

**INVITED REVIEW**

# Practical considerations of developing and conducting a successful telehealth practice in response to COVID-19

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**Abstract**

The coronavirus disease 2019 (COVID-19) pandemic posed significant challenges to clinicians practicing in outpatient settings focused on chronic disease treatment and management. Many interprofessional teams transitioned to telehealth to continue to provide care while minimizing in-person interaction to reduce risk of transmission. Given that telehealth will likely remain as a care option even as the pandemic subsides, this review summarizes the applied recommendations on telehealth in interprofessional patient care, provides practical insights for successfully transitioning care from an academic medical center bariatric surgery program, and highlights future opportunities for research.

**KEYWORDS**

COVID-19, nutrition therapy, organization and administration, telemedicine

**INTRODUCTION**

In 2020, the spread of the novel coronavirus SARS-CoV-2 and subsequent coronavirus disease 2019 (COVID-19) pandemic caused a significant disruption to the provision of healthcare. Within many outpatient services, chronic disease prevention and treatment care were initially slowed or completely halted to shift resources to crisis response. In the current time of extended crisis response, clinicians have been tasked with the challenge of continuing to provide high-quality care to patients while maintaining safety and meeting patient needs. Because of these factors, reporting currently suggests patient demand for telehealth services has increased; however, healthcare systems appear to have not yet met this need.<sup>1</sup>

Telehealth refers to remote healthcare for patients through the use of computer and telecommunication, most commonly video.<sup>2</sup> Telehealth is not a new approach, particularly within nutrition and weight management,

but has not been widely used.<sup>2–4</sup> Historically, telehealth utilization has been limited, attributed primarily to logistical and financial barriers for both providers and patients—limited technology access or skills and limited reimbursement coverage from payers. Having to pivot to relying on this modality of care in the face of the pandemic has presented both benefits and challenges for providers, administrators, and patients. In the present review, we aim to summarize the applied recommendations on telehealth in interprofessional patient care, provide practical insights for successfully transitioning care from an academic medical center bariatric surgery program, and highlight future opportunities for research.

The transition described in the present review occurred in a large-volume, academic medical center bariatric surgery program. The program continues to operate out of three urban hospitals and comprises >30 clinicians specifically dedicated to bariatric surgery care—including surgeons, physicians, advanced practice providers,

registered dietitians, psychologists, and registered nurses. Prior to the COVID-19 era, clinicians would travel to provide preoperative and postoperative outpatient care from seven urban and suburban locations. Patients presenting for surgery would attend an in-person informational session, followed by an initial consult with a registered dietitian, advanced practice provider, and surgeon. From there, patients would complete medical weight management, a payer-required counseling period, and a meeting in person with an advanced practice provider and registered dietitian at each visit, described in previous publications.<sup>5,6</sup> After completing required consultations, including with psychology and support group attendance, patients would attend a final education class prior to undergoing surgery. Postoperatively, patients would meet with a surgeon or advanced practice provider and a registered dietitian regularly for lifelong management. Although this group was historically an early adopter of new technologies, previous pilots of virtual education sessions had limited acceptance by patients, and remote care had been limited to other gastrointestinal surgery postoperative visits owing to payer and accreditation constraints. Over the course of the pandemic, this group has shifted to more than three-quarters of visits and communications being remotely delivered via telehealth.

## INFRASTRUCTURE SUPPORT

It is important to start on the foundation that building and implementing any operational system requires adequate resources, coordination of different teams, and leadership support. Information technology and security support is needed to build tamper-proof remote services.<sup>7</sup> Coverage and reimbursement vary, requiring expertise in finance.<sup>8</sup> Regulatory assistance is necessary to address ethical, legal, and social issues brought to light in telehealth.<sup>9,10</sup> Operations expertise to align the patient pathway and implement new protocols, such as scheduling and reminders, is key. Each of these pieces is necessary prior to first providing care remotely and requires resources. Without investment in these non-patient-facing areas, the likelihood of successfully implementing a telehealth program is minimal.

Within our health system, resources were specifically dedicated to providing and optimizing telehealth services, starting with having dedicated leadership and personnel to support existing systems. These leaders held regular updates to inform clinicians and staff of options for remote patient care, status of negotiations for platforms, payer requirements, and all other pertinent information. Centralized systems were updated for scheduling patients, documenting pertinent factors, and billing for telehealth ser-

vices. Existing resources for secure patient communication were heavily utilized, such as electronic medical record-based messaging, electronic questionnaires, and shared documents or photos. New features developed included a secure platform to view schedules, join visits, and direct patient text messaging. These are all non-patient-facing components that, although neither developed directly by the clinical team nor reviewed in detail here, were critical to being able to make the change to telehealth.

Specific to the bariatric surgery program, our group worked closely with our technology, web design, and marketing groups to convert our print nutrition education materials to documents suitable for electronic messaging or online publication. Additional resources were added to website. Clinicians collaborated with marketing and communications to record, edit, and publish previously in-person education sessions for patients to watch at their leisure. As with previously in-person sessions, patients would be assessed for comprehension of information provided in these sessions at clinical telehealth sessions, and if an individual exhibited limited knowledge of the content, the clinician would adapt delivery of the information to meet the patient needs. These groups also worked closely to create recorded patient education videos, establish live virtual preoperative education sessions, and create virtual patient support group conversations. Care was not withheld or delayed if patients did not engage with these online sessions. Leveraging existing relationships and resources to pivot to remote care and recreate was critical to reestablishing a high quality of care with given restraints. The direct clinical team relied heavily on the expertise of information technology groups and administration for infrastructure establishment, but this also required constant communication between stakeholders.

## REBUILDING TEAM COMMUNICATION CHANNELS

A cornerstone of interdisciplinary care is the ability to maintain a high level of communication with members of the team. Given the necessity for remote or physically distanced work, interprofessional teams have been tasked with establishing new forms of communication. A recent survey of remote work found that lack of face-to-face interaction was more likely to lead to reduced cohesion if not addressed.<sup>11</sup> Email is typically not an adequate sole communication mode in remote work.<sup>12</sup> Multiple options for communication for different types of messaging are necessary to the transition to remote work. This includes more informal chat functions, file sharing, and video chat between coworkers and secure messaging and calls for patient communications.

In order to maintain a safe workplace, strict masking policies were enacted throughout the health system along with limits on the number of individuals permitted in workspaces. To reduce risk, including in travel time, team members were encouraged to work from their homes if space and resources allowed. This was a significant shift from up to eight team members sharing workspaces and speaking directly to each other to coordinate patient care and large meetings. Electronic group chat functions were utilized for real-time video visit handoffs, whereas email and secure messaging were reserved for more formal communication. Establishing specific communication standard practices was a key aspect of initial expectation setting.

For information sharing, regular, brief check-in sessions, or huddles, were conducted with varying frequency and duration depending on the audience. These video meetings were held at different levels of the organization with specific audiences and topics. The relatively brief meetings allow for transmission-style communication to directly disseminate information and address concerns as they arise.<sup>13</sup> By having the quick, effective sharing of information, clinicians were able to focus on their primary area of expertise—patient care.

## CONDUCTING A VISIT

Clinicians, including registered dietitians, undergo hours of training to hone in-person counseling skills. A provider may be highly skilled in these techniques but struggle to transition to applying within a virtual world. In order to adapt to a video session when previously providing face-to-face counseling, nutrition or otherwise, returning to the foundations of counseling is vital. This starts with the setting of the visit for the clinician. Physical environment is typically not a consideration clinicians are responsible for in most outpatient settings; however, in delivering telehealth, this responsibility may fall to the clinician. Minimizing patient distractions helps establish a productive session. Backgrounds should be kept to a minimum wherever possible, and attire should contrast with the background, without prints or reflective items that may be distracting. Options include using backdrops or angling the camera to show only a wall or minimal decorations. Team members providing care from personal spaces either for their workspace or from home should assess their surroundings to confirm that all items within view of the camera are acceptable to be seen by patients, including other patient information, pictures, artwork, food, or drink.

The most impactful factors to consider in telehealth video environment are lighting, camera angle, and sound quality. The light source should be placed behind the cam-

era and aimed toward the individual's face to adequately highlight their facial features to be clearly seen. Light directed toward the side of the team member—light source above, behind, or to the side—can create shadows and difficulty for the patient to be able to optimally see the provider. The camera lens should be at eye level, which for device cameras can be achieved using stands or other items to lift the device to eye level. Ideal placement of a camera is just above the screen that the clinician is primarily utilizing to appear to the patient that the team member is actively engaged in the session. Headphones can be used to minimize background noise or echo depending on the acoustics of the room. Clinicians should test their equipment prior to utilizing for patient visits.

The first step of the actual visit, prior to identifying the patient and obtaining consent for the visit if required, is for the team member to clearly identify themselves and their role. A helpful option in video visits is to use a banner or other feature within the video to label the clinician's video with their name, credential, and title in order to verify their identity. After confirming the identity of the patient, obtaining consent for a virtual visit, and asking the patient to identify any other persons present, expectations for the session should be outlined, including an overview of what will be covered and other team members involved in the visit.

Conversations utilizing video or text messaging have become commonplace in informal communication outside of healthcare. Because of this, clinicians are prey to becoming lax with the structured professionalism of verbal and nonverbal communication typically brought to interactions. Without physical presence, this nonverbal standard can be reestablished within telehealth. Within the visit itself, providers can advance their video counseling skills by being cognizant of facial expression, as body language is no longer a simple form of signaling active listening in a virtual world and empathy, facilitation, and praise may not translate as well to telehealth.<sup>14</sup> This includes eye contact with the lens and exaggerating facial expression to convey messages, including nodding, smiling, and head tilting to clearly signal engagement.<sup>15</sup> A “resting” facial expression that may have appeared engaged and empathetic in person may instead appear as disinterested or worse.<sup>16</sup> Hand movements should be used in a pointed manner to add to this communication without distracting from the session. Visible dress should remain professional.

Within our current program, clinicians have found that electronic medical record documenting in real time assists in patient care, aids in clinician handoff when the patient is seeing multiple providers in a single visit (eg, dietitian and advanced practice provider), and minimizes additional work after the visit has been completed. Achieving this requires developing the skill of typing while conduct-

TABLE 1 Clinician telehealth visit checklist

No.	Checklist item
1	Minimize background distractions
2	Confirm all items within view of the camera are appropriate for patient view
3	Direct lighting toward the clinician's face
4	Angle camera at eye level, slightly above eyeline of screen
5	Use headphones or external microphone if audio or room acoustics are suboptimal
6	Use multiple screens for real-time documenting
7	Test equipment prior to visit
8	Use identification on screen (label electronic banner, wear visible identification, etc)
9	Wear professional visible dress
10	Use visible body language to convey engagement (eye contact with lens, exaggerated facial expressions)
11	Model positive telehealth etiquette for patients

ing the visit. Practical tips for this include utilizing separate screens for the documenting and video visit, making both the screens and the camera at eye level to maintain documenting while conducting the visit and appearing engaged to the patient. If logistically the clinician's camera cannot be in eyeline of the screen, leading to looking away from the camera to keep notes, it may be appropriate to inform the patient of the location of the screen and purpose of looking away from the camera frequently during the session. Table 1 describes a checklist that can be used when conducting telehealth visits. Clinicians in orthopedic surgery have also provided another telehealth checklist that some may find helpful.<sup>15</sup>

Clinicians have limited control over a patient's virtual environment and telehealth etiquette. Expectations can be set around preparing for the visit by including information on preparing for the session in the visit reminders, as our practice has done. This includes testing their technology prior to the visit and being in a quiet space conducive to a productive session. However, if a patient is not able to do this or exhibits poor telehealth etiquette, our team has viewed this as an opportunity to ask the patient to engage in a different form—propping up their device, moving to a quiet space, or facing the camera—while avoiding ending the session prematurely unless continuing would be unsafe or detrimental to a continued relationship. This has required some flexibility and patience. Ultimately, within chronic disease treatment, the clinician needs to weigh whether a suboptimal session is preferable to no session. This philosophy has led to our team conducting visits while patients are holding a child, in their workplace's restroom, or even while preparing a meal, integrating nutrition care into patients' lives in a new way.

## ACCESS SUCCESSES AND STRUGGLES

The steep increase in utilization of telehealth has reduced many previous barriers to accessing care, namely the difficulty of scheduling, traveling for, and attending an in-person visit. Patients no longer need to pay for transportation or parking and navigate offices in order to reach their provider's office. However, telehealth has highlighted the inequitable access to care that existed prior to the pandemic. Visits require both the physical technology, including a mobile device or computer along with network connection, along with the skills and knowledge to navigate the technology.<sup>17</sup> This technological divide reinforces already existing access issues for those without means, knowledge, or access to technology.<sup>18</sup>

Lack of validated measures and limited physical assessments in telehealth are also challenges clinicians are learning to navigate. Physical assessments, including a nutrition-focused physical assessment, that utilize video rely on patient observation and skill more than they do when in person. Certain features can be visualized utilizing video and prompting the patient with specific tasks or questions, such as hair, skin, and nail changes or facial muscle appearance. However, others are more difficult depending on the quality of video—eye or oral health or physical strength measures. Prompting patients to describe what they view or requesting that the patient complete a task such as assessing skin turgor can be helpful but will be limited for other tasks that require hands-on assessment. Additionally, key measures such as weight, height, temperature, blood glucose, or blood pressure rely on patient report or patients having the equipment to take these measures and confirm validity of their use. Although self-reported measures can have some issues around their accuracy, they provide an opportunity for additional patient-centered care by directly engaging patients in conducting self-monitoring. This has additionally been a financial divide of concern, as patients may not have the means to purchase these tools.

Although telehealth has increased access for many, it has highlighted the divide for those without access to high-speed broadband, with limited devices, or with low technology literacy.<sup>19,20</sup> For this reason, other options should be available, and accommodations should be made when necessary. This includes having access to audio visits when safe to forgo video, interpreter services, and in-person options with risk-mitigation protocols in place. Likewise, clinicians are invited into patients' private spaces, which surfaces new benefits and concerns for patients. Clinicians have reported the added benefit of meeting with a patient in their own, familiar space, where they have the ability to be comfortable and have easy access to report products or

medications in counseling and education rather than relying on memory. However, not all personal spaces are conducive to a productive counseling session. Some may not have access to a quiet, private space to conduct sessions. Additionally, many patients may not be comfortable with allowing their care team access to their private spaces in video calls. These challenges may be viewed as acceptable tradeoffs in exchange for the convenience and lack of travel with telehealth visits, but clinicians can be cognizant that this more intimate approach in care may not be welcomed by all patients.

## A TURNING POINT IN PATIENT CARE

Looking past the COVID-19 era, it appears unlikely that telehealth utilization will decrease with control of the pandemic. This crisis provides clinicians and administrators an opportunity to build new and innovative systems that break down patient barriers to care. Previous studies have suggested video conferencing is well accepted by most patients, clients, and nutrition professionals.<sup>17,21</sup> With this change, however, also comes an opportunity for additional stress and difficulty for both patients and care team members, as not all prefer this method of communication. Careful consideration should be given to how to balance competing needs as telehealth becomes a mainstay in the delivery of interprofessional care. Third-party payer data will be useful to further assess acceptance and future changes to payment models and opportunities for insurance providers to meet the needs of their participants. Until more structured guidance is available, clinicians and administrators can benefit, as our program has, from relying on best practices within project management and remote leadership strategies in order to successfully transition care.

What is currently unknown is what greater impact this shift will have in overall care. At present, there is little evidence of whether telehealth improves or impedes access in certain subspecialties or for specific geographic locations or patient demographics. Retrospective reporting and assessment of this time period will be critical to identifying gaps in care, best practices, and opportunities. As in-person care resumes, measurement of patient preferences, utilization of services, and reimbursement will provide insight into healthcare consumer trends and how providers will need to shift to meet patient needs.

## CONFLICT OF INTEREST

None declared.

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## AUTHOR CONTRIBUTIONS

Colleen Tewksbury contributed to the conception and design of the review and drafted the manuscript. Mary Elisabeth Deleener, Kristoffel R. Dumon, and Noel N. Williams contributed to the acquisition, analysis, or interpretation. All authors critically revised the manuscript, agree to be fully accountable for ensuring the integrity and accuracy of the work, and read and approved the final manuscript.

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