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Editorial

Improving obesity treatment through telemedicine: increasing access to bariatric surgery

Obesity has widespread impacts on individual health, and the severity of this disease and its contribution to health inequity has been highlighted in the coronavirus disease 2019 (COVID-19) pandemic [1]. Bariatric surgery is among the most effective therapies for obesity and associated comorbidities. However, less than 1% of patients eligible for bariatric surgery actually undergo surgery [2], and approximately 50% of individuals who initiate the process end up dropping out of these programs before undergoing surgery [3,4]. Thus, even when the desire and motivation are present, as a health-care system, we are inadequately supporting patients. Previous studies have shown that major barriers to accessing bariatric surgery care are additional appointments [4] and long travel distances [5]. Moreover, there is evidence that patients who face greater health-care access challenges, specifically patients who are Medicaid-insured or non-White, experience greater delays in their care [6]. Given this context, telemedicine provides an important new opportunity to overcome these barriers and to increase equitable access to bariatric surgery. In this piece, we explore ways in which telemedicine can help our patients achieve their health goals.

Previous barriers to bariatric surgery

Nationally, obesity is not seen as a disease [7]. Additionally, it is generally considered a sign of personal moral failure [8]. These 2 incorrect ways of viewing this important, devastating disease have led to bias in how insurance providers cover care for bariatric surgery. There are numerous hoops that patients must jump through to reach insurance clearance for bariatric surgery. This not only is demoralizing for patients, but also decreases the likelihood they will ever undergo bariatric surgery.

At the organizational and individual levels, it is difficult for bariatric surgery centers to schedule multiple appointments for patients in a way that consolidates their trips to laboratories, imaging centers, and various clinics. At a minimum, all patients meet with a dietician, mental health professional, office administrator, provider for medically supervised weight loss, and bariatric surgeon. Often patients

must meet with providers multiple times and with a number of other specialists (exercise physiologist, cardiologist, pulmonologist, etc.) for clearance for surgery. Additionally, some tasks of the workup process, such as recording weights in clinic, require exponentially more time in patient travel and waiting room time compared to in-person contact. This translates into hours of patients' days spent travelling to and from appointments, all while maintaining jobs, taking care of loved ones, and doing daily tasks of life. Telemedicine directly decreases the burden for patients to participate in these multiple touchpoints, and thus increases access to bariatric surgery.

New world opportunities to improve access to bariatric surgery

This time of health-care disruption has allowed us to rethink health-care delivery modalities. In the sudden explosion of need for health-care provision outside of traditional, in-person office visits due to COVID-19, many previous barriers to telemedicine have been removed at the policy, organizational, and individual levels. On the policy level, insurance companies previously (1) either reimbursed only a fraction of telemedicine visit costs, as compared to in-person visit costs, or did not reimburse telemedicine visits at all; and (2) required the origination site to be a medical facility. During the COVID-19 pandemic, the Centers for Medicare and Medicaid Services allowed for equal reimbursements of telemedicine visits and for visits to be conducted from home [9]. Commercial insurance providers followed suit. At the organizational level, smaller clinics and hospitals previously unsure of whether telemedicine would be worth the initial financial investment now can choose from many Health Insurance Portability and Accountability Act-compliant platforms, some of which are provided at no cost. Lastly, personal physician inertia is known to be a high barrier to adoption of telemedicine [10]. In a parallel example, after passage of the Affordable Care Act, all providers were required to use electronic medical records. There is no shortage of physician anecdotal complaints and articles written on how electronic medical

records are causing burnout. This reluctance to adopt new technologies due to a perception that they create more work for the individual physician without clear evidence of improving patient care may similarly have diminished enthusiasm to adopt telemedicine before it was necessary.

Given this new opportunity to use telemedicine, we have the responsibility to permanently adopt telemedicine as part of our care of patients with obesity. To leverage telemedicine for increased access to bariatric surgery, we propose some overarching strategies that will be important moving forward.

Advocate for policy changes at the insurance provider and accreditation organizational level

Without insurance coverage and accreditation standards for use of telemedicine, health-care systems will be unable to keep using this important tool in clinical care. It is unclear whether insurance companies, Medicare, and Medicaid will continue to cover telemedicine services in the same way after the threat of COVID-19 has passed [11]. It is crucial for bariatric surgery programs to collect data on the scale of patients reached and the quality of care provided to support the case for telemedicine coverage in the future. Physicians and advocacy organizations can play a key role in speaking with government bodies and insurance providers on how telemedicine has impacted patients. Additionally, accreditation organizations for bariatric surgery should consider how in-person care before and after surgery can be effectively administered using telemedicine, and explicitly add telemedicine as an appropriate means of care delivery into accreditation standards.

At the practice level, reorganize care around the patient rather than by physical location

First, as telemedicine platforms have burgeoned, there are now ways in which multiple providers can sequentially sign into a single patient visit. This feature of telemedicine creates an opportunity to group care visits. For example, a patient can meet with the dietician, exercise physiologist, social worker, and surgical provider all in 1 consolidated appointment rather than having to make multiple trips, as well as visit multiple sites, to receive care. Second, since patients can be seen outside of the clinic walls, practices can provide times outside of typical business hours that can reach more people. For example, some patients may appreciate being able to have early morning, evening, or weekend appointments. Third, all patients without postoperative complications can be offered telemedicine visits to discuss progress and concerns after surgery, rather than having to attend in-person visits at 2 weeks, 1 month, 3 months, and so forth. The availability of telemedicine to answer urgent issues postoperatively may also allay

patients' fears of complications after surgery, which is a major driver of low bariatric surgery utilization [3]. In these ways, patients have an opportunity for consultations that are safe, efficient, and respectful of their financial and time resources, in addition to in-person visits, throughout their bariatric surgery care.

As providers, we must actively participate in the challenge of a new vision for patient interaction

Other than for one-on-one visits, telemedicine can increase access to a number of bariatric surgery program components from the information session to postoperative care. Initial information sessions can be attended remotely with video and chat functions, allowing multiple participants opportunities to ask questions of bariatric providers. Throughout the entire spectrum of care, instead of patients physically coming into the office for medically documented weight loss, patients can measure themselves over a video visit. Thinking to the future, we should consider how to incorporate remote monitoring via Bluetooth scales or an application that can allow patients to self-report weights. There are numerous ways in which each of us as providers can harness this moment's creative energy to shape the future of bariatric surgery care.

Conclusions

The COVID-19 pandemic has helped us rethink the ways in which we can deliver care that is effective and equitable. Telemedicine can be a powerful way to deliver comprehensive and effective obesity care that is patient-centered. By leveraging telemedicine, we can increase access to bariatric surgery beyond 1%, aligning ourselves further with our patients and helping them live healthy lives.

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References

- [1] El Chaar M, King K, Galvez Lima A. Are black and Hispanic persons disproportionately affected by COVID-19 because of higher obesity rates? *Surg Obes Relat Dis* 2020;16:1096–9.
- [2] Campos GM, Khoraki J, Browning MG, Pessoa BM, Mazzini GS, Wolfe L. Changes in utilization of bariatric surgery in the United States from 1993 to 2016. *Ann Surg* 2020;271:201–9.
- [3] Funk LM, Jolles S, Fischer LE, Voils CI. Patient and referring practitioner characteristics associated with the likelihood of undergoing bariatric surgery: a systematic review. *JAMA Surg* 2015;150:999–1005.
- [4] Alvarez R, Matusko N, Stricklen AL, Ross R, Buda CM, Varban OA. Factors associated with bariatric surgery utilization among eligible candidates: who drops out? *Surg Obes Relat Dis* 2018;14:1903–10.
- [5] Funk LM, Alagoz E, Jolles S, et al. A qualitative study of the system-level barriers to bariatric surgery within the Veterans Health Administration. *Ann Surg*. Epub May 2020.
- [6] Alvarez R, Bonham AJ, Buda CM, Carlin AM, Ghaferi AA, Varban OA. Factors associated with long wait times for bariatric surgery. *Ann Surg* 2019;270:1103–9.
- [7] Executive Council of ASMBS. Safer through surgery: American Society for Metabolic and Bariatric Surgery statement regarding metabolic and bariatric surgery during the COVID-19 pandemic. *Surg Obes Relat Dis* 2020;16:981–2.
- [8] Rubin R. Addressing medicine’s bias against patients who are overweight. *JAMA* 2019;321:925–7.
- [9] Centers for Medicare and Medicaid Services. Medicare telemedicine health care provider fact sheet. 2020. [cited 2020 Aug 14]. Available from: [cms.gov/newsroom/fact-sheets/medicare-telemedicine-health-care-provider-fact-sheet](https://www.cms.gov/newsroom/fact-sheets/medicare-telemedicine-health-care-provider-fact-sheet).
- [10] Ranganathan C, Balaji S. Key factors affecting the adoption of telemedicine by ambulatory clinics: insights from a statewide survey. *Telemed J E Health* 2020;26:218–25.
- [11] H.R.7663 - Protecting Access to Post-COVID-19 Telehealth Act of 2020: To Amend Title XI of the Social Security Act. 116th Congress, 2nd Session 2020.

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