An observational survey study on quality and efficacy of telemedicine in general surgery outpatient clinic during the COVID-19 pandemic.

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Introduction

Telemedicine has been studied in many surgical subspecialties that showed feasibility and promising outcomes, but the population included is largely based on patient preference. One randomized control trial conducted in Spain only targeted a patient population that needed follow up appointments after hospitalization in general surgery. Recently, due to the rapid progression of SARS-CoV-2 (COVID-19), social distancing strategy has led many hospitals to restrict the amount of in-person clinic visits. During this time, MedStar Franklin Square Medical Center (MFSMC) provided telemedicine visits in the outpatient surgery clinics. The COVID-19 pandemic provided a unique situation where patients had no choice but to choose telemedicine if they needed a surgical clinic visit. Therefore, we saw an opportunity to study the quality and efficacy of telemedicine in a more heterogeneous group of patients and ultimately conducted an observational survey study in both patients and surgeons after each general surgery telemedicine visit.

Methods

This is a prospective observational study at a single institution that took place between March and June 2020. All patients who had telemedicine appointments for general surgery during this period were eligible for participation. Surveys were distributed to providers and patients after each telemedicine visit and data were collected to include responses on a 5 point Likert-scale and free test for additional comments. Additionally, patient demographics, nature of visits and clinical decisions were collected.

Results

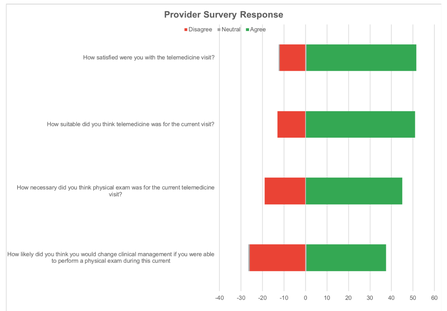
64 general surgery telemedicine encounters were identified between April and May, 2020 at MFSMC. The most common reasons for the visits were hernias at 39.1% and gallbladder disease at 20.3%. Among all the visits, 51.6% were new patients and 25% were postoperative visits. Ultimately 39.1% of patients underwent surgery at a later date and 0.05% received urgent intervention.

Table 1 General Surgery surgical clinic telemedicine patient encounters from March to June 2020

Nature of visit	Number of encounters/%	New patient encounters	Follow up encounters	Planned for surgery at a later date	Underwent urgent surgery
Hernia	25 (39%)	18	7	17	1
Postoperative visit	16 (25%)	N/A	16	N/A	N/A
Gallbladder disease	13 (20.3%)	13	0	8	2
Others*	10 (15.6%)	2	8	0	0

*Others include general abdominal pain, skin lesions and post hospitalization visits

Surgeons' survey response was 100% and rated satisfaction for 79.69% of the visits. Although most visits were rated suitable, 70.31% rated physical exam as necessary and 57.81% rated possible change in clinical decisions if the visit was in-person, which occurred mostly in hernia related visits. On the other hand, patients' survey response was 34.38% and rated satisfaction for 86.35% of the visits. The confidence level in telemedicine increased from 50% to 86.35% after the visit took place. When asked if patients would choose telemedicine over in-person visits in the future, 81.8 responded yes.



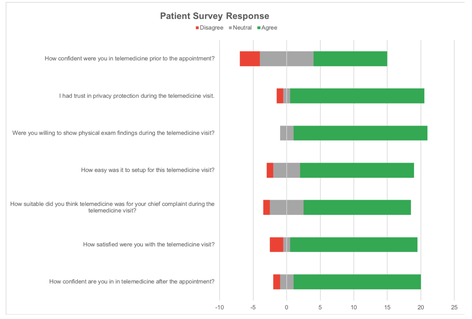


Figure 1 & 2: Results of the provider and patient survey response. Answers were provided on a 5-point Likert scale. Categories "completely agree" and "agree" were pooled as "agree". Categories "completely disagree" and "disagree" were pooled as "disagree".

Provider survey

1. How satisfied were you with the telemedicine visit?
2. How suitable did you think telemedicine was for the current visit?
3. How necessary did you think physical exam was for the current telemedicine visit?
4. How likely did you think you would change clinical management if you were able to perform a physical exam during this current telemedicine visit?
5. Additional comments?

Patient survey

1. How confident were you in telemedicine prior to the appointment?
2. I had trust in privacy protection during the telemedicine visit?
3. Were you willing to show physical exam findings during the telemedicine visit?
4. How easy was it to setup for this telemedicine visit?
5. How suitable did you think telemedicine was for your chief complaint during this visit?
6. How satisfied were you with the telemedicine visit?
7. How confident are you in telemedicine after the appointment?
8. In the future, if you could choose between in-person visit and telemedicine visit, would you choose telemedicine again?
9. Additional comments?

Conclusion

Telemedicine is a feasible alternative for both new patient and follow up visits in general surgery, especially during the COVID-19 pandemic. Generally both surgeons and patients are satisfied with telemedicine visits. However, surgeons prefer to include a physical exam for hernia related visits because of its potential effect on surgical management.