



# Research Week 2022

## Bridging the Digital Divide: Perioperative Telemedicine Among Rural Patients Evaluated at a Tertiary Abdominal Wall Reconstruction and Hernia Center

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### Keywords

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### Abstract

#### Background

Perioperative telemedicine use has increased as a result of the COVID-19 pandemic and may improve access to surgical care. However, studies assessing outcomes in populations at risk for digital-health disparities are lacking. We sought to characterize the pre- and post-operative outcomes for rural patient populations being assessed for hernia repair and abdominal wall reconstruction with telehealth.

#### Methods

Patients undergoing telehealth evaluation from March 2020-May 2021 were identified. Rurality was identified by zip code of residence. Rural and urban patients were compared based on demographics, diagnosis, treatment plan, and visit characteristics and outcomes. Downstream care utilization related to supplementary in-person referral and diagnostic testing was assessed.

#### Results

Three-hundred-seventy-three (196 preoperative, 177 postoperative) telehealth encounters occurred during the study period (rural: 28% of all encounters). Rural patients were more likely to present with recurrent or incisional hernias (90.0 vs 72.7%,  $p=0.02$ ) and advanced comorbidities (ASA>2: 73.1 vs 52.1%,  $p=0.009$ ). Rural patients derived significant benefits related to time saved commuting, with median distances of 299 and 293 km for pre- and post-operative encounters, respectively. Downstream care utilization was 6.1% (N=23) for

additional in-person evaluations and 3.4% (N=13) for further diagnostic testing, with no difference by rurality.

## Conclusion

Perioperative telehealth can safely be implemented for rural populations seeking hernia repair and may be an effective method for reducing disparities in surgical care. Downstream care utilization related to additional in-person evaluations or diagnostic testing was minimally impacted in both the preoperative and postoperative settings. These findings suggest that rurality should not deter surgeons from providing telemedicine-based surgical consultation for hernia repair.