In a retrospective study, we did not contact the patients; all data were obtained by reviewing the medical records and were deidentified.

**Results** | A total of 118 patients who underwent SPL before a right hemicolectomy were included. There were 55 patients in the obese group (BMI ≥ 30) and 63 patients in the nonobese group (BMI < 30). The 2 groups did not differ significantly in age, American Society of Anesthesiologists classification, number of prior abdominal surgical procedures, or percentage of operations performed for cancer (Table I). The mean duration of SPL was longer for obese patients (132 minutes) than for nonobese patients (107 minutes) (P < .001). There were no significant differences in the rate of conversion to open or multiport laparoscopy (P = .21), intraoperative blood loss (P = .24), or overall length of stay (P = .16) (Table 2).

There were 8 nonobese patients and 12 obese patients who had complications (P = .22). There was no significant difference in complications graded using the Clavien-Dindo classification (P = .27) or in anastomotic leak rate (ie, 1 obese patient and no nonobese patient experienced an anastomotic leak; P = .46). Four obese patients and no nonobese patient had a wound infection (P = .04). The mean specimen length was longer in the obese group than in the nonobese group (P = .04). With regard to oncologic resections, there was no difference in the mean number of lymph nodes harvested (P = .74) or in the rate of positive margins (P = .49) (Table 2).

**Discussion** | Safety and short-term outcomes do not appear to be compromised by obesity when SPL is used before a right hemicolectomy. The statistically significant differences between the 2 groups of patients were a higher wound infection rate, a longer specimen length, and increased operative time in the obese group. Our finding of an increased wound infection rate in the obese group is consistent with the existing literature, and this, unfortunately, continues to be a pervasive problem for obese patients regardless of surgical approach.\(^5\)

Single-port laparoscopy offers excellent cosmetic results and has been associated with better postoperative pain control.\(^1\) These factors can have a significant positive effect on patient satisfaction, and as the emphasis on satisfaction continues to increase, SPL may be an advantageous approach when indicated. Our results indicate that a BMI of 30 or higher does not preclude a patient from undergoing SPL. However, our study does not further categorize the class of obesity, and it would be useful to evaluate the results of SPL in the morbidly obese and super obese populations. We also recognize that the power of our study is limited by the retrospective nature of the study, and therefore, our data collection is ongoing. In addition, further studies are needed regarding the longer-term outcomes of using SPL before colorectal surgery, including hernia rate, cost analyses, and patient satisfaction in all patient populations.

Rachel M. Danforth, MD
M. Francesca Monn, MD
Leigh J. Spera, MD
Alyssa D. Fajardo, MD
Virgilio V. George, MD

**Author Affiliations:** Department of Surgery, Indiana University School of Medicine, Indianapolis (Danforth, Spera, Fajardo, George); Department of Urology, Indiana University School of Medicine, Indianapolis (Monn); Department of Surgery, Richard L. Roudebush VA Medical Center, Indianapolis, Indiana (George).

**Corresponding Author:** Virgilio V. George, MD, Department of Surgery, Richard L. Roudebush VA Medical Center, 1481 W 10th St, Indianapolis, IN 46202 (vigeorge@iupui.edu).

**Published Online:** September 16, 2015. doi:10.1001/jamasurg.2015.2409.

**Author Contributions:** Drs Danforth and George had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

**Study concept and design:** Danforth, Spera, Fajardo, George.

**Acquisition, analysis, or interpretation of data:** Danforth, Monn, Spera, George.

**Drafting of the manuscript:** Danforth, Fajardo, George.

**Critical revision of the manuscript for important intellectual content:** All authors.

**Statistical analysis:** Danforth, Monn, George.

**Administrative, technical, or material support:** Danforth.

**Study supervision:** Fajardo, George.

**Conflict of Interest Disclosures:** None reported.

**Previous Presentation:** This paper was presented at the 39th Annual Meeting of the Association of VA Surgeons; May 3, 2015; Miami Beach, Florida.

**References:**

**ASSOCIATION OF VA SURGEONS**

**Postoperative Telehealth Visits: Assessment of Quality and Preferences of Veterans**

There is increasing interest in telehealth as a means to improve access to care and decrease costs associated with patients traveling for traditional face-to-face encounters.\(^2\) This is especially important in the Veterans Health Administration patient population and consistent with the principles laid out in the Veterans Health Administration’s “Blueprint for Excellence.”\(^2\) Prior research has focused on the role of telehealth in the management of chronic conditions, although more recent work has demonstrated a role for telehealth in the preoperative and postoperative care of general surgery patients.\(^3\) Less is known about the preferences of patients for these types of visits across telehealth modalities. Our aim was to measure the quality of the visits and the preferences for postoperative general surgical care among veterans with regard to telephone, video, and in-person postoperative visits.

**Methods** | From May to July 2014, we selected a convenience sample of veterans undergoing operations of low complexity amenable to postoperative telehealth evaluation. Each eligible veteran was evaluated at 3 sequential visits: telephone...
considered a telehealth visit), in-person, and video (also considered a telehealth visit) using a standardized rubric that addressed 4 domains (general recovery, follow-up needs, wound care needs, and complications). In-person and video visits were completed by independent surgeons, and patients were unaware of the surgeons’ findings and opinions until all visits were completed. Percentage of agreement was determined for each domain across types of visits. The in-person visit was considered the reference. We calculated the positive and negative predictive values with 95% CIs for binomial proportions using the Wilson formula for telephone and video telehealth visits across domains. After completing all 3 types of visits, veterans were asked about their preferences regarding them. Associations between veterans preferences, travel distances, and whether travel pay was provided were determined using the t test and the χ2 analysis, respectively. Our project was determined to be a quality improvement project. It was reviewed by the institutional review board of the Tennessee Valley Healthcare System and was determined to be a nonresearch study based on the nature of the study (ie, quality improvement). It was determined that formal institutional review board approval was thus not required. Veterans did give oral informed consent, and the data were also deidentified.

Results | Thirty-five veterans agreed to participate, and 23 veterans completed all 3 types of visits. Veterans were mostly male (96%) and white (70%), with a mean (SD) age of 58 (14) years, and underwent a range of operations of low complexity (Table 1). Of the 23 veterans, 11 (48%) were discharged on the day of their operation. There was 100% agreement across all 3 types of visits in the domains of general recovery and follow-up needs. Percentage of agreement for wound needs and complications was 96%, reflecting a possible infection reported during a telephone call (ie, visit) that was not present during the in-person (ie, clinic) or video visit. One veteran had a wound infection that was detected during telephone and video visits and confirmed during the in-person visit. Importantly, there were no instances in which we failed to detect a wound or postoperative complication by telephone or video, with negative predictive values of 95% (95% CI, 78%-99%) and 100% (95% CI, 85%-100%), respectively (Table 2). The majority of veterans (16 [69%]) preferred a telehealth visit (39% preferred the telephone, and 30% preferred video). All the veterans who preferred a telephone visit also favored a video visit to an in-person visit. Veterans who preferred a video visit reported that a telephone visit would be adequate. Veterans who preferred telehealth visits traveled farther than those who preferred in-person visits (162 vs 75 miles; P = .03). Travel pay status was not associated with visit preference (P = .29).

Discussion | In this pilot project, most veterans undergoing general surgical operations of low complexity preferred telehealth follow-up, consistent with previous work.3–5 Veterans expressed a slight preference for telephone vs video visits. The data suggest that telehealth visits, either by telephone or video, can identify veterans requiring in-person assessment or further care. A telehealth follow-up program with further evaluation of patient outcomes is being trialed at our facility. This has implications for waitlist management, costs, and access to care for veterans and the Veterans Affairs health care system.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Telephone Visit PPV (95% CI)</th>
<th>Telephone Visit NPV (95% CI)</th>
<th>Video Visit PPV (95% CI)</th>
<th>Video Visit NPV (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General recovery</td>
<td>100 (86-100)</td>
<td>NA</td>
<td>100 (86-100)</td>
<td>NA</td>
</tr>
<tr>
<td>Follow-up needs</td>
<td>100 (61-100)</td>
<td>100 (82-100)</td>
<td>100 (61-100)</td>
<td>100 (82-100)</td>
</tr>
<tr>
<td>Wound care needs</td>
<td>50 (9-91)</td>
<td>95 (78-99)</td>
<td>100 (21-100)</td>
<td>100 (85-100)</td>
</tr>
<tr>
<td>Postoperative complications</td>
<td>50 (9-91)</td>
<td>95 (78-99)</td>
<td>100 (21-100)</td>
<td>100 (85-100)</td>
</tr>
</tbody>
</table>

Abbreviations: NA, not available; NPV, negative predictive value; PPV, positive predictive value.

* In-person (clinic) visit was considered the reference.

† Unable to calculate NPV for general recovery given 0 negative observations.
The scheduling of the procedure and the procedure itself is unknown. Changes in medical condition may account for 28% of surgery cancellations. In addition, prior research on adverse postoperative events may be biased by the unavoidable selection criterion that a patient must first experience surgery in order to be studied. With little information on the frequency and factors associated with surgery cancellations following PCI, it is difficult to quantify the impact of this bias. We hypothesize that surgery cancellations are more frequent in the first 6 months following the placement of a drug-eluting stent (DES) and that a higher proportion of early cancellations are associated with acute myocardial infarction (MI) or death.

Methods | The study cohort includes all patients receiving a PCI within the Veterans Affairs (VA) Healthcare System from fiscal year 2000-2010. The study was granted institutional review board approval with a waiver of informed consent at the Birmingham VA Medical Center. Data on PCIs were linked with the VA Surgical Package to identify all scheduled noncardiac surgical procedures occurring in the 2 years following PCI. Surgery cancellations were then identified among the scheduled surgical procedures using the VA Surgical Package, and the VA Medical Statistical Analysis Software (SAS) files were queried for instances of acute MI not related to the PCI (International Classification of Diseases, Ninth Revision, Clinical Modification codes 410.x1) or death within 30 days of a cancelled surgery date. The VA Medical SAS files were used to define demographics and other comorbidities present at the time of stent placement. The characteristics of the scheduled surgical procedures were compared using χ² test statistics. Analyses were then limited to only cancelled surgical procedures, and the characteristics of cancellations related to MI or death were examined using the χ² test.

Results | Of the 33,046 scheduled noncardiac surgical procedures within 2 years of PCI, 4387 (13.3%) were cancelled, with 46.7% of these cancelled surgical procedures proceeding to subsequent surgery (47.2% to DES placement and 46.2% to bare metal stent [BMS] placement; P < .001). Cancellations were more frequent among patients with a BMS (14.2%) than among patients with a DES (12.4%) (P < .001) and remained significantly elevated among patients with a history of chronic kidney disease (16.6%; P < .001) or a recent episode of congestive heart failure (16.0%; P < .001). They were also more common for planned digestive (23.3%) or vascular (17.1%) procedures (P < .001; Table). Cancellation rates were highest in the first 6 months following stent placement (15.1% for < 6 months vs 12.6% for > 6 months; P < .001) and remained significantly elevated among patients with a BMS beyond 6 months (13.5% of patients with a BMS vs 11.8% of patients with a DES; P < .001).

Death or an MI diagnosis accompanied 6.0% of cancellations (4.2% of completed surgical procedures; P < .001) and was more frequent among cancellations within 6 months following PCI (8.5%) compared with those beyond 6 months (4.9%) (P < .001; Figure). Cancellations related to MI or death were more frequent among patients whose stent was placed for an MI (9.4%; P < .001) and among planned respiratory (10.4%) or vascular procedures (8.7%) (P < .001). The proportion of cancellations related to death or MI did not vary by stent type (5.9% with DES vs 5.9% with BMS; P > .99).