Introduction: Hospitals must have accurate information on readmission causes to devise successful strategies for preventing surgical readmissions. The purpose of this study was to compare causes of surgical readmissions by medical chart review to: 1) readmission reasons in our local National Surgical Quality Improvement Program (NSQIP) database, and 2) administrative claims diagnosis codes. Methods: The study population included NSQIP-selected patients who underwent procedures from January 1-December 31, 2013 and were readmitted within the study hospital system. Medical charts of locally readmitted patients were reviewed by three experienced general surgeons to determine reasons for readmission. Primary diagnosis codes on readmission were evaluated from claims data. Percentage agreement and Cohen's Kappa were calculated to compare NSQIP vs. chart review and claims data vs. chart review. Results: A total of 1,840 NSQIP cases were evaluated (65% general, 19% colorectal, and 16% vascular). Overall, 156 patients (8.5%) were readmitted to any hospital. Six patients had two or more readmissions within 30 days. Of 162 readmission events, 157 occurred within the study hospital system and comprised the analytic sample. The most frequent causes were surgical site infections (SSI, 32%) and obstruction/ileus (17%). NSQIP readmission reasons had higher agreement with experts' chart review (71%, $\kappa=0.65$) than claims data primary diagnosis codes (61%, $\kappa=0.53$). Most
readmissions (63%) were potentially preventable. Conclusion: NSQIP provides more clinically accurate reasons for hospital readmissions than claims data diagnosis codes. Potentially preventable readmissions were common. The study results are guiding efforts to avoid future surgical readmissions, with focus on SSI and ileus.