P051 NATURAL TRENDS IN VOLUME, COSTS, AND PATIENT RISK PROFILE OF INPATIENTS UNDERGOING INCISIONAL HERNIA REPAIR IN RELATION TO ABDOMINAL SURGERY

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Aim: We describe trends in inpatient burden by volume, cost, and patient risk profiles of incisional hernia repair (IHR) as compared to other abdominal surgery (AS) procedures in the United States.

Material and Methods: Patients undergoing AS were identified using the National Inpatient Sample (2008-2018) by ICD-9/ICD-10 codes. National weighted procedure rates and hospital costs were ascertained and plotted using sampling weights and normalized per 1,000,000 people. Regression models allowed identification of statistical significance of trends and prediction of mean differences in rates, costs and patient characteristics.

Results: Over 38,000,000 AS discharges were identified, averaging 3.5 million annually, with over 1,200,000 discharges following IHR (3.1% of all AS). The difference between AS and IHR significantly decreased over time from 12,702 procedures per million (PPM) to 9,039 PPM. Open and laparoscopic AS down-trended (46.2% and 20.8%, respectively), whereas robotic AS up-trended (95.2% [all p < 0.01]). Open IHR down-trended (60.9%) and laparoscopic IHR up-trended (83.6%, [both p < 0.01]). Robotic IHR increased by 99.5% (p = 0.17). Average annual national charges for AS and IHR were $183.8 and $6.6 billion, respectively. Costs increased
by 20.3% for AS and 25.6% for IHR. Patients undergoing IHR were 45-64 years old (46%), female (63.1%), White (68.1%), publicly insured (55.1%), with moderate loss of function (43.2%) and ≥2 comorbidities (43.3%).

Conclusions: IH continues to carry a significant societal and healthcare burden. With AS decreasing and IHR remaining stable from 2008 to 2018, the percentage of patients developing IH after AS has increased, as well as cost per IHR, critically underscoring the need to adopt and implement risk reduction and hernia prevention.