

Ryan David Hoffman
L2
LSU Health Sciences Center, New Orleans, LA

Dr. Frank Lau
LSUHSC Department of Plastic and Reconstructive Surgery

“National Disparities in Incisional Hernia Repair Outcomes: An analysis of HCUP-NIS 2012-2014”

Background: Incisional hernias (IH) represent an acquired defect from failed healing of an abdominal incision and are therefore distinct from primary hernias. While literature regarding IH incidence, risk factors, and treatment are abundant, no study has examined national health disparities specific to IH repair (IHR).

Objective: The objective of this study was to analyze national health disparities unique to surgical incisional hernia repair procedures.

Methods: Patient data queried from the Healthcare Cost and Utilization Project National Inpatient Sample (HCUP-NIS) from 2012-2014 using ICD-9 procedure codes for IHR were used to generate univariate and multivariate models including demographics, socioeconomic factors, admission status, and hospital characteristics. Primary outcomes were non-elective admission status, in-hospital mortality, surgical complications, and extended length of stay (LOS).

Results: We estimated that 89,258 IHR procedures occurred annually from 2012-2014, incurring \$6.3 billion in healthcare costs. By multivariate analysis, multiple risk factors contribute to significantly increased odds of non-elective repair. These include age over 65, female sex, non-white race, non-private insurance, obesity, and increased Charlson comorbidity index. Non-elective IHR was strongly correlated with worse outcomes including in-hospital mortality [OR (95% CI) 3.01 (2.51,3.61)], postoperative complications [OR 1.2 (1.14,1.25)], and extended LOS [OR 2.96 (2.81,3.12)]. After controlling for admission status, other disparities persisted including extended LOS for black individuals [OR 1.21 (1.12, 1.31)].

Conclusion: Providers should be aware of these significant health disparities in IHR status and outcomes especially for elderly, non-white, non-private insurance, and obese/comorbid patients. Management strategies that increase access to elective repair and that prevent IH should be expanded to address these disparities.