

Racial Disparities in Access to Minimally Invasive versus Open Hartmann's Reversal: A NSQIP Analysis

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Background

- Racial and ethnic disparities in access to minimally invasive surgery (MIS) remain a persistent challenge in the US
- Given the technical complexity of Hartmann’s reversal, this procedure provides a meaningful context in which to examine potential differences in surgical access

Aim: To determine whether racial disparities exist in access to MIS versus open surgery for elective Hartmann’s reversals.

Methods

- Queried ACS NSQIP (2013-2023):
N= 21,109 patients
- Patients undergoing elective Hartmann’s reversal were identified using Current Procedural Terminology (CPT) codes
 - **Open procedures:**
44626 (closure of enterostomy with resection and colorectal anastomosis)
 - **Minimally invasive procedures:**
44227 (laparoscopic closure of enterostomy with resection and anastomosis).

Results

Mean Age (years):

- White: 61.69
- AA (56.43)
- Asian (61.64)

Males (%):

- White (51.5)
- AA (54.1)
- Asian (57.4)

Mean BMI (kg/m²):

- White (28.8)
- AA (29.96)
- Asian (23.92)

*AA: African American/Black

On univariate analysis:

- African Americans have highest rates of hypertension, smoking, diabetes, and dialysis (P<0.0001)
- Asians have the highest rates diabetes but lowest rates of hypertension, smoking, dialysis and COPD (P<0.0001)

Table 2. Multivariable Logistic Regression of Variables Associated with Undergoing Minimally Invasive Hartmann’s Reversal with Backwards Elimination

	Odds Ratio (CI)	
Race		P
White	Reference Group	0.001
AA*	0.864 (0.787, 0.949)	0.002
Asian	1.454 (1.205, 1.754)	0.0001
Hispanic	1.114 (0.933, 1.328)	0.232

On multivariable logistic regression analysis (accounting for demographic, comorbidities, and all other potential risk factors):

- African American were significantly less likely to undergo a minimally invasive procedure compare to White patients (OR 0.864, 95% CI 0.787–0.949, P = 0.002)
- Asian patients were significantly more likely to undergo a minimally invasive approach compare to White patients (OR 1.454, 95% CI 1.205–1.754, P < 0.001).
- Hispanic ethnicity was not independently associated with surgical approach.

Conclusion

Race is an independent risk factor influencing access to minimally invasive approaches for Hartmann’s reversal.