

## DEMOGRAPHIC AND SOCIOECONOMIC TRENDS IN THE USE OF LAPAROSCOPIC APPENDECTOMY FROM 1997-2003

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**Background:** Laparoscopic appendectomy was first described by Semm in 1980. It has not seen the rapid acceptance into clinical practice similar to that of laparoscopic cholecystectomy. This is most likely due to conflicting evidence on outcomes and resource utilization as compared to open appendectomy. Given this background, we hypothesized that there would be measureable differences in the rates of laparoscopic appendectomies performed among various socioeconomic groups and geographic areas.

**Methods:** The Nationwide Inpatient Sample (NIS), is an administrative database of inpatient admissions maintained by the Agency for Healthcare Research and Quality (AHRQ). We queried the NIS for appendectomies performed between the years of 1997 and 2003. Two-by-two tables and regression analysis were used to calculate the odds ratio for undergoing laparoscopic appendectomy for various demographic variables.

**Results:** The percentage of appendectomies performed laparoscopically has increased from 19.1% in 1997 to 37.9% in 2003. The indications for performing laparoscopic appendectomy appear to be expanding: 11.8% of cases of complicated appendicitis were treated laparoscopically in 1997, compared to 23.5% in 2003. Small hospitals were consistently less likely to perform laparoscopic appendectomies than large hospitals in each year studied (O.R. 0.828,  $p < 0.001$ ). Patients from low income areas continue to be less likely to undergo laparoscopic appendectomy than patients residing in the wealthiest areas (O.R. 0.703,  $p < 0.001$ ). Differences in the rates of laparoscopic appendectomy between teaching and nonteaching hospitals have fluctuated over time, but are now minimal (O.R. 1.04,  $p < 0.05$ ). White patients were more likely to undergo laparoscopic appendectomy than nonwhite patients in all years studied (O.R. 1.23,  $p < 0.001$ ).

**Conclusion:** Our analysis indicates that, despite expanding usage of laparoscopic appendectomy nationwide, low-income and minority patients are more likely to undergo open appendectomy for appendicitis.