

**NON-RESPONSE BIAS TO MAILED OUTCOMES SURVEY IN A PATIENTS UNDERGOING VENTRAL HERNIA REPAIR.**

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**Background:** Non-response bias is a major consideration in studies utilizing mailed patient surveys to assess the effects of a medical event. Duration from event to survey as well as poor outcomes are believed to affect response rates. This study examines survey response rates in patients who underwent surgery for ventral hernia repair (VHR) between 1998-2002.

**Methods:** Patients who underwent VHR in 16 VA hospitals from 1998-2002 were identified using the Veterans' Affairs National Surgical Quality Improvement Program. Medical chart abstraction was performed to determine evidence of complications or recurrence following repair. Surveys were mailed to patients with address information who were confirmed alive in 2005. Subset analyses were conducted on patients with medical chart information on outcomes. Chi-Square tests were used to compare proportions of survey response by 1) time (year of surgery), 2) hernia recurrence, and 3) post-operative complications.

**Results:** Of the 3251 patients receiving surveys, the overall response rate was 51%. On subset analysis of the 656 patients with medical chart abstraction, 445 (68%) responded. There were 98 hernia recurrences identified on the medical chart abstraction. Hernia recurrence, but not other complications, was associated with significant differences in survey response rates: 58.2% of patients with recurrence responded, compared to 69.5% without recurrence ( $p = 0.03$ ). There were no significant differences in survey response with increasing time from surgery to survey ( $p = 0.06$ ).

**Conclusions:** In this study of predictors of patient response to mailed surveys after VHR, only hernia recurrence was associated with a significantly lower response rate. In contrast to previous studies demonstrating decreased response rates over time, our study showed steady response rates over time. These data confirm the limitations of retrospective outcome studies in terms of response bias related to outcomes and stress the need to confirm patient reported outcomes with a secondary measure.