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Reply to "A Nationwide Analysis of Post-Penile Prosthesis Infection: Do Hospital and Surgeon Volume Matter?"

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**DISCUSSION**Articles in PressApril 19, 2025

# Reply to "A Nationwide Analysis of Post-Penile Prosthesis Infection: Do Hospital and Surgeon Volume Matter?"

Juan J Andino

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Show Outline

I commend the authors for their important contribution to the prosthetic literature. Using the national-level Premier Healthcare (PHC) Database, the authors focus on a critical outcome in first-time inflatable penile prosthesis (IPP) surgery: postoperative infection, one of the most feared complications after any implant.

In their analysis of 18,475 IPP cases over six years, the authors report a 2.99% infection rate (533 cases), with a median follow-up of 3.2 years. This is an important finding for counseling patients in the in the era of modern, antibiotic-coated devices. The findings build on earlier work by Dr. Hsieh's team, which showed in a California-wide study of penile implants that almost a quarter of re-operation occurred at a different hospital than the index surgery.[1] This highlights the limitations of single-surgeon/institution studies in capturing complication rates. Despite the inherent constraints of claims-based analyses, these studies may offer more realistic representation of complications following prosthetic surgery.

A notable strength of this study is its evaluation of facility volume. The authors identify a volume-outcome relationship: high-volume facilities (mean 60.7 IPPs/year, top quartile) had significantly lower infection rates of 2.4% compared to low-volume centers (mean 2.8 IPPs/year, bottom quartile) with infection rates of 3.7%. These findings raise an important question: how can infection-prevention best practices of high-volume centers be identified, standardized, and implemented across all facilities, regardless of surgical volume?

The study also examined surgeon volume, finding a trend toward lower infection rates with 2.7% infection rate for the highest quartile surgeon (mean 33 IPPs per year) vs 3.2% for lowest quartile surgeons (mean 0.4 IPPs per year), thought this difference was not statistically significant. Prior analyses have demonstrated a more robust association: a New York state study reported infection-related reoperation rates 2–2.5 times higher among surgeons in the lowest three quartiles compared to those performing >31 implants annually.[2] Similarly, a recent Sexual Medicine Society of North America (SMSNA) collaboration study confirmed that high-volume surgeons (>31/year) had lower reoperation rates in a national Medicare cohort of over 8,000 patients.[3]

Lastly, 77 of the 553 infected IPPs in their cohort underwent salvage – with 58 (10.5%) undergoing replacement with an IPP and 19 (3.4%) replacing with a malleable through an infected field. This was higher than the 6.6% salvage rate seen in the Medicare study[3] and should remain an area of research and discussion for implanters. Given the mean length loss of 3.7cm seen in delayed reimplantation,[4] efforts to educate trainees and urologists that salvage is an option for localized infection without sepsis has the potential to improve patient-centered outcomes.

It is important to note that the PHC database only captures surgeries performed within its facilities, unlike the state- and national-level surgeon tracking available in the New York and Medicare studies. While some experts have suggested a volume of 25 implants per year to define high-volume implanters[5], the data[2,3] now supports >31 implants per year as a more meaningful benchmark—one that should be considered by industry and researchers alike when defining and evaluating Centers of Excellence.

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none

## CONFLICT OF INTEREST

1) Dr. Juan J Andino, no conflict _____

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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