

Readmission rates following adenotonsillectomy in pediatric patients: Trends at major pediatric hospitals.

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Background

- ❖ Overnight admission can improve the safety of adenotonsillectomy (T&A) in children and may reduce the need for unplanned hospital revisits.
- ❖ Hospitals vary widely in their use of overnight admission after T&A, but it is unknown how this institutional practice affects revisit rates
- ❖ We sought to examine whether admission practices favoring overnight stay after T&A in children were associated with a lower likelihood of all-cause revisits in a multi-center registry.

Methods

- ❖ Pediatric T&A (age ≤ 18 years) performed in 2007-2015 were identified in the Pediatric Health Information System (PHIS).
- ❖ The primary outcome was 7-day, all-cause readmission or emergency department (ED) revisit.
- ❖ Secondary analysis examined specific revisit types.
- ❖ The primary exposure was each institution's annual rate of overnight stay after T&A.
- ❖ Locally-weighted regression plotting was used to compare hospital rates of overnight stay and revisits
- ❖ Mixed-effects logistic regression was used to predict individual revisit risk according to institutional practices of overnight admission after T&A.

Figure 1. Hospital rates of overnight stay after pediatric T&A vs. revisit rates (N = 48 hospitals).

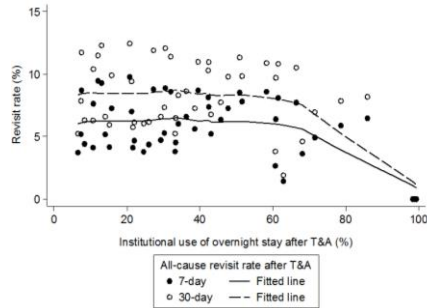
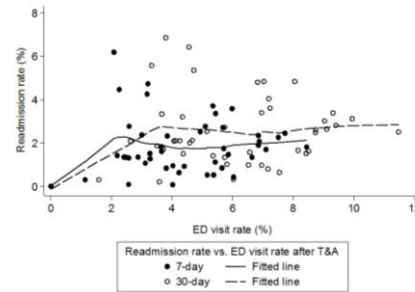


Figure 2. Hospital ED visit rates vs. hospital readmission rates after pediatric T&A (N = 48 hospitals).



Results

- ❖ The analysis included 411,876 procedures at 48 hospitals.
- ❖ Annual rates of overnight stay ranged from **3%-100%**; 7-day revisit rates ranged from **0%-15%**.
- ❖ The most common specific reasons for 7 day revisits were dehydration, bleeding and pain.
- ❖ Revisit rates did not differ by institutional rates of overnight admission (**Figure 1**).
- ❖ On multivariable analysis, individual patients' revisit odds were not associated with hospitals' rates of overnight stay after T&A (OR of $>60\%$ vs $<20\%$ = 1.01; 95% CI: (0.91, 1.12); $p=0.873$)
- ❖ ED revisit rates were not correlated with readmission rates (**Figure 2**). Rather, readmission rates were correlated with hospitals' use of overnight admission after T&A.

Discussion

- ❖ Pediatric hospitals vary widely in admission practices following T&A.
- ❖ Some institutions still perform T&A as a mostly inpatient procedure, while others nearly always discharge patients on the day of service.
- ❖ Our results reveal that these differences in practice contribute little to explaining institutional variation in revisit rates after T&A.
- ❖ However, institutional preference for overnight admission after T&A is associated with the type of revisits: in such institutions, patients returning after T&A are more likely to be readmitted as inpatients rather than be seen in the emergency department.
- ❖ These findings suggest that current judicious use of overnight stay performs well at reducing the risk of early revisits, notwithstanding practice variations across free-standing pediatric hospitals.
- ❖ Other institutional characteristics, or aspects of the case mix, may account for differences in hospitals' revisit rates after T&A

References:

1. Shay S et al. Laryngoscope. 2015 ;125:457-61.
2. Goodman DC. Pediatr Clin North Am 2009;56:745-55.