Introduction: The incidence and severity of common morbidities in children, following the removal of tonsils and/or adenoids is not well described in the anesthetic literature. Post-operative morbidity can delay functional recovery, having an impact on school attendance and family life. It is necessary to understand the nature of common post-adenotonsillectomy (T&A) morbidities in order to devise suitable strategies to reduce them.

Methods: After ethics approval, a prospective observational study of children undergoing either T&A, tonsillectomy or adenoidectomy was undertaken to evaluate their postoperative recovery. Anesthetic management was non-standardized. Intraoperative anesthetic management data was extracted from the anesthetic record. Postoperative recovery data was recorded by nurses on a standardized form and included age-appropriate pain scores (mCHEOPS & numeric rating scale, range 1-10). Questionnaires were sent to parents via email or by post on day seven post surgery. Questions included need and reason for postoperative healthcare worker (HCW) contact, severity of pain, functional recovery and overall satisfaction. Hospital data identified any visits/admissions within seven days of surgery for non-responders. Data are described as proportions, mean ± SD or medians (inter-quartile range). Spearman’s rho, Pearson chi-squared, Fischer’s exact and unpaired t-tests were performed as appropriate.

Results: One hundred and sixty patients were enrolled and 117 (73%) responded to the survey. Mean age was 7 ± 3.9 years, 59% were male, the majority underwent T&A (62%), 85% were ASA I-II and the mean BMI percentile was 62.1 ± 31.1. Most received an inhalational induction (82%), maintenance with sevoflurane (83%) and mean intraoperative dose of morphine equivalents and dexamethasone were 111 ± 70 mcg/kg 132±90 mcg/kg respectively. The median (interquartile range) maximum first hour recovery room (RR) pain score was 6 (3-8). Mean morphine equivalent consumption in the RR was 68.1± 53.3 mcg/kg. Patients were prescribed codeine 1 mg/kg with acetaminophen every 4-6 hours as required. Thirty eight (33%) of respondents contacted a HCW, the main reasons being static (58%) or dynamic pain (32% not drinking). Forty-six respondents (39%) described pain during the first week as being “severe-worst ever”. Only surgery including tonsillectomy (rho 0.195, p=0.04) and postoperative RR morphine consumption (rho 0.275, p=0.003) were weakly associated with post-discharge pain. Nausea/vomiting was described as “severe-worst ever” in only 7 (6%) and overall satisfaction was ranked as “excellent-outstanding” in 109 (93%) patients. Non-responder demographic, anesthetic management and postoperative recovery data and hospital visits were not found to differ from respondents.

Discussion: Severe pain is common after T&A and less so with adenoidectomy. Pain is the primary reason for postoperative contact with the healthcare system. It is difficult to predict which patients will experience more pain compared to others. Further research directed at predicting and preventing post-operative pain following this common surgical procedure is required.