

**Title: Trends in the Utilization of Moderate Sedation in Children in Emergency Departments in the USA**

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**Introduction:** Moderate sedation (MS) is frequently needed to successfully accomplish diagnostic or interventional procedures in children presenting to the emergency department (ED). Skilled personnel and equipment suitable for infants and children are essential for safely delivering sedation care. There are no current national estimates of the number of ED visits involving MS. We sought to estimate the utilization of MS using a large nationwide sample.

**Methods:** The Nationwide Emergency Department Sample is the largest all-payer emergency services database in the United States containing unweighted data from approximately 30 million ED discharges/year and estimates approximately 135 million weighted visits. For the years 2008 through 2013, the database was queried for children under age 18 years whose ED records included a CPT code for MS.

**Results:** 171,792 visits associated with MS were identified. Yearly average number of MS episodes was 28,631 (range 24,848-36,498). Mean patient age was 7.4 years. MS episodes by age epoch are shown below.

< 1 year	1-2 years	3-5 years	6-11 years	12-17 years
3072 (1.8%)	31178 (18.1%)	39206 (22.8%)	55764 (32.5%)	42572 (24.8%)

Medicaid insured patients accounted for 38% of episodes while private insurance was associated with 51.7% of the MS visits. 32% of MS visits occurred on Saturday or Sunday. Mean ED charge attributed to MS inclusive visits was \$4252.00(S.D. 149.6) with a total of \$658,414,566.

**Discussion:** On average 80 children per day across the United States receive moderate sedation care in ED’s. Additional information about the rest of the pediatric sedation care continuum (anxiolysis through deep sedation) in ED’s and other venues that provide diagnostic tests and procedures for children is difficult to find. Estimates of the prevalence of the whole continuum of sedation care for children outside the operating room is needed for optimal resource planning.