## Molar Incisor Hypomineralization: Etiology and Prevalence in Rural Central Pennsylvania Sehgal T, Malik G, Frank K, Popova M Figure 3. History of other medical diagnoses at < 1 year and 1-5 years

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### Purpose

Molar incisor hypomineralization (MIH) is a developmental enamel defect involving at least one first permanent molar and sometimes permanent incisors. The prevalence of MIH ranges from 2.8% to 44%. In this study, we explore the etiology and prevalence of MIH in the pediatric population served by a tertiary medical center in Pennsylvania.

### Methods

Electronic medical records (EMR) review of patients aged 6-25 years presenting with enamel defects for routine dental visits between 2011 – 2021 was completed. Of these 564 patients, 106 (18.8%) were diagnosed with MIH according to criteria by the European Academy of Pediatric Dentistry. EMR provide insight into demographics, medical history, hospitalizations, antibiotic use, and pregnancy-related data for MIH patients. We also analyzed the control group from the same data set.

### Results

Table 1. Patient demographics and medical history.			
	Case	Control	р-
Characteristic	(N = 106)	(N = 106)	value <sup>1</sup>
Age- years, median	7.99 (7.00,	6.48 (6.21,	< 0.001
(IQR)	9.28)	6.84)	
Sex, n (%)			0.336
Female	59 (56%)	52 (49%)	
Male	47 (44%)	54 (51%)	
<sup>1</sup> Wilcoxon rank sum test; Pearson's Chi-squared test			

Compared to patients without MIH, those with MIH were more likely to have been diagnosed with asthma: 18% of cases vs. 8.5% of controls (p = 0.043). Control patients tended to have a greater number of antibiotics courses at < 1 year (p = 0.035).

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Figure 1. Histogram of age for case and control patients



Figure 2. History of other medical diagnoses



## 100%







### Conclusion

MIH has a multifactorial etiology and is clinically prevalent in central Pennsylvania. Compared to patients without MIH, those with MIH were more likely to have been diagnosed with asthma and to have been on a greater number of antibiotics prior to their first birthday.

