

Research Question

What relationship, if any, exists between housing-related factors and asthma rates for Floridians?

Literature Review

28.2 million Americans suffer from asthma, leading to **\$81.9 billion in healthcare costs** every year, placing a burden on individuals, households and the greater American society (Allergy & Asthma Network, 2025). Chronic respiratory illnesses like asthma may emerge or be exacerbated without proper **household ventilation as mold and mildew** impact respiratory tracts (Mendell et al., 2011). Households are forced to make tradeoffs between **housing location and quality**. Income plays a major role in a household's ability to rent or purchase quality, new, or well-maintained housing in a desirable location. Half of American renters are expected to pay **more than 30% of their income on rent and utilities**, creating a cost burden on consumers (Harvard, 2024).

Methodology

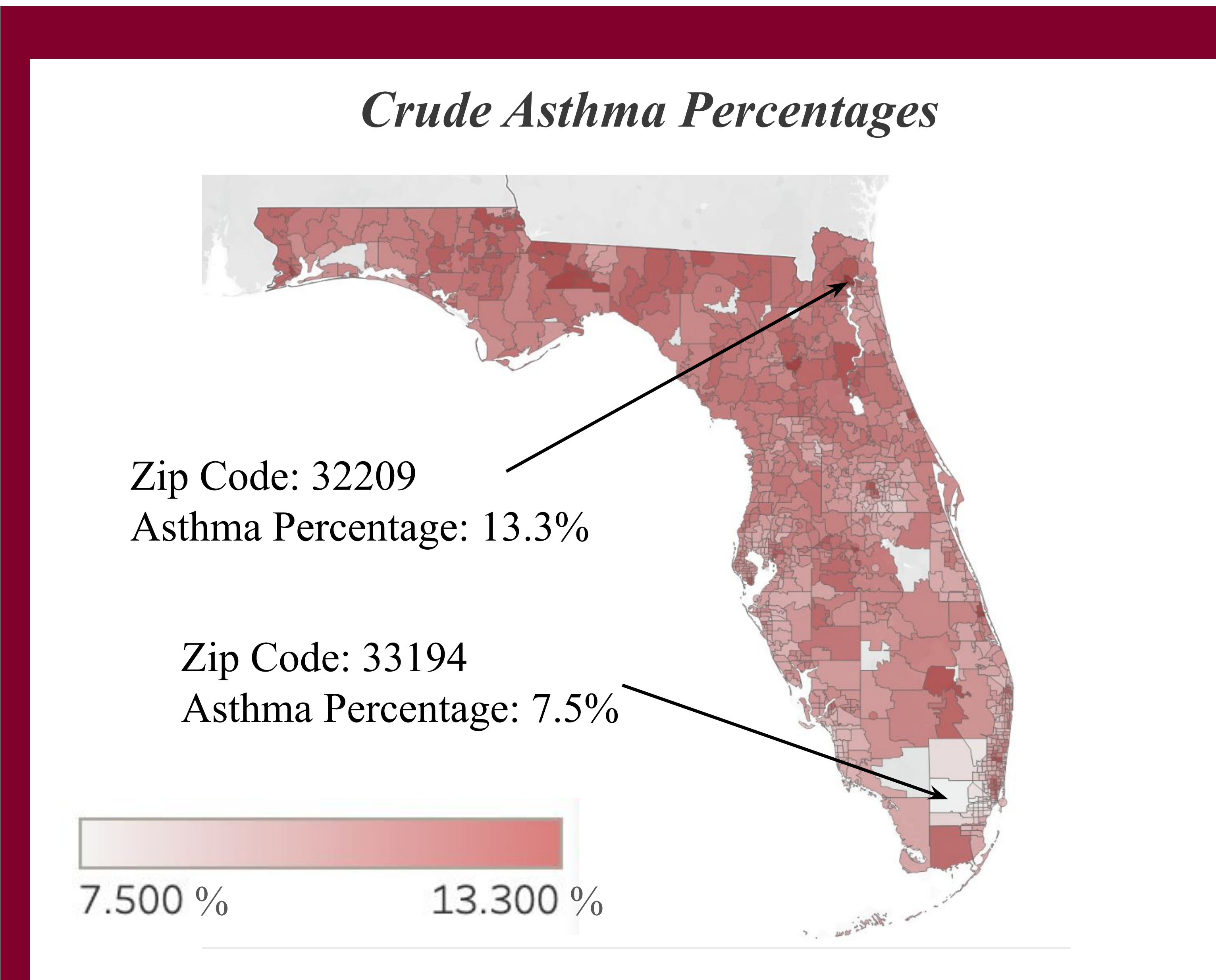
$$\text{Asthma Diagnosis Percentages} = \beta_0 + \beta_1 \text{TypicalHV} + \beta_2 \text{Location} + \beta_3 \text{Income} + \beta_4 \text{YearBuilt} + \epsilon$$

- Sample of **914 Florida zip codes**
- Median Household Income Data via Census (2019-2023)
- Median Year Built Data via Census (2019-2023)
- Typical Home Values and Metropolitan Status via Zillow (2024)
- Crude Asthma Rates via CDC PLACES (2023)

Limitations

More independent variables needed to broaden analysis of all factors contributing to asthma occurrence rates.

Preliminary Results



STATA Regression Results

	Coefficient	P-Value	Std. Error
Typical Home Value*	-2.99E-07	0.004	1.04E-07
Metro Binom*	-0.2735059	0.016	0.1135256
Median HI	-0.0000186	0	1.34E-06
Median YB	0.002127	0.333	0.0021967

*Preliminary results show a **2.35 percentage point decrease in asthma percentages for every one unit change in home values** and a **0.38 percentage-point decrease in asthma percentages for every one-unit change in metropolitan status**.

Policy Implications

- Rural counties overwhelmingly have worse measures of social determinants of health at the county level (Weeks et al., 2023).
- This indicates policy change and general intervention should be targeted to more rural communities initially, before expanding into urban areas to improve health outcomes.
- The accessibility of interest-free loans should be increased to fund home improvement projects that aim to remedy hazardous living conditions that can lead to respiratory ailments.
- Community health workers can support households by offering interventions for unsafe mold, mildew, and moisture problems (Bryant-Stephens et al., 2021).
- Policymakers can advocate for home improvements by improving ventilation and encouraging proper heating in homes to improve asthma rates (Free et al., 2009; Howden-Chapman et al., 2008).

References & Acknowledgments



Scan the QR code for works cited.

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