

What Do We Know? – Describing *Strongyloides* Infection Among Pediatric Patients on a Mobile Clinic

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Background

- While the AAP recommends testing for or presumptively treating strongyloidiasis among foreign-born immigrant children, strongyloidiasis prevalence is not well described in the US.
- More information on strongyloidiasis prevalence and risk factors would help pediatric providers in resource limited settings where strongyloidiasis prevalence may be higher but testing or presumptively treating is challenging.
- The Texas Children's Mobile Clinic Program (TC-MCP) provide free medical care to an under-resourced, immigrant-prominent population.

Objectives

- Describe the frequency of *Strongyloides* IgG positivity among patients receiving well child checks (WCC) on the mobile clinics
- Capture medical and social data that could be used to identify risk factors associated with strongyloidiasis.

Methods

- We invited patients age 0-18 years who presented for WCC on the mobile clinics to participate. We obtained informed consent for each participant. Baylor College of Medicine Institution Review Board approved this study.
- Participants completed a written survey about demographics, travel history, symptoms, medication use, and potential exposures. We later entered survey results into REDCap.
- Participants submitted a venous blood sample for *Strongyloides* IgG and CBC with differential (for absolute eosinophil count).
- We evaluated the data using descriptive statistics.

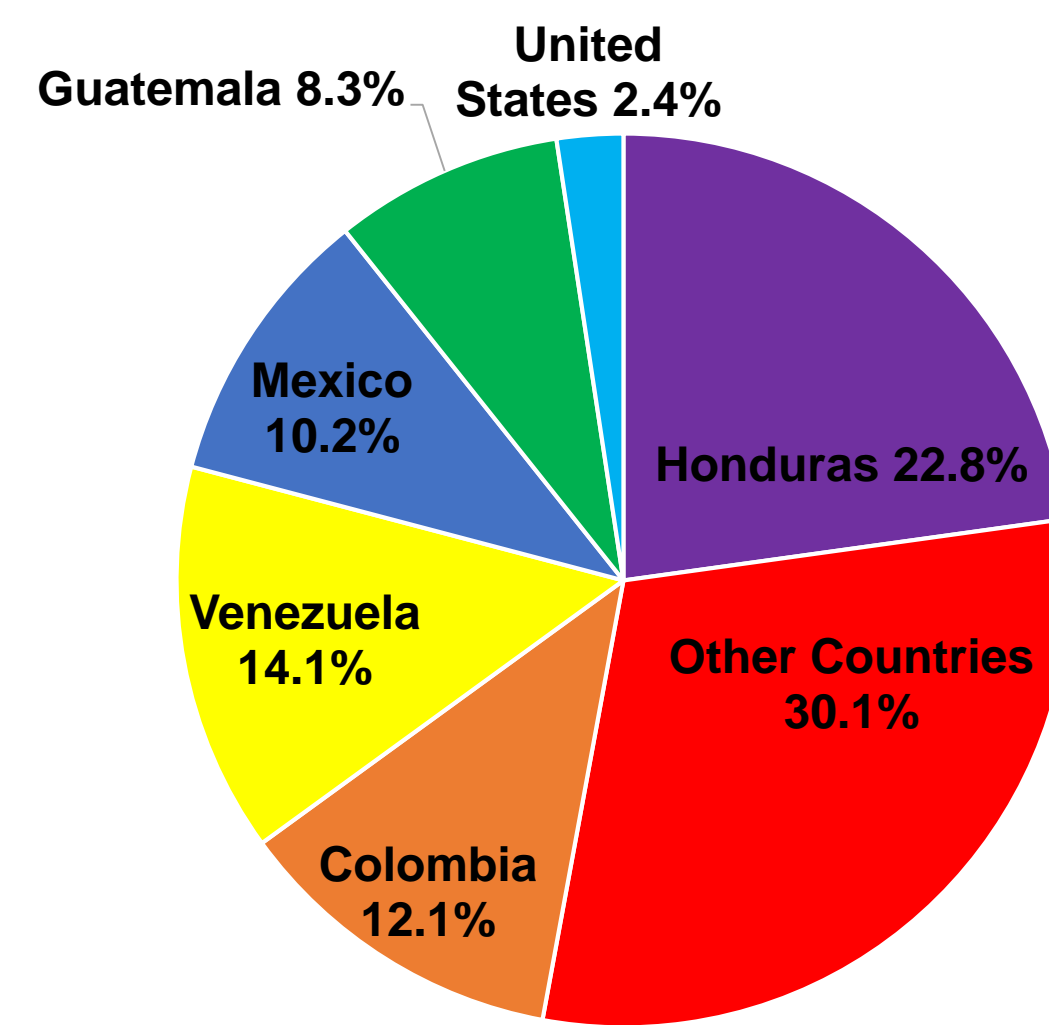
Results

- From October 2022 to June 2023, 309 patients presented for WCC. 206 consented to participate.

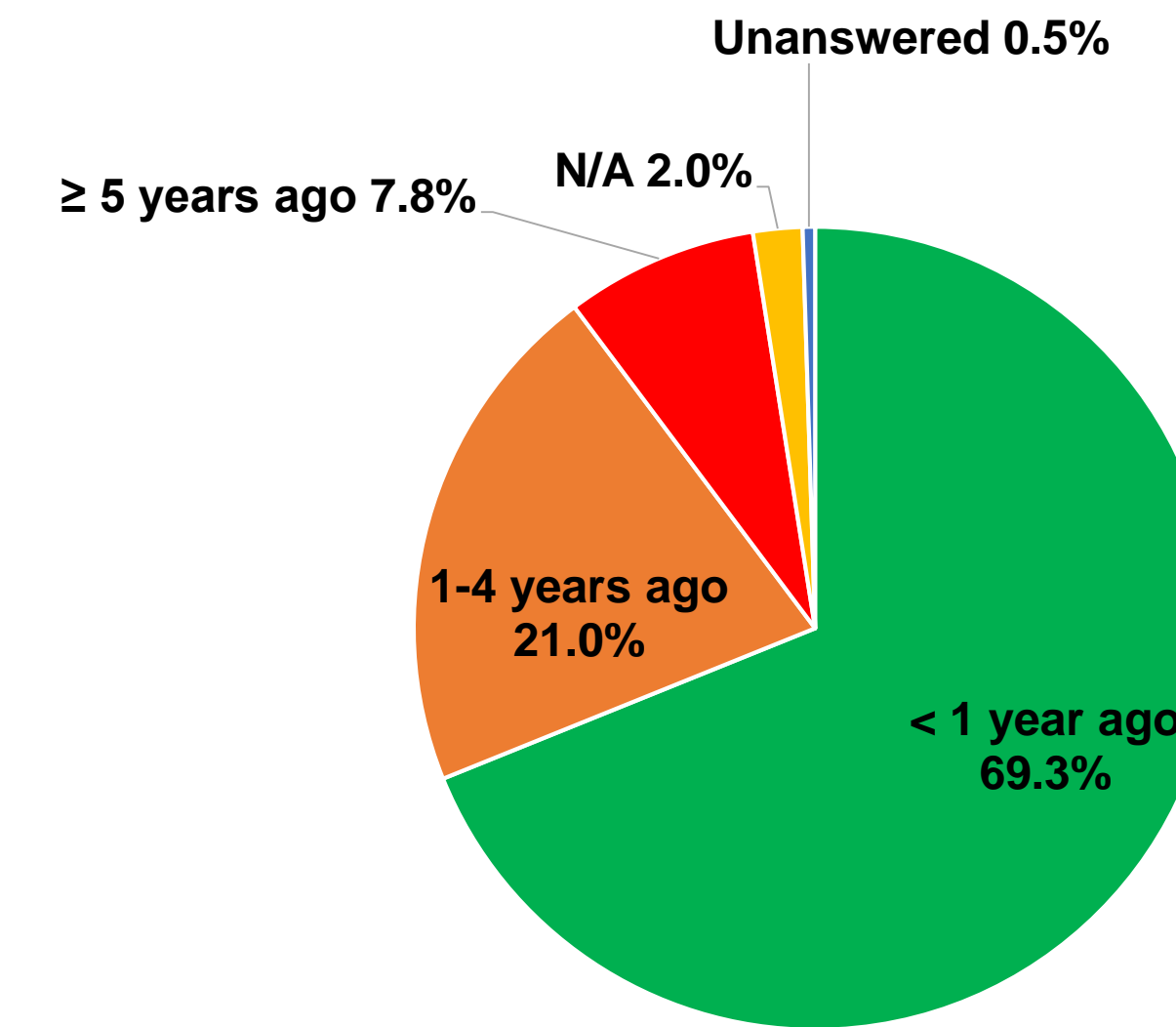
Demographics

Gender		Race		Ethnicity	
Male	107 (51.9%)	White	163 (79.1%)	Hispanic	200 (97.1%)
Female	99 (48.1%)	Black	9 (4.4%)	Non-Hispanic	5 (2.4%)
		Asian	3 (1.5%)	Unknown	1 (0.5%)
		Native American	1 (0.5%)		
		Other	11 (5.3%)		
		Unknown	19 (9.2%)		

Country of Birth



Time Since Arrival to the US



Prior Medication Use

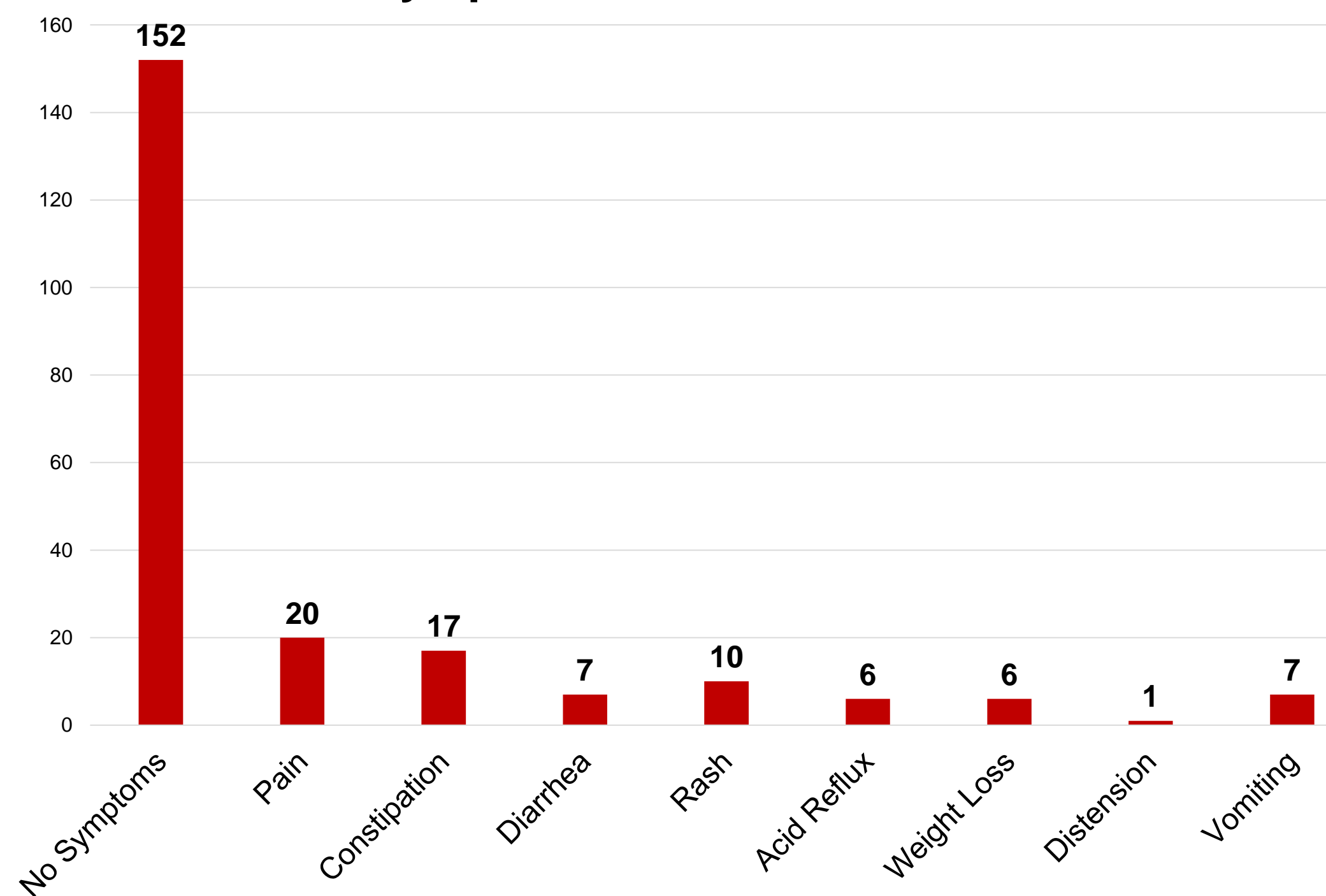
Timeframe	Lifetime	< 1 year ago	1 – 4 years ago	≥ 5 years ago
Ivermectin	4 (1.9%)	1 (0.5%)	3 (1.5%)	
Albendazole	73 (35.4%)	46 (22.3%)	21 (10.2%)	6 (2.9%)
Mebendazole	27 (13.1%)	7 (3.4%)	15 (7.3%)	5 (2.4%)
Any Medication*	106 (51.5%)			

*Any medication refers to ivermectin, albendazole, mebendazole, or other antiparasitics.

Lab Results

<i>Strongyloides</i> IgG		
Positive	Equivocal	Negative
4 (1.9%)	3 (1.5%)	199 (96.6%)
Absolute Eosinophil Count		
< 500 cells/μL	≥ 500 cells/μL	Not Available
177 (86.8%)	27 (13.2%)	2 (0.97%)

Symptoms in the Last Month



Exposures

No running, potable water	58 (29.6%)
No bathroom/toilet	18 (9.4%)
Barefoot on grass or soil	49 (25.5%)
Regular exposure to dogs or cats	74 (37.4%)
Regular exposure to livestock	36 (18.7%)
Regular exposure to other animals	17 (9.1%)

Characteristics of Participants with Positive *Strongyloides* IgG

Participant*	1	2	3	4
Demographics	8 yo M, white	16 yo F, white	7 yo M, white,	11 yo F, white,
Birth Country	Hispanic	Hispanic	Hispanic	Hispanic
Countries Prior to US	Honduras	Honduras	Nicaragua	Mexico
	Honduras, Mexico	Honduras	Nicaragua, Mexico	Mexico
Time Since Arrival to US	<1 year ago	1 – 4 years ago	<1 year ago	> 5 years ago
Symptoms	Other	None	Constipation	None
Antiparasitic Used in Lifetime?	Yes – albendazole	Yes – albendazole	Yes - albendazole	Yes - other
Exposures	Cats & dogs	None	None	None
Absolute Eosinophil Count	500 cells/μL	440 cells/μL	100 cells/μL	220 cells/μL

*Participant numbers were randomly assigned and are not in chronological order of enrollment

Conclusion

- It is feasible to screen for strongyloidiasis and associated risk factors among patients attending a mobile clinic like TC-MCP.
- The number of participants with positive *Strongyloides* IgG was small. A future study should include more participants to establish prevalence and risk factors for strongyloidiasis among pediatric populations. This would better inform pediatric providers caring for populations in which resources for testing and treating are low.

