

Social Needs Screening in Critically-III Pediatric Patients with Asthma

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THE PROBLEM

The contexts in which people live and work determine up to **50%** of health outcomes¹

Communities with unmet social needs experience:²⁻⁴

1. Increased mortality
2. More chronic disease
3. Higher ICU admission rates related to asthma

THE QUESTION

Do social needs result in:

1. More complicated ICU courses for asthmatics?
2. Lower follow-up rates?
3. More readmissions?

METHODS

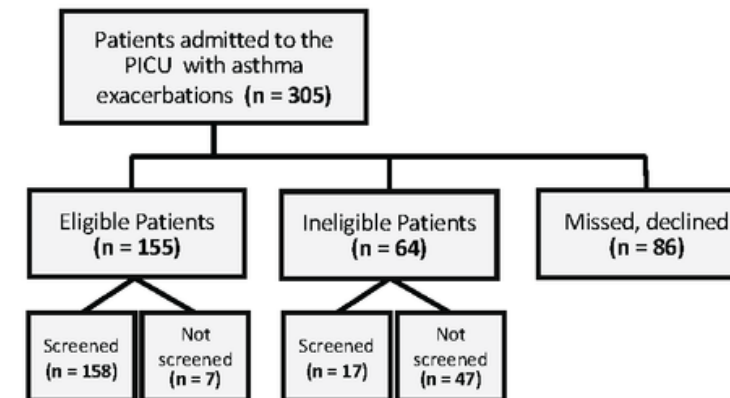
Study design:

- **Type:** Prospective cohort
- **Inclusion:** Children (2-18y) in the ICU with asthma (Feb, 2022 – Jan, 2023)
- **Exclusion:** Transferred, deceased, home BiPAP

Screener:



	My family is having issues with household asthma triggers (pests, dust, mold, unresponsive landlord)	<input type="checkbox"/>
	I have concerns about my child's asthma at school (strong smells, dust, pests, access to medications, etc.)	<input type="checkbox"/>
	I need help finding job training or employment programs	<input type="checkbox"/>
	I want to apply for public benefits (food stamps, cash benefits, WIC, SSI/SSDI)	<input type="checkbox"/>
	I would like help to provide food for my family... <input type="checkbox"/> Emergency food or government food benefits <input type="checkbox"/> Food pantry assistance	<input type="checkbox"/>
	I would like to receive help with my housing... <input type="checkbox"/> Finding housing (long term or short term) <input type="checkbox"/> Foreclosure assistance and counseling <input type="checkbox"/> Paying my utility bills (gas, electricity, and phone)	<input type="checkbox"/>
	I would like help with... <input type="checkbox"/> Childcare or baby supplies <input type="checkbox"/> Providing clothes and/or personal items for my family <input type="checkbox"/> Health care (finding insurance, prescription assistance)	<input type="checkbox"/>
	Other I would like to receive help with...	<input type="checkbox"/>



DISCUSSION

Average duration of screening time directly correlated with the number of unmet social needs.

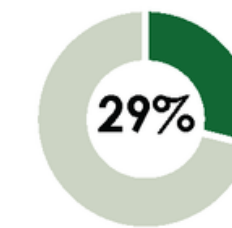
While the average (1) duration of BiPAP use, (2) ICU days, and (3) hospital days increased with unmet social needs, the difference was not statistically significant.

(1) Follow-up rates and (2) ED visits were significantly higher in patients with unmet social needs, though (3) readmissions were not significantly different.

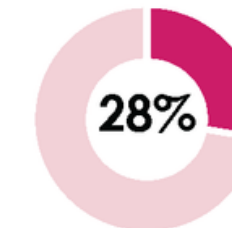
RESULTS

Social Needs

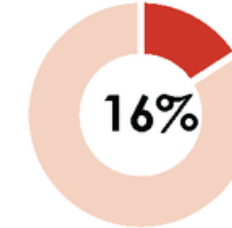
Food Insecurity



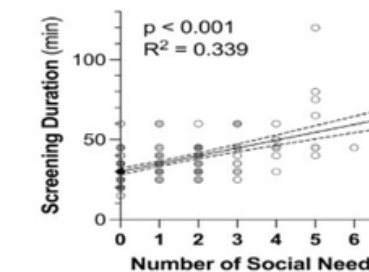
Housing Needs



Job Assistance



Screening



	BiPAP Duration (hours)
Positive Screens	33.73
Negative Screens	30.71
Difference	3.03 (CI = -1.29 – 7.34, p = 0.991)

BiPAP, F/U, & ED Visits

	Positive Screen	Negative Screen
Follow-Up	36	35
No Follow-Up	60	23
Percentage	37.5%	60.3%

Absolute Difference 22.8% (p = 0.0059)

	Positive Screen	Negative Screen
No ED Visit	14	23
ED Visit	17	9
Percentage	45.2%	71.9%

Absolute difference 26.7% (p = 0.031)



1. Hood CM, Gennuso KP, Swain GR, et al. County Health Rankings: Relationships Between Determinant Factors and Health Outcomes. American Journal of Preventive Medicine. February 2016; 50(2):129-135. doi:10.1016/j.amepre.2015.08.024

2. Tyrts J, Gourbhakar A, Ward MC, Kachroo N, Teach SJ, Parikh K. Social Determinants of Health and At-Risk Rates for Pediatric Asthma Morbidity. Pediatrics. 2022 Aug 1;150(2):e2021055570. doi: 10.1542/peds.2021-055570. PMID: 35871710.

3. Grunwell JR, Opalka C, Mason C, Fitzpatrick AM. Geospatial Analysis of Social Determinants of Health Identifies Neighborhood Hot Spots Associated With Pediatric Intensive Care Use for Life-Threatening Asthma. J Allergy Clin Immunol Pract. 2022 Apr;10(4):981-991.e1. doi:10.1016/j.jaip.2021.10.045. Epub 2021 Nov 11. PMID: 34775118; PMCID: PMC9007839.

4. Schickedanz A, Hamity C, Rogers A, Sharp AL, Jackson A. Clinician Experiences and Attitudes Regarding Screening for Social Determinants of Health in a Large Integrated Health System. Med Care. 2019 Jun;57 Suppl 6 Suppl 2(Suppl 6 2):S197-S201. doi:10.1097/MLR.0000000000001051. PMID: 31095061; PMCID: PMC6721844.