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Serologic Susceptibility to Vaccine-Preventable Infections in Asylum-Seekers

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To the Editor:

Asylum seekers who are unstably housed are at risk of acquiring and transmitting vaccine-preventable infections, even though most would readily accept vaccination and other preventive measures.[1] Some of the same structural barriers that compel asylum seekers to flee their home countries may limit their access to basic healthcare, including vaccinations. In contrast to most other immigrants in the US, asylum seekers are not required to undergo pre-departure or post-arrival evaluations to screen for active infections nor systematically offered immunizations against vaccine-preventable infections.[1] Furthermore, they may be unable to access legal services, social supports, stable housing, and healthcare.

The population of asylum seekers in the US is increasing: there are currently over 1.1 million pending asylum applications in the US.[2] Many of these families seek temporary shelter in congregate settings. There are recent reports of outbreaks of vaccine-preventable infections, including measles, in shelter sites for asylum seekers across the country.[3,4] Such outbreaks can result in serious harms for both asylum seekers and host communities, yet are preventable. Our objective was to determine the proportion of unstably housed asylum seekers who are susceptible to vaccine-preventable infections, as assessed serologically.

We conducted a cross-sectional study of 1147 unstably housed individuals seeking asylum in New York City who sought primary care at RyanHealth, a federally qualified health center, from January to November 2023 (Supplement). We measured serologic evidence of immunity against varicella, measles, mumps, rubella, hepatitis A, and hepatitis B. We used multivariable logistic regression to determine adjusted odds ratios (aOR) of lack of immunity by serology. Among 1147 people (53.2% female, median age 13), nearly one third were seronegative to measles (26.9%, 95% CI: 24.3–29.5%), varicella (32.0%, 95% CI: 29.3–34.8%), and hepatitis A (32.0%, 95% CI: 29.3–34.8%) (Table), which are higher than equivalent estimates for the general US population, estimated between 2.2–12.4%.[5] Absence

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of a titer to hepatitis B was identified in 41.6% (95% CI: 38.7–44.5%). No antibody titer to measles was more likely in children (aOR 1.69, 95%CI: 1.24– 2.30) and adolescents (aOR 2.10, 95%CI: 1.37–3.19) compared with adults. No antibody titer to varicella was more likely in children (aOR 9.85, 95%CI: 6.81–14.59) and adolescents (aOR 4.90, 95%CI: 3.02–8.01) compared with adults and in men (aOR 1.35, 95%CI: 1.02–1.78) compared with women.

In summary, many unhoused asylum seekers, particularly children, do not have evidence of immunity to vaccine-preventable infections which may place them at risk of infection. In addition to addressing structural barriers to their well-being, clinicians and public health officials should prioritize routine vaccination for asylum seekers in the US.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table.

Demographic characteristics and serologic immunity to vaccine-preventable diseases in asylum seekers in New York City, 2023

Characteristic	Value (n=1147)
Age, median (IQR) years	13 (7, 30)
Children (<13 years) *	558 (49.1%)
Adolescent/ Young Adult (13–21 years)	146 (12.8%)
Adults (>21 years)	433 (38.1%)
Sex, n (%)	
Female	610 (53.2%)
Male	537 (46.8%)
Country/ Region of origin, n (%)	
Venezuela	397 (34.6%)
Ecuador	262 (22.8%)
Colombia	196 (17.1%)
Peru	79 (6.9%)
Central America	58 (5.1%)
Caribbean	55 (4.8%)
Other (South America)	34 (3.0%)
Other (Africa, Asia)	29 (2.3%)
Mexico	11 (1.0%)
Secondary Migration	124 (10.8%)
Serologic Evidence of Immunity, n (%)	
Varicella	780 (68.0%)
Measles	839 (73.1%)
Mumps	978 (85.3%)
Rubella	1067 (93.0%)
Hepatitis A	780 (68.0%)
Hepatitis B	670 (58.4%)
Immune to Measles, Mumps, and Rubella	728 (63.5%)
Immune to hepatitis A and B	468 (40.8%)
Immune to all tested diseases	237 (20.7%)
Non-immune to all tested diseases	9 (0.8%)

* Youngest age recorded was 1 year old, and 24 (2.1%) of the sample was less than 2 years old.

Serologic evidence of immunity was based on a positive immunoglobulin G test. Denominator for each proportion was based on the number of people who completed testing. People with positive testing for hepatitis B infection were excluded from immunity analysis. Secondary migration was defined as migration following a minimum of one year in an intermediate country before entry into the US.