

Promotion of Recommended Vaccinations at Head Start

Jacqueline Tran, Janki Patel, Hosana Mamata, Erica Kwiatkowski, Amy Cheung

Population Health Clerkship
University of Massachusetts Medical School



Head Start

- A federally funded family-centered educational program that encourages early learning opportunities and promotes school readiness for children from birth to five years of age
- Provides education and health services, and advocates family well-being for children from low-income families

Objectives

- To evaluate recommended vaccination rates among students at Worcester Head Start programs
- To investigate common reasons for students not receiving recommended vaccinations
- To assess the social determinants involved in the completion of vaccinations

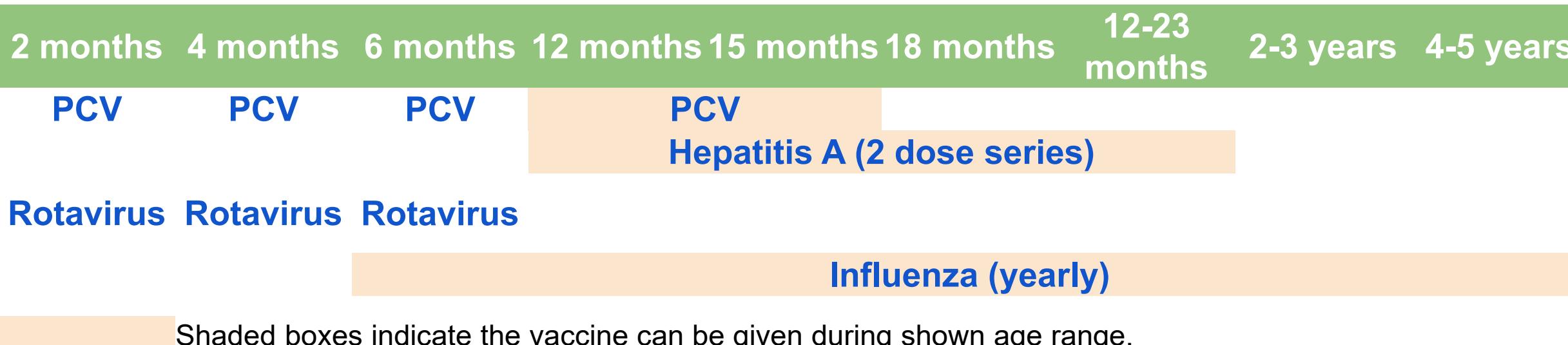
Service Project

- Herd immunity occurs when a sufficient portion of the population is vaccinated against a disease, which provides protection for non-vaccinated individuals
- Our team documented vaccine status and medical/religious exemptions at all Worcester Head Start students
- In order to increase the number of students who are up-to-date on their recommended vaccines, our team created a pamphlet for families that summarizes the benefits of vaccinating their children

Required Vaccines	# of Doses	Recommended Vaccines	# of Doses
DTaP	4	Pneumococcus (PCV)	4
Polio	3	Hepatitis A	2
MMR	1	Rotavirus	3
Hib	4	Influenza	1*
Hepatitis B	3		
Varicella	1		

*Any documented dose of seasonal influenza vaccine received between July 2015 and June 2016

Table 1. Required and recommended immunizations and their corresponding doses for completion at Worcester Head Start programs



Shaded boxes indicate the vaccine can be given during shown age range.

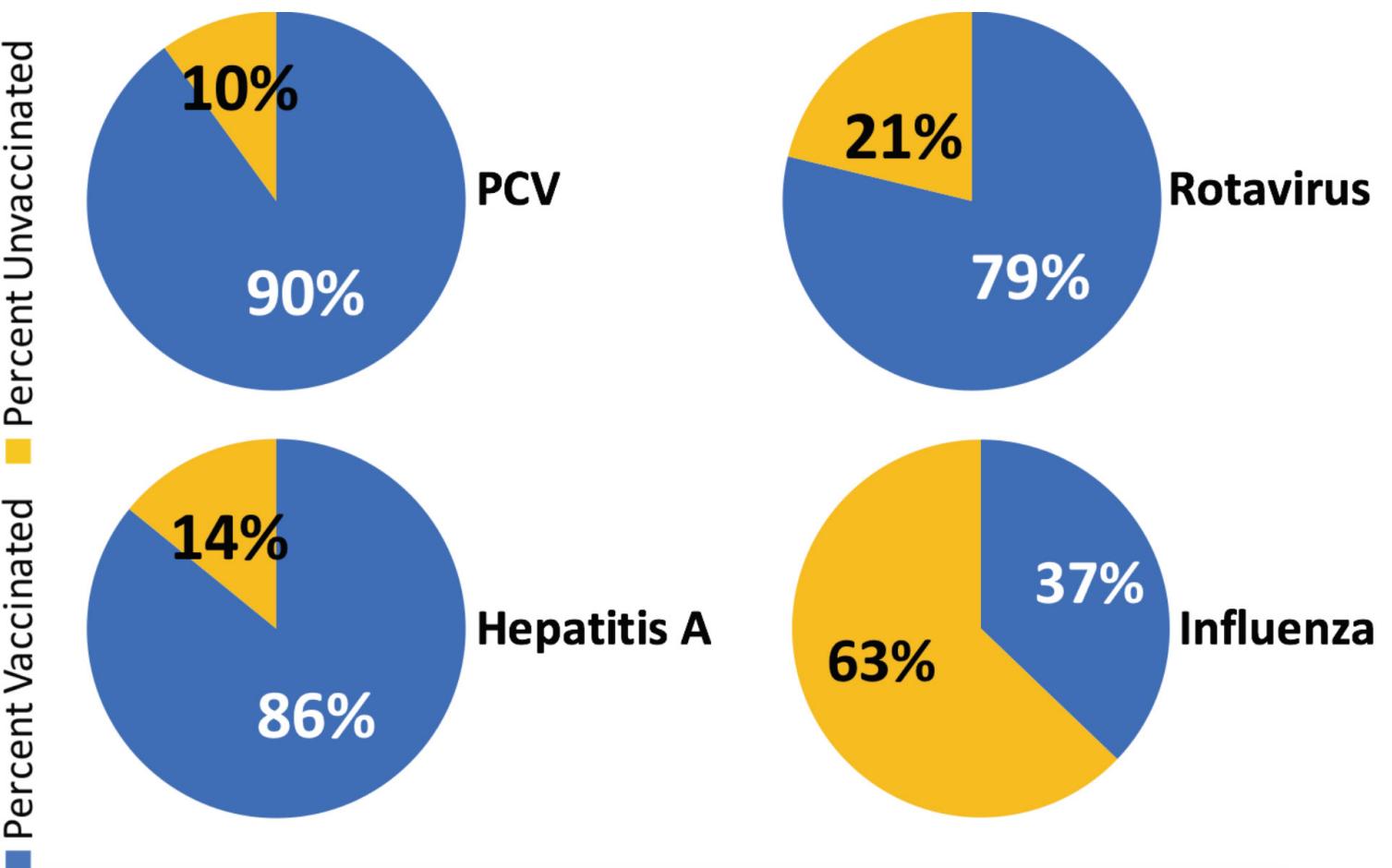


Figure 1. Percent children (n=611) vaccinated against recommended diseases at Worcester Head Start programs, October 2016. Exemptions from vaccinations: 3 medical, 1 religious.

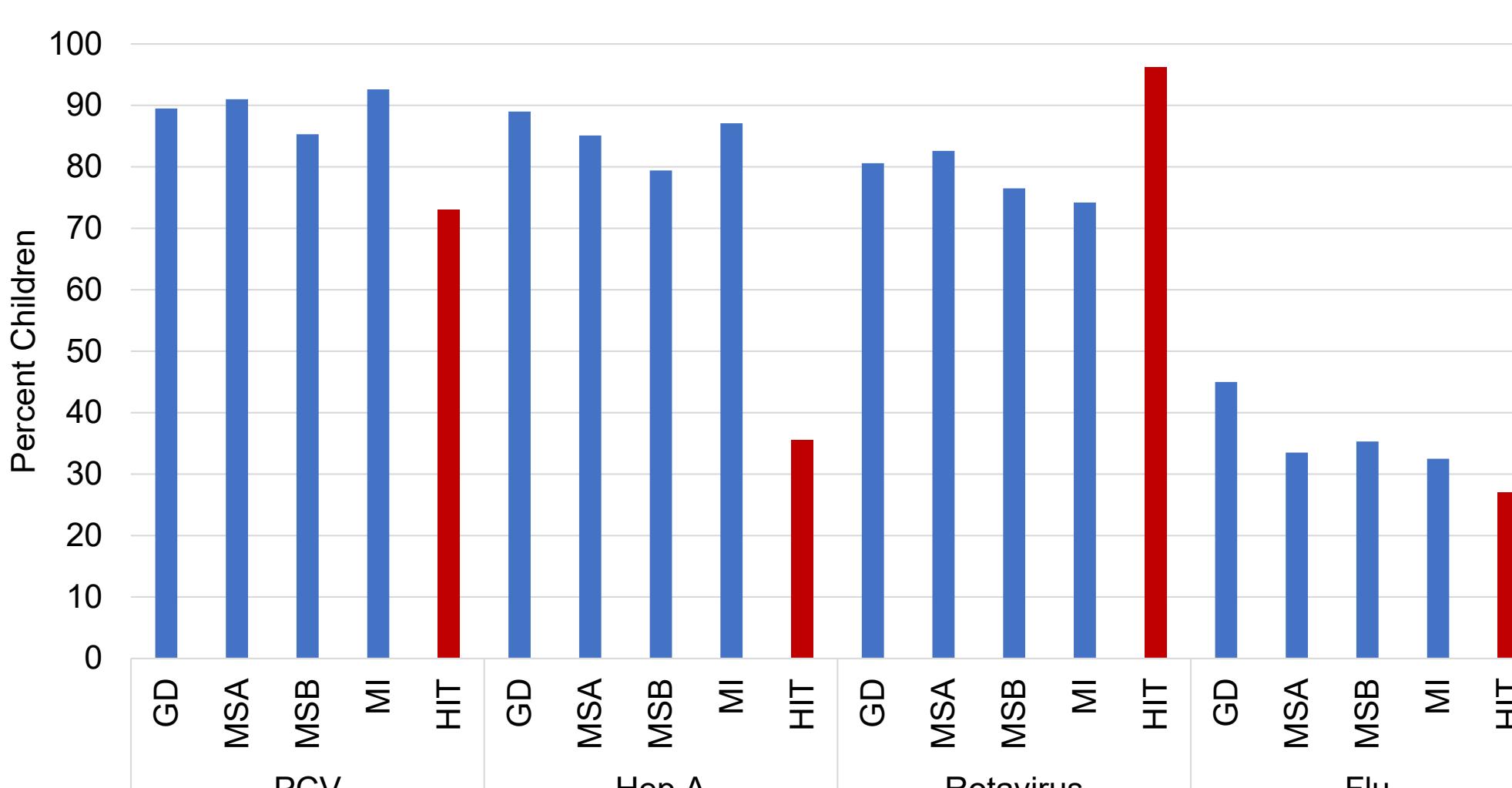


Figure 2. Differences between herd immunity threshold of and percent children vaccinated against recommended diseases at Worcester Head Start programs, October 2016. Herd immunity threshold values calculated from Nurhonen et al., Van Eiffelterre et al., Biggerstaff et al., Pitzer et al. GD: Greendale, MSA: Mill Swan A, MSB: Mill Swan B, MI: Millbury Street, HIT: herd immunity threshold.

Population

- Children (ages 3 through 5) enrolled at one of the four Worcester Head Start locations

Location	# Enrolled
Greendale (GD)	191
Mill Swan A (MSA)	102
Mill Swan B (MSB)	163
Millbury Street (MI)	155
Total Enrolled	611

Table 3. Number of children enrolled at Worcester Head Start programs for the 2016-2017 academic year

Conclusions

- Vaccination coverage is above threshold to establish herd immunity against PCV, Hepatitis A, and Influenza, but not against Rotavirus
- Educating families about the importance of receiving recommended vaccinations along with required vaccinations may be enhanced by distributing a pamphlet with basic information about each of the 4 recommended vaccines

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