

Dengue Vaccine Knowledge and Attitudes in Puerto Rico

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Outline

- General Population 2021
 - Opinions on a generic dengue vaccine
 - From household survey in Southern Puerto Rico
- Physicians 2020
 - Online vaccine knowledge and attitudes survey in Puerto Rico
 - Sponsored by the Puerto Rico Academy of Pediatrics
- Parents of children ages 9-16 years 2020 and 2021
 - Focus groups and discussion groups
 - Behavioral Science Team, Dengue Branch, San Juan



Communities Organized to Prevent Arboviruses



Puerto Rico Vector
Control Unit

A program of:  Puerto Rico
Science, Technology
& Research Trust

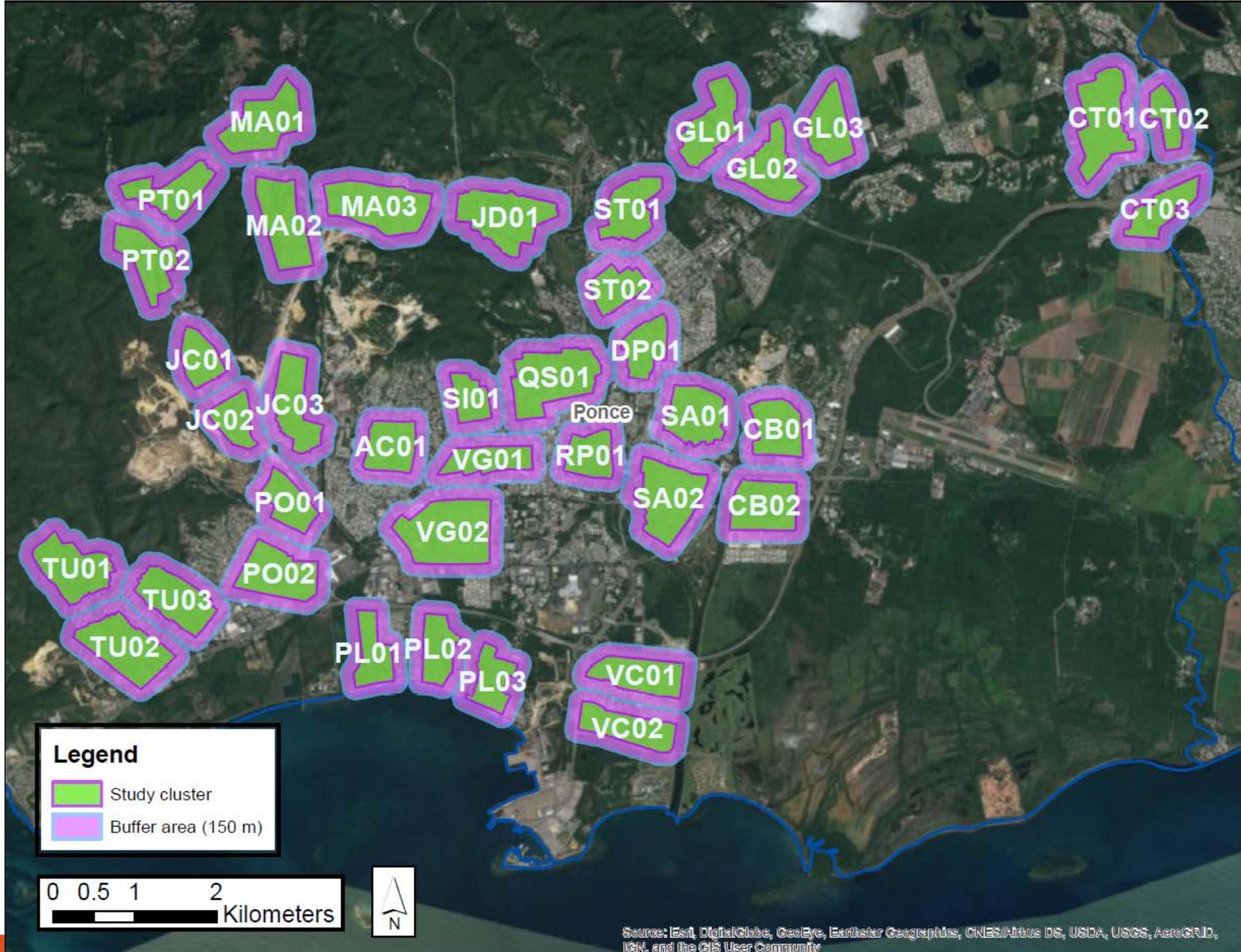


Centers for Disease
Control and Prevention



Communities Organized
to Prevent Arboviruses

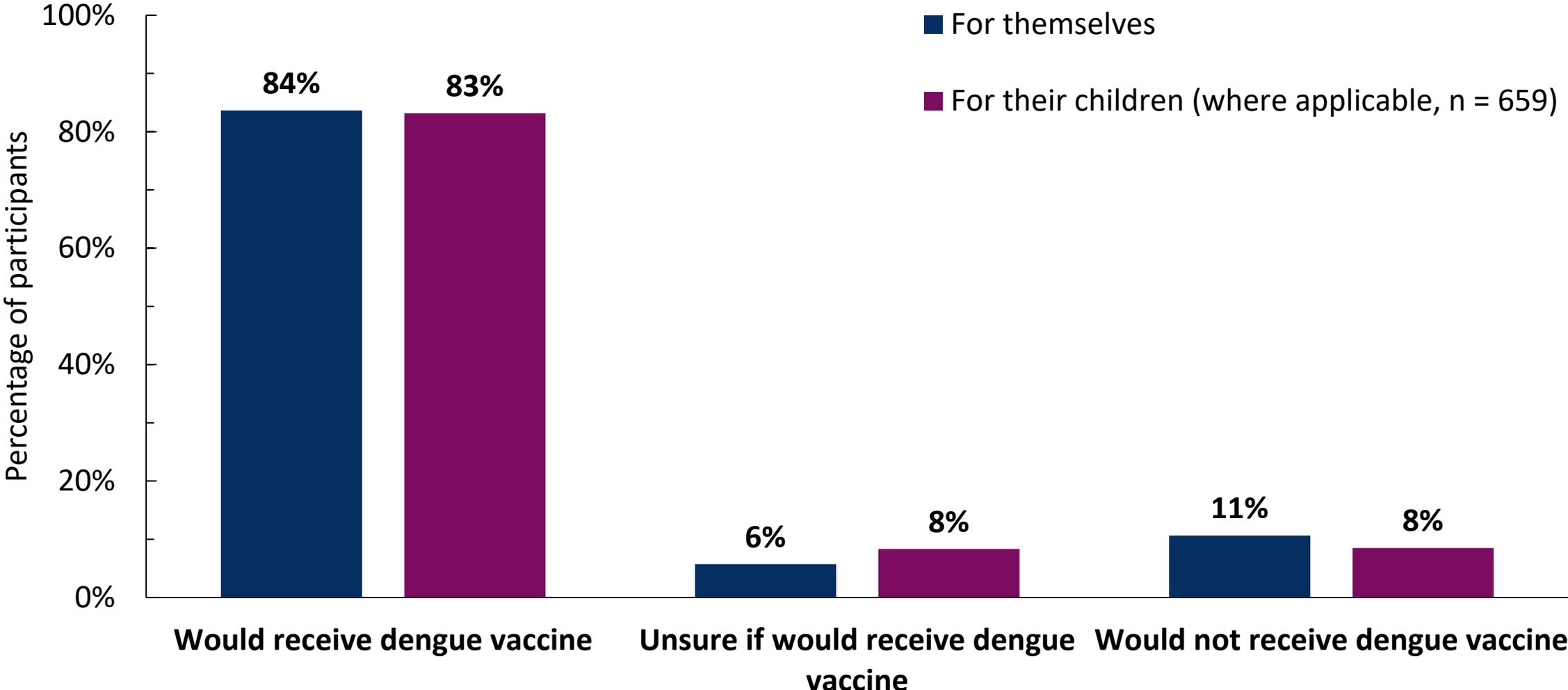
- Community-based **cohort study**, using data from Nov 2020 to June 2021
- Participants recruited from selected households in **38 cluster areas**



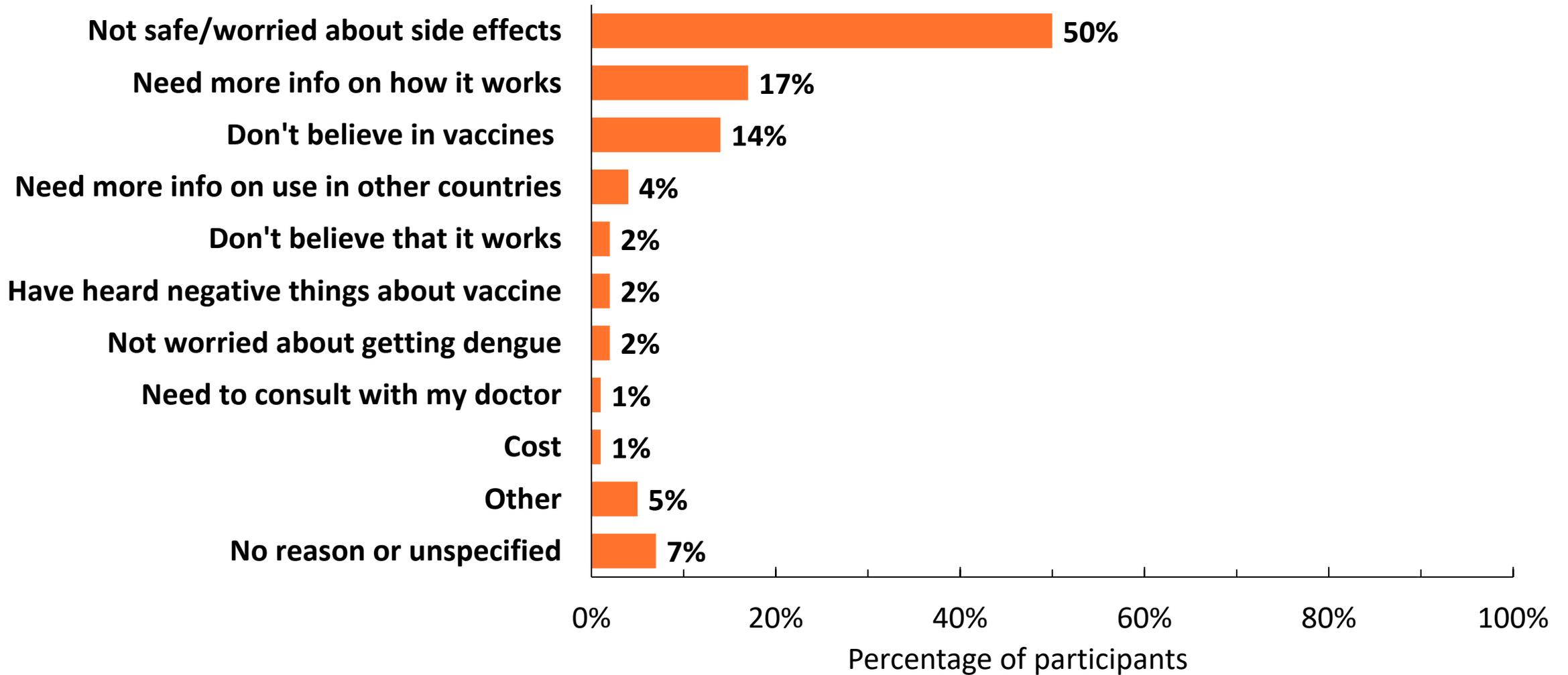


- Enrollment offered to all household members that meet eligibility requirements:
 - 1–50 years old
- Survey included questions on interest in a free or low cost (\leq \$10) dengue vaccine if approved and available in Puerto Rico

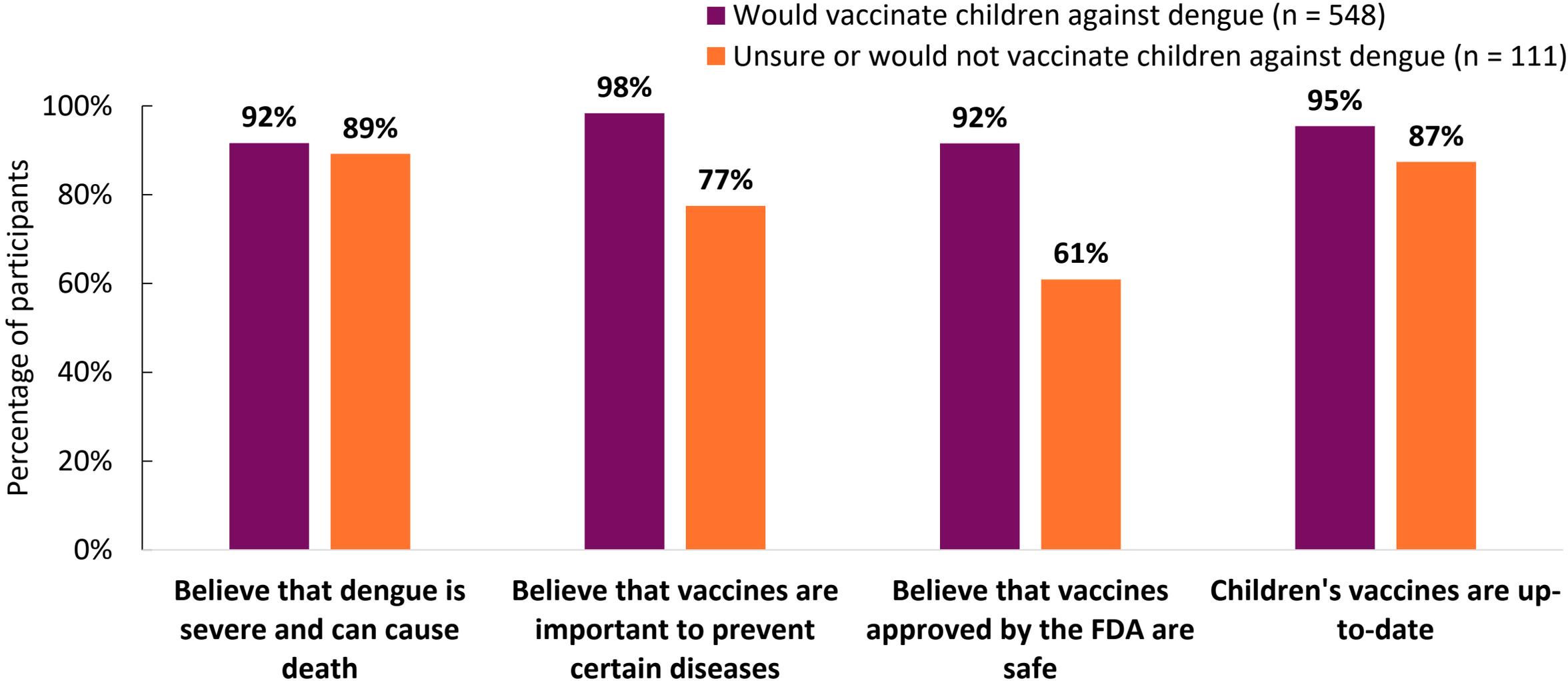
Interest in dengue vaccine among adult participants in COPA, 2020-2021 (N = 1,082)



Reasons would not or unsure if would vaccinate children among adult participants in COPA, 2021 (N = 111)



Dengue and general vaccine perceptions among adult participants in COPA by reported willingness to vaccinate children against dengue, 2021 (N = 659)



Dengvaxia Vaccine Knowledge
and Attitudes Survey- Puerto
Rico Physicians



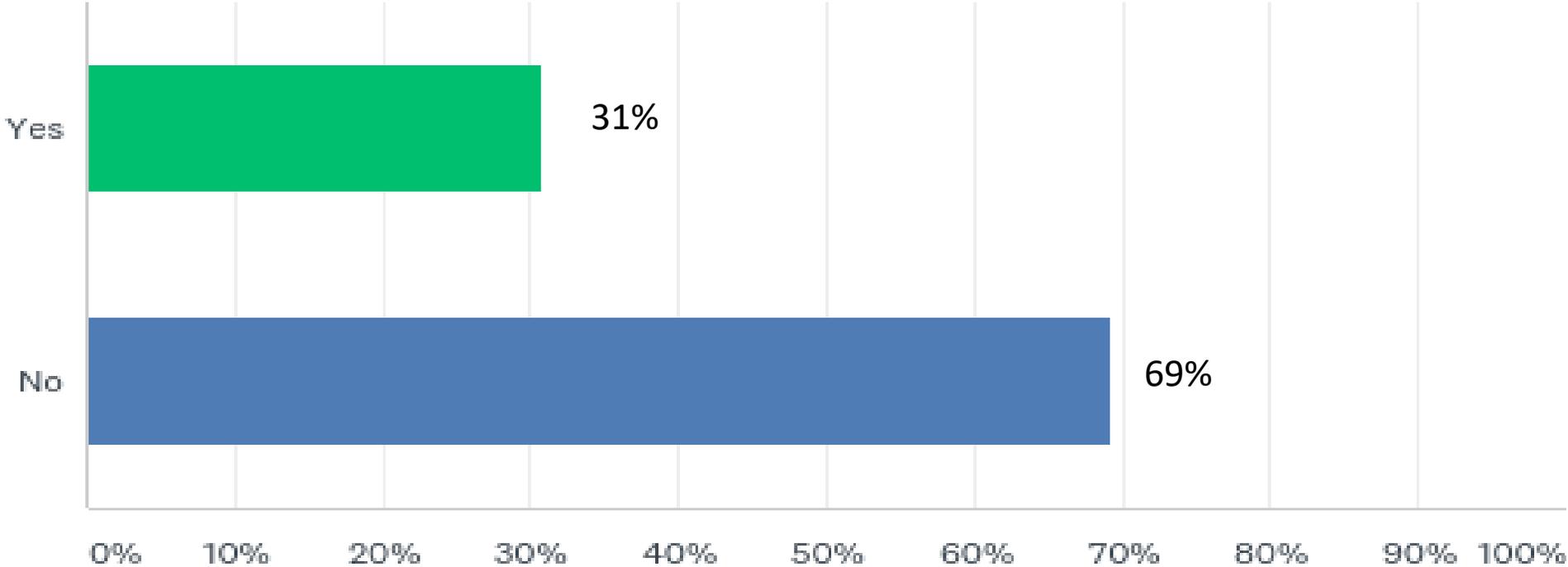
Puerto Rico physician survey on Dengvaxia

Methods

- Sponsored by the Puerto Rico Academy of Pediatrics, the Puerto Rico College of Physicians, the Puerto Rico Science and Technology Trust and the University of Georgia
- Presentations by CDC Dengue Branch pediatrician to local pediatric associations during continuing education meetings in 2019 and 2020
- Survey includes info on risks of hospitalization and severe illness in vaccinated seronegatives and implications for pre-vaccination test specificity
- Number of participants 114

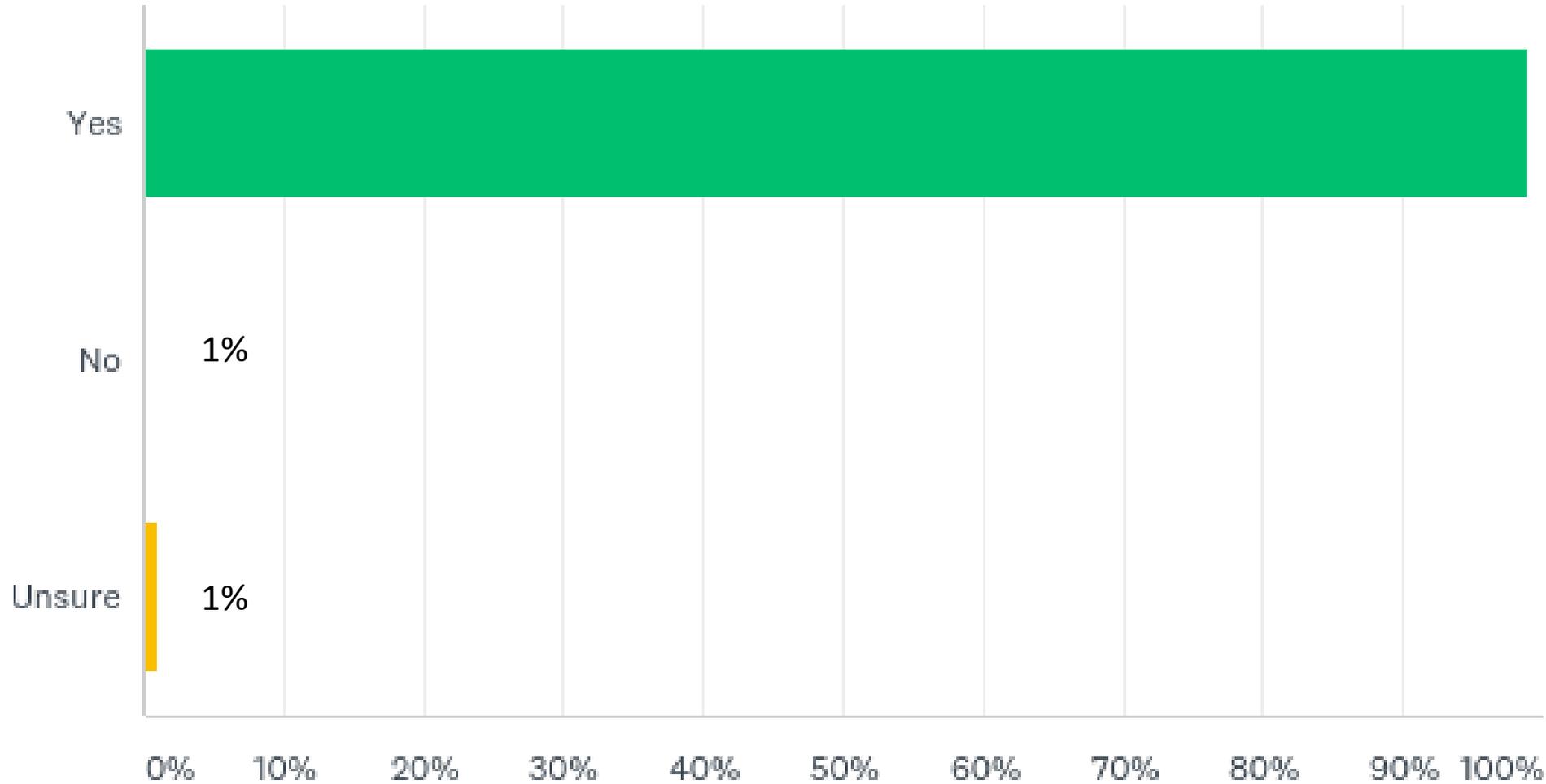


Do you administer vaccines in your office? (n=114)



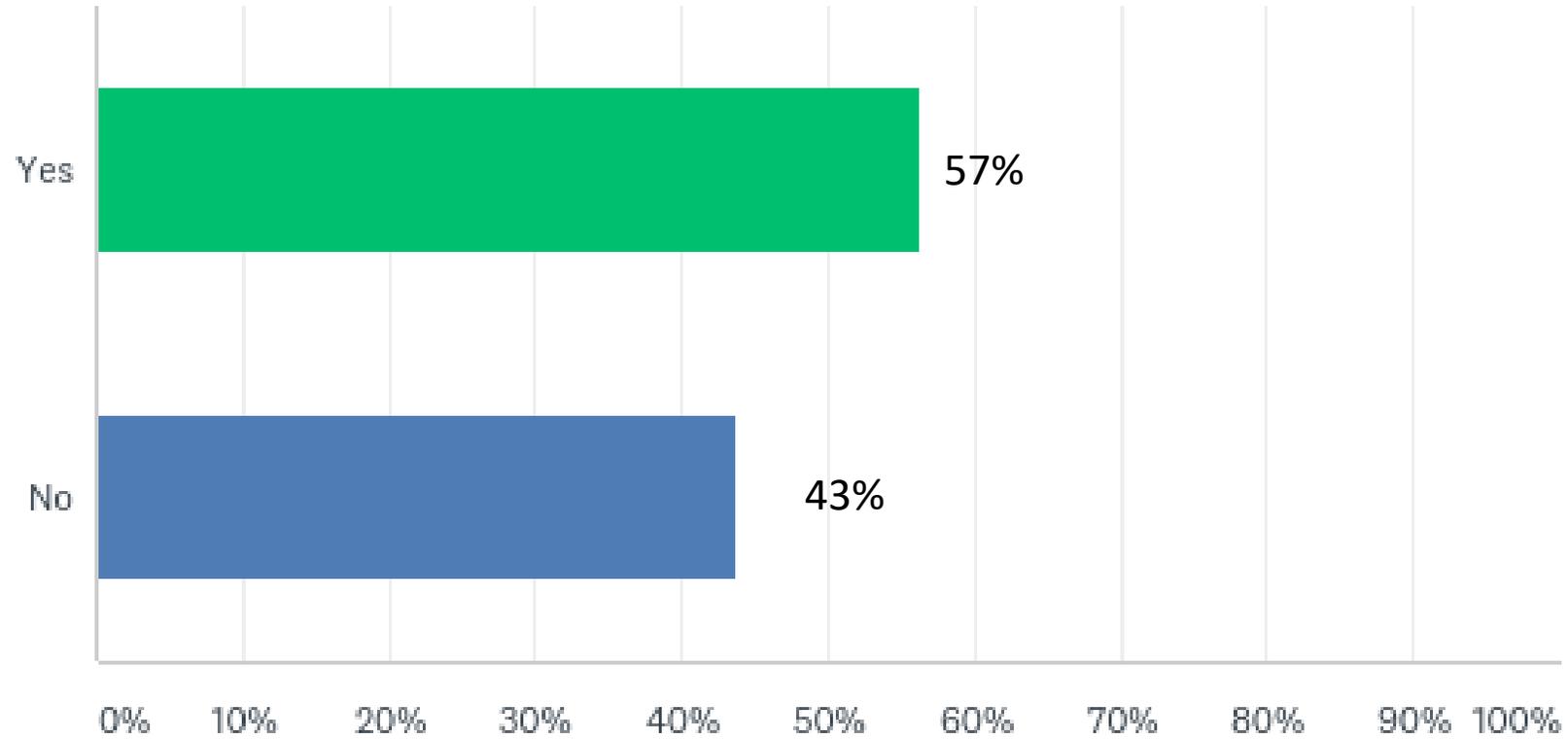
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Do you think dengue is a significant public health problem in the Puerto Rico? (n=114)



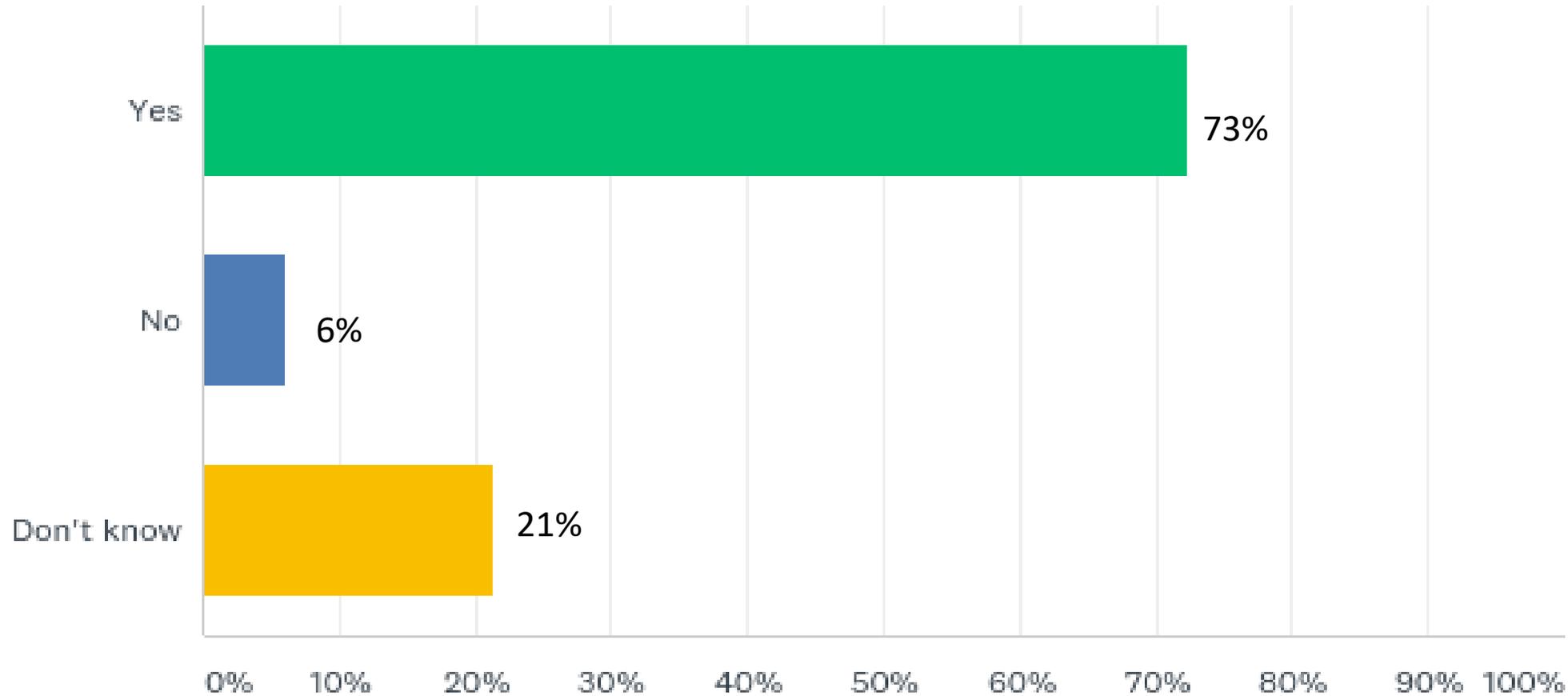
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Do you know there is an FDA approved vaccine for dengue known as Dengvaxia? (n=114)



Missing: 3

Assuming a laboratory test with acceptable specificity were available, would you recommend Dengvaxia to your pediatric patients? (n=114)



Missing: 10

If yes, why would you recommend Dengvaxia to your pediatric patients?
(n=76)

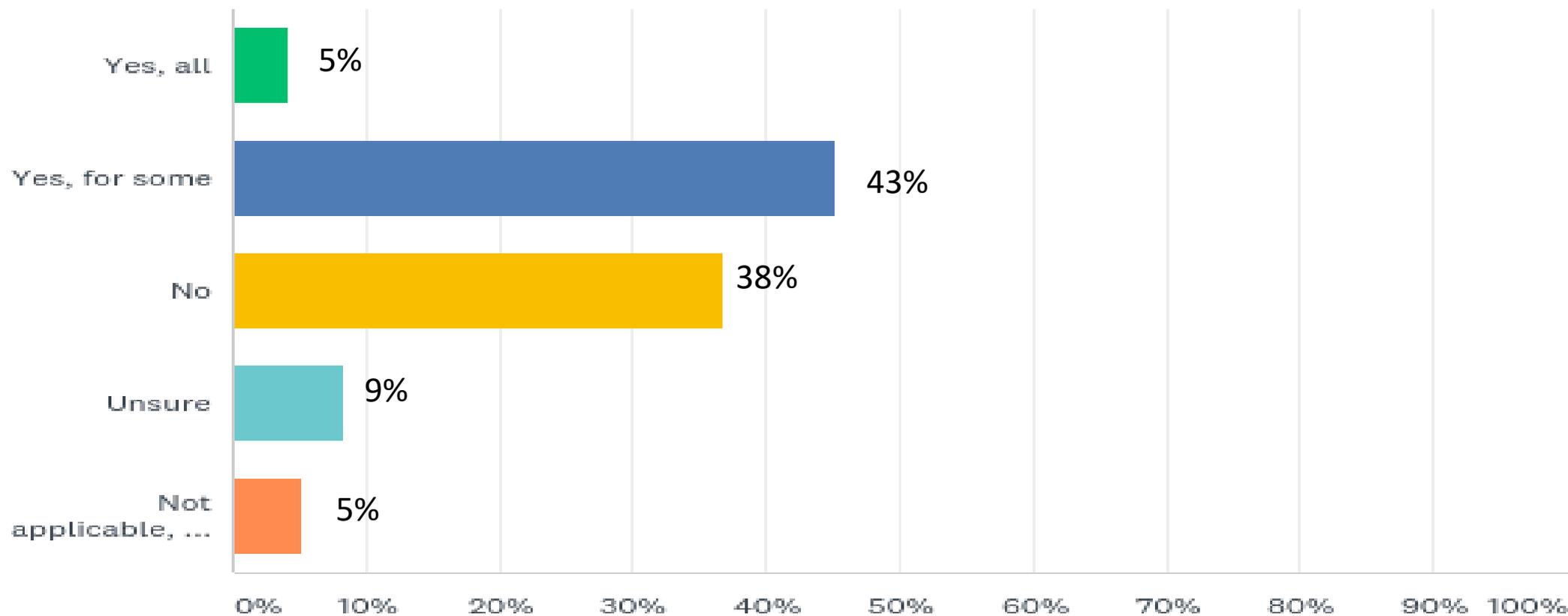
Response	No.	Rank
Dengue is an important public health problem	70	1
Laboratory testing sufficiently reduces the risk	29	2
Other	1	3



If no or unsure, why? (n=28)

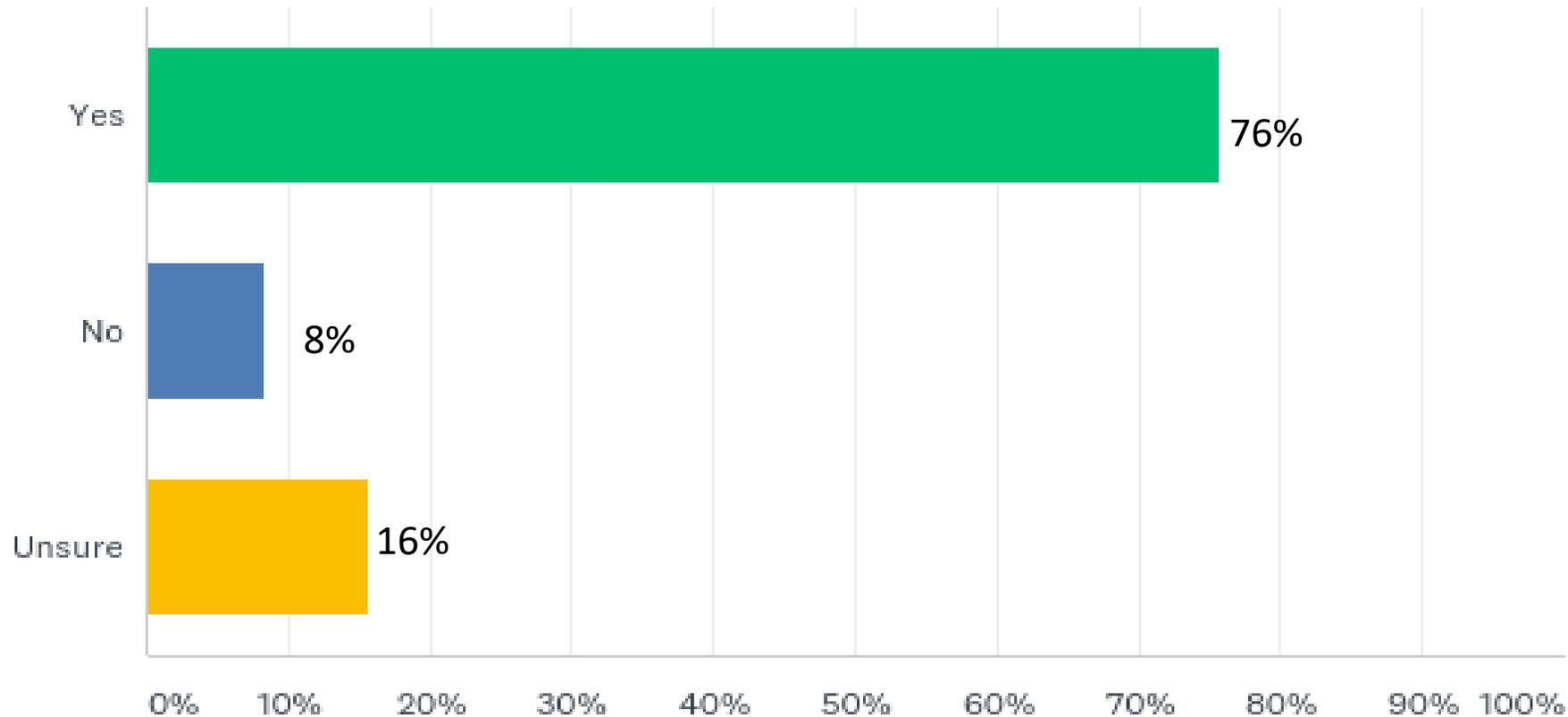
Response	Number	Rank
I need to get more information	21	1
Concern about the risks of vaccination	20	2
I would prefer to wait until a better vaccine comes along	11	3
The vaccine is not sufficiently efficacious	2	4
I have heard negative things about the vaccine	1	5
Dengue is not an important enough health problem	1	5

For the patients you have diagnosed with dengue, do you have documentation of positive dengue laboratory tests in the medical record? (n=114)



Missing: 13

Would you favor a phased in (e.g., slowly scaling up starting with discrete high risk populations) approach of dengue vaccination with Dengvaxia before implementing a large-scale program in school age children throughout Puerto Rico? (n=114)



Missing: 13

Assessing acceptability of Dengvaxia vaccination by parents and physicians

Behavioral Science/Communications Team
CDC Dengue Branch, San Juan

Objectives

- Assess acceptability to vaccinate children with Dengvaxia by parents and physicians

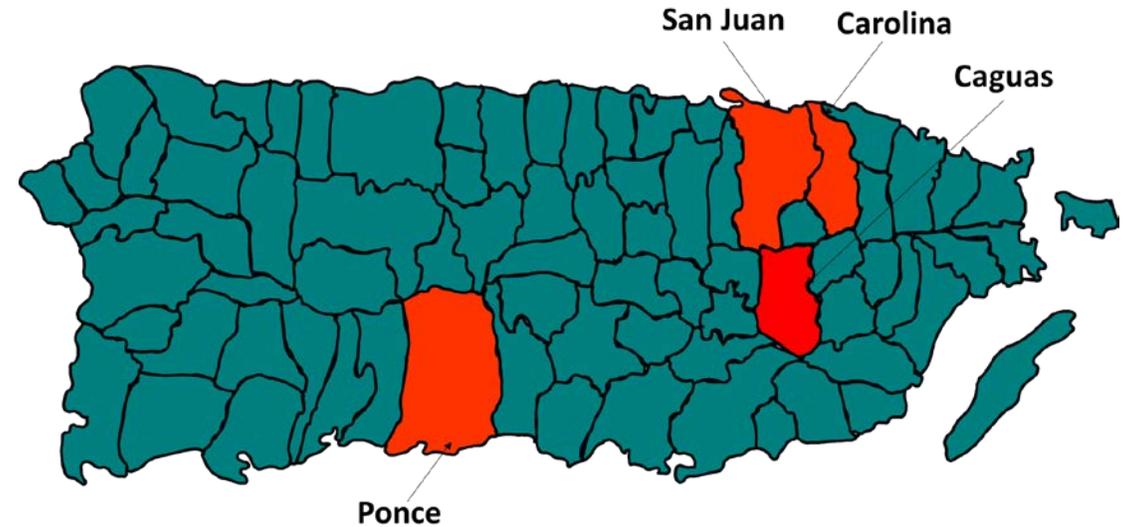
Methods

2020 - Assessment of Dengvaxia acceptability

- 5 focus group discussions with parents
- 15 in-depth interviews with pediatricians, researchers and school officials

2021 - Validation of messages

- 4 group discussions (GD)
 - Physicians – 2 GD
 - Parents – 2 GD
- Data collection
 - Written notes and recording
- Analysis
 - Category-based content analysis of notes
 - Unit of analysis – participants' comments



Opinions about dengue vaccines

- Most participants had questions about dengue and a dengue vaccine
 - *“Parents should be given support [information] about the types [of dengue]. That they understand that the vaccine is important, they must be clear that there are different types [of dengue] and even if you have already got one, you can get another.”*
- A few participants had mixed opinions about having a dengue vaccine
 - *“I would love it if there was a dengue vaccine; I would use it, but I would wait to see the effects it would have in other children.”*
 - *“I don’t find this vaccine necessary.”*
 - *“It (the vaccine) should be optional. ”*



Willingness to vaccinate

- Yes
 - *“If he had a previous dengue infection, yes.”*
 - *“...the blood test gives me peace of mind, and yes, I would consider it.”*
- No
 - *“No, because there is not enough research and data... There needs to be something longitudinal where we can see the effects.”*
- Unsure
 - *“I will continue to inform myself a little more, for a little while.”*

Pediatricians' opinions about a dengue vaccine

- Almost all pediatricians had a positive opinion about having a dengue vaccine for children between 9 to 16 years of age.
 - Participants said it would be ideal to have a broader age range (i.e. infants)
 - One participant thought that if morbidity and hospitalized dengue cases was low among children, parents would hesitate to vaccinate



"I agree the vaccine be added; it is a health problem we have in Puerto Rico and if there is a way to prevent it, then yes. "

Pediatricians' motivators and barriers Dengvaxia Vaccination Program

- Most mentioned they would participate in a vaccination program with Dengvaxia.
- **Motivators**
 - Support of vaccines
 - Dengue prevention is a priority
 - Dengvaxia studies showed a decrease in hospitalizations and serious clinical outcomes
- **Barriers**
 - Payment for vaccine or test
 - Prolonged time to receive dengue test results

"I prefer to prevent than to treat."

"There are several strategies such as repeating the test, to reduce risks. I would be willing to be part of it because preventing dengue should be priority number 1."

Information needs about Dengvaxia

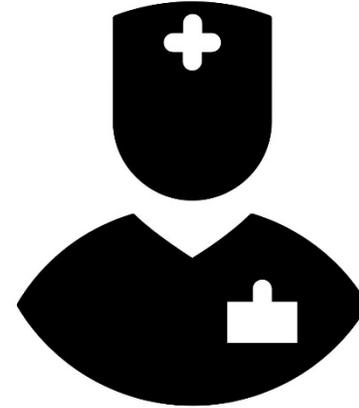
- ✓ Justification for age range (9-16)
- ✓ Studies in other countries
- ✓ Approval process
- ✓ Vaccine type / components
- ✓ Dosage / schedule
- ✓ Effectiveness
- ✓ Side effects
- ✓ Risk and benefits

- ✓ Interaction with medications and medical conditions
- ✓ Reactions of vaccine with subsequent dengue infection
- ✓ Countries using the vaccine
- ✓ Justification of use in US territories
- ✓ PR Department of Health's scheduled vaccines requirement
- ✓ Dengue lab tests

Best Sources of Information

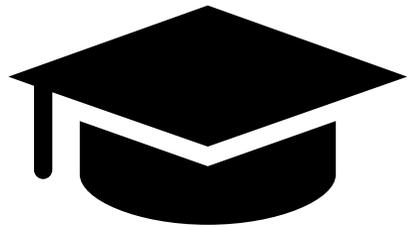


Doctors



Nurses

Best Sources
Information



Academy



CENTERS FOR DISEASE
CONTROL AND PREVENTION

Conclusions

General population

- Participants demonstrated interest in the dengue vaccine among most adult participants for themselves and their children.
- Side effects and possible adverse reactions were the most important reason for those not wanting to receive the dengue vaccine.

Conclusions

Physician's survey

- Most participants were pediatricians
- Almost all physicians recognize that dengue is a significant public health problem in PR, 44% were not aware that there is a FDA approved dengue vaccine.
- Further physician education needed regarding Dengvaxia vaccine, its schedule and efficacy, and safety
- Most physicians would recommend the vaccine if a laboratory test with acceptable specificity were available to document prior dengue infection.
- Medical record documentation of past positive dengue laboratory diagnostic tests for patients is limited

Conclusions

Focus groups and discussion groups

- Most parents would agree to vaccinate if they have information on Dengvaxia including efficacy, side effects, rationale for use in Puerto Rico and current use in other countries
- Having the support of the Universities, PRDH and CDC is important. Main influencers will be pediatricians.
- Pediatricians showed overall support, recognized that dengue is a priority and that Dengvaxia has shown efficacy against hospitalization.

Thank You!