



ACIP Dengue Vaccines Work Group

Wilbur Chen, MD, MSc

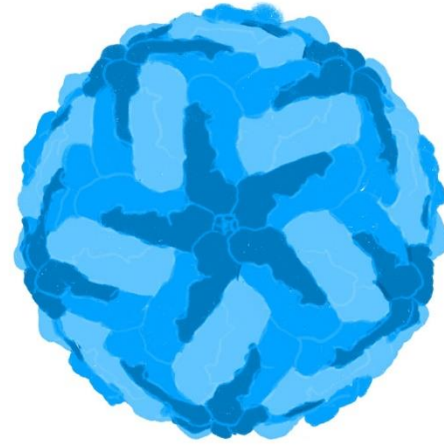
ACIP Member and Workgroup Chair

Advisory Committee on Immunization Practices

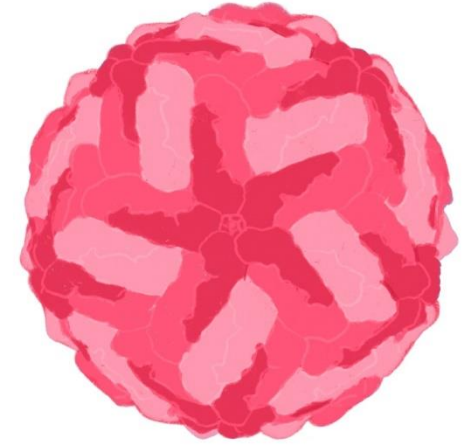
ACIP Meeting June 22, 2023

Dengue Virus

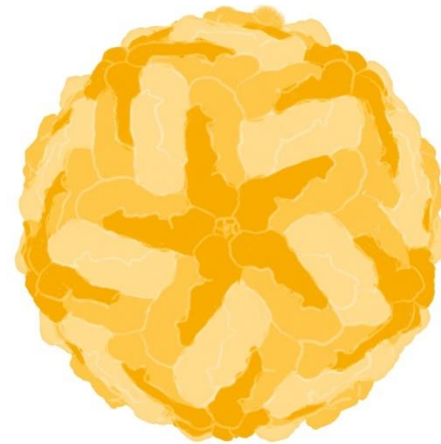
- DENV-1, 2, 3, 4
 - Lifelong DENV type-specific immunity
 - Short-term cross-immunity (~1–2 years)
 - A second dengue infection is the most important risk factor for severe dengue
- Dengue is the most common mosquito-borne virus globally



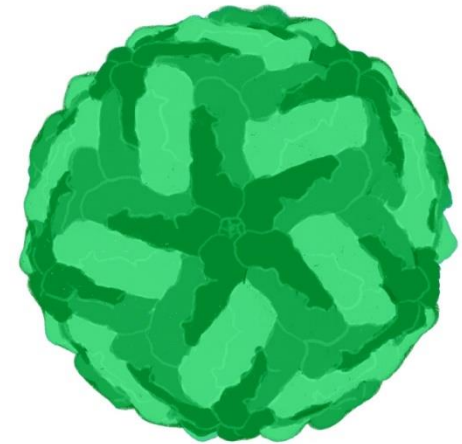
Dengue 1



Dengue 2



Dengue 3



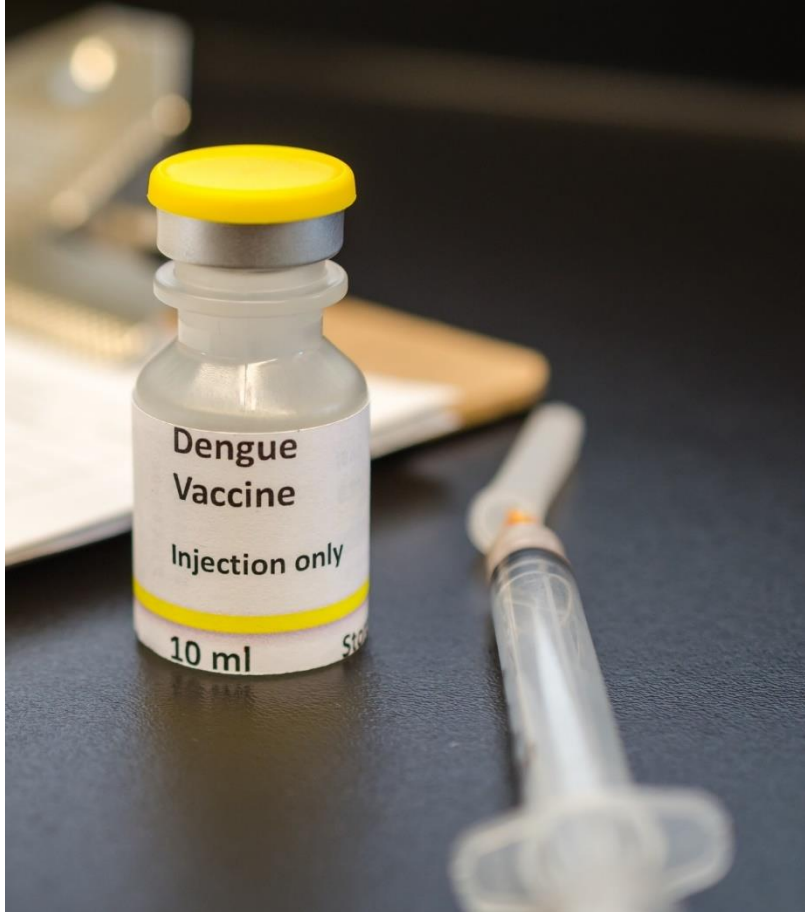
Dengue 4

Dengvaxia™ and previous dengue infection

Clinical trials found **different outcomes after Dengvaxia™ vaccination** among children with and without previous dengue infection.

- Children **without previous dengue infection** had a **higher risk for hospitalization and severe dengue** if they were vaccinated and then had a DENV infection.
- Children **with previous dengue infection** were **protected from hospitalization and severe dengue** if they were vaccinated with Dengvaxia™.

Dengvaxia™ ACIP Recommendation June 2021



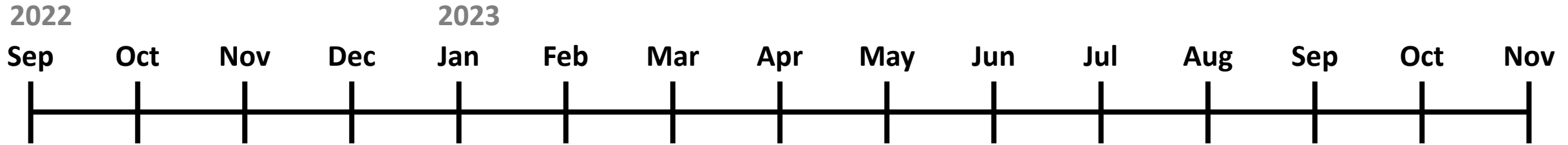
Three doses of Dengvaxia are indicated for the prevention of dengue disease caused by dengue virus serotypes 1, 2, 3, and 4 in people 9–16 years old with:

- laboratory confirmation of previous dengue virus infection

AND

- living in endemic areas.

Previous Presentations to ACIP on TAK-003



- Dengue epidemiology
- Review of Sanofi dengue vaccine and ACIP recommendation

- Takeda dengue vaccine safety and efficacy presentation
- Workgroup summary and interpretation

Presentations Today

Introduction of policy questions for TAK-003

- Dr. Alfonso Hernandez, CDC, NCEZID, DVBD

Cost effectiveness analysis and health impacts of routine vaccination with TAK-003 dengue vaccine in Puerto Rico

- Dr. Guido España, Notre Dame

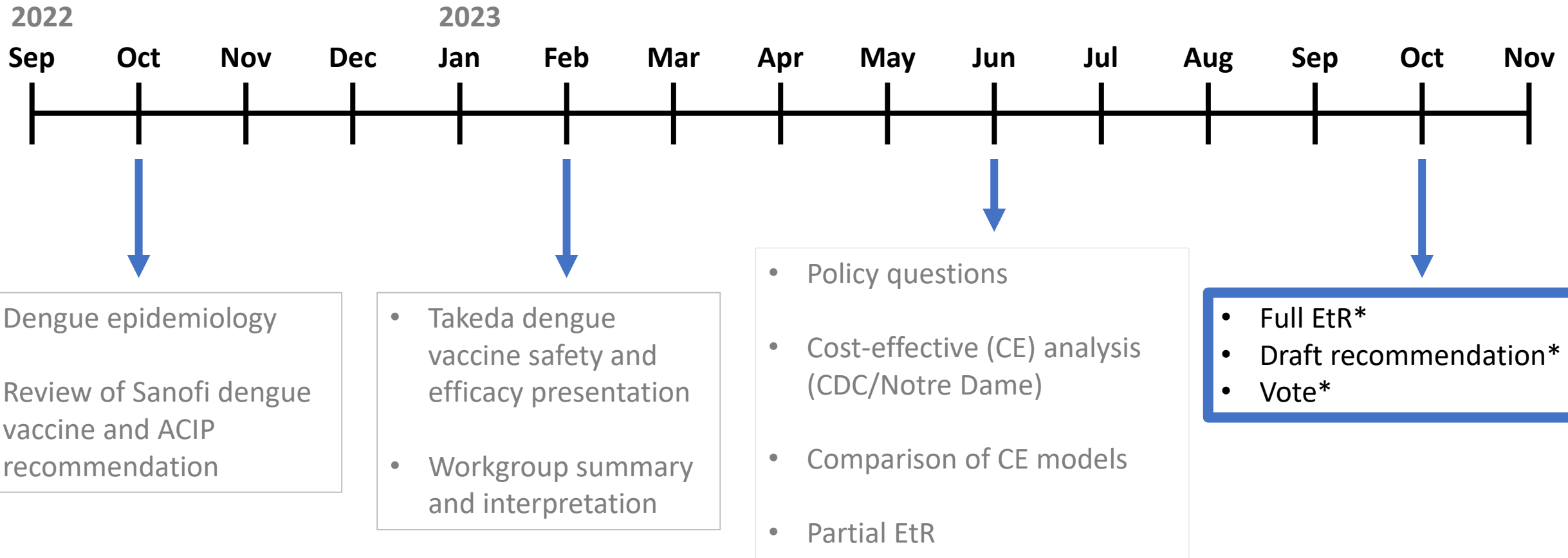
Summary of two economic models for dengue vaccine TAK-003 use in Puerto Rico

- Dr. RajReni Kaul, CDC

Partial evidence to recommendations framework for TAK-003

- Dr. Joshua Wong, CDC, NCEZID, DVBD

Future Presentations to ACIP on TAK-003



ACIP Dengue Vaccines Work Group

ACIP Members

- Wilbur Chen (Chair)
- Kathy Poehling
- Beth Bell
- Veronica McNally

CDC Co-Leads

- Gabriela Paz-Bailey
- Laura Adams

Ex Officio Members

- Kaitlyn Morabito (NIH)
- Ralph LeBlanc (FDA)
- Ihid Carneiro Leao (FDA)
- Kirk Prutzman (FDA)

- Srihari Seshadri (DOD)
- Liaison Representatives
- Elizabeth Barnett (AAP)
- Rob Schechter (AIM)

Consultants

- Edwin Asturias
- Robert Atmar
- Alan Barrett
- Iris Cardona
- Anna Durbin
- Tony Marfin
- Kristen Pierce
- Anita Shet

CDC Contributors

- Joshua Wong
- Nicole Medina
- Mimi Eckert
- Rachel Eidex
- Alfonso Hernandez
- Susan Hills
- Terri Hyde
- Mike McNeil
- Jorge Munoz
- Erin Staples
- Cindy Weinbaum
- Rita Helfand