



Washington State Board of Health

Overview of Congenital Cytomegalovirus

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WASHINGTON STATE 
BOARD OF HEALTH

Background: Congenital Cytomegalovirus (cCMV)

- Senate Bill 5829 (2024 legislative session)
 - Directed the Board of Health to conduct a review of cCMV to determine if this condition should be added to our mandatory newborn screening panel
- Previously reviewed by TAC in 2022
 - Recommendation to re-review in 3 years



Overview of cCMV

- Congenital cytomegalovirus (cCMV) is a viral infection that occurs when a pregnant person passes a CMV infection to their unborn child.
- 1 out of 200 babies are born with cCMV.
- cCMV is the leading cause of non-genetic decreases in hearing.
- Other significant impacts include developmental delay, changes in vision, or death.
- Most babies with cCMV are asymptomatic.
 - But may still experience decreases in hearing.

CDC. "About Cytomegalovirus." *Cytomegalovirus (CMV) and Congenital CMV Infection*, 10 May 2024, www.cdc.gov/cytomegalovirus/about/index.html.

Akpan US, Pillarisetty LS. Congenital Cytomegalovirus Infection. [Updated 2023 Aug 8]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK541003/>



Available Screening Technology

- Real-time polymerase chain reaction (RT-PCR) to detect CMV in newborn screening specimens.
- Screening results available within 1–2 days of specimen receipt.
 - Would allow for a diagnosis to occur within 21 days of life
- Three options for biological specimen type
 - Dried blood spot
 - Saliva swab
 - Dried urine filter paper



Available Screening Technology

Specimen type	Sensitivity	Specificity
Dried blood spot	76.8%	>99%
Saliva Swab	92.9%	>91%
Dried urine filter paper	98.8-100%	>99%

Diagnostic Testing and Available Treatment

- Must be diagnosed within 3 weeks of birth to determine if congenital.
- The virus may be detected through urine, blood, saliva, or cerebral spinal fluid via diagnostic DNA testing.
- Infants with cCMV who are symptomatic or experiencing isolated decreases in hearing may receive antivirals.
- Antivirals may reduce changes in hearing and improve development.
 - They do not reduce mortality or serious morbidity.
- Antivirals may lead to serious side effects.
- All infants with cCMV must have regular hearing, vision, and developmental assessments.



Cost Benefit, Cost Effectiveness Analysis

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Director, Department of Health's Newborn Screening Program



Public Health Infrastructure Readiness

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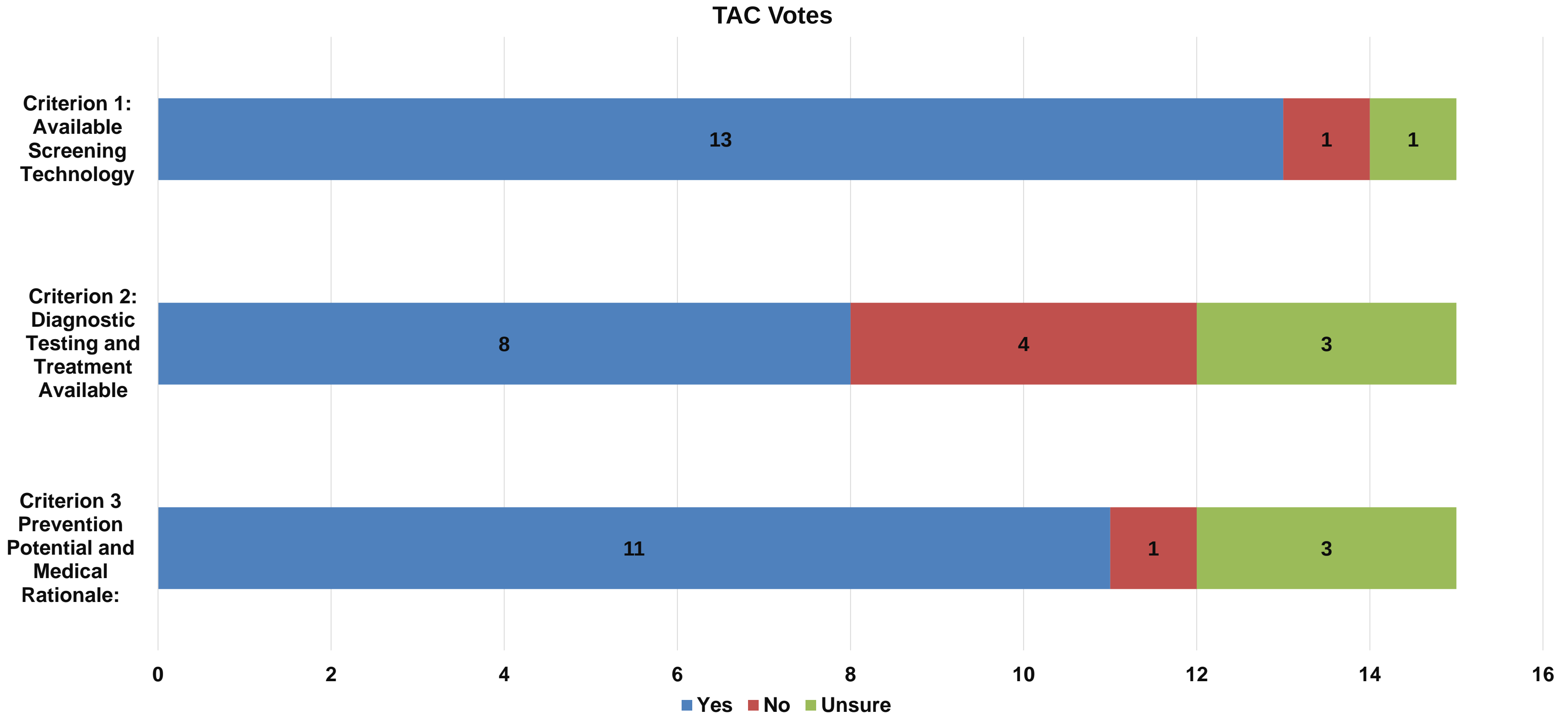
Director, Department of Health's Newborn Screening Program

Julie Walker, CHES, MPH

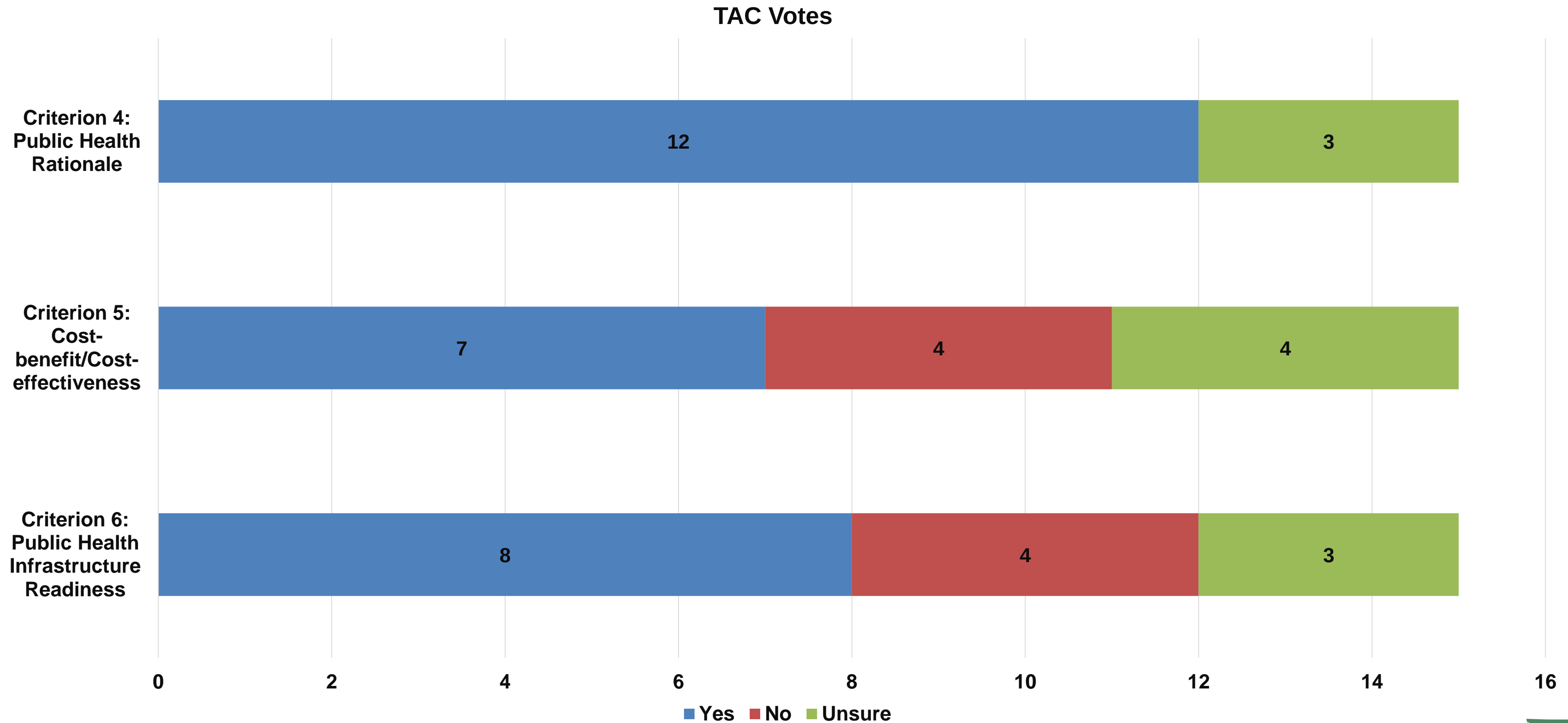
EHDDI Program Manager, Early Hearing Detection, Diagnosis and Intervention (EHDDI) Program



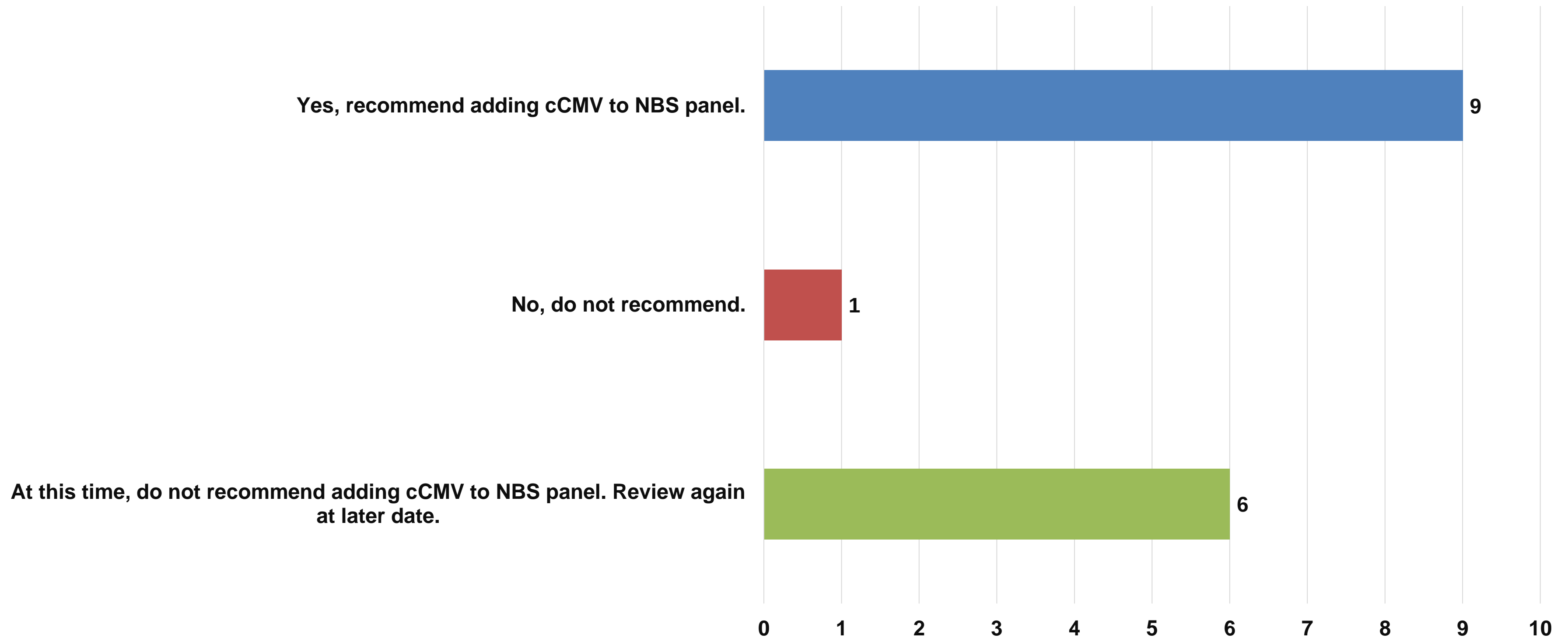
Criteria Review of cCMV



Criteria Review of cCMV



Overall Recommendation for cCMV



Board Member Discussion

- RCW 70.83 specifies testing of dried blood spot specimens.
- Several biological specimen types to screen for cCMV, including saliva, blood, and urine.
- TAC evaluation and recommendation focused on dried urine filter paper.



THANK YOU

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