# cCMV and Professional Identity Formation: Reflections from Medical Students

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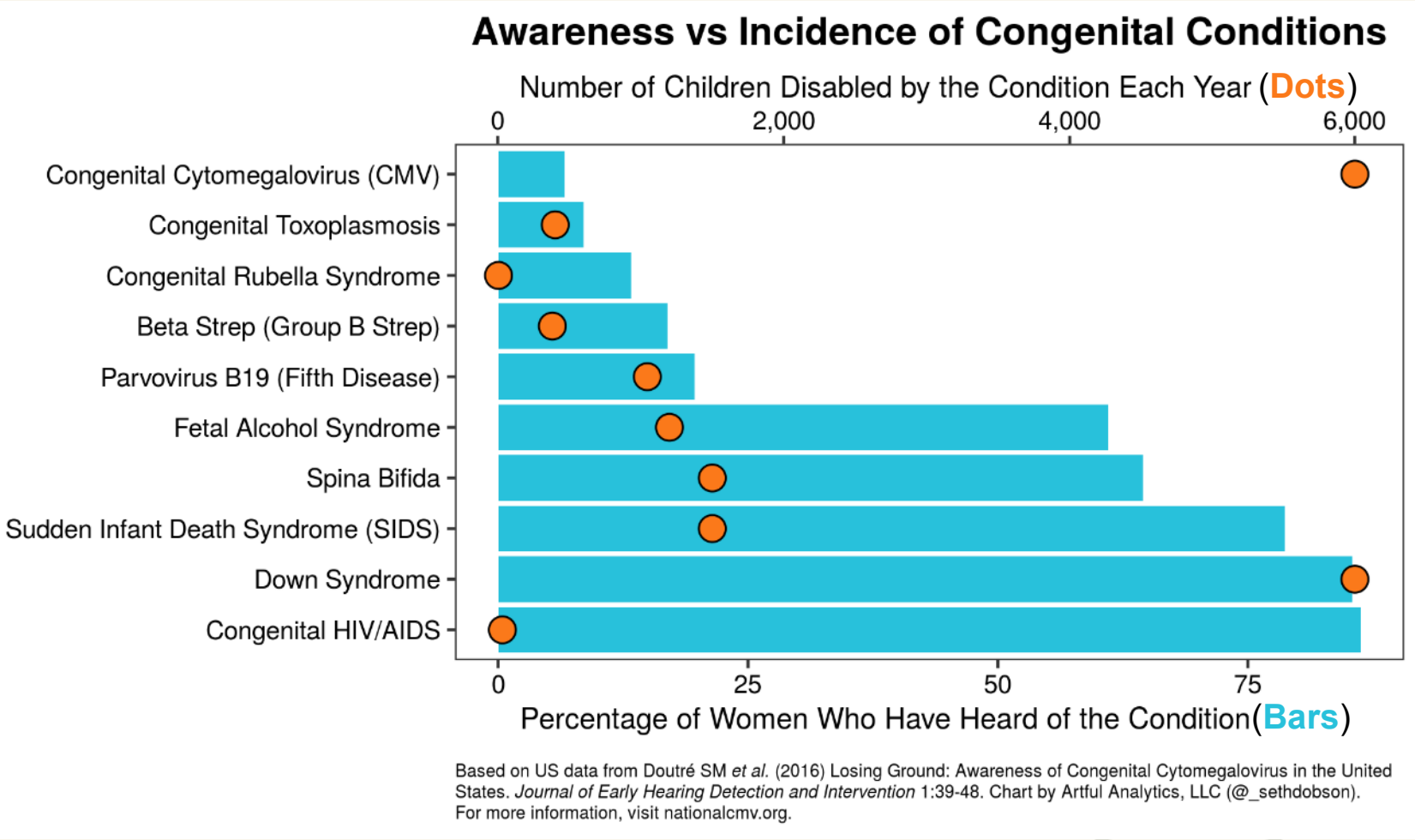
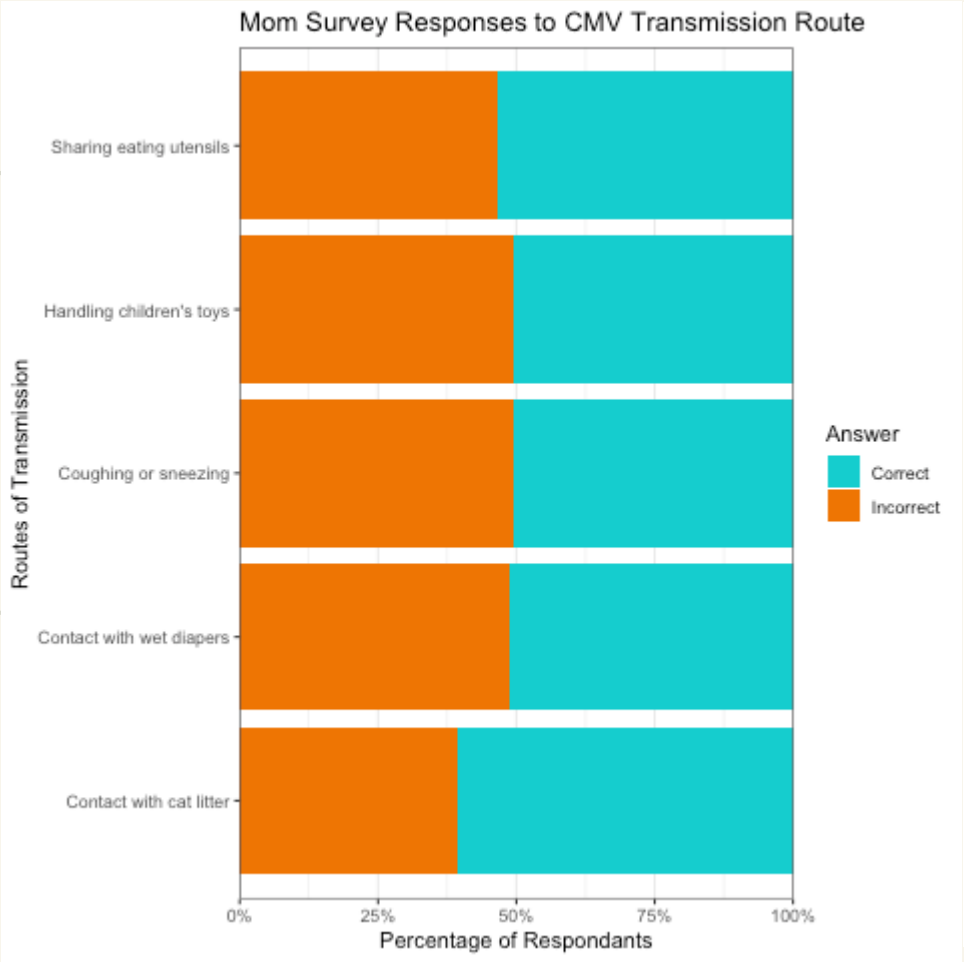
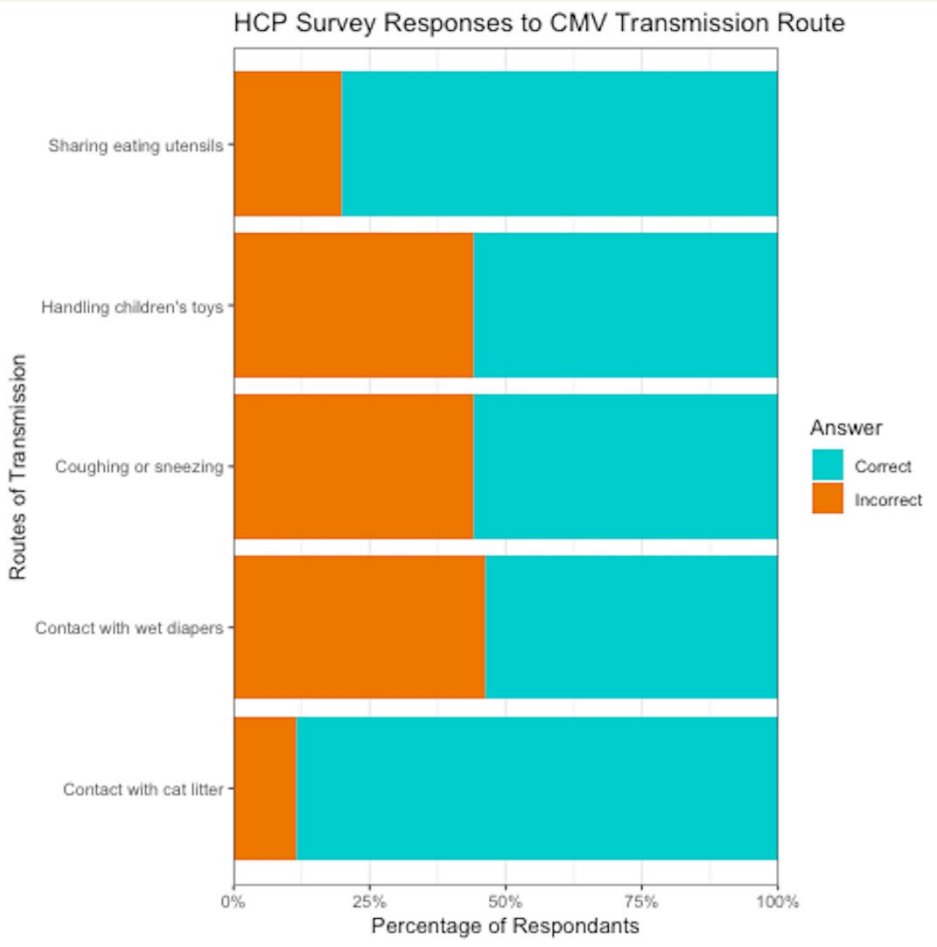



Dobson (NCMVF website)




Muldoon et al (unpublished data)


Fig 1a.
Medical students in non-library setting

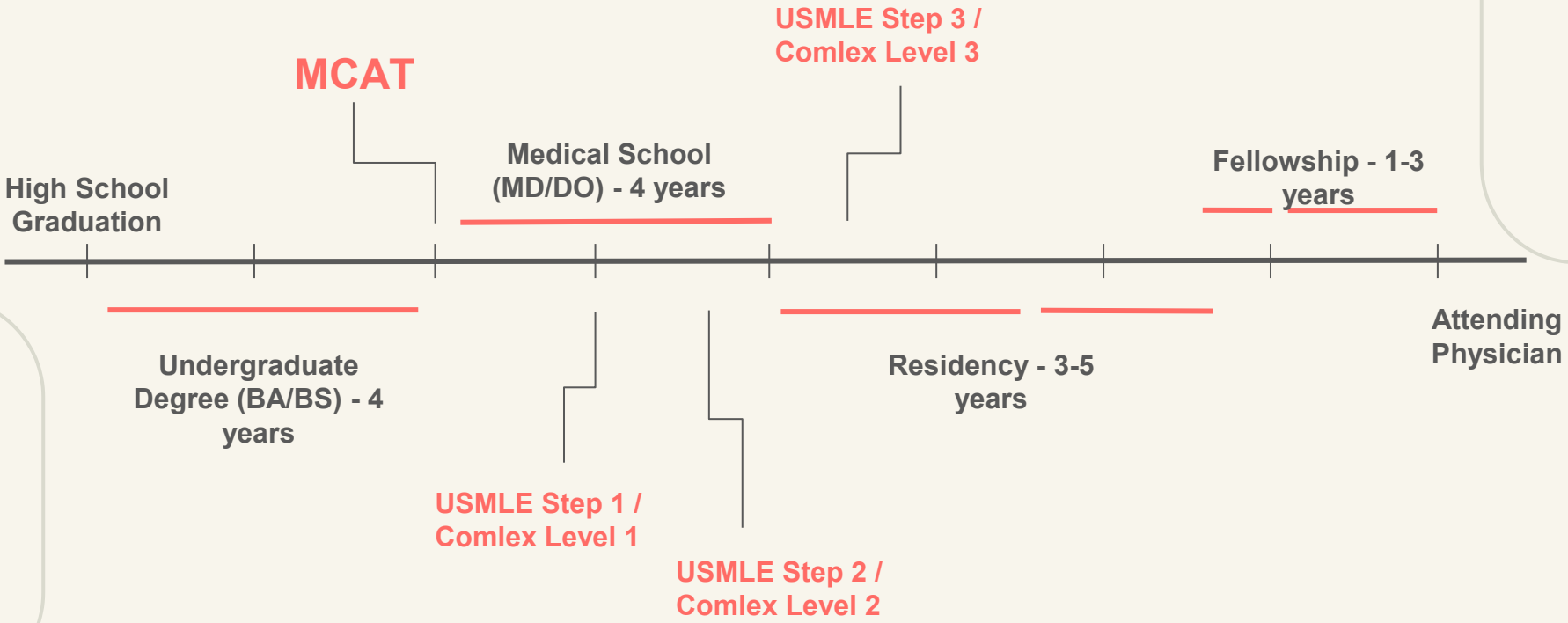
# What Does Medical Education Look Like?

## Undergraduate (4 years)

## Medical School (4 years)

## Residency (3 - 7 years)

- Minimum of 11 years after high school to become a physician (MD/DO)
- While volunteer work, advocacy work, and other extra -curricular activities are encouraged for residency applications, they are not required and many students struggle to find the time.


MCAT
USMLE Step 3 / Comlex Level 3
Medical School (MD/DO) - 4 years
High School Graduation
Fellowship - 1-3 years
Undergraduate Degree (BA/BS) - 4 years
USMLE Step 1 / Comlex Level 1
USMLE Step 2 / Comlex Level 2
Residency - 3-5 years
Attending Physician

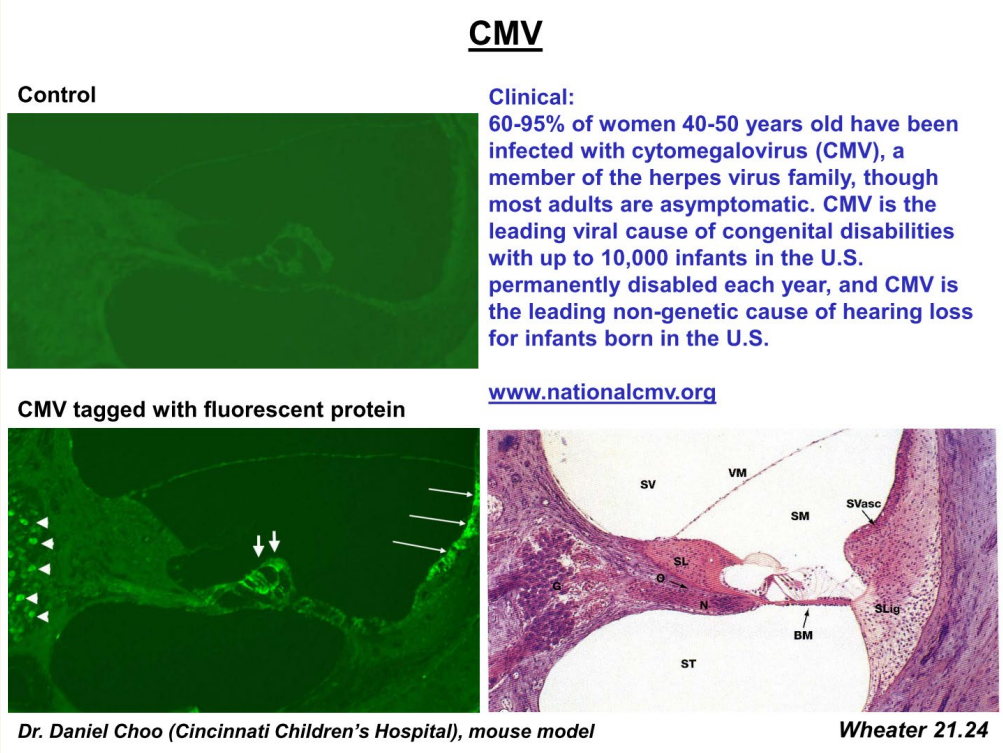
# How to talk about disability

And why medical students struggle with it

- Disability is historically underrepresented in medical school curricula
  - In our own curriculum, we have noticed a lack of discussion surrounding care for patients with disabilities, particularly in pre-clinical courses where we interact with standardized patients
- Our primary source of discussion on disability was in the form of a new required course titled "Humanity in Medicine"
  - We spent a total of 20 hours discussing the social aspect of medicine in 4 years
- When there is little emphasis on a topic, students who are already inundated with information tend to filter these topics/conditions out

# Student Awareness of CMV

Example of presentation of CMV in an anatomy lecture



# Student Awareness of CMV

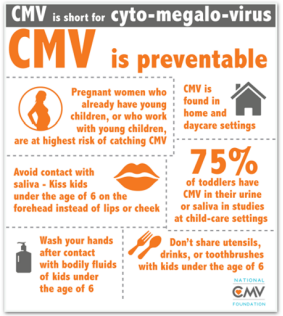
## *Learning Objectives*

- Identify the **structural characteristics** and **infection cycles** for **EBV**, **CMV** and **Mumps** including cells infected and the route of entry and exit (transmission)
- Compare and contrast the clinical presentations of primary and reactivated EBV and CMV infections
- Explain how to diagnose EBV and CMV including the uses and limitations of virus-specific antibody tests, **heterophile antibody** tests, PCR, **atypical lymphocytes**, and **Owl Eye** appearance of inclusion bodies
- Describe the **clinical manifestations** and possible **complications** of Mumps
- Identify the type of **vaccine** used to prevent mumps and the contraindications for its use

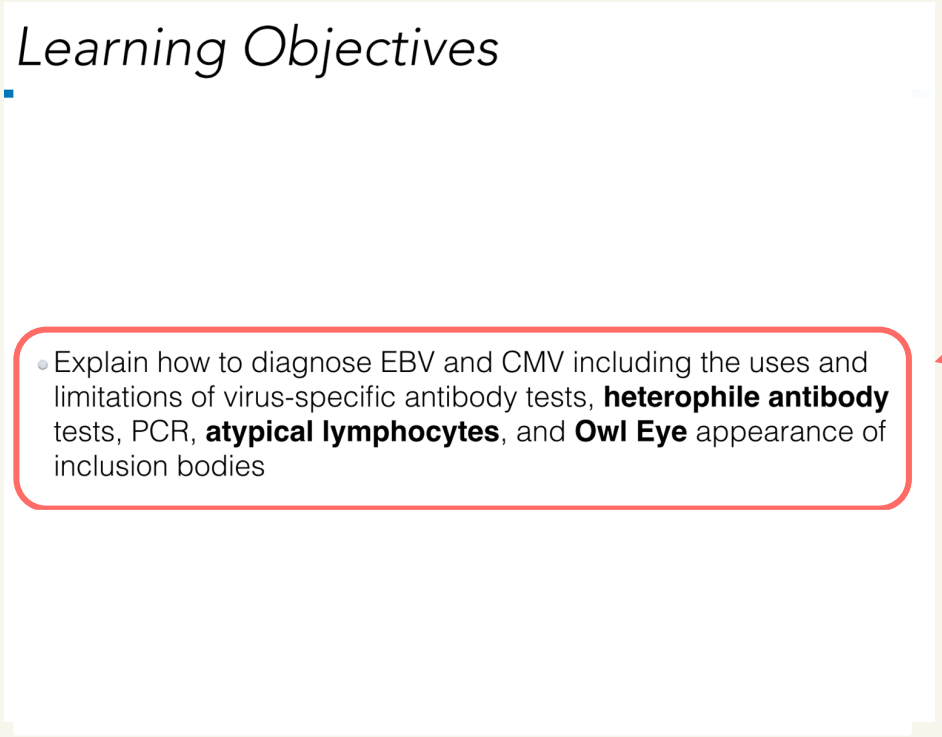


## *CMV: Treatment and Prevention*

- **Prevention**
  - Education of parents and/or those working with children to break the chain of transmission
  - Good personal hygiene and fomite disinfection



# Student Awareness of CMV




- Focus is on diagnostic tools and pathogenesis
- Learning “buzzwords” for tests
- No discussion on how to talk to patients
- Unclear how CMV patients’ lives are affected

# Stop CMV AZ Symposium

STOP CMV AZ, Arizona's coalition of healthcare providers, educators, and families united to improve systems of care for children affected by congenital cytomegalovirus (cCMV)

# The Symposium

- Attendees included interdisciplinary stakeholders such as families, social workers, policy analysts and health care providers
- We discussed education gaps, screening challenges and issues with follow  -up care
- Explored  infrastructure needs and outreach opportunities from many different perspectives

# Student Perspectives

What it was like learning from something other than a PowerPoint

*“Parents and providers often don’t have enough information, especially when there are language barriers.*

*It’s crucial that we work with community health centers that can reach at-risk populations. Physicians should strive to build partnerships and promote culturally sensitive education”*

**—Shivam Nipanikar**

*"I cannot recall many times that CMV was discussed in our courses; most of the time being labeled as something that "**might appear on boards**" and "**low yield**." It feels as though our medical curriculum was designed to prepare students for **board examinations instead of real human medicine.** As such, I did not spend much time considering the long-term social and health effects of the things I was learning."*

—Jonathan Lo

*"In medical education, so much time is (rightfully) spent on learning disease processes and disease management from other physicians. While this is obviously important in shaping future physicians, it can sometimes feel that* ***patient impact beyond the symptoms is overlooked*** *…[at the symposium] I especially appreciated the opportunity to listen to parents and community advocates a.... So much of medical education is* ***accepting "this is the way it is".*** *Understanding advocacy work in general is the first step towards understanding how to advocate for our patients in our future practice."*

—Serene Puri

*“Considering my own role within this realm, I realize that expanding my knowledge and engaging in conversation with others is instrumental to furthering CMV/cCMV advocacy. By taking an active role, I am able to gain a deeper appreciation for the work that is being done and what areas may need greater attention .”*

—Ellen Peng

“ ”

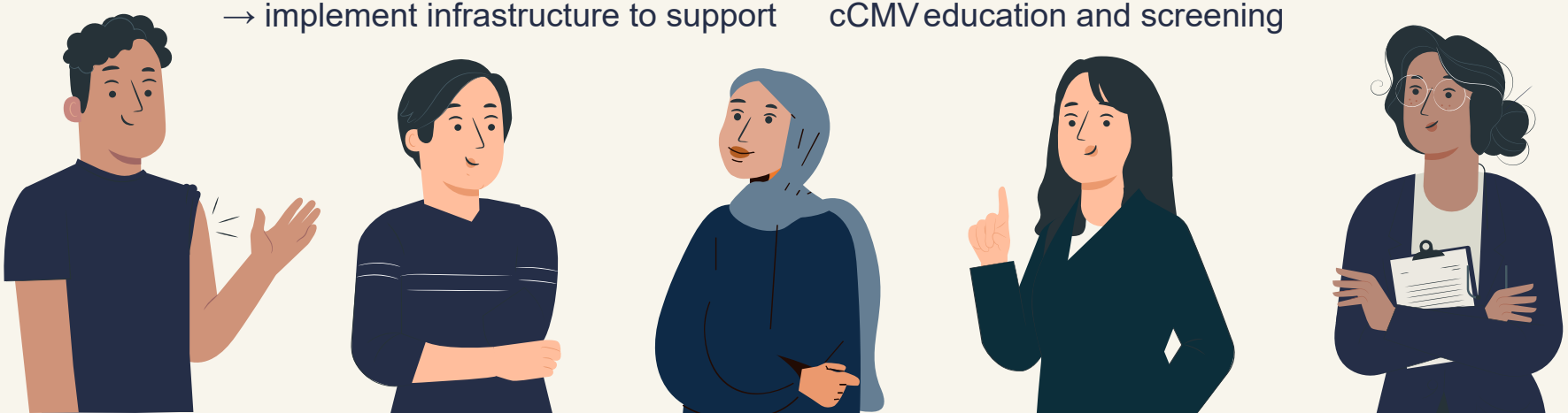
*We learn about diagnoses in isolation from the social and community aspects of treatment isolating our patient’s physical symptoms from their emotional and mental wellbeing .*

*The way we learn about disability does not give us the tools, the vocabulary, the empathy to talk about disability in a way that is not condescending or aloof . Medical education preaches of advocating for patients, but how do you advocate for someone that you do not yet understand*

**- Kinza Naeem**

# Role of Physicians as Social Advocates

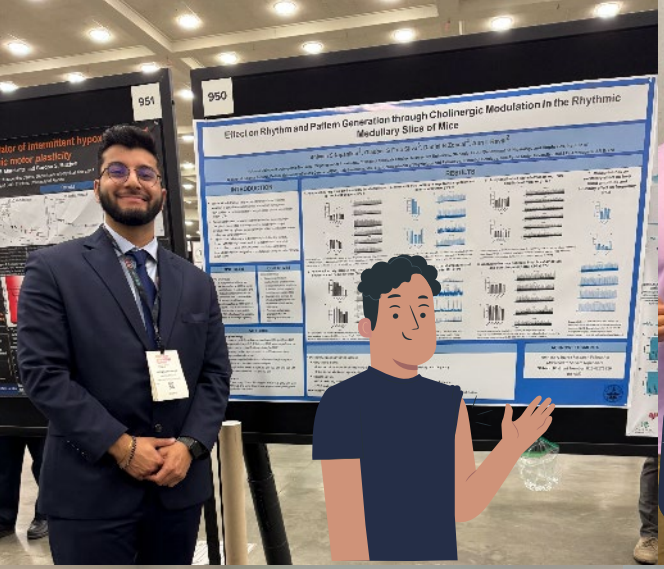
- Physicians have the opportunity to act as a bridge within the healthcare system → coordinating between OB/GYN, pediatrics, audiology, and public health
- Using lived experiences and patient stories, physicians humanize information, reduce stigma, and encourage parental engagement.
- Can advocate for expanded newborn screening, follow up programs, and leverage social media/community outreach to spread culturally appropriate messaging
- Addressing barriers like staffing, training gaps, cost, language/cultural barriers, → implement infrastructure to support cCMV education and screening

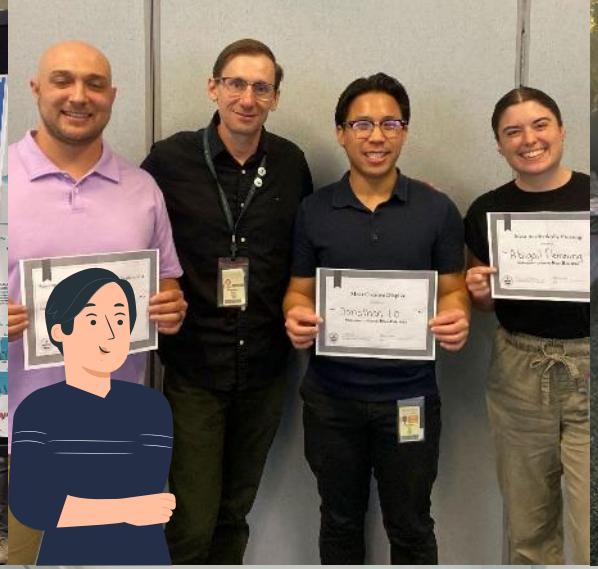


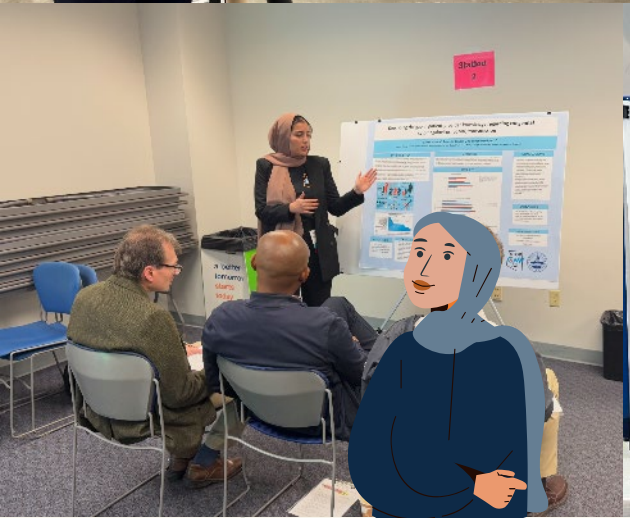
# How to Teach Advocacy?

Besides humanities courses, clubs provide a non-school sponsored way to learn about advocacy, but this is not standardized or regulated by academic institutions to the level of a class and these opportunities are presented as additional time separate from the already strenuous medical curriculum.

How can upcoming medical professionals be expected to provide outstanding care on day 1 when we don’t focus on the medical ethics, humanities, and socioeconomic dynamics that heavily weigh in on why a patient is seeing us?




# Advocacy in Action

# Thank you!

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