



# Challenges of General Population Screening for Early T1D – Pediatric Endocrinologist Perspective

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## Disclosure Information

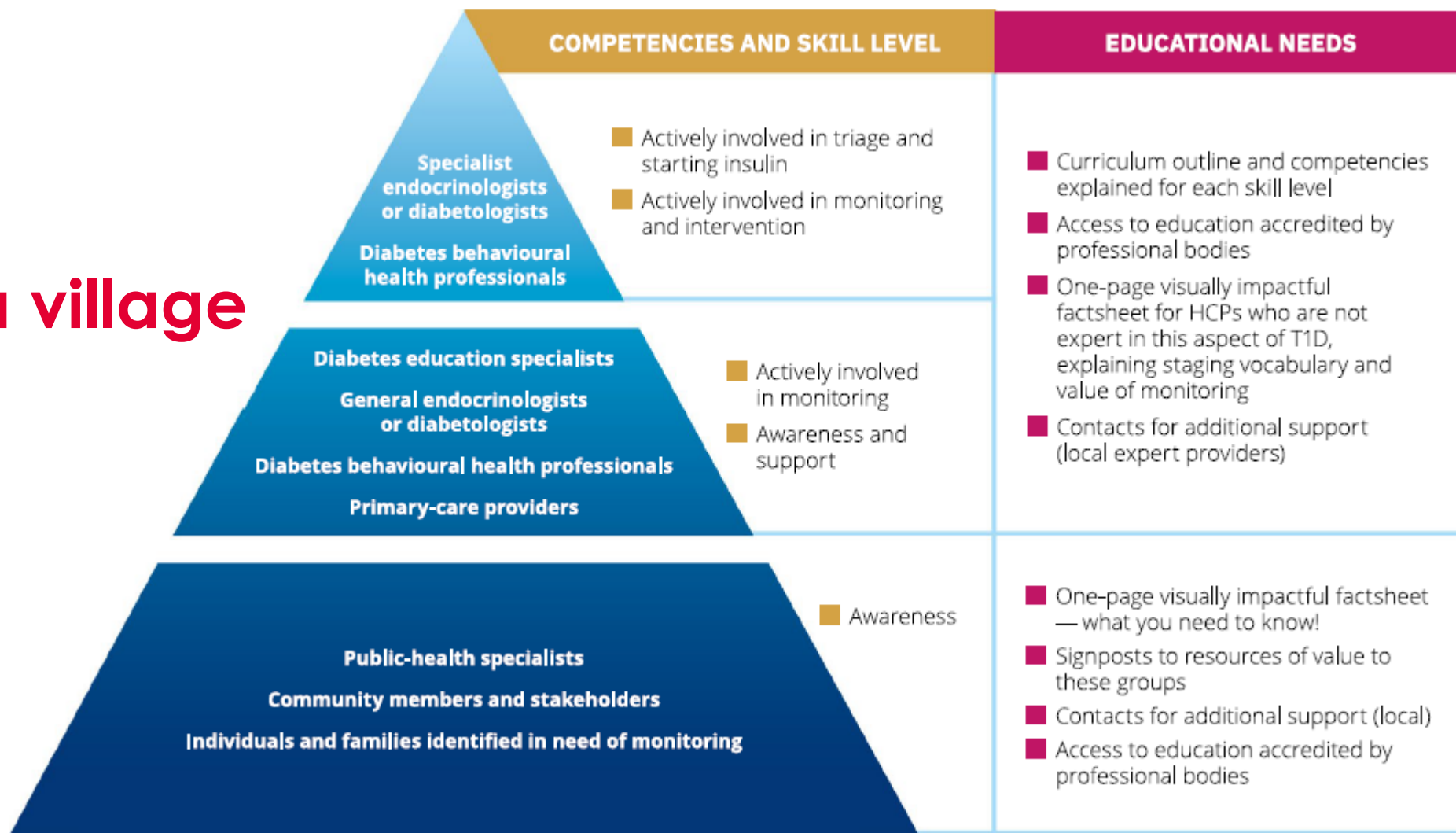
I have the following relationships with the manufacturer of commercial products discussed in this CME activity:

- Scientific Expert, Scientific Education Program – Sanofi

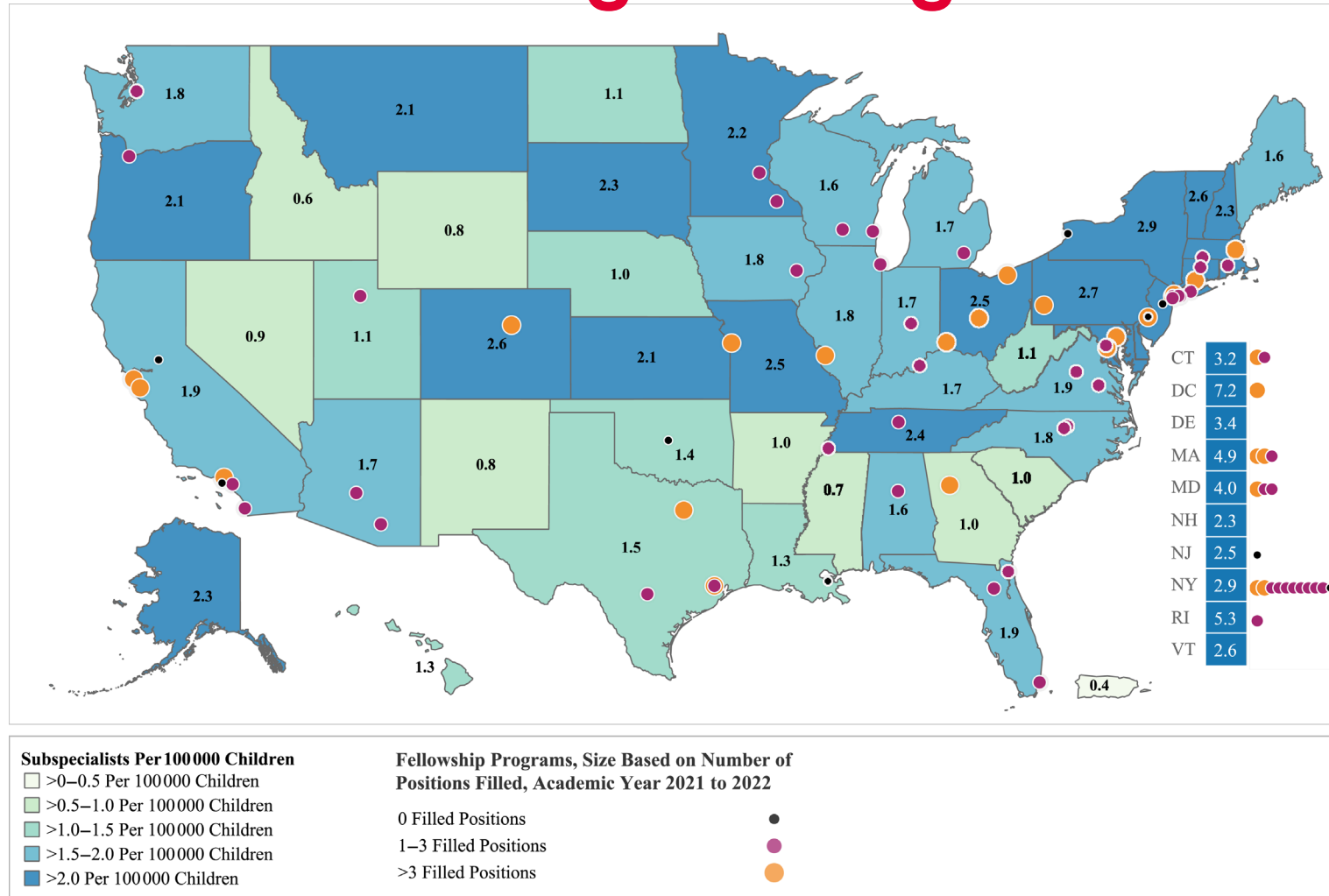
# Challenges of General Screening – Pediatric Endocrine Perspective Outline

- Pediatric Endocrinology needs after initial screening
- Psychosocial Impact – What We Know and What We Need
- Monitoring and Delay
- Risk of Worsening Disparities

# It will take a village



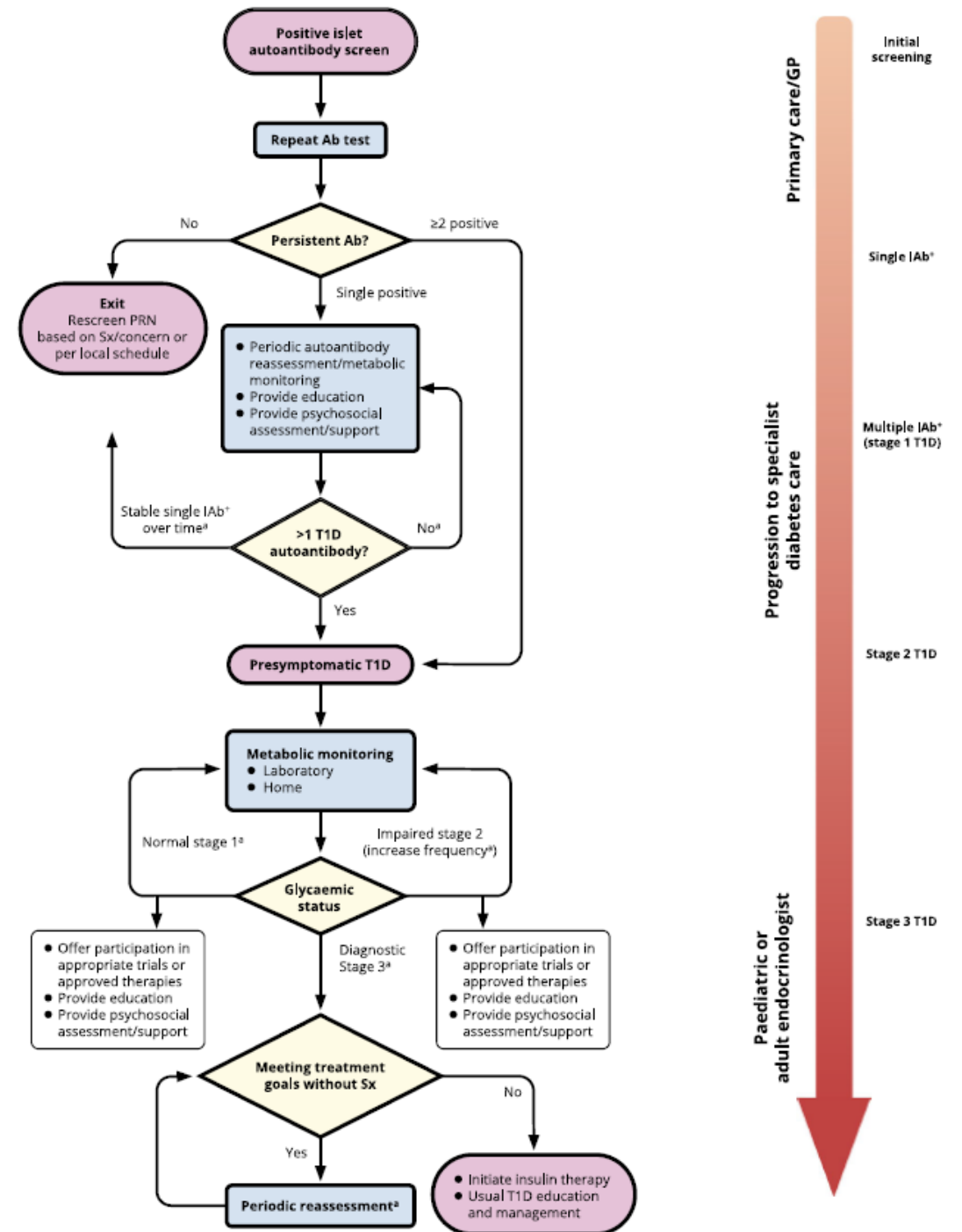
# Pediatric Endocrinologists in high need



# Challenges of Generalized Screening

- 23,847 children screened
  - 0.90% had 1 diabetes autoantibody
  - 0.27% had multiple antibodies
- US population under 18 years of age =~73.5 million
  - ~661,500 will have 1 antibody
  - ~198,500 will have multiple autoantibodies
- US # births in 2023 = ~3.5million
  - ~31,500 will have 1 antibody
  - ~9,500 will have multiple diabetes autoantibodies

- Primary Care needs more structured education and resources to provide initial discussion for screening, answer initial questions based on results.
- Parents are asking complex questions even with 1 antibody positive.
- Pediatric Endocrinologist needs to get involved starting at least at multiple antibody positivity, even at single antibody positivity due to parental anxiety.



# Challenges of Generalized Screening – Psychosocial Impact

- Caregivers participating in type 1 diabetes screening for their children
  - Parental Anxiety highest when notified of positive autoantibody results
  - Female caregiver anxiety remained highest among group even over time
  - Persistent single antibody and multiple antibodies associated with higher anxiety in female caregivers





# Challenges of Generalized Screening – Psychosocial Impact

ASK study:

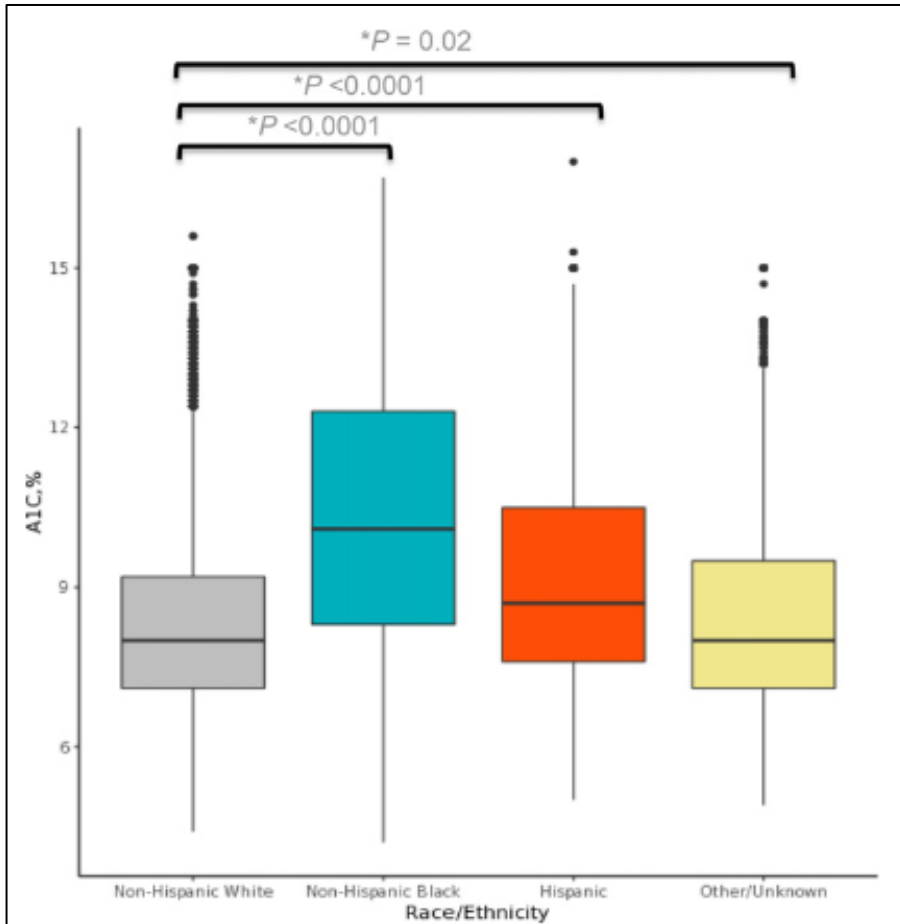
- High level of parental anxiety (~75% of parents), limited improvement at follow-up
- Most common in those with lower parental education level, minoritized individuals

**Takeaway: Psychosocial resources are needed for families when positive autoantibodies are identified. There is already a paucity of behavioral health providers affiliated/associated with diabetes clinics around the country.**

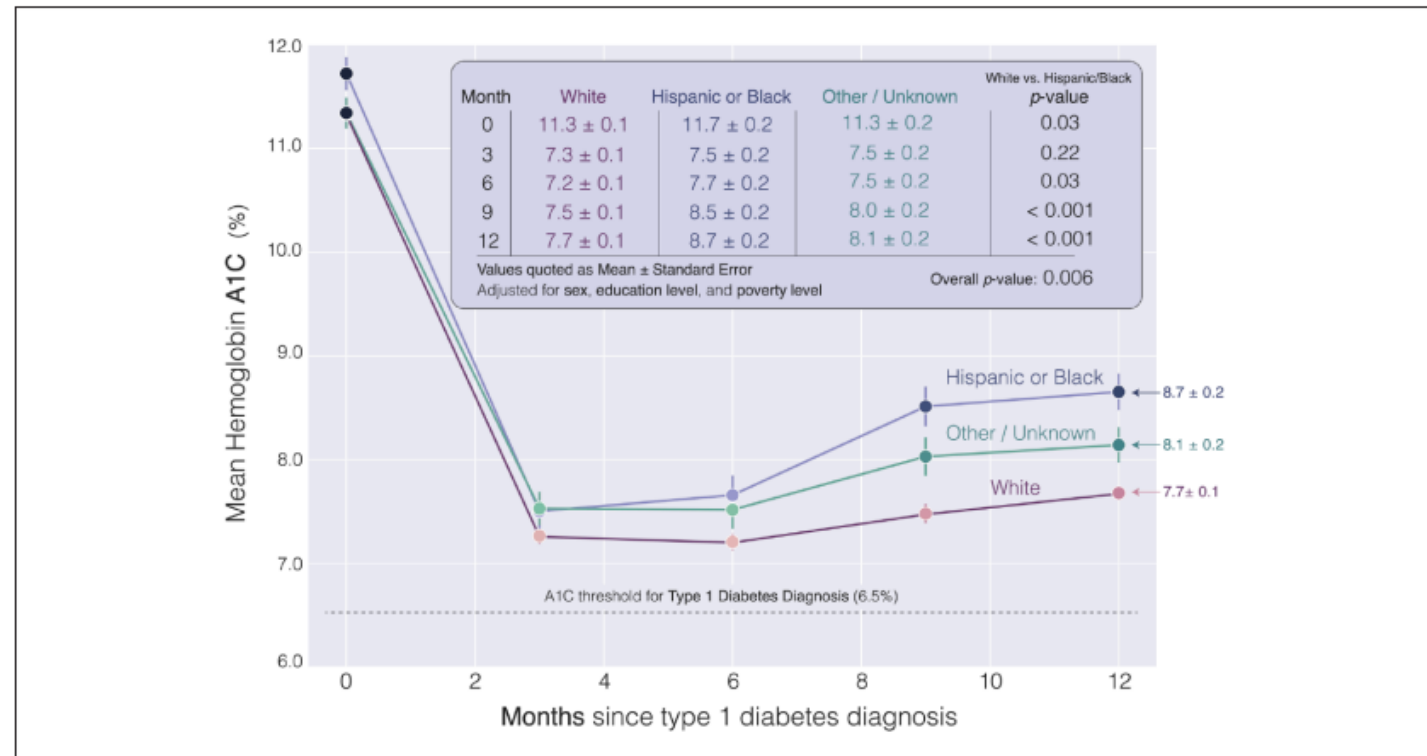
# Challenges of Generalized Screening – Prevention and Onset

- Currently no way to definitively provide answers to when an individual will progress to Stage 3 T1D
- Currently no way to prevent or reverse type 1 diabetes
- We now have an ability to delay T1D – Teplizumab is the first and only FDA-approved treatment to delay the onset of Stage 3 Type 1 Diabetes for people  $\geq 8$  years of age, for a median of 2 years
  - Extensive resources are needed to implement and provide infusion in a clinical/hospital infusion center
  - Limited locations have Teplizumab available for patients
  - Burden for patients/families to have 14 days of infusion therapy

# Challenges of Generalized Screening – Worsening Disparities



**FIGURE 1** Difference in A1C levels across racial/ethnic groups.  
\*t test.



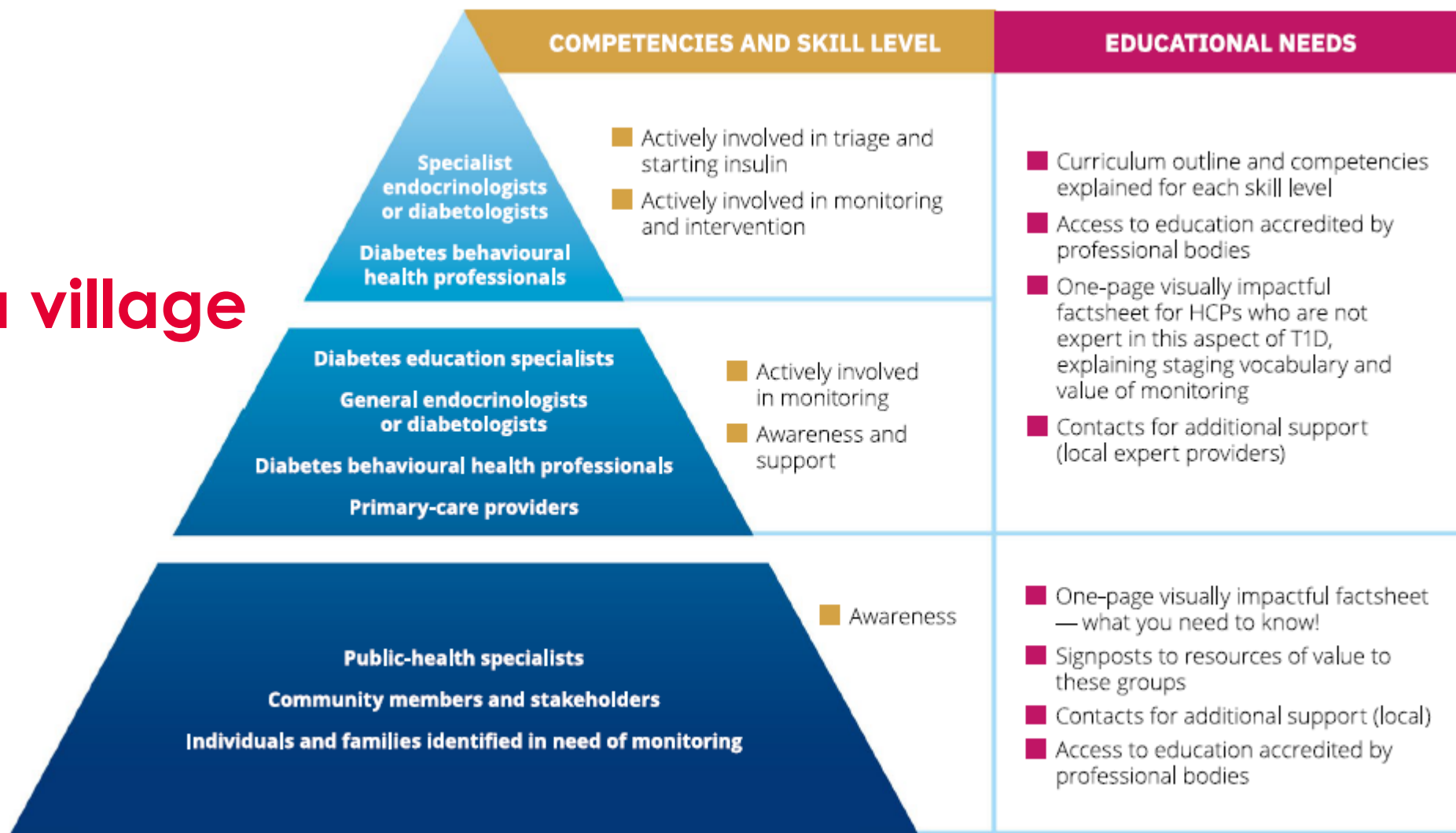
**Disparities already exist in Type 1 Diabetes**

# Challenges of Generalized Screening – Worsening Disparities

- Monitoring
  - Those with lower parental education level and Hispanic ethnicity were less likely to report their child with positive antibodies were at higher risk of developing type 1 diabetes → could lead to decreased attendance at monitoring follow-up visits
- Treatment to delay type 1 diabetes
  - Difficult for those with lower socioeconomic status to participate in 14 day infusions (with or without assistance)

**Health Equity needs to be a focus of current and future screening implementation**

# It will take a village





# Diabetes Care Complex at Children's National

- 17 Endocrinologists/Diabetologists
  - 10 see diabetes patients
- 6 Fellows
- 4 Nurse Practitioners
- 7 Certified Diabetes Educators
- 2 Registered Dietitians
- 2 Social Workers
- 2 Clinical Psychologists
- 1 Research Psychologist
- 1 Clinical Care Coordinator
- 1 Patient Navigator

## T1 Delay Program

- 2 Endocrinologists
- 1 Nurse Practitioner
- Certified Diabetes Educators
- Dieticians
- Psychologist
- Clinical Care Coordinator
- Administrative Assistant

## Teplizumab Group

- Endocrinologists
- Diabetes Pharmacist
- Clinical Care Coordinator
  
- Specialty Infusion Center Nurses, Coordinator
- Hematology/Oncology Nurses, Coordinator
  
- Pharmacy
  
- Payor Reimbursement Analysts
- Revenue Cycle Team

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**Thank You!**



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