Improving Diabetes Self-Management for Patients with Disabilities: Strategies for Engagement and Care Coordination

National Center for Health in Public Housing

April 28, 2026

Housekeeping Items

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- Engage in chat
- Raise hand if you would like to unmute
- Meeting is being recorded
- Slides and recording link will be sent via email
- *Let us know about you!*
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  - Title
  - What brings you here today

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Speaker

Jose Leon, MD
Chief Medical Officer

- Chief Community Health Officer at La Maestra Community Health Centers, leading community health strategy and implementing the Circle of Care model to address medical, behavioral, and health-related needs in San Diego communities.
- Chief Medical Officer at the National Center for Health in Public Housing, with over 12 years developing training and technical assistance programs for health centers serving residents of public housing.
- National leader in population health and chronic disease prevention, contributing to major initiatives such as the American Diabetes Association's Practice Committee and the development of the Standards of Care in Diabetes.

Moderators

Fide Pineda Sandoval, MPH, CHES
Training & Technical Assistance Manager

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Health Communications and Research Analyst

Learning Objectives

1. Describe common barriers to diabetes self-management among patients with physical, sensory, intellectual, and developmental disabilities
2. Identify practical self-care strategies that can be adapted to meet the needs of patients with disabilities in health center settings
3. Explain approaches for identifying non-health related needs to improve care coordination
4. Discuss methods for strengthening collaboration with public housing groups to reinforce diabetes management goals
5. Apply workflow and caregiver education strategies that improve patient engagement and continuity of chronic disease care

Type 2 Diabetes and People with Disabilities

About 1 in 6 people with disabilities (16.2%) in the United States in 2020 had been diagnosed with diabetes, compared to 1 in 14 people without disabilities (7.5%).

Source: CDC.gov

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Diabetes in Health Center Programs

Category	Total number health centers	Number of patients with diabetes, %	Number of patients with uncontrolled diabetes (A1C > 9%), %	Adjusted Quartile Ranking (AQR) for uncontrolled diabetes
All Health Centers	1,359	10.81%	28.24%	2
IOATS*	485	10.86%	28.48%	2
PHPCs**	107	10.26%	30.02%	3

Notes:
* Immediately Accessible to Public Housing Health Centers (IOATS)
** Public Housing Primary Care awardees (PHPCs)

Source: 2024 UDS Table 6A

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Diabetes From the Health Center Patient Perspective

This slide provides a comparison of the diabetes-related health services that health center patients receive across housing situations, all Department of Housing and Urban Development (HUD)-assisted patients, and those living in public housing. Public housing and HUD-assisted patients have lower diabetes diagnosis rates and engagement in diabetes self-care than other health center patients.

Contrasting residents of public housing and HUD-assisted from the general health center patient population: HRSA Health Center Patient Survey (2022)				
n (weighted) = 27,224,243	**All other housing (%)**	**All HUD-assisted* (%)**	**Public housing (%)**	***p*******
Patient diagnosed with type 2 diabetes in the last 3 years	17.3	17.9	10.2	0.05
Patient has ever been diagnosed with prediabetes	10.0	15.1	11.0	0.30
Patient contacted in last 6 months for diabetes self-care education	31.8	34.0	9.4	0.36
Patient has nurse appointment for diabetes self-care in the last 6 months	35.1	44.3	23.0	0.68
Patient has visited health center in the last 6 months for diabetes self-care	3.3	2.5	0.13	0.33
Patient has received diabetes home care plan from healthcare professional	63.8	50.5	24.7	0.08

* Includes Section 8 Voucher, Housing Choice Voucher, Project-based Section 8, and other HUD public housing programs
** P-value analyzed via weighted X^2
Source: Health Resources and Services Administration, 2022

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Types of Disabilities

- Visual
- Cognitive, learning, and neurological
- Auditory
- Physical
- Speech
- Chronic medical conditions
- Mental health and psychosocial

Source: Centers for Disease Control and Prevention. (n.d.). *Disability impacts all of us infographic*. https://www.cdc.gov/disability-and-health/articles-documents/disability-impacts-all-of-us-infographic.html?CDC_AAref_Val=https://www.cdc.gov/ncbddd/disabilityandhealth/infographic-disability-impacts-all.html

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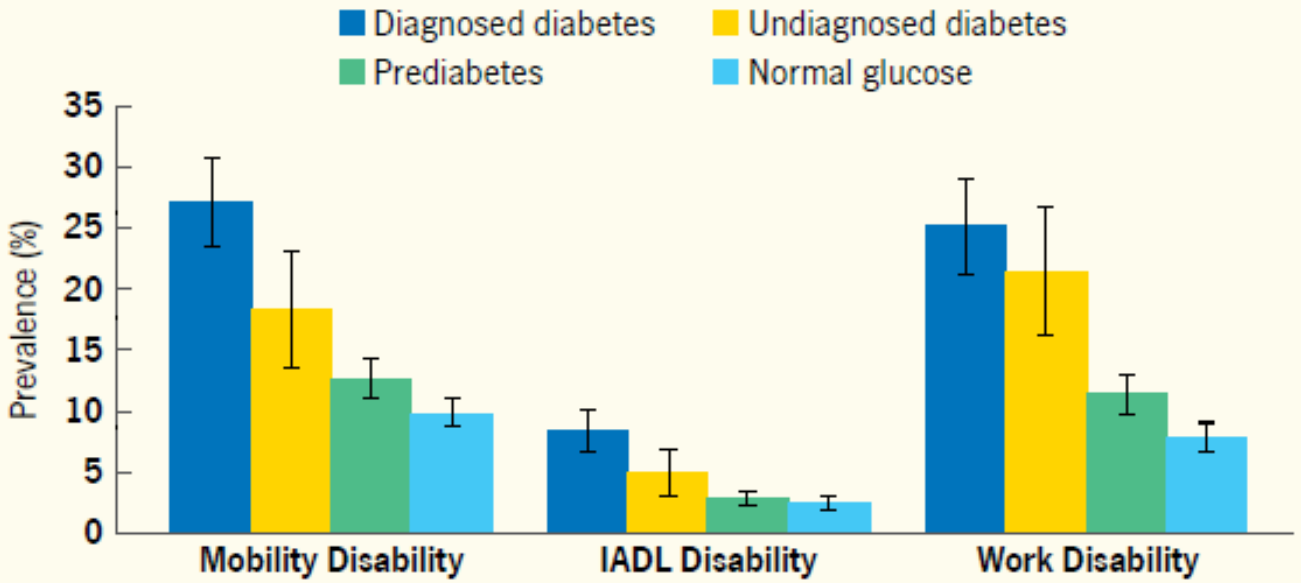
FIGURE 34.3. Age-Standardized Prevalence of Disability Among Adults Age ≥20 Years, by Diabetes Status, U.S., 2005–2010



Diabetes is based on self-reported diagnosis or A1c ≥6.5% or fasting plasma glucose ≥126 mg/dL. Prediabetes is defined as A1c 5.7%–6.4% or fasting plasma glucose 100–125 mg/dL. Normal glucose is defined as A1c <5.7% and fasting plasma glucose <100 mg/dL. Mobility disability is defined as self-reporting needing special equipment to walk or have much difficulty/unable/do not: (1) walk a quarter mile, (2) walk up 10 steps, (3) stoop/crouch/kneel, (4) walk between rooms, (5) stand up from armless chair, or (6) get in/out of bed. IADL disability is defined as self-reporting unable/do not do: (1) household chores or (2) prepare meals. Work disability is defined as self-reporting limitations keeping you from working. Data are standardized to the National Health Interview Survey 2010 overall population using age categories 20–44, 45–64, 65–74, and ≥75 years. Error bars represent 95% confidence intervals. Conversions for A1c and glucose values are provided in *Diabetes in America Appendix 1 Conversions*. A1c, glycosylated hemoglobin; IADL, instrumental activities of daily living.

SOURCE: National Health and Nutrition Examination Surveys 2005–2010

Source: Cowie, C. C., Casagrande, S. S., Menke, A., Cissell, M. A., Eberhardt, M. S., Meigs, J. B., Gregg, E. W., Knowler, W. C., Barrett-Connor, E., Becker, D. J., Brancati, F. L., Fradkin, J. E., & Narayan, K. M. V. (2018). *Diabetes in America* (3rd ed., Chapter 34: Diabetes and disability). National Institute of Diabetes and Digestive and Kidney Diseases. https://www.niddk.nih.gov/-/media/Files/Strategic-Plans/Diabetes-in-America-3rd-Edition/DIA_Ch34.pdf

POLL QUESTION 1

- Based on your experience, what is the most significant barrier to diabetes self-management among patients with physical, sensory, intellectual, or developmental disabilities?

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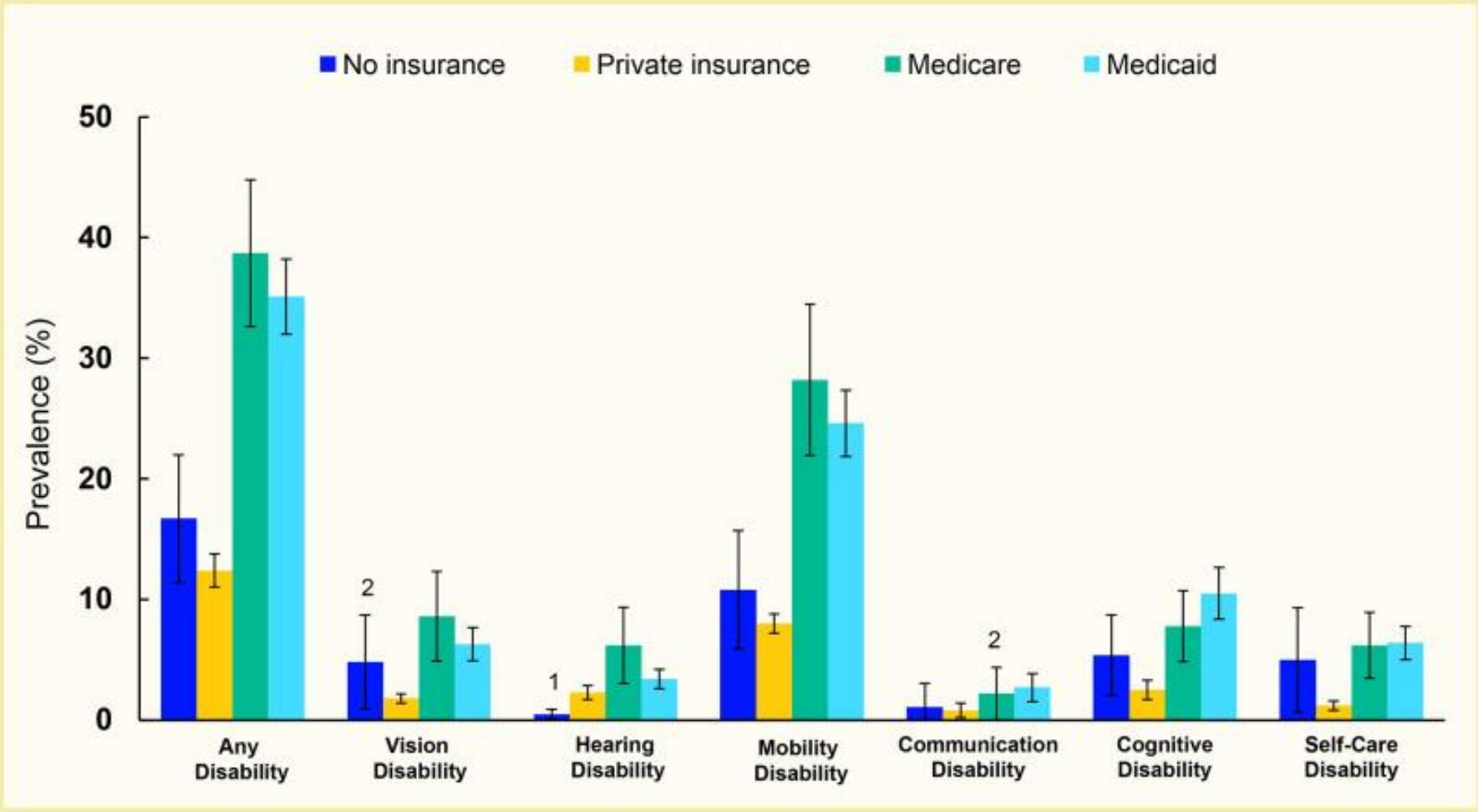
Age-Standardized Prevalence of Disability Among Adults With Diagnosed Diabetes, by Health Insurance Status, U.S., 2019–2022.



https://www.ncbi.nlm.nih.gov/books/NBK609951/

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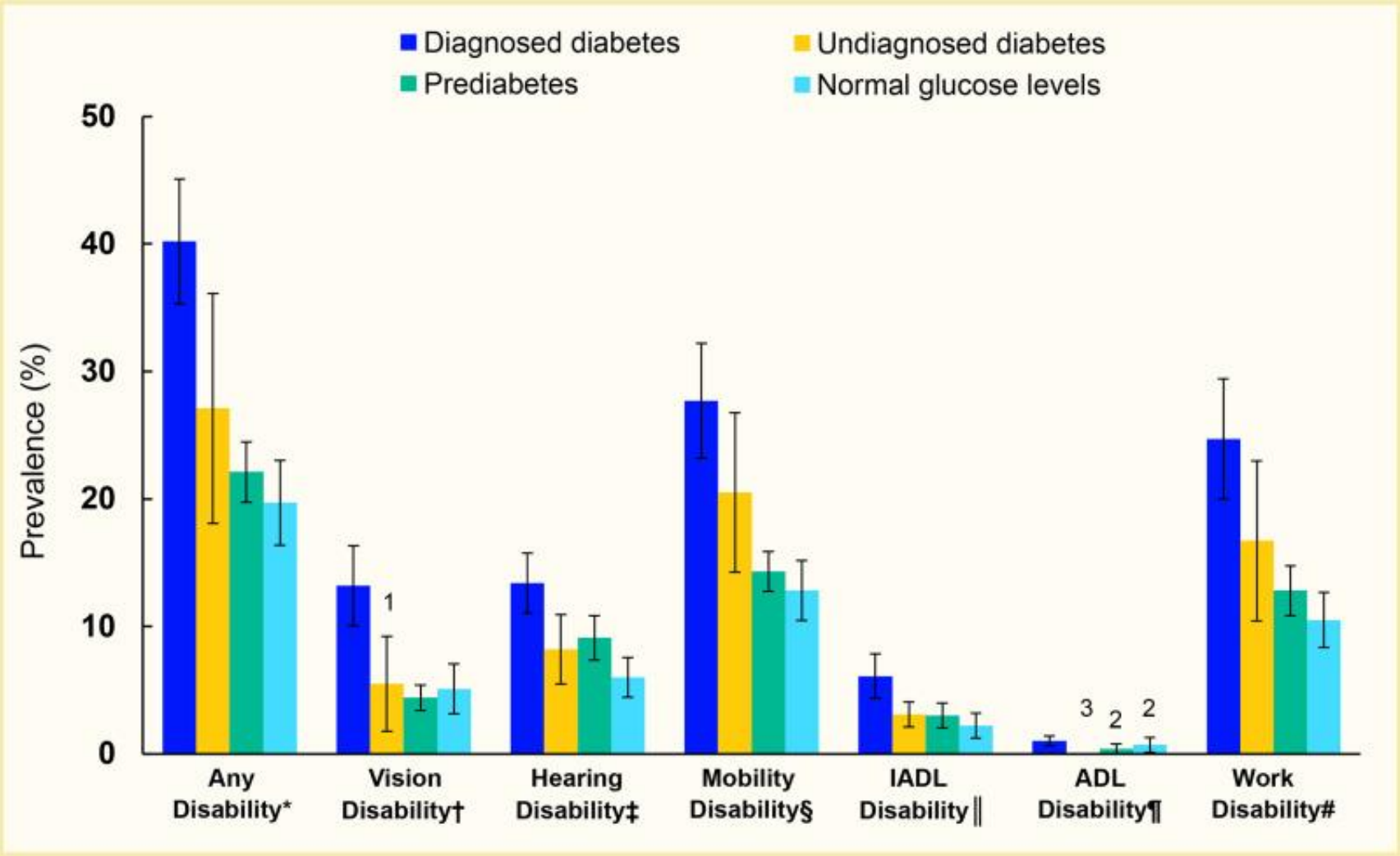
Age-Standardized Prevalence of Disability Among Adults Age ≥20 Years, by Glycemic Status, U.S., 2015–2018.



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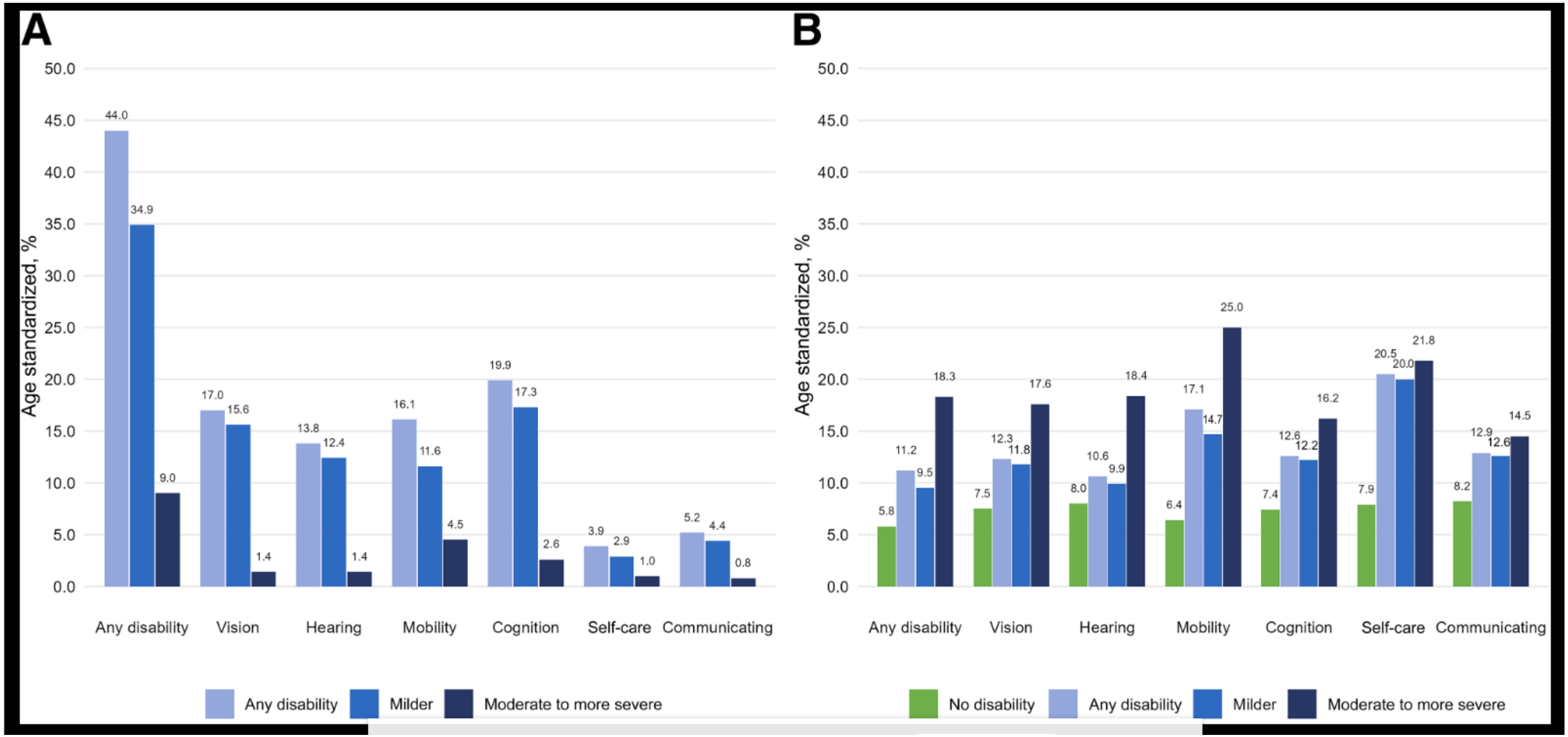
Prevalence of Disabilities Among U.S. Adults



Barbara H. Bardenheier, John D. Omura, Jinan B. Saaddine, Israel Hora, Kai McKeever Bullard; Prevalence of Diagnosed Diabetes Among U.S. Adults Aged ≥18 Years With Disabilities, 2021–2022. *Diabetes Care* 20 February 2025; 48 (3): 324–331. https://doi.org/10.2337/dci24-0086

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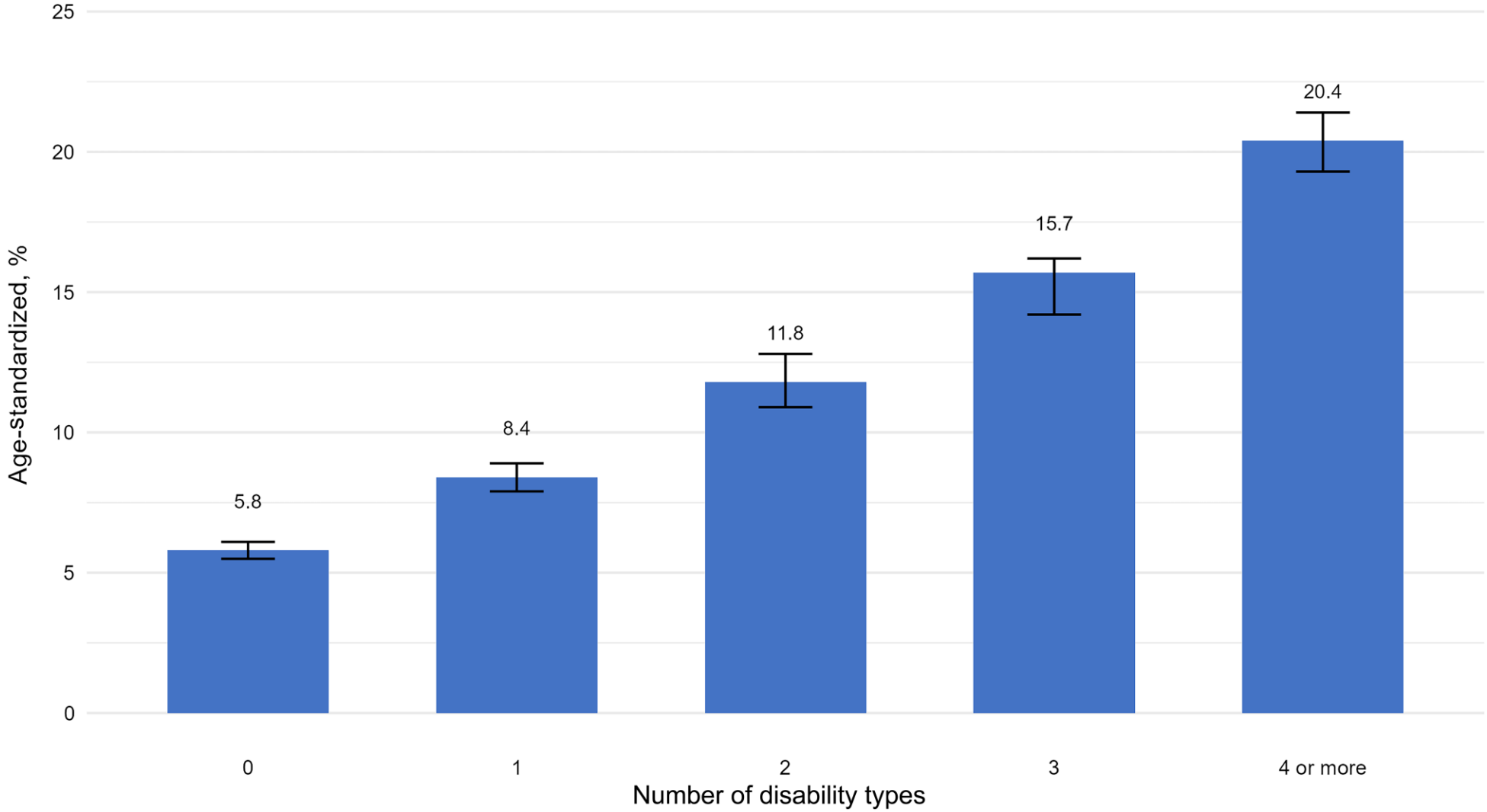
Diabetes Prevalence by Level and Type of Disability and by Number of Disability Types



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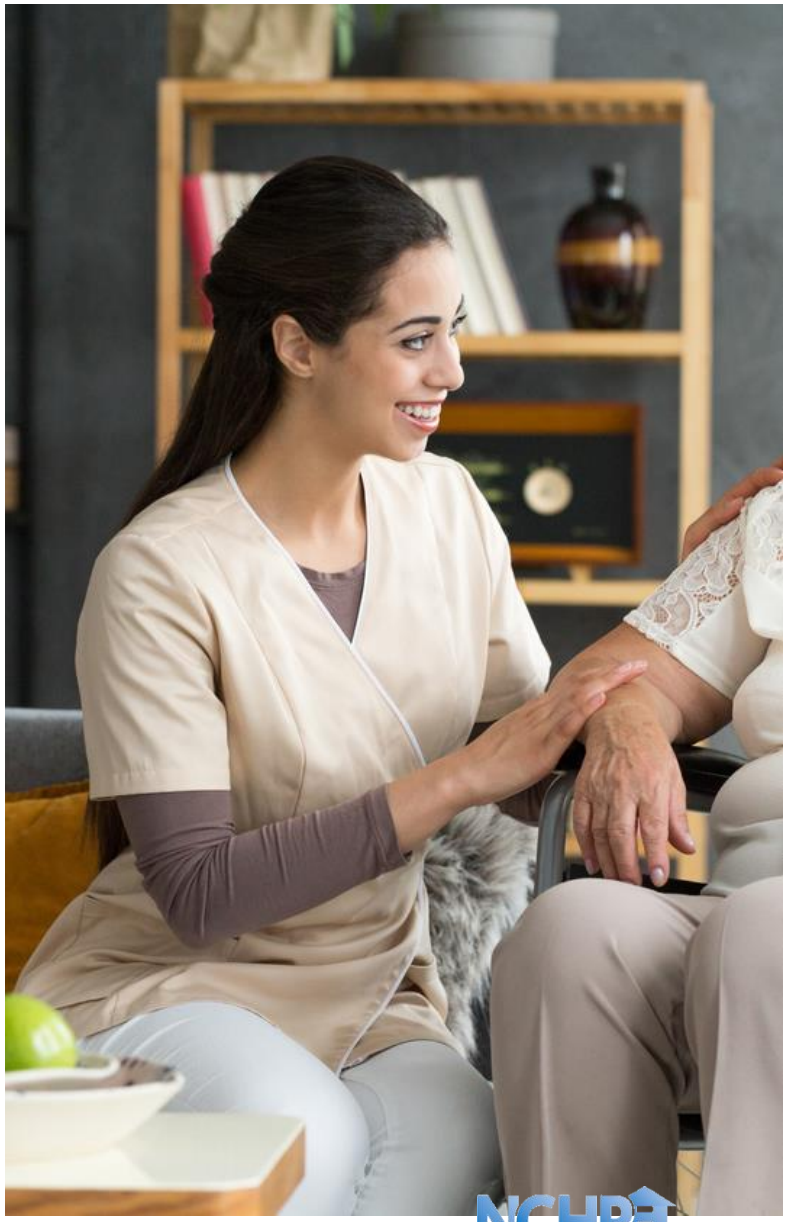
Challenges: Disabilities and Diabetes

- Socioeconomic and systemic barriers
- Barriers to accessing specialized care
- Sensory
  - Difficulty with injections, tablets
  - Food intolerances
  - Glucose testing refusal
- Physical limitations
- Reduced exercise capacity
- Cognitive delays
- Limited dexterity for injections & testing
- Difficulty remembering instructions
- Harder to recognize & respond to symptoms
- Reduced executive functioning



Challenges: Disabilities and Diabetes

- Antagonistic behaviors
  - Oppositional behavior
  - Often seen with psychiatric conditions
- Eating disorders
  - Binge eating disorder
  - Rumination disorder
  - Avoidant/Restrictive food intake disorder
- Communication barriers
  - Non-verbal
  - Multiple staff/care providers may be involved
- Caregiver dependency
  - Reduced autonomy
  - Caregiver burnout/loss/turnover

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Where to Start

- Acknowledge different needs
- Individualized approach
- Avoid stereotypes
- Emphasize support
- Tailored education
- Caregiver assistance
- Simplified resources
- Use person-focused language
- Suggest collaboration

Physical Disabilities and Diabetes

- Mobility limitation
- Exercise barriers
- Access to care
- Wound care and complications
- Caregiver dependence
- Financial burden
- Mental health strain
- Social isolation

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Poll Question 2

- What practical self-care strategies have you used or seen that effectively support patients with disabilities in managing their health in clinical settings?

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Physical Disability Strategies

Adaptive devices	Continuous glucose monitors, easier to use pen needles (retractable), auto-injector vs. multiuse pen GLP1 agent, patch pumps
Adaptive exercise programs	Work with a physical therapist on a personalized program that may include aquatic therapy, chair-based exercises, and a customized movement plan.
Telehealth	Virtual appointments, leverage community programs or services for in-person visits.
Simplify regimen	Limit insulin injections and testing frequency; use pill packaging service.
Pressure relieving devices and daily inspections	Teach patients/aids to perform daily foot checks. Use specialized cushions, mattresses, and orthotic footwear.

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Sensory Disabilities and Diabetes

- Injection or self-testing limitation
- Exercise barriers
- Caregiver dependence
- Financial burden
- Mental health strain
- Social isolation

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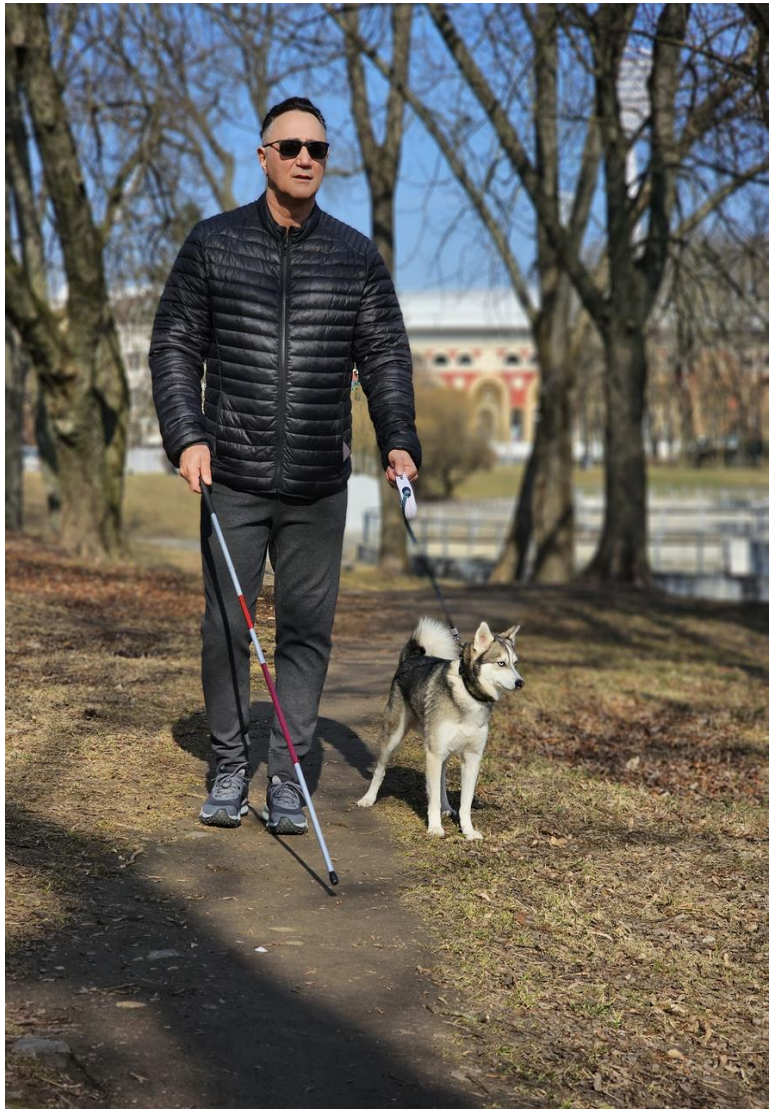
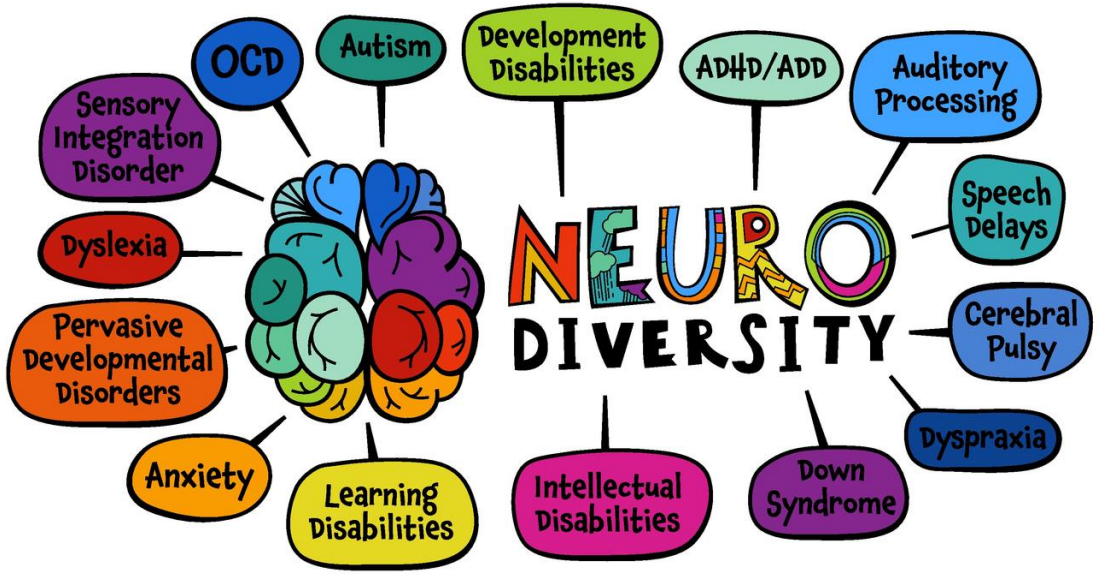
Sensory Disability Strategies

Tactile and accessible tools	Talking glucose meters (e.g., Prodigy Voice); braille or tactile markings (rubber bands or textured stickers) for test strips or pens; CGMs (e.g., Dexcom) with haptic or vibration feedback
Insulin administration aids	Clicks on pens as tactile feedback; caregiver preloading of needles or prefilling syringes; insulin pumps with tactile interfaces
Communication and support systems	Tactile sign language or finger spelling; braille or large-print materials; caregiver training
Diet and exercise programs	Create predictable meal plans and guided exercise
Leverage technology	Smartphone apps with accessibility features (e.g., mySugr) that can be used with screen readers or haptics; wearable alerts; Be My Eyes app for daily support



Diabetes and Intellectual Disabilities

- Cognitive and comprehension barriers
- Limited self-management skills
- Caregiver dependence
- Communication challenges
- Behavioral and emotional factors
- Physical and sensory comorbidities
- Access to tailored healthcare



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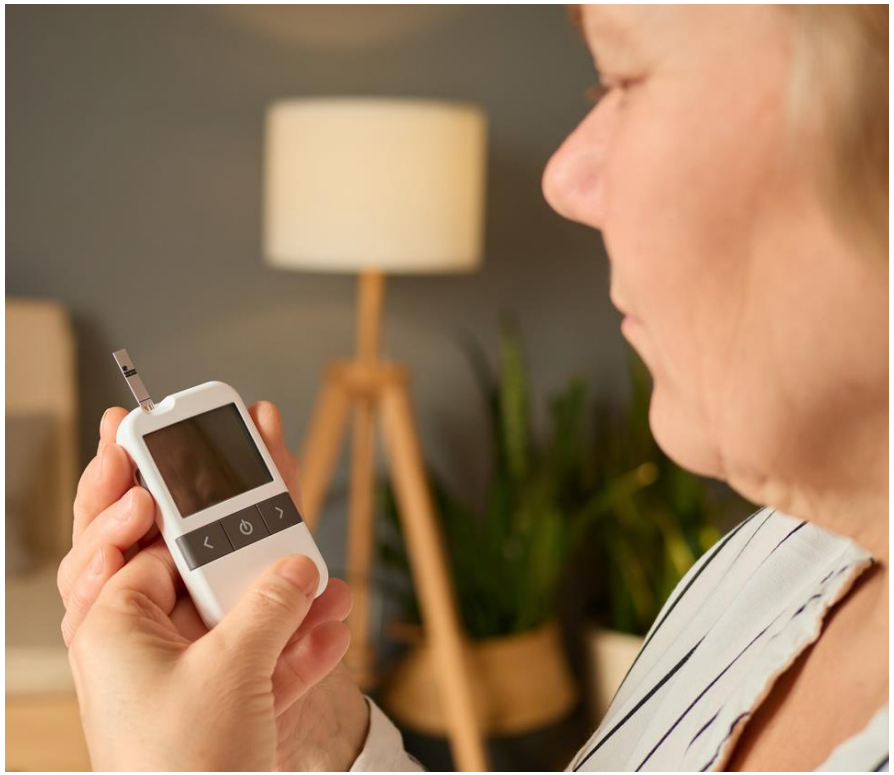
Diabetes and Intellectual Disabilities - Strategies

Provide simplified education	Use visual aids, easy to read material, hands on demonstration
Simplify regimen	Reduce administration burden of injections/meds where possible
Address diet challenges	Address any coexisting eating disorders, connect with RD to develop realistic plan with caregiver
Caregiver training and support	DSME tailored to the caregiver with ongoing support and reinforcement
Adaptative tools	Talking glucometers or CGMs
Counseling & support for coexisting behaviors	Connect with behaviorist/psychiatrist for counseling and ongoing support



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Diabetes and Developmental Disabilities

Autism Spectrum Disorder

- Sensory sensitivities
- Difficulty with routine changes
- Communication barriers
- Executive functioning challenges
- Caregiver dependence
- Behavioral and emotional challenges
- Access to tailored healthcare

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Poll Question 3

- Which approach do you think most improves patient experience and outcomes for people with disabilities in diabetes care?

A. Meet-and-greet or orientation visits

B. Consistent provider relationships

C. Extended consultation time

D. Caregiver involvement

E. Accessible education and communication

F. Reduced wait times and improved clinic navigation

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Diabetes and Autism Spectrum Disorders - Strategies

Sensory friendly tools	Use less invasive devices and explore what works best for the patient
Visual and structured support	Provide visual schedules, social stories, or apps to reinforce diabetes management in a predictable ASD friendly way
Provide simplified education and regimen	Reduce administration burden, provide clear and concise education
Caregiver training and support	DSME tailored to the caregiver with ongoing support and reinforcement
Behavioral interventions	Incorporate behavioral therapies to reinforce positive diabetes management habits
Sensory-adapted environments	Create calm, sensory-friendly medical settings to reduce anxiety during appointments

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Recommendations for Diabetes Review Clinics and Diabetes Health Checks for People With Disabilities

- Consider a meet-and-greet first appointment with the healthcare team as an initial step to get to know staff and provide photos of the health-care team
- For continuity of care, make reasonable adjustments so that the person is seen by the same doctor
- Allow extra consultation time for people with disabilities and their caregivers, and ensure reception staff offer double appointments where possible
- Ensure that the person is always accompanied by a caregiver or someone familiar during the consultation
- Build awareness of the disability with members of the health-care service, including the reception staff and nursing staff
- Use and adapt resources to provide education for various procedures, such as monitoring blood glucose, blood pressure, and measuring height and weight. Such resources could include a story or an online video about a visit to the doctor or nurse
- Promote patient-focused care mitigate barriers to booking follow-up appointments, reduce time spent in waiting rooms, improve accessibility of clinic rooms (especially for physical examinations), and adapt language when giving information

Caregiver & Staff Education

1. Use clear, accessible and individualized training materials
   - Simplify information
   - Tailor care to disability needs

2. Provide hands-on, practical training
   - Demos and role playing
   - Supervised practice

3. Emphasize person-focused care
   - Understand the individual
   - Promote autonomy

Caregiver and Staff Education

4. Address sensory and behavior needs
   - Recognize and accommodate needs
   - Teach staff to use positive reinforcement

5. Provide ongoing education and support
   - Regular training updates
   - Multidisciplinary collaboration

6. Focus on key diabetes management areas
   - Blood glucose monitoring, medication administration, nutrition and exercise, and emergency preparedness

7. Evaluate and provide feedback

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Case Study

A 14-year-old male had experienced learning difficulties since the start of elementary school. At the same time, he developed a tendency toward obesity. Upon entering middle school, a urine test revealed positive glucose levels. Blood tests confirmed HbA1c of 7.7% and fasting blood glucose of 142 mg/dL, leading to a diagnosis of type 2 diabetes. At diagnosis, his height was 157.5 cm, his weight was 72.5 kg, and his BMI was 49.7%. Cognitive studies revealed inattention and difficulty with writing. In the WISC-V, the FSIQ was at the lower limit of the average range, but there were deficits in the WMI and PSI. In the K-ABC2 achievement test, deficits were observed in the writing and mathematics areas.

Based on these findings, the patient was diagnosed with dysgraphia, working memory impairment, inattentive-type ADHD, and DCD.

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Discussion

What strategies need to be shared with the caregiver?

What type of community support would you recommend?

Who should be included as members of the health team?

What diet and exercise recommendations should be given to the patient and caregiver?

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Community Collaborations

https://youtu.be/vtxWNjx6rAo?si=FQLdxxw7cvCvw7vE

Q & A SESSION

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