



# Designing for Neurodiversity: Building Inclusive Spaces for Health Equity



Wendy Ross, MD, FAAP

Sabra Townsend, MS

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# Waiting Room



# Objectives

- 1) Articulate the aspects of autism and neurodiversity that present challenges in providing care and services
- 2) Discuss an approach to improve understanding and interactions
- 3) Reflect on your role in helping people feel that they belong in your community space or place of employment

## Jefferson Values



Put People First. Build relationships. Engage with grace. Create moments.



Pursue Excellence. Look and listen. Innovate with intent. Value lessons learned.



Do What's Right. Prioritize what matters. Align on expectations. Act with integrity.

# One Design Example

**Jefferson Center for Autism and Neurodiversity** has been involved in consultation on the design of Jefferson Health Honickman Center Specialty Care Pavilion in an effort to help create a healthcare environment conducive to the care of those with neurodiversity and, by extension, even more accessible to typical individuals.



# The Story

- Several years ago, the Center for Autism and Neurodiversity approached Jefferson leadership and asked to be included in discussions about the new building with the mission of including vulnerable populations from inception
- Autistic individuals have challenges with communication, social skills, and behaviors (especially in novel sensory environments)
- They also have many strengths
- Neurodiversity refers to anyone who experiences their world and/or communicates differently. It reflects the idea that all minds vary and have value
- Like ramps were designed for wheelchairs but improve access for others, when we program for vulnerable groups, we improve opportunities for everyone

# Opportunity

## Special Design Project

- Design consultants
- Create neurodiverse seating
- **Create a mock-up of a section of a floor and an examination room so that a focus group of our patients and their families can experience the built environment.**
- **Gather feedback from selected families so that we may refine the design prior to its permanent installation in the new Specialty Care Pavilion.**
- **Use findings to help refine this specific space and identify key aspects of design that can be applied to a variety of waiting areas and clinical rooms.**



## Jefferson's Specialty Care Pavilion Model

- Approximate cost: **\$500,000**
- 2 examination rooms
- Waiting room
- Hall



# Bathrooms with adult changing tables



# Exam Rooms



- Smart boards to promote inclusion of family and consultants and stream relaxing content
- Accessible examinations seats
- Uncluttered surfaces

# Sculpture by Autisarian Kambel Smith

- Incorporating a strength-based perspective
- Kambel is Pew Award winning artist



# Seating

- Sensory rooms should not be the only option
- Students of all backgrounds - health and design-problem solving together will shape the future
- Neurodiverse population involved from beginning
- Inclusion of non-speakers through video and behavioral coding



# Semi-Enclosed Spaces

# Sensory Walls

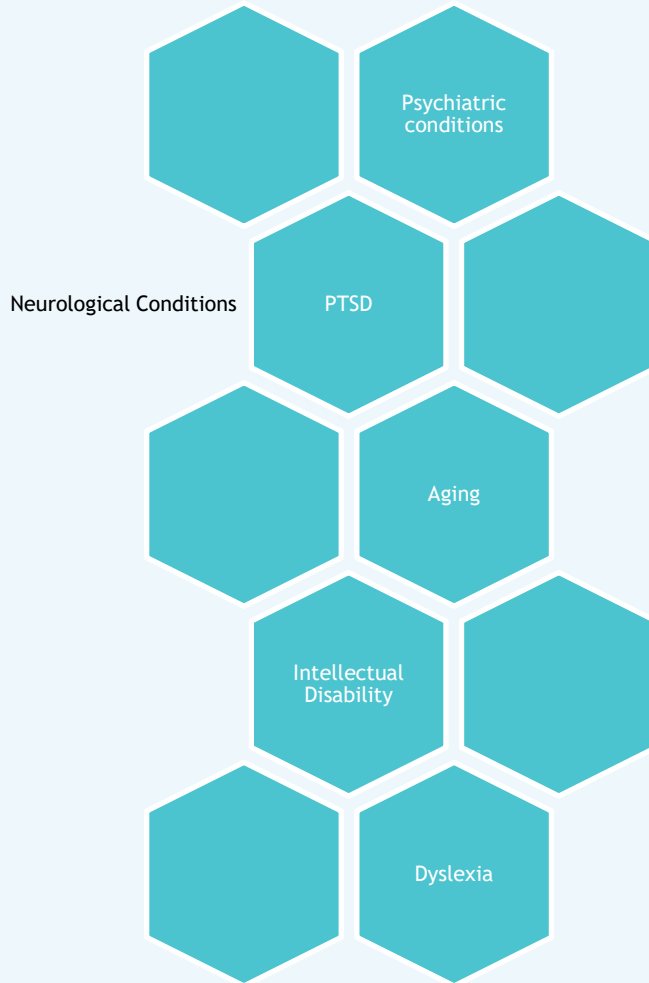


# Autism and Neurodiversity

- Let's take a step back...

# Neurodiversity

## Anyone who thinks or interacts differently



- ADHD
- Tourette's
- Veterans
- Anyone with an invisible or visible medical condition that has anxiety secondary to that condition.

# Neurodiversity

- Processing and communicating differently
- Autism
- Intellectual and Developmental Disorders
- Psychiatric Diagnoses
- Neurological Problems
- Aging
- Anyone with a novel and stressful medical condition or significant life stressor (including supporting a family member with challenges)

Autism  
Affects

Socialization

Communication

Behavior

## Socialization

May have poor eye contact

May seem to ignore you

May not read facial expressions

May not understand social situations without explanations or practice

May look completely typical



## Communication

May not respond to name

May have difficulty understanding

May struggle with expression

May not speak

May use pictures, letter board, or sign language to communicate

May seem totally typical



## Communication

May echo

May script

May have language but not be able to have a conversation

Can be very literal

May not understand sarcasm or humor

## Behavior

May be affected by changes in sensory information (lights, noises, textures)

May get upset easily

May have atypical or repetitive behaviors

Spinning, rocking, jumping, looking at things out of the corners of their eyes

Seeking or avoidant behaviors





## Behavior

May get stuck on certain topics

May read but not be able to speak

May not understand danger

May elope

May not follow conversational cues

## Behavior

May be very rigid about expectations

Behavior may worsen in new situations

May worsen in environments that have crowds and other sensory information

May change with medical conditions

May struggle with experiencing pain or describing pain

Never assume a behavioral change is just autism. Rule out medical causes.

## About Autism

Individuals with autism may or may not have intellectual disability.

Autism is not caused by parenting.

There is no medical cure for autism.

Not every behavioral change is the autism. Beware of diagnostic overshadowing.

## CDC 2025 and Additional Statistics

1:31 have autism

3.4:1 Boys to Girls

All racial, ethnic and socioeconomic groups

70 million people worldwide

50,000 in US enter adulthood every year

The population of individuals with autism is increasing and getting older

Many young adults with autism do not receive any healthcare after leaving pediatrics

More likely to die inpatient

Parents and stress

# American with Disabilities Act (ADA passed in 1990)

- Based on civil rights law to prevent discrimination
- Applies to Autism and invisible disabilities
- But there are no guidelines for invisible disabilities
- The care and support that some need but everyone deserves

# Let's Talk Strategies!

How can  
you help?

First, thank you for coming  
today.

Caring enough to come  
together means a lot!

Awareness is important.

# Ramps



# One

If you know one person with autism, you know one person...

Not everyone with ASD has an intellectual disability. Presume competence.

Someone with ASD may seem totally typical.

# How can you help?

## Be

Be aware of sensory issues

## Offer

Offer a quiet space or time if possible

## Think

Think of the person first, not the label

# Strategies



- Be Patient
- Don't Judge
- Respond don't react
- Be aware of sensory needs
- Prepare patients or participants
  - Exams and Activities
  - Use visuals whenever possible
- Coordinate care
- Schedule carefully, consider telehealth
- Involve caretakers thoughtfully
- Presume competence

# Please Do Not

Judge

Stare

Touch

Try to stop self stimulatory behavior

Rely on your facial expression to communicate a message

Demand eye contact

Talk about someone as if they were not present

# Strategies - Fidgets



# “Pocket” Card - front

## Individuals with Autism

may look typical but behave or react in unexpected ways.

### Communication

- Limited or no language
- Difficulty with conversation
- Not respond to name, requests or questions
- Echo words or phrases
- Difficulty expressing needs
- Confused by slang, sarcasm or humor
- Very literal

### Socialization

- Ignore you or seem deaf
- Decreased eye contact
- Pay attention even without eye contact
- Not understand or act within social norms without support

### Behavior

- Sensitive to light, sound, touch
- Get upset for no clear reason
- Repetitive behaviors (flapping, spinning, rocking)
- Get stuck on topics
- Wander or run off
- Show no fear of danger
- Decreased response to pain
- Increased response to other sensory input
- Inappropriate laughter or social response
- Not understand consequences

For more information, please email:  
[JeffCAN@jefferson.edu](mailto:JeffCAN@jefferson.edu)



# “Pocket” Card - back

## Strategies for Interactions

### REMEMBER:

- Each individual with autism is unique
- You may not be able to tell they have autism by appearance
- Some may have cognitive limitations; some may not
- Ask how you can help

### DO (if possible):

- Be patient
- Use a calm voice
- Speak slowly and clearly
- Use simple, literal language
- Use single step directions
- Show or demonstrate a message
- Allow time for responses
- Repeat simple questions or requests if no response in 15 seconds
- Be aware of sensory overload
- Offer a quiet space or time

### DO NOT:

- Judge
- Touch
- Stare
- Try to stop self stimulatory behavior—sometimes repetitive behaviors help manage anxiety
- Rely on your facial expression to communicate a message

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# Design Examples – Behind the Scenes

- Sensory Seating
- Fashion Design

# Industrial Design Class



# Interviewing Neurodivergent People



# Listening Sessions of Multiple Groups

Inclusion of non-speakers through video and behavioral coding



# Analysis



	<b>Movement</b>	<b>Privacy</b>	<b>Weight</b>	<b>Texture</b>
<b>Results Definite</b>	<p>Valuable</p> <p>Sliding was challenging, encouraged static movement not fidgeting, &amp; unapparent</p>	<p>Conditionally Valuable</p>	<p>Conditionally Valuable</p> <p>Benefits for those with anxiety; mostly placed on lap/stomach</p>	<p>Valuable</p> <p>Variety of texture is encouraged</p>
<b>Inconclusive</b>	<p>Finding optimal movement type requires more testing; how to make interactions more intuitive</p>	<p>Finding optimal height and shape requires more testing</p>	<p>Cleaning system concerns, social concerns for public use</p>	<p>Further research for responsive textures (i.e., buttons, switches, etc.)</p>

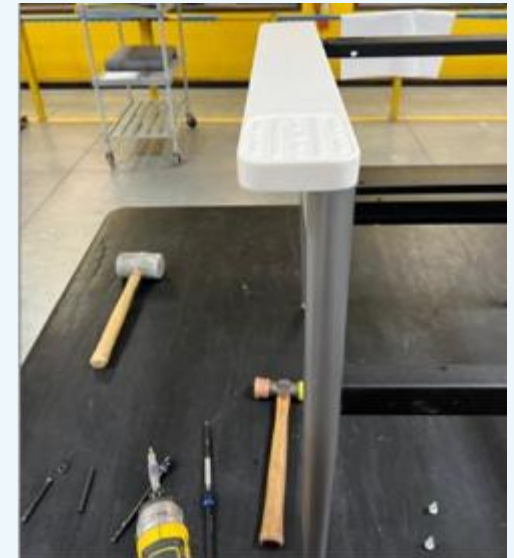
# Product Development



# Prototype Development



# Prototype Manufacturing



Photos provided by Miller Knoll

# Seating Designed for Public Spaces



Photos provided by Miller Knoll

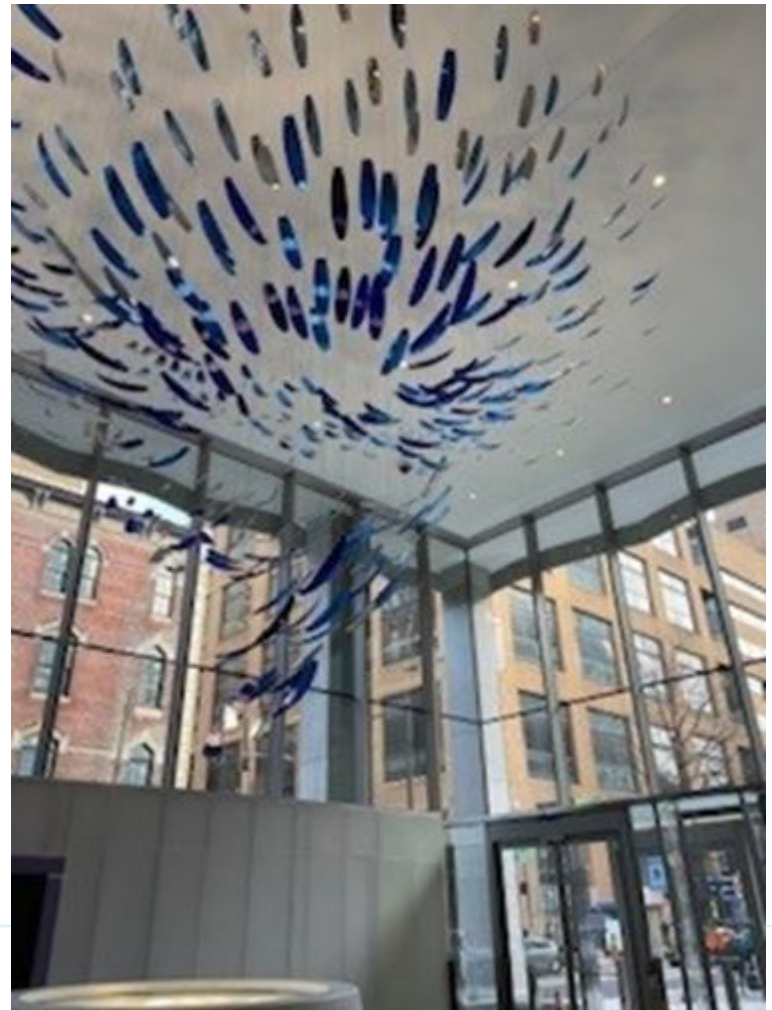
# Honickman Center



# Honickman Center



# Honickman Center



# Award-winning Design



Fast Company Award for Innovation – 2024  
Sensory Seating Design and Manufacture

## Adaptive Fashion: Designing for Inclusivity

A partnership between Jefferson Fashion Design & Jefferson Center for Autism & Neurodiversity



# Adaptive Designs



# Design Vision Boards



# Student Designers and Models



# Reception at Hayward Hall



# Voices: Listeners in the Noise

- *Voices: Listeners in the Noise* shares first-hand narratives that reveal how urban soundscapes affect autistic individuals, raising awareness and inspiring more inclusive cities.
- The documentary contains visual and audio elements that some viewers may find distressing (e.g, sirens, bright lights, loud noises). Viewer discretion is advised.

# Voices: Listeners in the Noise (17 min)

[VOICES.mp4 | Powered by Box](#)

# Care

- The care some need, and everyone deserves



Jefferson Center for Autism and Neurodiversity

Wendy Ross, MD, FAAP

[Wendy.ross@Jefferson.edu](mailto:Wendy.ross@Jefferson.edu)

Sabra Townsend, MS

[Sabra.townsend@Jefferson.edu](mailto:Sabra.townsend@Jefferson.edu)



# Jefferson Health

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