



**EARLY INTERVENTION FOR AUTISM
SPECTRUM DISORDERS IN CHILDREN
WHO ARE DEAF/HARD OF HEARING**

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OBJECTIVES

Describe a minimum of two key aspects of evidence-based interventions for treating autism spectrum disorders in young children.

Identify a minimum of two evidence based interventions for ASD and describe considerations for applying those practices with children who are deaf/hard of hearing.

Describe a minimum of two behavioral intervention components for ASD that can specifically be applied in early childhood and preschool settings.

INTERVENTIONS FOR DUAL DIAGNOSIS

Evidence of effectiveness of interventions is lacking (mostly case studies).

It is reasonable to take interventions which have been successful for hearing children to modify/adapt for children who are deaf/HH

EVIDENCE FOR EARLY INTERVENTION ...

Behavioral interventions work

- No effective medications yet
- Many models work
- Most effective use combo of structured and naturalistic strategies

INTERVENTION OUTCOMES

Higher cognitive skills (Dawson et al., 2010; Smith et al 2000)

Better language skills (Dawson et al., 2010; Kasari et al.,2008)

Improved social skills (Kasari et al., 2012)

Families are less stressed/happier (Breterton & Tonge, 2004)

BEHAVIORAL INTERVENTIONS REQUIRE INTENSITY

Involve high dose (20+ hours per week)

Structure

Highly trained professionals

Can change course of core deficits in social communication

Still not sure who benefits most from current interventions

- 1/3 kids receiving ABA still minimally verbal entering K

EVIDENCE BASED PROGRAMS

National Professional Development Center on ASD

<http://autismpdc.fpg.unc.edu/>

Autism Speaks

<https://www.autismspeaks.org/science/resources-programs/autism-treatment-network>

INTERVENTIONS FOR YOUNG CHILDREN

Applied Behavioral Analysis	Relationship Focused Early Intervention Models <ul style="list-style-type: none">• Floor Time (DIR)-Greenspan and Wieder• Relationship Development Intervention (RDI)	Developmental Models <ul style="list-style-type: none">• Early Start Denver Model	Parent training models <ul style="list-style-type: none">• Hanen More than Words	Models specifically for preschool-age children <ul style="list-style-type: none">• LEAP• Early Start Denver Model
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APPLYING PRINCIPLES FROM THESE MODELS TO CHILDREN WHO ARE DEAF/HARD OF HEARING

Intervention must focus not just on acquiring auditory skills or sign skills (e.g., language) but also social aspects of language (e.g., pragmatics)

- eye contact
- posturing for social communication
- early social behaviors such as showing/giving
- joint attention
- gesture use
- attention to others' actions
- imitation
- play skills

STRATEGIES FOR DEVELOPMENT OF JOINT ATTENTION

Use attention getting strategies to gain attention before communication

Shift the environment to promote improved ability to easily obtain joint attention (e.g., sit across from child so they don't have to shift visual attention as far)

When child looks spontaneously, seize the opportunity to engage in communication

Allow for child exploration of toy before trying to interact

Avoid making child reliant on external cues such as ("look!"/LOOK)

- (VL2 Research Brief #5)



STRATEGIES FOR ENCOURAGING EYE CONTACT

Manage antecedents and consequences

- Move object closer to your face
- Pause expectantly
- Reinforce with object requesting immediately after eye contact obtained

Be mindful of prompting

Expect eye contact with verbal communication

- Eye contact is first step toward social communication
- Do not reinforce verbal communication unless paired with eye contact

INCREASING SOCIAL ENGAGEMENT

Observe to find what motivates child (find the smile!)

Draw child's attention to people

- Eliminate competition by managing environment
- Position yourself to be center stage (play at child's level, consider toddler chair/beanbag, sitting on lap facing you)
- Watch and comment (e.g., sound effects)
- Be helpful (push materials closer, open containers)

Taking a role in play

- Imitate the child with matching materials
- Elaborate the play slightly (e.g., crash your tower! – not theirs 😞)

Becoming more active

- Control materials
- Take turns

EARLY START DENVER MODEL- USING SENSORY SOCIAL ROUTINES (SSRS) TO BUILD SOCIAL ENGAGEMENT

Play with people, not objects

The more fun the child is having, the longer they are attending and interacting, and the more learning opportunities you can provide

Work to increase the “fun quotient”

ESDM assumes that one of the basic biological differences in ASD is a decreased internal reward from social interactions and engagement

- use enjoyable play experiences to
 - increase child’s experience of pleasure in social interactions
 - internal motivation to seek out social engagement

EXAMPLES OF SENSORY SOCIAL
ROUTINES:

Patty cake

Peekaboo

Chase

Swinging

Airplane

So Big

Open Them
Shut Them

Ring around
the Rosie

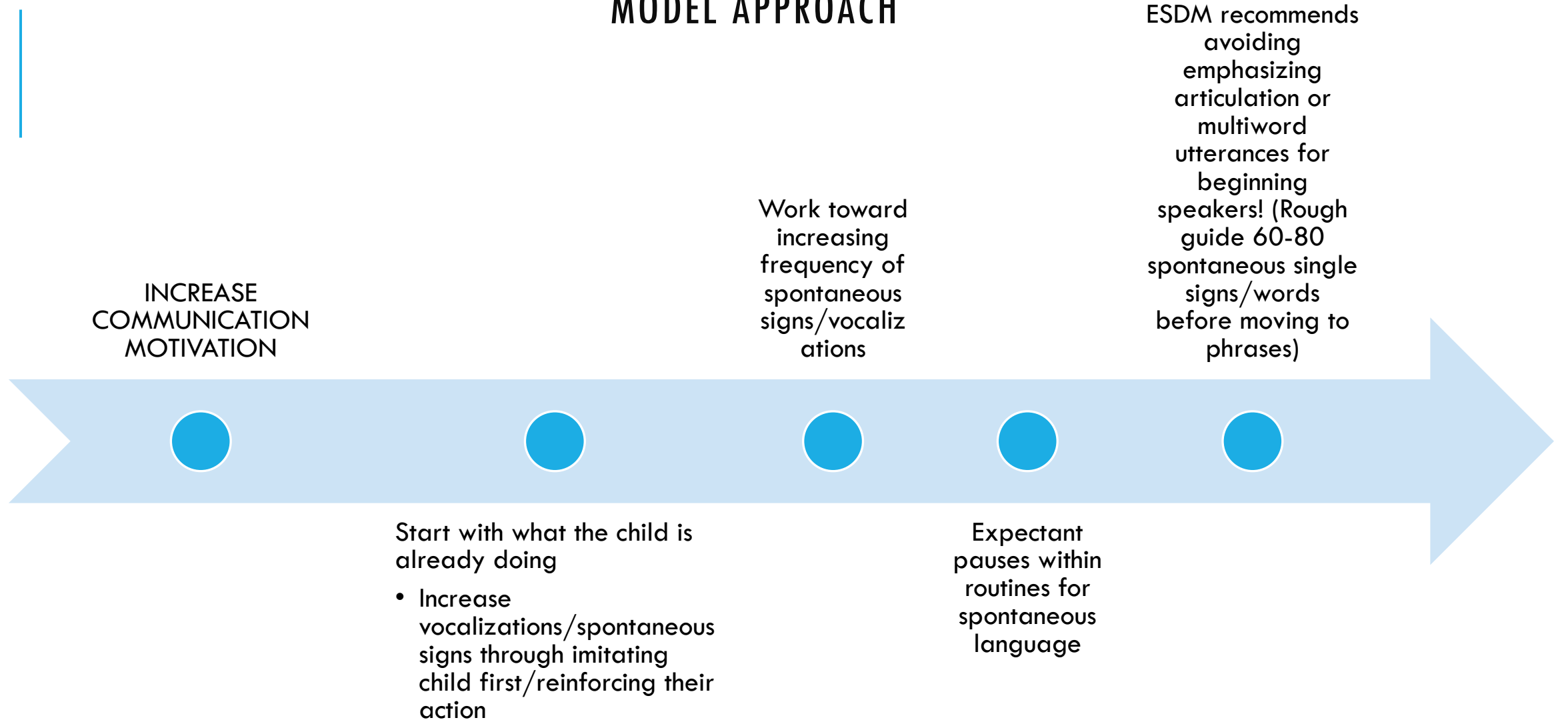
BUILDING IMITATION SKILLS

Importance of imitation

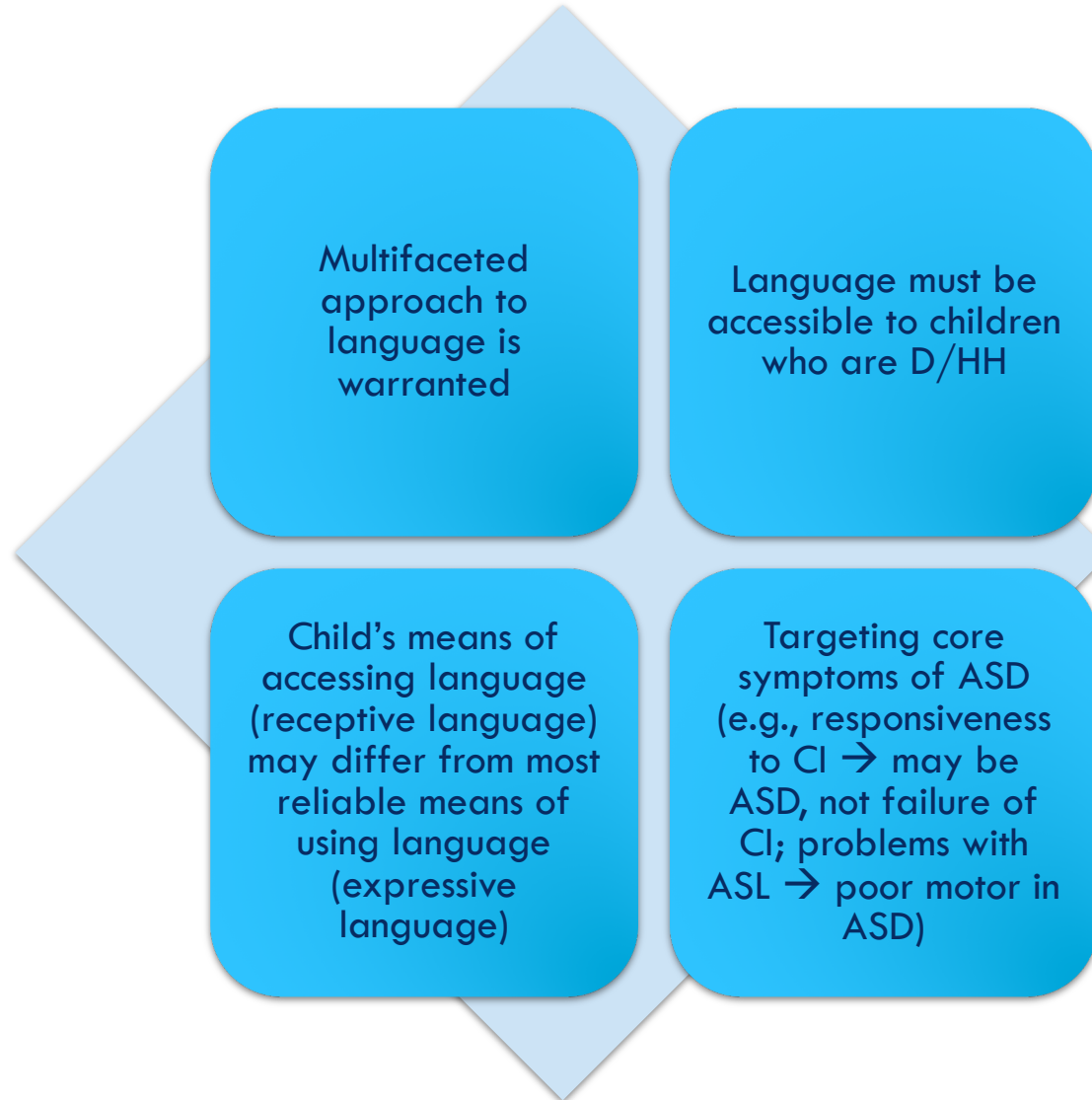
- Facial imitation- EX: smiles for yummy, disgust face, silly faces- may be best after child is imitating body actions
- Gestural imitation= imitation of body movements without objects
 - Imitating animals
 - Gestures in songs
 - Adult model preferred over verbal “you do it”
 - Proceeds from actions able to see on self to those can’t see on self
 - Management of prompting is key
- Imitation actions on objects
 - May be easier for some kids than vocal imitation
 - Proceed from you imitating their action and they repeat to child imitating your initiation of the activity, then imitating your NOVEL action (facilitates play)



LANGUAGE DEVELOPMENT –THE EARLY START DENVER MODEL APPROACH



COMMUNICATION CONSIDERATIONS



EDUCATIONAL CONSIDERATIONS

Severity of ASD symptoms and interaction with communication needs may impact educational placement decisions

Some children who have significantly impaired pre-verbal social/communication skills and reduced social interest may initially require an autism focused preschool program (rather than DHH program) to build communication motivation

Accessibility must always be considered



ASD may be suspected but not yet diagnosed during the 0-3 years.

- Assist parents/caregivers in identifying which behaviors are ones that would not typically be seen in a child who is deaf or hard of hearing.
- Do not be afraid of trying some of the strategies used with this population to see if they make a difference for the child. You can try the strategies without the label!
- Know the resources in your state or community for further diagnostic testing.

Intervention is often further complicated by the presence of still other conditions.

- Be mindful of the whole child.

SUMMARY REMINDERS FOR EARLY INTERVENTIONISTS

Encourage consistency in use of strategies with all caregivers.

There is no “one size fits all”. Be prepared to try different strategies with different children.

Carefully observe the child’s interactions. Help caregivers recognize and affirm progress.

DHH/ASD CHILDREN IN THE PRESCHOOL CLASSROOM

- Each child is different! Rarely do these kids present similarly in any way.
- Severity of hearing loss vs severity of ASD symptoms. Impact of dual diagnosis.

ALWAYS START WITH CHILD'S STRENGTHS

- What are the child's interests or preferences?
- What areas of development are the child's strengths?
- How does the child communicate most effectively?
 - Auditory/Oral
 - Sign/ASL
 - Augmentative Communication – low and high tech

PRAGMATIC/SOCIAL LANGUAGE INTERVENTIONS

- Must have authentic communication partners/peers with similar or slightly higher language levels and modality strengths.
- Provide explicit instruction in various pragmatic/social skills
 - Social Stories/Scripts
 - Experiences
 - Role Playing
 - Journals/Sharing

STEPS TO SUCCESSFUL COMMUNICATION

Teach skills explicitly and make them relevant to the child

Start with more supports and fade as appropriate

- 1:1 with child - practice
- Bring in peer with similar communication modality (maybe a peer model)
- Set up as much success as possible with small group (2-3 children)
- Work with towards large group setting in the classroom

Train/work with parents to support communication skill development outside of the classroom



Similarities and differences in ASD vs. DHH approach to language development

- Any areas of contradiction?
- How to resolve those?

Applying principles to ASL/signed language acquisition