Hearing Loss and Autism Spectrum Disorders (ASD): Information for New First Parents and Families

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April 2015

## Abstract

Autism spectrum disorders are lifelong conditions that affect children's social and communication skills. Dual diagnoses pose additional challenges mainly because of the difficulties that come with making accurate decisions. It is intriguing to note that children with hearing impairments are more likely to have autism as opposed to members of the general public. As a result of this, it is critical for hearing impairments to be identified at an early age. Parents of such children may feel confused about the dual diagnoses of autism as well as that of deafness. Therefore, the intention of this research brief is to provide parents and families about the signs and symptoms of deafness and autism. It also provides them some recommendation about the intervention strategies that could be used with their children.

## Hearing Loss and Autism Spectrum Disorders (ASD): Information for New First Parents and Families

### Overview

Autism spectrum disorders (ASD) refers to a developmental condition that alters an individual's ability to communicate and socialize with others. <sup>1</sup>Our understanding of ASD has grown since researchers began exploring ASD in the 1960s, reflecting an increase in research because of increased prevalence of ASD around the world.<sup>2</sup> Moreover, children with ASD often have additional diagnoses. <sup>3</sup>Autism is also in other words is considered to be a peripheral hearing disorder. Parents of such children may feel confused about the dual diagnoses of autism as well as that of deafness. The intention of this brief is to provide parents and families about the signs and symptoms of deafness and autism. It also provides them some recommendation about the intervention strategies that could be used with their children



- ASD interferes with an individual's communication and socialization skills.
- Children with hearing impairment have higher chances of having ASD.
- Dual Diagnoses are complicated to understand

The age at which autism spectrum disorders and hearing impairment are discovered is vital when it comes to helping the children. Children diagnosed with autism come with tremendous demands, which may make other impairments such as hearing loss go unnoticed.<sup>4</sup> This can be attributed to the fact that symptoms of hearing loss such as speech problems, lack of attention, lack of eye contact and clumsiness may be understood as being symptoms of autism.<sup>4</sup> However, observing and recording a child's developmental milestones periodically may unearth symptoms exceptionally early. These are behaviors that are expected of children at various ages. It is pivotal for one to understand the symptoms of deafness alone and those when autism is involved. Among other symptoms, children with hearing impairment experience difficulties when it comes to relating with other children.<sup>5</sup> They isolate themselves socially due to the fact that there is a substantial barrier in terms of communication system. Children with deafness may also struggle to communicate with gestures. With dual diagnoses where autism and hearing loss are involved, the symptoms have considerable similarities.<sup>5</sup> For instance; the child may be unable to sustain eye contact. They may also pull away from hugs and may be unable to express their feelings through facial expressions.<sup>5</sup>

## 1. Developmental Milestones.

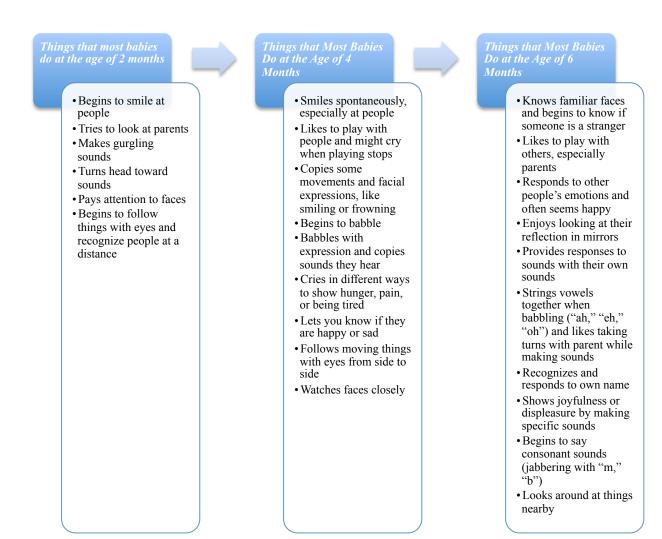
Table 1 illustrates a list of developmental milestones for communication and social skills that physicians may ask parents when they suspect their children of having autism and hearing loss. Paying attention to the social and emotional developmental milestones of the child can provide parents and other professionals with additional areas of exploration.<sup>6</sup> According to Autism New Jersey (2015) pediatricians are often the first contact when

parents become concerned about their children. During office visits, the physician may ask questions about the child's development. During these sessions, parents often share their concerns with the health professionals. Pediatricians will ask the parents various questions in order to assess a child's progress toward typical milestones.<sup>6</sup> however; some of the developmental milestones may define both autism and hearing loss. The items listed are developmental milestones that children should exhibit by the time they reach the specified age. Failure to achieve some of the specific developmental milestone is a clinical clue that raises concerns that the child may have autism or some of other delayed developmental disorder.<sup>7</sup>



- Symptoms of hearing loss have a striking resemblance to those of Autism spectrum disorder.
- Early detection of both hearing loss and ASD is vital.

# Table 1: Developmental milestones for communication and social skills.<sup>20</sup>



## Table 1: Developmental milestones for communication and social skills.<sup>20</sup>

#### Things that Most Children Do at this Age of 1 Year Things that Most Children Do at the Age of 2 Years Things that Most Children Do at the Age of 3 Years · They are shy or nervous Copies others, especially · Copies adults and adults and older children with strangers friends · Cries when mom or dad • Gets excited when with · Shows affection for other children friends without leaves prompting · Shows more and more · Have favorite things and independence · Takes turns in games people Shows concern for a · Shows fear in some · Shows a defiant behavior crying friend situations • (Doing exactly what · Hands you a book when • Understands the idea of he wants to hear a story they have been warned "mine" and "his" or to avoid) "hers" · Repeats sounds or actions to get attention · Plays mainly beside · Shows a wide range of • Responds to simple other children, but emotions begins to include other · Separates easily from spoken requests • Uses simple gestures, like shaking head "no" children mom and dad · Points to things or · May get upset with pictures when they are major changes in routine or waving "bye-bye" named · Makes sounds with · Follows instructions · Knows names of changes in tone (sounds with 2 or 3 steps familiar people and body more like speech) Can name most familiar parts • Says "mama" and "dada" and exclamations things Says sentences with 2 to • Understands words like 4 words like "uh-oh!" "in," "on," and "under" • Follows simple • Tries to imitate the · Says first name, age, and words they hear instructions sex • Repeats words · Cognitive (learning, • Names a friend thinking, problemoverheard in · Says words like "I," conversations "me," "we," and "you" and some plurals solving) · Points to things in a Copies gestures book · Lets things go without • (Cars, dogs, cats) help · Talks well enough for strangers to understand most of the time

### 2. What you should to know about intervention programs

"No information has yet been reported about the effectiveness of early intervention strategies for very young children with the dual diagnosis of ASD and deafness".<sup>8</sup> Early intervention programs should target a range of skills, including communication and social skills. It is better to use intensive intervention programs that add up to 25-40 hours per week for one to three years.<sup>9</sup> Children who are deaf or hard of hearing rely on visual skills for support in communication. <sup>8</sup>Consequently, intervention strategies for young children with hearing loss focus on developing visual skills and aural habilitation with the use of hearing aids. Specialized interventions for these children may include the development of auditory skills, visual attention, peer interaction, sign language, communication skills, and stimulus response. Meanwhile, young children diagnosed with ASD are typically treated with comprehensive behavioral therapy. This mainly focuses on expressive and receptive language, nonverbal communication, play skills, imitation, joint attention, self-help skills, peer interaction, and engagement and other attentive and socially appropriate behaviors.<sup>10</sup> Behavioral intervention is also the most effective method of addressing the needs of children with ASD. One type of behavioral intervention for children on the spectrum is Applied Behavior Analysis (ABA). ABA uses techniques and principles to bring about positive change in behavior. for more information about ABA please visit, ABA Therapy - Center for Autism and Related Disorders.<sup>11</sup> Research suggests that incorporating the perspective of parents into the service delivery model and intervention services leads to positive outcomes for both the child and the family.<sup>4</sup>Research suggests parents have knowledge of Sign Language, they may choose to use it with their children.<sup>12</sup> However, many parents who are hearing and are not used to signing may decide to learn sign language as a family. Alternatively, they can encourage their child to speak and learn lip reading. Most families use a variety of methods to communicate with their deaf children. If a child has additional needs, autism families may prefer to adopt a 'total communication approach' including a combination of symbols, pictures, or sign language in order to communicate. It can be challenging to communicate with a child who is deaf and has autism. Therefore, it is essential to find out what works for the individual child. It is also prudent to use a combination of signing and pictures besides ensuring that your child is looking at you and can see you clearly when you speak. Visual clues can be very helpful when it comes to reinforcing messages.<sup>12</sup>



### Recommendations

Parents with children who are diagnosed with both autism and deafness face tremendous challenges in life. These families face confusion due to the dual diagnoses since the conditions may have detrimental implications on the children's entire lives. It is worth noting that hearing disability can interfere negatively with children's development in terms of communication, social and language skills. In order to put the situation under control, diagnoses should be conducted exceptionally early in life. This is mainly because a timely intervention is critical when it comes to helping the children reach their full potential. Families should get in touch with health professionals whenever their children show symptoms that are unique to autism and hearing loss. It is also crucial for more studies into autism and hearing loss to be conducted in future. This would create more awareness regarding the dual diagnosis and create an understanding of signs and symptoms of autistic children with hearing impairment.

## Conclusion

Autism spectrum disorders are lifelong conditions that affect children's social and communication skills. Dual diagnoses pose additional challenges mainly because of the difficulties that come with making accurate decisions. It is intriguing to note that children with hearing impairments are more likely to have autism as opposed to members of the general public. As a result of this, it is critical for hearing impairments to be identified at an early age. This would facilitate a timely diagnosis of ASD thereby ensuring timely intervention mechanisms. Despite the fact that autism spectrum disorders are incurable, there are numerous therapies that enable affected children to lead independent lives. Early observation of developmental milestones among children is crucial. It is necessary to evaluate listening and communication skills in order to identify factors and signs of both hearing loss and autism spectrum disorder. An early diagnosis provides the concerned families with an accurate prognosis and enables health professionals to make appropriate referrals. Consequently, necessary intervention mechanisms can be initiated thereby relieving parents of an enormous challenge.

## **Resources that might help**

What is ABA? (http://www.centerforautism.com/abatherapy.aspx)

Developmental Milestones (http://www.cdc.gov/ncbddd/actearly/milestones/index.html)

If you chose sing language approach with your child, you can get more information about teaching method from Peter cook website, Sign Story (http://www.signedstories.com/apps).



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