DEFINITION

- Developmental disorders (also known as neurodevelopmental disorders) are a group of conditions with onset during childhood – generally present to some degree from birth. These disorders are characterized by developmental deficits that produce impairments of personal, social, academic, or occupational functioning that vary from relatively mild limitations of executive functioning to global impairments of social skills or intelligence (Wilmoth, 2017).
- There is substantial heterogeneity across many developmental disorders (Continental Hospitals, n.d.) which often makes it difficult to predict actual outcomes in adulthood (Wilmoth, 2017).

ETIOLOGIES

- The etiology of developmental disorders is complex and multifaceted, with various factors contributing to their onset. The causative factors can be broken down into genetic, environmental, and other biological factors (Continental Hospitals, n.d.):
    - **Genetic causes**: Chromosomal abnormalities such as the presence of an extra chromosome 21 in Down syndrome are a clear genetic cause. Other conditions, like ASD and ADHD, have more complex genetic correlations with multiple genes thought to contribute to their manifestation.
    - **Environmental causes**: Prenatal exposure to certain substances like alcohol (which can cause fetal alcohol spectrum disorders), drugs, or tobacco has been linked to developmental disorders. Infections during pregnancy, such as rubella, are also associated with an increased risk of developmental issues.
    - **Biological factors**: Low birth weight, premature birth, and a lack of oxygen during birth are biological factors that can contribute to developmental disorders. In some cases, severe malnutrition or exposure to toxins (like lead) during childhood can also play a role.

COMMON DEVELOPMENTAL DISORDERS

AUTISM SPECTRUM DISORDER (ASD)	
Definition	**Etiology**

• A neurological and developmental disorder affecting how people interact with others, communicate, learn, and behave
• Described as a "developmental disorder" because symptoms generally appear in the first 2 years of life (National Institute of Mental Health, 2024)
	• *No single known cause*; but genetics and environment are implicated in the development of the disorder (Sauer et al., 2021)
	  ○ **Genetics** - can be associated with a genetic disorder or a risk factor genetic mutations
	  ○ **Environmental Factors** - there is an ongoing exploration of whether factors such as viral infections, medications or complications during pregnancy, or air pollutants play a role in triggering ASD (Mayo Clinic, 2024)

Prevalence & Incidence

Locally:

- Estimated to be slightly lower, with about 1 in every 100 Filipinos being affected by this condition, translating to approximately 1.2 million of our countrymen living with autism today (Autism Society Philippines, 2021).

Internationally:

- It is estimated that worldwide about 1 in 100 individuals has autism. This estimate represents an average figure and reported prevalence varies substantially across studies. Some well-controlled studies have, however, reported substantially higher figures. The prevalence of autism in many low- and middle-income countries is unknown (World Health Organization, 2023).

SIGNS: Manifestations According to Physicians/Allied Health Medical Professionals

- Persistent deficits in social communication and social interaction across multiple contexts
- Restricted, repetitive patterns of behavior, interests, or activities
- Hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment
- Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning
- Previous or current contact with mental health or learning disability services
- A history of neuro-developmental conditions or psychiatric difficulties
- Some adults are diagnosed later in life, especially if their symptoms are mild or masked by compensatory behaviors developed over time.

ASD IN WOMEN

- Have learned to hide signs of autism to 'fit in' by copying people who do not have autism
- Be quieter and hide their feelings
- Appear to cope better with social situations
- Show fewer signs of repetitive behavior

SYMPTOMS: Manifestations According to the Patient

- Communication preferences such as written or electronic communication over face-to-face interactions, which can be overwhelming
- Problems in obtaining, regularly attending, or sustaining employment or education
- Difficulties in initiating or sustaining social relationships
- Self-stimulatory behaviors like stimming to regulate emotions and sensory input
- Unique coping mechanisms to manage stress and anxiety
- Preferring predictable environments
- Experiencing the world in a unique way, valuing detail, patterns, or specific interests

Manifestations that the Parents/Significant Others Perceive

- Challenges in forming and maintaining close relationships or a preference for solitude
- Specific sensory triggers that cause sensory overload or discomfort in daily life
- Strong need for routine and predictability, with deviations causing significant stress
- Difficulties in organization, planning, and time management

Structural & Anatomical Changes

- Larger brain volume
- Differences in connectivity between different regions of the brain
- Affects multiple regions of the brain, leading to variations in how they function
    - Prefrontal cortex - involved in higher-order cognitive processes, contributing to challenges in executive functioning and social interaction
    - Amygdala - processes emotions and social information, contributing to difficulties in recognizing and responding

	to emotions in others ○ Hippocampus - involved in memory formation and spatial navigation, impacting learning and memory processes ○ Cerebellum - associated with motor control, contributing to challenges in motor skills and coordination, as well as difficulties with language and social interactions.

Possible SLP Areas Affected and Their Characteristics

Speech	• May have a **speech sound disorder** (Shriberg et al., 2011, as cited in ASHA, n.d.). • Identifiable speech and voice characteristics: Monotone, robotic, staccato, jerky, and sing-songy; inconsistent prosody • Creates an impression of "oddness" among children with ASD (Vogindroukas et al., 2022).
Language	• According to ASHA (2024): Persistent deficits in **social communication** and social interaction across multiple contexts (e.g., joint attention, social-emotional reciprocity, nonverbal and verbal communication skills, initiation of conversation). • **Restricted and repetitive use of language** (e.g., echolalia, perseveration). • Difficulty with **abstract language** (Tager-Flusberg & Caronna, 2007). • Difficulty with **narrative discourse** (Colle et al., 2008).
Swallowing	• May have feeding problems (Twachtman-Reilly et al., 2008, as cited in ASHA, n.d.). • Feeding problems are seen as **behavioral**, as they closely link to the repetitive and restrictive characteristics seen in autism. • **Sensory sensitivity**, common in autism, may also cause feeding problems. • Other **physical disabilities or developmental delays** that may exist alongside ASD may cause feeding problems (SLT for Kids, 2024).
Hearing	• Children with autism may have **hyperacusis** (a heightened sensitivity to sounds). • At the same time, they may have **hearing loss in other ranges** (e.g., high-pitched sounds are very bothersome for them, but they can't hear lower-pitched sounds clearly). • This can make it tough to parse out if issues are stemming from HL, or not (Clason, 2023).

Types of Autism Spectrum Disorders: DSM-4 (1994)

In the DSM-4, autism was divided into five separate diagnoses. More specifically, the DSM-4 included autism within a category of disorders known as Pervasive Developmental Disorders (PDDs)

Autistic Disorder	• The presence of **markedly abnormal or impaired development in social interaction and communication**, and a markedly restricted repertoire of activity and interest.

	• The manifestations of this disorder vary greatly depending on the developmental level and chronological age of the individual. • Autistic Disorder is sometimes referred to as Early Infantile Autism, Childhood Autism, or Kanner's Autism
Asperger's Disorder	• The essential features include severe and sustained impairment in social interaction and **the development of restricted, repetitive patterns of behavior, interest, and activity.** • The disturbance must clinically show significant impairment in social, occupational, and other important areas of functioning. • In contrast to Autistic Disorder, there are no clinically significant delays in language. • In addition, there are no clinically significant delays in cognitive development or in the development of age-appropriate self-help skills, adaptive behavior, and curiosity about the environment in childhood.
Rett's Disorder	• The essential feature is **the development of multiple specific deficits following a period of normal functioning after birth.** • There is a loss of previously acquired purposeful hand skills before subsequent development of characteristic hand movement resembling hand wringing or hand washing. • Interest in the social environment diminishes in the first few years after the onset of the disorder. • There is also significant impairment in expressive and receptive language development with severe psychomotor retardation.
Childhood Disintegrative Disorder	• The central feature is **a marked regression in multiple areas of functioning following a period of at least two years of apparently normal development.** • After the first two years of life, the child has a clinically significant loss of previously acquired skills in at least two of the following areas: expressive or receptive language; social skills or adaptive behavior; bowel or bladder control; or play or motor skills. • Individuals with this disorder exhibit the social and communicative deficits and behavioral features generally observed in Autistic Disorder, as there is qualitative impairment in social interaction, communication, and restrictive, repetitive, and stereotyped patterns of behavior, interests, and activities.
Pervasive Developmental Disorder Not Otherwise Specific (PDD-NOS)	• The essential features are **severe and pervasive impairment in the development of reciprocal social interaction or verbal and nonverbal communication skills; and stereotyped behaviors, interests, and activities.** • The criteria for Autistic Disorder are not met because of late age onset; atypical and/or sub-threshold symptomatology are present. • This category should be used when there is a severe and pervasive impairment in the development of reciprocal social interaction or verbal and nonverbal communication skills, or when stereotyped behavior, interests, and activities are present, but the criteria are not met for a specific Pervasive Developmental Disorder, Schizophrenia, Schizotypical Personality Disorder, or Avoidant Personality Disorder (Autism Society, 2024)

Types of Autism Spectrum Disorders: DSM-5

The DSM-5 was released in 2013. The DSM-5 redefined autism. Autism spectrum disorder is the only classification for autism in the current edition of the DSM. There are no subcategories. However, if someone had an established diagnosis of Asperger's, Autistic Disorder, or PDD-NOS from the DSM-4, they would likely be considered as having autism spectrum disorder (ASD).

Levels of Autism Spectrum Disorder: DSM-5 (2013)

Level 1: "Requiring Support"	• Without support in place, deficits in social communication cause noticeable impairments • Difficulty initiating social interactions • Atypical or unsuccessful response to social overtunes of others • May appear to have decreased interest in social interactions • Inflexibility of behavior causes significant interference with functioning • Difficulty switching between activities • Problems of organization and planning hamper independence
Level 2: "Requiring Substantial Support"	• Deficits in verbal and nonverbal social communication skills • Social impairments apparent even with supports in place • Limited initiation of social interactions • Reduced or abnormal responses to social overtunes from others • Inflexibility of behavior • Difficulty coping with change • Restricted/repetitive behaviors appear frequently and interfere with functioning • Distress and/or difficulty changing focus or action
Level 3: "Requiring Very Substantial Support"	• Severe deficits in verbal and nonverbal social communication skills • Very limited initiation of social interactions • Minimal response to social overtures from others • Inflexibility of behavior • Extreme difficulty coping with change • restricted/repetitive behaviors markedly interfere with functioning • Great distress/difficulty changing focus or action

Progression of the Condition

- Many symptoms observed in children with ASD persist into adulthood, potentially complicating independent living.
- The progression of ASD in adults varies significantly between individuals, with some experiencing improvements in certain areas while others face new challenges.
- Mental health concerns, such as anxiety and depression, may become more prominent in adulthood.
- Environmental factors, like life transitions related to employment or relationships, can impact symptom presentation. While some adults may experience cognitive changes as they age, many can lead fulfilling lives with appropriate support and interventions.
- It's worth noting that research on ASD in older

Outcome if Left Untreated

- For individuals with ASD, untreated symptoms can lead to difficulties in social interactions, communication, and maintaining relationships. They may struggle with employment, independent living, and may experience increased anxiety and depression.

adults is limited, but some studies suggest potential cognitive decline similar to the general population.
- Comorbid conditions may also develop or become more apparent in adulthood.

SLP Management (ASHA, 2024)

Communication
- For those who do not talk at all, talk very little, or have trouble talking, Augmentative and Alternative Communication can be provided to help them communicate
- Can include sign language, gestures, pictures, computer tablets, and other electronic devices

Pragmatic Skills
- Getting along with others in different settings
- Using a variety of communication supports
- Taking turns in conversation
- Moving from one task or setting to another
- Accepting change and expanding interests, including trying new foods and activities
- Reading and writing skills

Caregiver Training
- Talking about what you are saying/doing
- Talking about what a individual is saying/doing
- Adding extra words for what a individual has said
- Providing enough help to complete a task while still letting the individual do it themselves
- Providing sensory support during play

Career Support
- Write cover letters
- Practice interview skills
- Learn strategies to communicate at work
- Practice advocating for their needs
- Problem-solve regarding appropriate accommodations

Medical Management (National Institution of Health, n.d)

Currently, there is no medication that can cure autism spectrum disorder (ASD) or all of its symptoms. However, some medications can help treat certain symptoms associated with ASD, especially certain behaviors.

Selective Serotonin Re-Uptake Inhibitors (SSRIs)
- This group of antidepressants treats some problems that result from imbalances in the body's chemical systems.
- SSRIs might reduce the frequency and intensity of repetitive behaviors; decrease anxiety, irritability, tantrums, and aggressive behavior; and improve eye contact.

Tricyclics
- These medications are another type of antidepressant used to treat depression and obsessive-compulsive behaviors.
- These drugs seem to cause more minor side effects than do SSRIs. They are sometimes more effective than SSRIs for treating certain people and certain symptoms.

Psychoactive or Anti-Psychotic Medications
- These types of medications affect the brain of the person taking them. The anti-psychotic drug risperidone is approved for reducing irritability in 5-to-16-year-olds with autism.

- These medications can decrease hyperactivity, reduce stereotyped behaviors, and minimize withdrawal and aggression among people with autism.

Stimulants
- This group of medications can help to increase focus and decrease hyperactivity in people with autism. They are particularly helpful for those with mild ASD symptoms.

Anti-Anxiety Medications
- This group of medications can help relieve anxiety and panic disorders, which are often associated with ASD.

Anticonvulsants
- These medications treat seizures and seizure disorders, such as epilepsy. (Seizures are attacks of jerking or staring and seeming frozen.)
- Almost one-third of people with autism symptoms have seizures or seizure disorders.

Medical Precautions Regarding Speech-Language Therapy

Before	During	After
• **Set expectations** ○ Discuss the goals for the session and answer any questions you have about the therapy process. • **Choose a quiet and comfortable space** ○ Choose a quiet and comfortable space in your home where your client can feel relaxed. ○ Remove any distractions and provide a comfortable seat for your client and yourself. • **Inform family members and pets** ○ Let them know that they should avoid interrupting the session, and if possible, keep noise levels to a minimum. • **Prepare materials** ○ Prepare necessary materials relevant to the session and according to the individual's preferences and specific triggers ○ Remember that they may have communication problems, may take things literally, may only be able to handle on thought or idea at a time, may hyperfixate on one topic,	• **Be patient** ○ It often takes them longer to process information. You may need to slow down your conversation to their speed. Long pauses can be helpful. • **Teach them how to express anger without being too aggressive** ○ They should know that they don't have to hold their anger and frustration inside. • **Ignore irritating attention-getting behavior** ○ They may act badly at times to get you to focus on them. Ignoring this behavior is often the best way to prevent it. • **Interact through physical activity** ○ They tend to have short attention spans. This is especially true when it comes to communicating. Running around and playing outside may be a better way of sharing time together. It will also let them relax and feel calmer. • **Take care of yourself. It's OK to take a break.** ○ If the session becomes too	• **Provide feedback** ○ After the session, provide feedback to the family about the client's progress and any concerns that you have ○ Answer any questions to help the family tailor the approach you are going to use in future sessions to better meet their client's needs • **Home Practice & Carry-Over** ○ Provide worksheets or home activities to build practice into the daily routine ○ Monitor carryover as the person applies skills to different situations and contexts

and may have different perceptions • **Review the therapy plan** ○ Review the therapy plan with the family before the session begins.	overwhelming, suggest a break for both you and the client.	

Support Systems

Local**:**

- **Autism Society Philippines**
  - A national, non-profit organization working towards an environment that empowers persons on the autism spectrum disorder to become the best of their potentials—self-reliant, independent, productive and socially-accepted members of an Autism-OK Philippines.
- **Center for Autism & Related Disorders, Philippines**
  - A non-stock, non-profit organization to run a therapy center which has now grown to be not just as a school but a "one-stop-shop" center which provides various programs and services on autism management.
- **Disability Laws**
  - Republic Act Number 10627: Anti-Bullying Act
  - Republic Act Number 10524: Equal Opportunity Employment
  - Republic Act Number 10336: Accessible Polling Places Exclusively for Persons with Disabilities and Senior Citizens
  - Republic Act Number 10070: Implementation of Programs and Services for Persons with Disabilities in every province, city and municipality
  - Republic Act Number 7277: Magna Carta for Persons with Disabilities

International:

- **World Health Organization (WHO)**
  - WHO Comprehensive mental health action plan 2013–2030 and World Health Assembly Resolution WHA73.10 for "global actions on epilepsy and other neurological disorders" calls on countries to address the current significant gaps in early detection, care, treatment and rehabilitation for mental and neurodevelopmental conditions, which include autism. It also calls for counties to address the social, economic, educational and inclusion needs of people living with mental and neurological disorders, and their families, and to improve surveillance and relevant research.
- **Autism Speaks**
  - This nationally recognized organization provides information for parents of newly diagnosed children. This includes app reviews, resources for children with ASD, and a 100-Day Kit with a step-by-step guide of what to do in the 100 days after an autism diagnosis.
- **Global and Regional Asperger Syndrome Partnership (GRASP)**
  - This group provides community outreach, online support, education, and advocacy for teens and adults on the autism spectrum. Membership is free.

ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD)

Definition

- ADHD is a developmental disorder that has the essential feature of a persistent pattern of inattention and/or hyperactivity-impulsiveness which interferes with functioning or development (APA, 2013, as cited in Australian Psychological Society, 2017).

Etiology

- The exact cause of attention deficit hyperactivity disorder (ADHD) is *not fully understood*, although a combination of factors is thought to be responsible (NHS, n.d.).
  - **Genetics** - Research shows that parents and siblings of someone with ADHD are more likely to have ADHD themselves.
    - However, the way ADHD is inherited is likely to be complex and is not thought to be related to a single genetic fault.
  - **Brain Function & Structure** - Research has identified a number of possible differences in the brains of people with ADHD from those without the condition, although the exact significance of these is not clear.
    - For example, studies suggested that certain areas of the brain may be smaller in people with ADHD, whereas other areas may be larger.
    - Other studies have suggested that people with ADHD may have an imbalance in the level of neurotransmitters in the brain, or that these chemicals may not work properly

Prevalence & Incidence

Locally:

- In the Philippines alone, 80% of adolescents and 60% of adults have admitted to experiencing symptoms of ADHD (Department of Health Philippines, 2022).

Internationally:

- Worldwide, an estimated 3-5% of people are affected by ADHD (World Health Organization [WHO], 2022).

SIGNS: Manifestations According to Physicians/Allied Health Medical Professionals

- Predominantly Inattentive Presentation
  - Lacking attention to detail
  - Difficulty focusing
  - Trouble listening
  - Failing to complete tasks
  - Poor organizational skills
  - Avoiding tasks requiring sustained focus
  - Losing important items
  - Distracted easily
  - Forgetfulness

SYMPTOMS: Manifestations According to the Patient

- Feeling overwhelmed, constantly distracted, or unable to complete tasks despite effort
- Feelings of inadequacy, low self-esteem, or a sense of underachievement
- Personalized strategies to manage symptoms such as using reminders, creating routines, or seeking external structure
- Difficulties with time perception, often leading to procrastination or being late
- Experiencing hyperfocus, becoming deeply engrossed in activities of interest

• Predominantly Hyperactive-Impulsive Presentation
  ○ Leaving their seat when expected to remain seated
  ○ Blurting out answers and completing other people's sentences
  ○ Struggling to stay quiet during activities
  ○ Fidgeting and tapping hands or feet
  ○ Often on the go and unable to sit still
  ○ Trouble waiting their turn
  ○ Talking excessively
  ○ Feeling restless
• Combined Type Presentation
  ○ A balanced mix of both symptoms of inattention and hyperactivity/impulsivity	

Manifestations that the Parents/Significant Others Perceive • Mood swings, frustration, and impulsive decision-making • Challenges in communication and social interactions • Strained relationships due to miscommunications, unmet expectations, or emotional volatility	**Structural & Anatomical Changes** • Smaller brain volume • Volume differences in various brain regions, including the amygdala and hippocampus, which relate to motivation, memory, and emotion regulation • Delayed brain maturation, specifically the prefrontal cortex • Motor cortex matured quicker than usual, which may related to symptoms of restlessness and fidgeting • Certain areas of the frontal lobe also mature more slowly

Possible SLP Areas Affected and Their Characteristics

Speech	• At a higher risk of developing **articulation problems**, which affect one's ability to produce certain letter sounds and meet certain speech milestones as they grow and develop. • Differences in the **vocal quality and fluency** of speech are also common. • As individuals with ADHD work to organize their thoughts when speaking, it is common for them to use more fillers and produce more word or sound repetitions. This often leads to misunderstanding from others and impatience from both the person speaking and those who are listening and trying to understand them (Ben-Aharon, 2021).
Language	• Individuals with ADHD often face **language processing delays** and distractions that impact their ability to focus, find words, and express thoughts clearly. • They may also make **grammatical errors despite having the necessary skills**. Their **listening comprehension** can suffer, especially in noisy or fast-paced environments, leading to missed details and seeming inattentive. This can affect their academic and social interactions, sometimes causing withdrawal. • People with ADHD **may interrupt, blurt out answers, or speak excessively**, disrupting social norms and interactions. Although they generally understand communication rules, their distractibility and

	impulsiveness can hinder their ability to follow them effectively (Ben-Aharon, 2021).
Swallowing	• Swallowing problems are not typically associated with ADHD. However, ADHD can sometimes lead to difficulties that indirectly impact eating and swallowing, such as: ○ **Distraction:** be easily distracted during meals, which can lead to issues with chewing and swallowing properly. ○ **Impulsivity**: Impulsive eating behaviors, such as eating too quickly, can sometimes cause swallowing difficulties or discomfort. ○ **Coordination**: ADHD can sometimes be associated with coordination issues, which might affect the eating process, though this is less common
Hearing	• People with ADHD may struggle with processing sounds and may have **difficulty distinguishing between sounds in distracting environments**, such as when a lot of people are talking. • They may also have **sensory processing issue**s, leading to sensory overload from things like touch, loud noises (Sonic Learning, 2023).

Presentations of ADHD: DSM-5 (2013)

Predominantly Inattentive ADHD	• According to the DSM-5 criteria, a person may be diagnosed with predominantly-inattentive ADHD if "five or more symptoms of inattention have persisted for at least six months" and they show "fewer than five symptoms of hyperactivity or impulsivity".
Predominantly Hyperactive-Impulsive ADHD	• The DSM-5 states that an ADHD presentation that's predominantly hyperactive/impulsive can be diagnosed if "five or more symptoms of hyperactivity/impulsivity have persisted for at least six months" and the person has "less than five symptoms of inattention."
ADHD Combined Type	• The DSM-5 criteria for combined-type ADHD involves a balanced mix of both inattention and hyperactivity/impulsivity symptoms. This type is diagnosed if the individual shows "five or more symptoms of inattention and five or more symptoms of hyperactivity/impulsivity in the last six months."

Progression of the Condition

- Attention Deficit Hyperactivity Disorder (ADHD) is now understood as a lifelong condition for most individuals, with about 80% of those diagnosed in childhood continuing to experience symptoms into adulthood.
- Contrary to earlier beliefs, research indicates that ADHD doesn't simply disappear with age.
- Instead, the disorder's presentation may evolve over time, with some symptoms becoming less pronounced while others persist or manifest differently.
- Brain scans reveal that structural differences associated with ADHD remain even in adults who no longer meet the clinical criteria for diagnosis. This persistence of neurological

Outcome if Left Untreated

- Those with untreated ADHD might face academic underachievement, difficulties in maintaining employment, relationship problems, and increased risk of substance abuse. They may also experience low self-esteem and higher rates of anxiety and depression.

differences suggests that even when outward symptoms seem to lessen, the underlying condition endures.
- The shift in terminology from "subtypes" to "presentations" in the DSM-5 reflects this understanding of ADHD as a dynamic condition.
- While some adults may develop effective coping strategies or experience changes in symptom intensity, ADHD can still significantly impact various aspects of adult life, including relationships and work performance.
- Additionally, it may contribute to the development of co-occurring conditions such as depression or anxiety.
- Overall, current research emphasizes that ADHD is a complex, enduring neurodevelopmental disorder that requires ongoing attention and management throughout adulthood.

Medical Management (American Academy of Family Physicians, 2024)

Currently, two classes of FDA-approved medications are used for ADHD treatment: stimulant and non-stimulant.

Stimulants

- Methylphenidate and amphetamine are the two most commonly used stimulant medications for treatment of ADHD in adults (FDA-Approved Stimulant Medications for Adult ADHD). They both affect dopamine and norepinephrine reuptake in certain parts of the brain and, as a result, increase the amount of these neuro - transmitters to facilitate brain functioning. While methylphenidate and amphetamine have different mechanisms of action in the brain, they generally have a similar effect in terms of improvement of ADHD symptoms.

Non-Stimulants

- Atomoxetine (Strattera) is currently the only non-stimulant approved by the FDA for the treatment of ADHD in adults (FDA-Approved Non-Stimulant Medications for Adult ADHD). It is a potent selective norepinephrine reuptake inhibitor. It lacks the abuse potential of stimulants and is not a controlled Schedule II drug. The effects of atomoxetine take longer to achieve. Some people report small changes in hyperactivity and impulse control within two weeks, but it may take 4 to 8 weeks for the drug to achieve maximum effectiveness.

Medical Precautions Regarding Speech-Language Therapy

Before	During	After
• **Minimize Distractions** ○ Clear unnecessary items from therapy space ○ Reduce visual clutter on walls and surfaces ○ Consider noise-canceling options if needed ○ Dim or adjust lighting to optimal levels • **Safety Checks**	• **Physical Considerations** ○ Watch for signs of physical restlessness or agitation ○ Be prepared for sudden movements or impulsive actions ○ Maintain appropriate positioning for both client and therapist ○ Keep pathways clear in	• **Thorough Recording** ○ Note any safety concerns that arose ○ Document successful strategies and potential triggers ○ Record any incidents or near-incidents ○ Update risk assessment if needed

- Secure any equipment that could be knocked over
- Remove or secure small objects that could be fidgeted with unsafely
- Ensure all electrical cords are properly managed and secured

- **Session Planning**
  - Plan shorter activity segments (15-20 minutes max)
  - Prepare backup activities in case of attention shifts
  - Have fidget tools available if appropriate
  - Create visual schedules of planned activities
- **Medication Awareness**
  - Know client's medication schedule
  - Be aware of medication effects and potential side effects
  - Plan session timing around medication peaks if possible
- **Medical History Review**
  - Check for co-occurring conditions
  - Review any physical limitations or sensitivities
  - Note any behavioral triggers from previous sessions

case quick movement is needed

- **Emotional/Behavioral Monitoring**
  - Observe for signs of frustration or overwhelm
  - Watch for indicators of hyperfocus or difficulty transitioning
  - Be alert to changes in attention or engagement
- **Pacing Considerations**
  - Provide frequent breaks
  - Use movement activities strategically
  - Allow time for processing and transitions
  - Be flexible with activity duration
- **Communication Adaptations**
  - Give clear, concise instructions
  - Use visual supports alongside verbal directions
  - Provide written instructions for complex tasks
  - Check frequently for understanding
- **Have readily available:**
  - First aid kit
  - Emergency contact information
  - Behavior intervention plan if applicable
  - Clear path to exits
- **Know Facility Protocols for:**
  - Medical emergencies
  - Behavioral incidents
  - Fire or other evacuation needs

- **Communication Protocol**
  - Inform caregivers of any safety concerns
  - Provide written safety recommendations for home practice
  - Document any discussions about safety with client/caregivers
- **Space Assessment**
  - Check for any damaged materials or equipment
  - Ensure all items are returned to secure storage
  - Note any environmental modifications needed for next session
- **Material Preparation**
  - Clean and sanitize any used materials
  - Repair or replace any damaged items
  - Update safety features of materials if needed

Support Systems

Local**:**

- **AD/HD Society of the Philippines**
  - established in 2000, is a non-profit organization dedicated to supporting individuals with Attention Deficit/Hyperactivity Disorder (ADHD).
  - Designed for individuals seeking guidance, connection, and strategies to thrive with ADHD. Facilitated by experienced professionals, our groups offer a safe space to share, learn, and grow.
- **Philippine ADHD Support Group**
  - This group is for Parents of Children with ADHD, ADHD with ASD, and for adults diagnosed with ADHD as well.
- **DepEd Campaigns for Better ADHD Awareness**

- The DepEd calls for the participation of all schools, especially those schools offering program for children with AD/HD as well as the Special Education (SPED) Centers.
- Some of the efforts and activities to be conducted in schools are hanging of streamers, art workshops for children and youth with AD/HD, exhibit on educational services offered to children with AD/HD, community and parents' forum on understanding and possible employment of people with AD/HD, among others.
- The annual celebration of the National AD/HD Awareness Week on the third week of October is pursuant to Presidential Proclamation No. 472, s. 2003 signed by then President Gloria Macapagal-Arroyo.

International:

- **Children & Adults with Attention-Deficit/Hyperactivity Disorder (CHADD)**
  - Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD) was founded in 1987 in response to the frustration and sense of isolation experienced by parents and their children with ADHD.
- **Attention Deficit Disorder Association**
  - The Attention Deficit Disorder Association (ADDA) is the world's leading adult ADHD organization. They are an international non-profit – 501C – organization founded over thirty years ago to help adults with Attention Deficit/Hyperactivity Disorder (ADHD) lead better lives. Since its inception, ADDA has become the source for information and resources exclusively for and about adult ADHD. ADDA brings together scientific perspectives and the human experience to generate hope, awareness, empowerment and connections worldwide in the field of ADHD.

FETAL ALCOHOL SPECTRUM DISORDER (FASD)

Definition

- FASD refers to the wide range of physical, behavioral, and cognitive impairments that occur due to alcohol exposure before birth (also known as prenatal alcohol exposure). These impairments may appear at any time during childhood and last a lifetime.
- Exposure to alcohol during pregnancy causes cognitive, behavioral issues, and physical abnormalities

Etiology

- Alcohol exposure during pregnancy can result in FASD by interfering with development of the baby's brain and other critical organs and physiological functions. This can lead to deficits after birth and beyond. Alcohol can disrupt development at any stage, even before a woman knows that she is pregnant (National Institute on Alcohol Abuse and Alcoholism, 2023).
- Research shows that binge drinking and heavy drinking during pregnancy put a developing baby at the greatest risk for severe problems. However, even lesser amounts can cause harm. In fact, there is no known safe amount of alcohol consumption during pregnancy (National Institute on Alcohol Abuse and Alcoholism, 2023).

Prevalence and Incidence

Locally:

- Exact figures are unknown but are believed to affect a number of Filipinos.

Internationally:

- Fetal Alcohol Spectrum Disorder (FASD): The global prevalence of FASD is estimated at approximately 7.7 cases per 1,000 individuals in the general population (Lange et al., 2017).

SIGNS: Manifestations According to Physicians/Allied Health Medical Professionals

- Physical characteristics associated with prenatal alcohol exposure such as small eyes, very thin upper lip, flat nose bridge, and other minor facial anomalies or growth deficits
- Neurocognitive impairments affecting executive functions like planning, organization, and problem-solving, as well as memory and learning deficits
- Comorbid mental health conditions such as depression, anxiety, or conduct disorders
- Behavioral issues including impulsivity and poor judgment
- Challenges in daily living skills, social interactions, and maintaining employment

SYMPTOMS: Manifestations According to the Patient

- Struggles with self-esteem, often feeling misunderstood or frustrated by their limitations
- Challenges with memory, concentration, and understanding complex information, affecting their confidence and performance in various settings
- Sensory sensitivities, leading to discomfort or overstimulation in certain environments
- Need for ongoing support, whether in personal relationships, work, or daily life management

Manifestations that the Parents/Significant Others Perceive

- Mood swings, frustration, or inappropriate emotional responses to situations
- Concerns about the individual's ability to live independently, manage finances, or make sound decisions
- A need for structured environments and routines to help manage daily activities and reduce confusion

Structural & Anatomical Changes

- Smaller brain volume
- Defects in the frontal lobe, corpus callosum, cerebellum, hippocampus, and basal ganglia
- Affect a variety of abilities, including decision-making, the ability to organize and plan, learning and memory, and motor control

Possible SLP Areas Affected and Their Characteristics

Speech	• Disorders of speech production associated with FASD include deficits in fluency, lack of intonation (monotone speech), voice dysfunctions (e.g., hypernasality, a harsh voice), slurred speech, and poor articulation (Church & Abel, 1998).
Language	• Children with FASD may develop language skills at a slower rate than their typically developing peers, and FASD can affect grammatical ability, vocabulary, and both expressive and receptive language skills. People with FASD may also display difficulties with communication, such as trouble maintaining conversation, answering questions, and staying on topic (University of Sydney, 2024).
Swallowing	• Problems with the coordination of chewing and swallowing movements, which can lead to inefficient food processing and an increased risk of choking. • Deficiencies in the reflexes necessary for safe swallowing, resulting in a higher risk of aspiration and dysphagia.

	• Higher likelihood of aspiration due to poor motor control, which can lead to respiratory complications.
Hearing	• Different types of hearing disorders result from prenatal alcohol exposure: delayed maturation of the auditory system, sensorineural hearing loss (SNHL), and intermittent conductive hearing loss secondary to recurrent serous otitis media, among others (Church & Abel, 1998).

Types of FASD

Partial fetal alcohol syndrome (pFAS)	• Some facial changes typical of FAS • Not all FAS symptoms present
Alcohol-Related Neurodevelopmental disorder (ARND)	• Behavioral and learning issues • Problems with impulse control, attention, and judgment
Alcohol-related birth defects (ARBD)	• Physical abnormalities in various body parts • Can affect heart, eyes, bones, ears, and kidneys
Neurobehavioral Disorder Associated with Prenatal Alcohol Exposure (ND-PAE)	• Significant prenatal alcohol exposure • Difficulty with daily tasks and social interactions • Behavioral problems and cognitive challenges

Progression of the Condition

- During adolescence, those with FASD often experience high rates of mental health issues, academic struggles, legal problems, inappropriate sexual behaviors, and substance abuse.
- The increased expectations for independence clash with their cognitive deficits, making it difficult to achieve typical levels of autonomy. Continued structure and support are crucial, but opportunities for developing independent living skills should also be provided.
- As adolescents with FASD enter adulthood, the challenges often intensify due to greater expectations of independence across various life domains.
- Many individuals with FASD may never achieve full independence and will require lifelong support. Research indicates that adaptive functioning in adults with FASD is often impaired beyond what would be expected based on their intellectual deficits alone.
- Adults with FASD frequently struggle with daily life skills, cognitive functioning, and mental health issues, with alcohol/drug dependence and mood disorders being particularly prevalent.
- They may need assistance in various areas

Outcome if Left Untreated

- Individuals with FASD who do not receive appropriate interventions may struggle with impulse control, judgment, and adaptive functioning. This can lead to problems with the law, substance abuse, and difficulties in independent living.

such as transportation, housing, employment, financial management, housekeeping, meal planning, health management, and family planning.	

SLP Management

- Speech
  - **Fluency & Prosody:** Use fluency-shaping techniques (easy onset, pausing strategies) and intonation exercises
  - **Voice Therapy:** Apply resonance therapy, vocal hygiene education, and biofeedback to adjust vocal quality
- Language
  - **Expressive & Receptive Language:** Focus on vocabulary, grammar, and comprehension activities
- Swallowing
  - **Oral Motor Therapy:** Strengthen chewing and swallowing muscles through exercises
  - **Swallowing Safety:** Teach compensatory strategies (e.g., chin tuck), modify food textures, and educate caregivers on aspiration signs
- Hearing
  - **Auditory Rehabilitation:** Use auditory training, hearing aids, and monitor middle ear
  - **Speech Perception Training:** Improve speech understanding through listening discrimination activities

Medical/Surgical Management

- **Cardiac Management**
  - Congenital heart defects, such as septal defects, are relatively common in individuals with FASD. Surgical intervention may be required for significant heart defects to correct structural problems. In milder cases, regular cardiac monitoring is essential to ensure the heart functions properly and to detect any changes that might need medical attention.
- **Seizure and Neurological Management**
  - Structural brain abnormalities and the occurrence of seizures are sometimes seen in individuals with FASD. Antiepileptic medications are typically prescribed to control seizures, and ongoing neurological evaluations are important for tracking brain development.
  - Therapeutic interventions, including occupational and physical therapy, are often needed to address motor and cognitive delays linked to these neurological issues.
- **Hearing and ENT Services**
  - Hearing problems, such as sensorineural or conductive hearing loss, can result from prenatal alcohol exposure.
  - Management might include fitting hearing aids or cochlear implants for those with severe hearing loss.
  - Surgical procedures, such as placing ear tubes, may be necessary for individuals who experience frequent ear infections (otitis media) to prevent further hearing complications.
- **Craniofacial and Airway Surgery**
  - Cleft lip or palate repair is typically necessary to address feeding and speech difficulties, as well as for cosmetic reasons.
- **Behavioral and Psychological Management**
  - Individuals with FASD frequently experience behavioral challenges, such as ADHD, impulsivity, and mood disorders. Pharmacological treatments, such as stimulant medications for ADHD, are often part of the management plan. Behavioral therapy and counseling are key to helping individuals regulate emotions, focus, and manage impulsive behaviors.

Medical Precautions Regarding Speech-Language Therapy

Before	During	After
● Hearing and Vision Assessment: ○ Ensure the child has been assessed for hearing and vision impairments, as these can impact therapy outcomes. ● Medical History: ○ Review medical records for any history of seizures, cardiac issues, or medications that may affect focus or participation. ● Nutritional Considerations: ○ Ensure proper nutrition, as malnutrition can impact cognitive and language development.	● Monitor Fatigue: ○ Individuals with FASD may tire easily. Schedule sessions at optimal times for focus and adjust the length based on the child's endurance. ● Seizure Awareness: ○ If the child has a history of seizures, ensure staff are trained in recognizing and responding to seizure activity. ● Behavioral Sensitivity: ○ Be aware of attention deficits or emotional dysregulation. Incorporate frequent breaks and adapt therapy approaches to keep the child engaged.	● Follow-Up on Progress: ○ Regularly review therapy progress with other medical professionals (e.g., neurologists, pediatricians) to adjust goals and approaches. ● Home Carryover: ○ Provide caregivers with clear, manageable exercises to reinforce progress at home, taking into account any medical or behavioral issues.

Support Systems

Locally:

- **PhilHealth**
  - PhilHealth's Z Benefit Package is a financial protection program for Filipinos, including children with developmental disabilities.
  - The package covers assessment and planning by medical specialists and allied health professionals, standardized testing, and rehabilitation therapy, with benefit amounts ranging from P 3,626.00 to P 5,276.00.

Internationally:

- **National Organization on Fetal Alcohol Syndrome (NOFAS)**
  - NOFAS, founded in 1990, is the leading international non-profit organization dedicated exclusively to Fetal Alcohol Spectrum Disorders (FASD). They serve as the primary voice and resource for the FASD community, focusing on prevention, advocacy, and support.
  - NOFAS works to prevent alcohol use during pregnancy through education and awareness campaigns. The organization provides support services for individuals with FASD and their families, including resources, referrals, and peer networks.

CEREBRAL PALSY (CP)	
Definition	**Etiology**
● CP refers to a group of neurological disorders that appear in infancy or early childhood and permanently affect body movement and muscle coordination (National Institute of Neurological Disorders and Stroke, 2024).	● CP is caused by damage to or abnormalities inside the developing brain that disrupt the brain's ability to control movement and maintain posture and balance (National Institute of Neurological Disorders and Stroke,

- There are more adults than children with CP.
- As individuals with CP enter adulthood, they often struggle to find physicians trained in managing CP in adults.
- Various health issues affect adults with CP differently than children such as:
    - Musculoskeletal changes
    - Neurological issues
    - Cardiovascular health
    - Gastrointestinal problems
    - Mental health issues
    - Pain management
    - Aging-related concerns

2024).

- In some cases, the areas of the brain involved in muscle movement do not develop as expected during fetal growth.
- In others, the damage is a result of injury to the brain either before, during, or after birth. In either case, the damage is not reversible, and the disabilities that result are permanent.

Prevalence and Incidence

Locally:

- The Department of Health estimates that 1-2% of Filipinos, or about one million people, are affected by CP. The Philippine Cerebral Palsy Inc., a non-governmental organization, reports a more conservative figure of over 300,000 Filipinos with CP nationwide (Department of Health Philippines, 2023; Philippine Cerebral Palsy Inc., 2023).

Internationally:

- Approximately 1 million people in the United States have cerebral palsy. Globally, the Cerebral Palsy Alliance Research Foundation reports that about 17 million people have some form of cerebral palsy (United Cerebral Palsy, 2023; Cerebral Palsy Alliance Research Foundation, 2022).

SIGNS: Manifestations According to Physicians/Allied Health Medical Professionals

- Persistence of motor impairments, such as spasticity, muscle weakness, and involuntary movements; affecting balance, coordination, and mobility
- Increased likelihood of musculoskeletal complications such as joint pain, arthritis, and bone deformities due to long-term stress on the musculoskeletal system
- Secondary conditions such as cardiovascular issues, respiratory problems, and gastrointestinal complications that can arise due to reduced mobility and physical activity
- Cognitive communication difficulties, depending on the severity and type of CP

SYMPTOMS: Manifestations According to the Patient

- Experiences of pain, muscle tightness, and physical limitations, causing frustration and the need to adapt using mobility aids or modifying activities
- Strong desire for independence, balancing their need for assistance with personal goals and self-esteem
- Challenges in social situations due to physical differences and communication barriers
- Concerns about long-term care, employment opportunities, and quality of life as they age

Manifestations that the Parents/Significant Others Perceive

- Focusing on individual's ability to perform daily activities, such as personal care, household tasks, and managing finances
- A need for assistance or adaptive devices
- Challenges in social interactions, forming and maintaining relationships, and emotional regulation
- More frequent fatigue and physical strain

Structural & Anatomical Changes

BRAIN STRUCTURE

- Damage to the white matter, particularly periventricular leukomalacia (PVL)
- Abnormalities in the grey matter, including cortical malformations such as polymicrogyria, where the brain surface has too many small folds, or other developmental brain malformations
- In cases of dyskinetic CP, the basal ganglia and

• Adapting to physical limitations, using various coping strategies, and seeking out therapy or community resources	thalamus may show damage due to hypoxic-ischemic injury, affecting movement control and muscle tone. • Damage to the cerebellum can lead to ataxic CP, characterized by problems with balance and coordination. Cerebellar hypoplasia (underdevelopment) or atrophy (shrinkage) can be observed in these cases. • Global brain changes due to more extensive damage, which can lead to more severe symptoms and associated conditions ***ANATOMICAL & MUSCULOSKELETAL CHANGES*** • Changes in muscle tone, often leading to spasticity (increased muscle tone) or hypotonia (reduced muscle tone), resulting in altered muscle growth and development, and changes in the length-tension properties of muscles • Joint contractures (permanent shortening of a muscle or joint), scoliosis (curvature of the spine), and other bone deformities • Spasticity in the hip muscles can lead to hip dislocation or subluxation, where the head of the femur becomes misaligned with the pelvic socket • Equinus deformity (tiptoeing), flatfoot, and other misalignments due to imbalanced muscle forces

Possible SLP Areas Affected and Their Characteristics

Speech	• Different speech issues to different types of cerebral palsy include (Lavender, 2024): • Spastic - usually struggle with slow, imprecise oral movements that require a lot of effort. Their speech often sounds slurred, and their voice sounds tight or hoarse. • Athetoid - often have a hard time controlling their face and tongue muscles. They also have difficulty controlling their breathing and vocal cords. • Ataxic - "Scanning" speech, which is speaking in a monotone voice with breathy sounds. Their speech is often marked by pauses and accelerations.
Language	• Individuals with CP can have aphasia which is a language disorder that can impact the ability to understand or express spoken or written language. Aphasia is a result of damage to the language areas of the brain. • Cognitive impairments associated with CP can also impact language development. These impairments can make it hard to remember words or to come up with the right word when speaking (Larrazabal & Wilson, 2023).
Swallowing	• CP can disrupt the motor control and coordination of sucking, drinking, biting, chewing and swallowing, particularly in people with

	severe functional disabilities. This can lead to problems with inadequate intake, the risk of food or drink going into the lungs (aspiration), prolonged dependence on immature food textures (single textures and/or puree) and on being fed by others. Mealtimes may be lengthy, distressing, emotional and unproductive in terms of achieving adequate or perceived adequate intake (National Guideline Alliance, n.d.).
Hearing	• Children with cerebral palsy can have either a conductive or sensori-neural hearing loss. It is also possible to have a combination of the two (Cerebral Palsy Research Network, 2021).

Types of Cerebral Palsy (CP)

By Body Part	
Quadriplegia	• This type affects all 4 limbs – both arms and legs.
Triplegia	• This type affects 3 limbs – one arm and both legs.
Diplegia	• This type affects both legs.
Hemiplegia	• This type affects one side of the body. • People can either have right-side hemiplegia (affecting their right arm and leg), or left-side hemiplegia (affecting their left arm and leg). • Approximately 40% of people with cerebral palsy have hemiplegia.
Monoplegia	• This type affects only one limb.
By Brain Injury Location	
Spastic Cerebral Palsy	• Spastic cerebral palsy is the most common form, affecting up to 80% of people with CP. • This type causes muscles to appear stiff and tight. • This is the result of damage to the motor cortex.
Dyskinetic Cerebral Palsy	• Spastic cerebral palsy is the most common form, affecting up to 80% of people with CP. • This type causes muscles to appear stiff and tight. • This is the result of damage to the motor cortex.
Ataxic Cerebral Palsy	• Ataxic cerebral palsy occurs in 6% of people with CP. • This type is characterized by shaky movements and affects a person's balance and sense of positioning in space. • This is the result of damage to the cerebellum.
Mixed Cerebral Palsy	• Mixed cerebral palsy means that someone's brain is injured in more than one location and they will experience symptoms from multiple types of CP.

Progression of the Condition	**Outcome if Left Untreated**
• As individuals with Cerebral Palsy (CP) transition into adulthood, they face unique	• Lack of proper treatment can result in worsening physical complications, including

challenges and opportunities.

- While CP is a non-progressive disorder, meaning it doesn't worsen over time, adults with CP may experience various impacts on their overall health and wellness.
- The transition to adulthood for individuals with CP can bring both obstacles and reasons to celebrate. Some may experience more pronounced developmental delays or mental health conditions, while others might achieve significant personal milestones, such as walking independently for the first time.
- The level of independence for adults with CP varies greatly. Those with milder forms of CP may live independently and work full-time jobs, while others with more severe CP or coexisting conditions may require full-time assistance for daily tasks.
- As there is no cure for CP, proper health care and continued support are crucial for improving quality of life. Managing symptoms effectively allows young adults with CP to make the most of their lives as they mature.

muscle contractures, joint problems, and pain. They may also face increased challenges in mobility, self-care, and participation in daily activities.

SLP Management

- Speech and Language Therapy: focuses on improving articulation and language development, tailored to the unique needs of adults with CP (ASHA, n.d.).
- Augmentative and Alternative Communication (AAC): provides alternative communication methods, including devices and systems, to support individuals with severe communication impairments due to CP (ASHA, n.d.).

Medical/Surgical Management

- **Therapeutic Interventions**
  - Physical Therapy: A key part of CP management, physical therapy focuses on improving strength, flexibility, and motor coordination.
  - Occupational Therapy: Helps individuals develop fine motor skills, improve daily living activities, and adapt to physical limitations.
  - Speech Therapy: Addresses issues related to articulation, swallowing (dysphagia), and communication, including the use of AAC devices.
- **Nutritional Management**
  - Individuals with CP may experience feeding difficulties due to oral motor impairments. Nutritional support, such as a specialized diet or enteral feeding (e.g., G-tube), ensures proper nutrition and growth.
- **Assistive Devices**
  - Wheelchairs, Walkers, and Braces: These devices are often prescribed and customized to help individuals with CP achieve better mobility and independence.
  - Speech Generating Devices (SGDs): For individuals with severe communication impairments, SGDs or other augmentative and alternative communication (AAC) tools are recommended.
- **Surgical Interventions**
  - Orthopedic Surgery: Procedures like tendon lengthening or muscle release surgeries help alleviate contractures, improve mobility, and correct musculoskeletal deformities (e.g., scoliosis, hip dislocation).
  - Selective Dorsal Rhizotomy (SDR): A neurosurgical procedure used to selectively cut nerve roots in the spinal cord to reduce spasticity in the legs, improving motor function.

- **Medications**
    - Spasticity Management: Medications like baclofen, diazepam, and tizanidine are used to reduce muscle spasticity, improve comfort, and increase mobility.
    - Seizure Control: Antiepileptic drugs (e.g., valproate, carbamazepine) are often prescribed for individuals with CP who experience seizures.
    - Pain Management: Nonsteroidal anti-inflammatory drugs (NSAIDs) or stronger pain medications may be prescribed to manage musculoskeletal pain, which is common in individuals with CP.

Medical Precautions Regarding Speech-Language Therapy

Before	During	After
● Assess Swallowing: ○ Screen for dysphagia to avoid aspiration risks during oral-motor exercises or speech tasks. ● Review Medications: ○ Check for medications affecting muscle tone or alertness (e.g., baclofen) that may impact therapy participation. ● Consult Orthopedic Devices: ○ Ensure any braces, wheelchairs, or positioning devices support safe and effective participation in therapy.	● Monitor Fatigue: ○ CP patients may fatigue quickly; schedule therapy at optimal times and incorporate breaks as needed. ● Watch for Spasticity: ○ Be mindful of increased muscle spasticity or rigidity during exercises, adjusting techniques accordingly. ● Postural Support: ○ Maintain proper posture using adaptive seating or positioning devices to facilitate breathing and speech.	● Evaluate Progress: ○ Regularly assess progress with input from other medical professionals (e.g., physical therapists) and adjust goals as needed. ● Home Program: ○ Provide clear, manageable exercises for caregivers to reinforce progress, considering any medical limitations.

Support Systems

Locally:

- **Cerebral Palsy Epilepsy Family Awareness Support Group.PH Inc (CPEFAS PH)**
    - A SEC-registered non-profit organization and social service agency composed of families across the Philippines.
    - The group promotes Cerebral Palsy and Epilepsy awareness through social media parent support groups and community activities, providing a platform for families affected by these conditions to connect and share resources.

Internationally:

- **International Cerebral Palsy Society**
    - The International Cerebral Palsy Society (ICPS), founded in the UK in 1969, works to increase acceptance and understanding of the 17 million people worldwide with Cerebral Palsy.
    - ICPS aims to bridge gaps in social acceptance across countries, combating misconceptions and educating about Cerebral Palsy as a medical condition.
    - The organization focuses on developing services for children and adults with Cerebral Palsy, aiming to enhance their participation in society.
    - ICPS is committed to fostering global understanding, acceptance, and support for the Cerebral Palsy community.

INTELLECTUAL DISABILITY (ID)

Definition

- Individuals with ID have neurodevelopmental deficits characterized by limitations in intellectual functioning and adaptive behavior. These disabilities originate at birth and manifest before the age of 22 and can be associated with a considerable number of related and co-occurring problems, including mental health like depression and anxiety), neurodevelopmental like ASD, and ADHD), as well as neurological like infantile cerebral palsy) and medical conditions like meningitis (Lee et al., 2023).

Etiology

While many causes of ID are not known, the etiology of intellectual disability is mainly divided into genetic abnormalities and environmental exposure (Lee et al., 2023):

- Genetic abnormality can be a single gene mutation, copy number variation, or chromosomal abnormality that causes an inborn error of metabolism, neurodevelopmental defect, and neurodegeneration.
- The most common chromosomal cause is Down syndrome, and the most common genetic cause is Fragile X syndrome.

Environment exposure can be maternal exposure to toxin/infectious agents, uncontrolled maternal medical conditions, delivery complications, and post-natal trauma and exposure to toxin/infectious agents.

- The most common known preventable or environmental cause of intellectual disability is fetal alcohol syndrome.

Prevalence and Incidence

Locally:

- Precise figures are scarce, but it's believed to affect a significant portion of people.

Internationally:

- A recent study by the Institute of Public and Preventive Health at Augusta University estimates that 0.95% or 9.5 per 1,000 adults between the ages of 21 and 41 live with intellectual disability (Fujiura et al., 2021).

SIGNS: Manifestations According to Physicians/Allied Health Medical Professionals

- Need for varying levels of support or supervision regarding personal care, household tasks, and other daily activities
- Challenges in forming friendships, engaging in social activities, or understanding social norms
- Difficulties in expressive and receptive communication, with some individuals using non-verbal methods or needing communication aids
- Signs of frustration, anxiety, and depression that may arise from the challenges they face

SYMPTOMS: Manifestations According to the Patient

- Delayed or slowed learning of any kind
- Difficulties with reasoning and logic
- Problems with judgment and critical thinking, as well as problem-solving and planning abilities
- Varying degrees of awareness about their condition, expressing frustration or sadness about their limitations
- Difficulties in social interactions
- Coping strategies to manage daily challenges

Manifestations that the Parents/Significant Others Perceive	Structural & Anatomical Changes
• Delayed or slowed learning of any kind • Difficulties with reasoning and logic • Problems with judgment and critical thinking, as well as problem-solving and planning abilities • Varying degrees of awareness about their condition, expressing frustration or sadness about their limitations • Difficulties in social interactions • Coping strategies to manage daily challenges	• Microcephaly: Smaller than normal head size, indicating reduced brain volume • Macrocephaly: Larger than normal head size, although less common in intellectual disability • Abnormal brain shape, such as elongated/flattened • Cortical abnormalities: Changes in the outer layer of the brain, including reduced thickness or abnormal folding • Subcortical abnormalities: Changes in deeper brain structures, such as the basal ganglia or thalamus • Ventricular abnormalities: Enlarged or abnormal ventricles, the fluid-filled spaces within the brain. • Imbalances in neurotransmitters can affect brain function and behavior

Possible SLP Areas Affected and Their Characteristics

Speech	• Individuals with intellectual disabilities may exhibit various speech characteristics, including: • Articulation Difficulties: Issues with pronouncing sounds correctly, leading to unclear speech. • Speech Rate: Slower speech rate due to processing and motor planning difficulties
Language	• Language difficulties in individuals with intellectual disabilities often include: ○ Delayed Vocabulary Development: Slower acquisition of words and limited vocabulary. ○ Simplified Sentence Structure: Tendency to use shorter, simpler sentences compared to peers.
Swallowing	• Swallowing difficulties may arise due to motor control issues, such as: ○ Challenges with chewing and moving food effectively. ○ Increased risk of food or liquid entering the airway due to coordination issues.
Hearing	• Hearing issues can vary but may include Auditory Processing Challenges: Difficulties in processing and interpreting auditory information

Levels of Intellectual Disability

Mild: IQ 52–69	• Needs guidance and assistance in complex tasks (such as health care and legal decisions) and during times of unusual social or economic stress • Can usually achieve enough social and vocational skills for self-support • May achieve self-support by doing work in a supportive environment
Moderate: IQ 36-51	• Cares for simple personal and household needs after extended guidance

	• Needs supervision and guidance managing money, scheduling, and all but simplest daily tasks
Severe: IQ 20-35	• Can develop some useful self-protection skills in controlled environments • Requires support for most daily tasks but may contribute partially to self-care with a high level of supervision
Profound: IQ 19 or below	• Often needs nursing support • May have very limited participation in self-care

Progression of the Condition

- The progression of Intellectual Disability (ID) in adolescents and adults is highly individualized and not typically progressive in nature.
- However, its manifestation and impact can change over time due to various factors.
- During adolescence, individuals with ID often face challenges related to puberty, increased social expectations, and more apparent cognitive limitations.
- The transition to adulthood brings new hurdles in areas such as independence, employment, and social relationships. Some adults with ID may show significant progress in adaptive skills, while others may plateau or decline in certain areas.
- As they age, adults with ID may experience age-related health issues earlier than the general population, including sensory impairments, mobility issues, and cognitive decline.
- Some genetic conditions associated with ID can increase the risk of early-onset dementia.
- Despite these challenges, many individuals with ID can continue to develop skills throughout adulthood, albeit at a slower pace.

Outcome if Left Untreated

- Untreated ID can result in significant challenges in adaptive functioning, including difficulties in communication, self-care, social skills, and academic or vocational performance. This can lead to increased dependence on others and reduced quality of life.

SLP Management

- **Speech and Language Therapy**: provides interventions to enhance communication skills, focusing on language development, articulation, and pragmatic skills.
- **Social Skills Training**: enhances social interaction skills and understanding social norms through structured interventions

Management (Cleveland Clinic, n.d.)

- **Education support and interventions**. These can help with changes to educational programs and structure. An example of educational support is an Individualized Education Plan (IEP), which creates a custom educational plan and expectations.
- **Behavioral support and interventions**. These kinds of interventions can help with learning adaptive behaviors and related skills.
- **Vocational training**. This can help people with intellectual disabilities learn work-related skills.

- **Family education**. This can help family and loved ones of those with intellectual disability learn more about intellectual disability and how to support a loved one who has it.
- **Various medications** can help with conditions that are related to or happen alongside intellectual disability. While these don't treat intellectual disability itself, they can help with some of the symptoms that may contribute.
- **Community support**. A person and/or their family can contact local government agencies or support organizations. Doing so can help them get access to the services they benefit from, including support in home or work environments and options for daytime activities.

Medical Precautions Regarding Speech-Language Therapy

Before	During	After

• Comprehensive Medical History:
  ○ Obtain a detailed medical history, including any neurological conditions, physical impairments, and medications.
  ○ Be aware of comorbid conditions such as epilepsy, sensory impairments (hearing or vision), or psychiatric conditions that may affect therapy.
• Medications:
  ○ Understand any side effects from medication that could impact their behavior, attention, or communication abilities during sessions.
• Behavioral Considerations:
  ○ Understand any behavioral triggers or sensory sensitivities that could cause distress or lead to challenging behavior during therapy.
	• Clear Communication:
	  ○ Use simple, concrete language and visual aids to support understanding.
	  ○ Break tasks into smaller, manageable steps to avoid frustration.
	• Monitor for Fatigue or Overstimulation:
	  ○ Observe for signs of fatigue, overstimulation, or stress and take breaks as needed. Shorter, more frequent sessions may be beneficial.
	• Behavior Management:
	  ○ Have a plan in place to manage challenging behaviors, such as a behavioral reinforcement system or calming strategies (e.g., deep breathing exercises).
	• Sensory Considerations:
	  ○ Be mindful of sensory sensitivities (e.g., loud noises, bright lights) and adjust the therapy environment to promote comfort.
		• Review of Progress:
		  ○ Provide caregivers with a summary of the session's activities and progress.
		  ○ Offer strategies or exercises to practice at home, ensuring caregivers understand how to implement them safely.
		• Behavioral Reflection:
		  ○ Reflect on any challenging behaviors observed during the session and consider adjustments for future sessions (e.g., changes to the environment, routine, or communication approach).
		• Medical Monitoring:
		  ○ Observe any delayed physical or emotional reactions to the session, especially if the individual has a history of seizures or other medical conditions.

Support Systems

Locally

- **Special Olympics Pilipinas**
  - Special Olympics Pilipinas is an organization officially established in the Philippines in 2021. It is part of the global Special Olympics movement and aims to serve persons with intellectual disabilities across different regions, age groups, and social classes in the Philippines.
  - It promotes inclusion, raises awareness about the capabilities of individuals with developmental disorders, and fosters community engagement. Through these efforts, the organization helps participants redefine their lives, discover new potential, and challenge societal perceptions about intellectual disabilities.

Internationally

- **American Association on Intellectual and Developmental Disabilities (AAIDD)**
  - AAIDD, established in 1876, is the oldest and largest interdisciplinary organization focused on intellectual and developmental disabilities.
  - The association brings together professionals and other stakeholders concerned with intellectual and developmental disabilities. AAIDD's mission includes promoting progressive policies, sound research, and effective practices in the field.
  - The organization advocates for universal human rights for individuals with intellectual and developmental disabilities.

DOWN SYNDROME (DS)

Definition

- Down Syndrome is a genetic disorder whereby a person has three copies of chromosome 21 instead of two

Etiology

- In a process called non-disjunction, the two copies of chromosome 21 fail to separate during formation of the egg, resulting in an egg with two copies of the chromosome. When this egg is fertilized, the resulting baby ends up with three copies of chromosome 21 in each of its cells. The cause of this nondisjunction remains unknown.

Prevalence and Incidence

Locally:

- Estimated to occur in approximately 1 out of every 800 live births. However, data on its prevalence among adults is not as readily available or comprehensive. Although, according to figures released by the Down Syndrome Association of the Philippines Inc. (DSAPI) in 2014, more than 100,000 households in the Philippines include a family member with Down syndrome (DSAPI, 2014; Philippine Statistics Authority, 2021).

Internationally:

- The CDC estimated that around 250,700 children, teens, and adults were living with Down syndrome in the U.S. in 2008. Additionally, approximately 1 in every 700 babies in the U.S. are born with Down syndrome (CDC, 2021; National Down Syndrome Society, 2023).

SIGNS: Manifestations According to Physicians/Allied Health Medical Professionals

- Physicians/Allied Health Professionals
- Features associated with Down Syndrome
  - Protruding tongue
  - Cataracts
  - Limp muscles
  - Slanting eyes
  - Flat nasal bridge
  - Short neck
  - Small head, ears, and mouth
  - Broad, short hands with a single crease in the palm
- Chromosomal karyotype confirming an extra

SYMPTOMS: Manifestations According to the Patient

- While it can be challenging to pinpoint the exact location or severity of pain, individuals may exhibit signs of discomfort
- Symptoms of fatigue might include decreased energy levels, difficulty concentrating, or increased irritability
- Symptoms like stomach pain, constipation, or diarrhea can be observed through changes in behavior or bowel movements
- Symptoms of anxiety, depression, and frustration
- Can experience feelings of inadequacy or isolation due to societal perceptions

chromosome 21 in all or some cells • Difficulty with abstract thinking, problem-solving, and long-term planning. • Challenges in expressing thoughts and understanding complex language. • Difficulty remembering recent events or information.	
Manifestations that the Parents/Significant Others Perceive • May struggle with social cues, understanding emotions, and building relationships. • Can exhibit behaviors such as impulsivity, anxiety, or obsessive-compulsive tendencies. • Increased risk of heart conditions, thyroid disorders, sleep apnea, and early-onset Alzheimer's disease. • Often require support with daily living activities, such as personal hygiene, household chores, and financial management. • Despite challenges, parents and significant others often describe a deep love and sense of fulfillment in supporting their loved ones.	**Structural & Anatomical Changes** • Distinct facial features • Short stature • Hypotonia • Heart defects such as atrial septal defect or ventricular septal defect • Gastrointestinal issues such as celiac disease or Hirschsprung's disease • Dental issues such as malocclusions • Ear infections or hearing loss • Vision problems or eye diseases

Possible SLP Areas Affected and Their Characteristics

Speech	• Speech intelligibility problems, which may result from disturbances in voice, articulation, resonance, fluency, or prosody • Stuttering is more prevalent
Language	• Language comprehension is better than production, particularly syntax. • Adults with DS usually do well with social interactive language, using greetings, and scripts (automatic phrases such as "hi"! And "see you later!") effectively. They may have difficulty with conversational skills, and tend to have short conversations or rambling conversations that veer from the topic.
Swallowing	• swallowing difficulties could be caused by the presence of a narrow and short palate, which would alter tongue control, activity, and movement in people with Down syndrome.
Hearing	• Persistent otitis media, conductive, and sensorineural hearing loss is common in individuals with down syndrome.

Types of Down Syndrome

Trisomy 21 (Nondisjunction)	• Most common type; 95% of cases • Baby ends up with an extra 21st chromosome pair. This extra chromosome is copied in all its cells
Translocation Down Syndrome	• 3% to 4% of cases • The extra piece of chromosome 21 is attached to one of the other 23 chromosomes; still has 46 chromosomes but one of them has an

	extra chromosome 21 attached to it
Mosaic Down Syndrome	• Rarest type; 1% - 2% of cases • Some cells have a copy of the extra chromosome, but not all of them • Milder symptoms/ fewer issues

Progression of the Condition

- Adults with Down syndrome exhibit a wide range of abilities, needs, and aspirations, much like any other group of individuals. With appropriate support, they can lead rich, fulfilling lives and actively participate in their communities.
- As they transition from adolescence to adulthood, they face similar challenges as their peers in determining living arrangements, career paths, and social connections. This transition can be particularly challenging for individuals with Down syndrome, emphasizing the importance of early planning and support.
- Living arrangements for adults with Down syndrome vary based on individual needs and preferences, ranging from living at home to independent living with support services, or group homes.
- In terms of employment and education, some pursue higher education, while others enter the workforce in competitive, supported, or sheltered employment settings.
- Social well-being remains crucial, with many adults with Down syndrome engaging in relationships, marriages, and various social activities.
- Health considerations become increasingly important as individuals with Down syndrome age.
- They may face a higher risk of mental health issues, such as depression, and tend to experience age-related health problems earlier than the general population. This includes an increased risk of dementia and Alzheimer's-like symptoms.

Outcome if Left Untreated

- If left untreated
  - Adults with Down Syndrome who do not receive appropriate care may experience earlier onset of age-related health issues, including dementia. They may also face challenges in maintaining independence and participating in community activities.

SLP Management

- **Speech and Language Therapy:** focuses on improving articulation, expressive and receptive language, and pragmatic skills tailored to the needs of individuals with Down syndrome (ASHA, n.d.).
- **Augmentative and Alternative Communication (AAC):** utilizes various AAC systems and devices to enhance communication for individuals with significant speech and language impairments (ASHA, n.d.).

Management (Bianchi, 2024)

- **Treatment Therapies**
  - **Physical therapy** includes activities and exercises that help build motor skills, increase muscle strength, and improve posture and balance.
    - A PT can also help individuals with Down syndrome compensate for physical challenges, such as low muscle tone, in ways that avoid long-term problems. For example, a physical therapist might help establish an efficient walking pattern, rather than one that might lead to foot pain.
  - **Speech-language therapy** can help individuals with Down syndrome improve their communication skills and use language more effectively.
    - In many cases, individuals with Down syndrome understand language and want to communicate before they can speak. An SLP can help a client use alternate means of communication, such as sign language and pictures, until he or she learns to speak.
      - **Augmentative and Alternative Communication (AAC)**: utilizes various AAC systems and devices to enhance communication for individuals with significant speech and language impairments
    - Learning to communicate is an ongoing process, so a person with Down syndrome may also benefit from speech and language therapy in school, as well as later in life. The therapist may help with conversation skills, pronunciation skills, understanding what is read (called comprehension), and learning and remembering words.
      - **Speech and Language Therapy**: focuses on improving articulation, expressive and receptive language, and pragmatic skills tailored to the needs of individuals with Down syndrome.
  - **Occupational therapy** helps find ways to adjust everyday tasks and conditions to match a person's needs and abilities.
    - This type of therapy teaches self-care skills such as eating, getting dressed, writing, and using a computer.
    - An OT might offer special tools that can help improve everyday functioning, such as a pencil that is easier to grip.
    - At the high school level, an occupational therapist could help teenagers identify jobs, careers, or skills that match their interests and strengths.
  - **Emotional and behavioral therapies** work to find useful responses to both desirable and undesirable behaviors. Individuals with Down syndrome may become frustrated because of difficulty communicating, may develop compulsive behaviors, and may have attention-deficit/hyperactivity disorder and other mental health issues.
    - A psychologist, counselor, or other mental health professional can help individuals deal with emotions and build coping and interpersonal skills.
    - The changes in hormone levels that adolescents experience during puberty can cause them to become more aggressive. Behavioral therapists can help teenagers recognize their intense emotions and teach them healthy ways to reach a feeling of calmness.
    - Parents may also benefit from guidance on how to help a child with Down syndrome manage day-to-day challenges and reach his or her full potential.
- **Assistive Devices**
  - More and more often, interventions for children with Down syndrome involve assistive devices—any type of material, equipment, tool, or technology that enhances learning or makes tasks easier to complete. Examples include amplification devices for hearing problems, bands that help with movement, special pencils to make writing easier, touchscreen computers, and computers with large-letter keyboards.

Medical Precautions Regarding Speech-Language Therapy

Before	During	After
• Medical Conditions: ○ During case history taking, ask about common medical	• Postural and Physical Precautions: ○ Ensure proper postural	• Review of Progress: ○ Provide caregivers with a summary of the session's

conditions such as congenital heart defects, respiratory issues, or gastrointestinal concerns that are often associated with Down syndrome. ● Hearing and Vision Screenings: ○ Conduct or review recent hearing and vision screenings, as individuals with Down syndrome may have hearing loss or visual impairments that could affect therapy outcomes. ● Behavioral and Cognitive Profile: ○ Recognize potential attention deficits, memory issues, and impulsivity, and plan therapy sessions accordingly to accommodate these cognitive characteristics.	support during activities, especially if the client has low muscle tone (hypotonia). ● Monitor Breathing and Fatigue: ○ Watch for signs of respiratory difficulty or fatigue, especially if the client has a heart condition or low stamina. ○ Adjust the pace of activities to match the individual's endurance. ● Speech and Oral Motor Issues: ○ Be mindful of any feeding or swallowing concerns (dysphagia) that could impact speech therapy tasks involving oral movements. ● Engagement and Attention: ○ Use engaging, multisensory materials to maintain attention and motivation. Short activities with frequent rewards may help sustain interest.	activities and progress. ● Home Program: ○ Provide recommendations for home practice that take into account the individual's physical and cognitive abilities, ensuring caregivers understand how to implement them safely. ○ Communicate with caregivers about any necessary adaptations in daily routines to support speech and language development. ● Follow-up on Medical Needs: ○ Ensure that the individual's hearing aids, glasses, or other assistive devices are in good working condition after the session. ○ Advise follow-up with medical professionals if any new medical concerns arise during or after therapy.

Support Systems:

Locally

- **Down Syndrome Association of the Philippines, Inc. (DSAPI)**
  - A non-profit organization dedicated to supporting individuals with Down syndrome and their families in the Philippines.
  - DSAPI supports individuals with Down syndrome and their families through various programs and initiatives. They provide early intervention services to help children with Down syndrome develop essential skills from a young age. The organization offers educational resources and advocates for inclusive education, enabling individuals with Down syndrome to access appropriate learning opportunities.

Internationally

- **Down Syndrome International (DSI)**
  - Down Syndrome International (DSI) is a global network representing people with Down syndrome and their families.
  - The organization provides a unified voice for the Down syndrome community in decision-making processes that affect them.
  - DSI focuses on empowering individuals with Down syndrome and their families to advocate for their human rights. They work to ensure that people with Down syndrome and their families have an active role in shaping policies and practices that impact their lives.

GENERAL MANAGEMENT FOR DEVELOPMENTAL DISORDERS

<table>
<tr><th colspan="2">SKILL DEVELOPMENT</th></tr>
<tr><td>Adaptive Skills Training</td><td>

Focuses on exercising skills that allow consumers to be independent in daily living, increasing their quality of life
Specific skills or areas of functioning typically targeted in the adaptive skills training program include:

☐ Basic Math & Reading Skills
☐ Communication Skills
☐ Community/Mobility Training
☐ Dating Skills
☐ Health & Fitness
☐ Housekeeping Skills
☐ Job Skills
☐ Meal Preparation
☐ Money Skills
☐ Safety Skills
☐ Self-Help Skills
☐ Social Skills

Adaptive skills are essential for daily living and independence, enabling individuals to adapt to new situations and environments
These skills help you to think critically and solve problems when faced with challenges or changes
Promotes social engagement, healthy relationships, and a strong sense of self, leading to overall success at home and in the community

</td></tr>
<tr><td>Independent Living Skills (ILS)</td><td>

People with disabilities learn essential life skills that can be applied to daily living and promote independence
Helps in learning to live independently within the context of their level of physical, intellectual, and emotional development
Individuals with disabilities often grow up with a supported living system, providing a safe environment and assisting them with daily tasks. Unfortunately, this isn’t always the case, and individuals gain little to no support in childhood.
Regardless of upbringing, there comes a point when individuals mature into adolescence and adulthood and need to learn skills to help them live more independently.
ILS helps adolescents and young adults develop skills in:

☐ Basic Math & Reading
☐ Communication Skills
☐ Community & Home Safety
☐ Driving Education (Written)
☐ Food Preparation
☐ Health & Nutrition
☐ Housing Assistance
☐ Job Assistance
☐ Locating Generic Resources
☐ Medical & Mental Health
☐ Medication Management
☐ Mobility Training
☐ Money Management
☐ Organization & Cleaning
☐ Parenting Support
☐ Personal Care
☐ Personal Hygiene & Health
☐ Problem-Solving
☐ Public Transport
☐ Recreation & Social Leisure
☐ Self-Advocacy Training
☐ Social Integration Skills
☐ Social Security
☐ Organization & Cleaning
</td></tr>
<tr><td>Supported Living Services (SLS)</td><td>

Help individuals with intellectual and developmental disabilities who wish or choose to live in their own homes independently
People who use SLS live apart from their guardians in apartments or houses they lease or own

</td></tr>
</table>

	• Offers the same inclusions as ILS **What is the Difference Between SLS and ILS?** SLS is focused on residential services and supported living arrangements for consumers. On the other hand, Independent Living Skills Training (ILS) teaches consumers essential skills and personal care for their daily lives. These two services go hand in hand and can be incredibly beneficial to an individual's choice to live independently with our natural support and more freedom.
Applied Behavioral Analysis (ABA)	• An evidence-based therapy technique focused on teaching how behaviors work and using this understanding to find the best learning methods for an individual • Aims to understand a person's behavior and use this knowledge to develop a treatment plan that improves learning and conduct • Using ABA techniques and principles brings about meaningful and positive behavior changes • Works to reduce problem behaviors that may interfere with learning or prove to be harmful • Focuses on the skills that pertain to daily life, those that bleed into all aspects of a person's life, including professional, academic, social, and personal: ☐ Communication Skills ☐ Community Training ☐ Functional Pre-Academics ☐ Functional Academics ☐ Home Living Skills ☐ Health and Safety ☐ Leisure Skills ☐ Self-Care Skills ☐ Self-Direction ☐ Social Behaviors and Skills ☐ Motor Skills ☐ Work Skills • ABA therapists develop a plan with goals that follow seven dimensions ○ Generalizable - can be maintained long-term after being learned ○ Effective - an achievable goal needs to be a desired goal ○ Technological - should be comprehensible to a general audience ○ Applied - applicable to the consumer ○ Behavioral - looking into measurable behaviors that a disorder manifests ○ Analytical - taking evidence-based approaches when creating plans for their consumers ○ Conceptual - all aspects of intervention and treatment are rooted in the theoretical base of ABA

EDUCATIONAL MANAGEMENT	
Individualized Education Programs (IEPs)	• Ensures medical needs are integrated into the educational plan. • Includes health-related accommodations and emergency protocols (e.g., seizures, allergies). • Regular reviews and reassessments to stay medically appropriate.

	• Involves medical professionals and coordinates with therapeutic interventions (e.g., OT, PT, speech therapy). • Aligns educational goals with medical treatments.
Inclusive Education	• Promotes well-being by reducing isolation and improving mental health. • Accommodates medical needs, ensuring accessibility for students with disabilities. • Trains staff and students on diverse medical conditions, enhancing health awareness. • Includes emergency procedures for all students, improving response times in crises.
Specialized Instruction	• Integrates medically necessary devices and assistive technology. • Adjusts curriculum for fatigue, medication side effects, or physical limitations. • Provides individualized monitoring to detect and manage health changes. • Incorporates health education to help students understand and manage their conditions.
Life Skills Training	• Teaches self-care, medication management, and hygiene to prevent illness. • Prepares students for vocational work with consideration of medical limitations. • Focuses on advocating for health needs and navigating the healthcare system independently.

CRITICAL MEMBERS OF THE MANAGEMENT TEAM

- **AUDIOLOGIST**: Evaluates hearing loss, provides hearing aids, and develops strategies to improve communication for individuals with hearing impairments
- **SPEECH-LANGUAGE PATHOLOGIST**: Assesses and treats communication disorders, including speech, language, and swallowing difficulties
    - Helps individuals develop effective communication skills
- **OCCUPATIONAL THERAPIST**: Focuses on developing daily living skills, fine motor skills, and sensory processing abilities
    - Helps individuals participate in activities of daily living and work
- **PHYSICAL THERAPIST**: Improves physical function, mobility, and strength
    - Develops exercise programs and provides assistive devices as needed
- **BEHAVIORAL ANALYST**: Assesses and treats challenging behaviors
    - Develops behavior intervention plans and teaches strategies to manage behavior effectively
- **NEUROLOGIST**: Diagnoses and treats neurological conditions that may affect individuals with developmental disorders, such as epilepsy or movement disorders
- **DEVELOPMENTAL DOCTOR**: Specializes in diagnosing and managing developmental disorders
    - Provides comprehensive care and coordinates with other specialists
- **GENERAL PHYSICIAN**: Provides primary care, manages chronic conditions, and coordinates with specialists
- **CLINICAL DIRECTOR**: Oversees the clinical operations, ensuring quality of care and coordination among team members
- **PSYCHOLOGIST**: Provides psychological assessments, diagnoses, and treatment for mental health conditions
    - Offers therapy and support to individuals and families

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