

MODULE 4

Feeding Difficulties in Infants and Children with Disabilities

(Total time: 185 minutes)

4.1 Developmental Feeding Skills in Infants and Children

Time: 55 minutes

Preparation & materials required: Slide Deck, flipchart, markers, scissors, food that requires chewing, 4 sets of Developmental Milestone Sorting Cards activity sheet and answer key, Developmental Milestones handout.

Objectives: At the end of this module, learners will be able to:

- Describe typical development of feeding skills in children from birth to five years.
- Discuss the relationship between physical development, feeding skills, and appropriate food textures during development.
- List four factors that could limit or delay the development of skills in children.

Key message(s) to take away for learners:

1. Developmental milestones progress in a predictable manner during certain windows of time, but all children learn and develop at different rates.
2. Feeding skills are developmental skills that develop over time and with opportunity to practice. There is a relationship between a child's physical development, feeding skills development, and food texture.

Activity 4.1.1 (25 minutes)

Developmental milestones

Activity Summary	Key message(s)	Slides & Material(s)
Group sorting/matching activity	1	Slides 140-145 Scissors, flipchart, markers, food that requires chewing (e.g., biscuits, bread) Mod 04_Activity Sheet_Developmental Milestone Sorting (4) Mod 04_Activity Sheet_Developmental Milestone Sorting Answers (1) Mod 04_Handout_Developmental Milestones up to 2 Years

Instructions

- Introduce the module:
 - Developmental milestones are the behaviors or skills that mark a transition in a child's development such as learning to walk. Typical development is how those skills or behaviors are expected to be acquired over time.
 - Certain skills are expected to develop around certain ages and with opportunities to practice, but the exact time may be a little different for every child.
 - Understanding typical development and milestones related to feeding and nutrition is important because it will equip you to identify potential delays, know when to seek help, and support children to learn lifelong skills.

Activity (20 minutes):

- Prior to training, cut out and prepare four sets of developmental milestone activity cards.
- Introduce the activity:
 - It can be helpful to think of development in different areas or domains. One area or domain is physical development. Physical development involves learning to move the body such as learning to walk.
- Ask participants to name other areas or domains of development.
- Reveal the domains on the PowerPoint slides or write them on a flipchart as participants share.
 - *Physical/Movement*: learning to move the body; this includes fine motor, or small muscle movements like in the hands and fingers, and gross motor, or whole body or larger muscle movements like crawling, walking or running.
 - *Self-Care*: learning skills for everyday tasks and independence such as self-feeding, dressing, bathing, and cleaning teeth.
 - *Social and Emotional*: learning skills to understand who you are, how you feel, and how to interact with others.
 - *Communication or Language*: learning skills to understand communication and to express words, thoughts, or feelings.
 - *Cognitive or Brain*: learning how to think, explore and figure things out.
 - *Feeding Skills*: learning the ability to eat and drink safely and efficiently.
 - *Sensory*: learning skills related to the senses including vision, hearing, touch, smell and taste.
- If it is helpful, use the physical/movement domain to demonstrate how to place the developmental skills in chronological order according to how the skills typically develop.
- *Note: Each card has a label with the domain, so they can be easily sorted before participants place them in chronological order.*
- Divide participants into four groups. Distribute a set of developmental milestone cards to each group.
- Explain to participants that each team has a set of cards for three developmental domains. The task is to correctly place the milestones in each of the three remaining domains in chronological order the fastest.
- Use the Developmental Milestones Sorting Answers activity sheet to reveal the correct answers. Teams get a point for each correct answer and bonus points for completing the task the fastest; tally the points for each team. The team with the highest points wins.
- Distribute the Developmental Milestone Handout and allow participants a few minutes to review it individually.
- Conclude this section:
 - Each area of development continually interacts with the others and development in one area supports the development of other areas.

- Early development is critical for each child's future health, well-being, and participation in their community.

Activity 4.1.2 (30 minutes)
Developmental feeding skills

Activity Summary	Key message(s)	Slides & Material(s)
Facilitated discussion & feeding skills simulation activity	2	Slides 146-153 Flipchart, markers

Instructions

- Introduce this section about developmental feeding skills:
 - Lifelong feeding skills begin at birth, so it is important to support safe and efficient feeding from the beginning. Feeding skills are the abilities required to consume a developmentally appropriate diet safely and efficiently, ensuring children get the nutrition they need to grow and thrive.
 - While healthy infants are born with some instinctual feeding skills, a child must go from drinking only breast milk in infancy to eating the wide variety of foods that adults eat. In order to do that, a child must develop skills such as moving the parts of the mouth (e.g., lips, tongue, and jaw) to prepare and swallow food safely and easily.
 - As with other areas of development, feeding skills develop over time and with the opportunity to practice. A child's ability to move the parts of their mouth changes as they grow and this allows them to eat a wider variety of foods and textures.

Activity (5 minutes):

- Introduce the activity:
 - Understanding the typical development of feeding skills will help you to better know how to feed children and support them to acquire lifelong feeding skills in support of healthy growth and development.
 - Feeding skills generally develop during about the first 18 months of life and continue to get better and more efficient until around 3-5 years of age.
- Ask participants: what do you think are the most important parts of the mouth for feeding?
 - All of the parts of the mouth play a role in eating and drinking. Each part works together to prepare and move food and liquids for swallowing.
 - Understanding each part's job and how those skills develop over time helps us to better understand how to feed children safely and efficiently and to identify when children are having trouble.
 - The tongue, lips, and jaw have key roles and are important parts of the mouth for eating and drinking.
 - *Tongue:* The tongue gathers food or liquid together to prepare to swallow. The tongue moves the food or liquid in the mouth.
 - *Lips:* Lips pull the food into the mouth from a spoon, from the fingers, or the liquid from a cup. Lips help to keep the food in the mouth.
 - *Jaw:* The jaw provides stability to allow the other parts of the mouth to do their jobs. The jaw moves to chew the food.
 - *Note: Teeth are very useful for tearing foods like meats and raw vegetables that are difficult to chew, but they are not required for safe and efficient feeding for many foods.*

- Present information about feeding skills development:
 - There is a relationship between a child's physical development, feeding skills development, and food texture. Acquiring feeding skills and the ability to move the key parts of the mouth is linked directly to the food textures the child is able to eat.
 - As the child develops and acquires skills to move the body, notice how the ability to move the mouth changes.
 - As the movement of the parts of the mouth changes, the child is able to eat a larger variety of food textures. (*Note: food texture is a food's consistency, or how the food feels in the mouth.*)

0 to 3 months

- Infants are typically learning to control their body against gravity, suck reflexively to feed and should be consuming breast milk exclusively. Well-coordinated feeding has a regular, rhythmic pattern of sucking, swallowing, and breathing.

4 to 5 months

- Infants are typically rolling actively and improving head and trunk control. For feeding, the tongue moves mostly forward/back. If you were to try to offer complementary foods now, the tongue will eject the food involuntarily. Infants at this age should be consuming breast milk exclusively.

6 months

- Infants typically are now sitting with minimal or no support. When feeding, the tongue is able to move forward/back and up/down. The jaw moves up/down and the lips move together to gather food from a spoon. At this age, children should continue consuming breast milk and complementary foods can be introduced. Based on the child's skill and stage of development, smooth, pureed food textures are the most appropriate.

7 to 9 months

- Children typically have full trunk control and are beginning to crawl. During feeding, the child's tongue is starting to move side to side and follow the food, the jaw moves up/down, and the lips close easily on a spoon or cup. Breast milk, thicker purees, and mashed foods are appropriate for the child's age and stage of development.

10 to 12 months

- Children typically are standing and learning to walk. During feeding, the tongue is becoming coordinated, the jaw moves in a circular/diagonal pattern, and the lips actively help pull food into the mouth. Breast milk, liquids from a cup, and soft and bite-sized foods that require chewing are appropriate for the child's age and stage of development.
- After 12 months of age, children are typically able to consume most regular foods safely. They will become more and more efficient as skills continue to develop and will be able to manage more difficult-to-chew foods and mixed textures or foods that contain more than one food texture like soups with small pieces of vegetables or soft meats.

Activity (20 minutes):

- Introduce activity by explaining that they will experience how the ability to move the tongue, lips, and jaw impacts the food we are able to eat. This activity will help you understand the potential challenges children can face when they are given foods they do not yet have the skills to eat and this will help you to more fully understand the importance of matching the textures of foods to a child's skills.
- Pass out food items for this activity.

- Explain the activity to participants:
 - You are going to try to eat as if you have the feeding skills of a 6-month-old infant.
 - Break off a piece of food and place it on the center of the tongue and try to eat it using only the skills of a 6-month-old.
 - Remember, your tongue can *only* move forward/back and up/down; your tongue is not able to move the food to the side of the mouth to chew it, but it can only mash the food against the top of the mouth.
 - Give feedback if people are using more advanced chewing skills.
 - Encourage participants to eat the food as usual after they have sufficiently tried the simulation.
- Ask participants:
 - What did it feel like to be offered a food that was too challenging to eat?
 - What is a more appropriate food texture for the feeding skills you have? *Explain that a puree texture, like yogurt or smooth porridge would be easier and more enjoyable when they can only move their tongue up/down and forward/back.*
- Conclude this section:
 - Check for evidence of learning by asking participants to share in their own words what they learned about feeding skills or how they understand feeding skills differently.



Check before proceeding.

These are the key messages for this module. Have these been explicitly addressed and learners appear to have a good understanding of them?

1. Developmental milestones progress in a predictable manner during certain windows of time, but all children learn and develop at different rates.
2. Feeding skills are developmental skills that develop over time and with opportunity to practice. There is a relationship between a child's physical development, feeding skills development, and food texture.

4.2 Types of Feeding Difficulties

Time: 50 minutes

Preparation & materials required: Slide Deck, flipchart, markers, Global Health Media video.

Objectives: At the end of this module, learners will be able to:

- Describe types of feeding difficulties that are common in infants and children with disabilities.
- Define aspiration and recognize its signs and symptoms.

Key message(s) to take away for learners:

1. Any infant or child can have difficulty with feeding and up to 80% of children with developmental disabilities have feeding difficulties.



2. Reasons for feeding difficulties may include medical, nutritional, feeding skill, and psychosocial issues. These may involve immature feeding skills, lack of responsive feeding practices, interruptions in typical development, poor nutrition, untreated illnesses, or other co-occurring complex medical needs or complications.
3. Aspiration can be very serious because it may lead to respiratory problems like pneumonia, dehydration, malnutrition, weight loss, or increased risk for illness.
4. Signs and symptoms of aspiration, like a wet-sounding voice or watering eyes, may happen during or right after feeding.

Activity 4.2.1 (25 minutes)

Types of feeding difficulties

Activity Summary	Key message(s)	Slides & Material(s)
Group discussion	1 & 2	Slides 154-161 Flipchart, markers

Instructions

- Introduce this section by defining and discussing feeding difficulties:
 - **Feeding difficulties** are a wide range of delays or issues that lead to oral intake that is not age-appropriate.
 - Safe and efficient feeding should have minimal risk for aspiration, provide sufficient nutrition for healthy growth and development, and be pleasurable.
 - The severity and complexity of specific feeding difficulties can vary widely. Up to 80% of children with disabilities have feeding difficulties.
 - In this section, we will take a closer look at feeding difficulties and aspiration and then identify issues that are common among infants and children with disabilities.

Activity (20 minutes):

- Prepare flipcharts with the following headings: Examples, Signs, Causes, Consequences.
- Introduce the activity by telling participants that we will discuss their experiences and understanding of feeding difficulties.
- *Note: Alternatively, you can divide participants into four groups and assign one heading to each group. Groups can brainstorm examples for their topic from their own experience and knowledge. After time to brainstorm, bring the groups back together to share their ideas. Use notes below to add to each group as needed.*

Examples

- Ask participants:
 - What are feeding difficulties that you have observed in your work?
- Write down the examples shared on the flipchart under “**Examples.**”
- Provide additional examples of feeding difficulties that are common for infants and children with disabilities using this list:
 - Difficulty latching during breastfeeding
 - Difficulty sucking or weak suck
 - Poor lip closure
 - Difficulty swallowing
 - Difficulty biting or chewing
 - Using wide-open jaw movements or inconsistent jaw movements while feeding
 - Difficulty coordinating sucking, swallowing, and breathing

- Difficulty advancing food textures
- Poor endurance, prolonged feedings, or requiring more breaks while feeding
- Increased effort during feeding causing tiredness
- Difficulty finishing an adequate amount
- Difficulty drinking from a cup
- Difficulty with self-feeding
- Food refusal or selective eating
- Limited variety of types or textures of food
- Food or liquid spilling from the mouth while feeding

Signs

- Ask participants:
 - What are some signs, or things that you or a mother may observe, that might indicate an infant or child is having difficulty feeding? Think about any signs that you have observed feeding that have made you think that the child is having issues.
- Write down the signs and symptoms shared under “**Signs.**”
- Provide additional examples of signs that infants or children are having feeding difficulties using this list:
 - Frequent nasal congestion
 - Loss of milk from the mouth or nose
 - Loss of food from the mouth or nose
 - Fatigue or falling asleep while feeding
 - Difficulty finishing an adequate amount
 - Long feeding times
 - Arching back during feeding
 - Frequent gagging
 - Coughing or choking
 - Frequent or repeated vomiting
 - Low number of wet diapers or other signs of dehydration
 - Poor weight gain
 - Refusal or avoidance behaviors
 - Grimace or finger splay (*spreading the fingers wide apart*)

Causes

- Ask participants:
 - What might be reasons or causes for some of the feeding difficulties that you named?
- Write down key words describing the causes of feeding difficulties that they encounter in their work on the flipchart under “**Causes.**” *Note: Participants may share examples of beliefs about the causes of feeding difficulties, as well. If it is appropriate, you can discuss some of those further, especially if there are myths that could contribute to harm or stigma.*
- Present information about the causes to expand the conversation:
 - There are many reasons that any infant may have feeding difficulties such as limited opportunities to practice feeding skills, poor nutrition, or a lack of responsive feeding and care practices.
 - Issues with body function or body structure, like a palate that has a cleft for example, can limit an infant’s ability or efficiency, interrupt their skill development, or put them at risk for aspiration.
 - Certain aspects of disability can disrupt the typical progression of development, including developing the skills needed for feeding (e.g., when stigmatization (attitudinal barriers) leads to isolation or limited interaction from caregivers or family, then an infant may miss out on critical stimulation that supports development of skills).

- Issues within the child's gut, intestines, or throughout the gastrointestinal (GI) tract can also contribute to feeding difficulties (e.g., a child who has severe reflux or frequent constipation may feel pain and discomfort during or after eating and begin to avoid feeding or limit the amount they consume.).
- Other complex medical needs can contribute to delays in developing skills due to the nature of the condition or due to secondary impacts such as illness, hospitalizations, procedures, or long recovery times.
- Sensory-based sensitivities often related to taste, touch, sound, texture, smell, and/or appearance that the brain has to process during feeding experiences can contribute to feeding difficulties. This can typically manifest in strong preferences or avoidance behaviors.

Consequences

- Ask participants:
 - What are the possible consequences of feeding difficulties?
- Write down key words mentioned by participants on the flipchart under "**Consequences.**"
- Explain
 - Poor feeding in infancy and early childhood can lead to serious issues with growth and development. It is important to avoid dismissing feeding difficulties as something that will improve on their own over time. The consequences of unaddressed feeding difficulties can include choking, frequent illness, malnutrition, and even death.
- Conclude this section:
 - Many factors can contribute to feeding difficulties, such as: medical, nutritional, feeding skill, and/or psychosocial issues.
 - Ask participants to reflect on how their understanding of feeding difficulties has changed or improved after this discussion. Invite 1-2 participants to share about their reflection.

Activity 4.2.2 (25 minutes)

Understanding aspiration

Activity Summary	Key message(s)	Slides & Material(s)
Small group brainstorm	3 & 4	Slides 162-167 Flipchart, markers Global Health Media video: A small baby's feeding journey (1:13 to 1:23)

Instructions

- Introduce this section:
 - Feeding is a complex task, but we all need to do it every day. In fact, swallowing involves the coordination of more than 30 muscles and nerves.
 - **Safe swallowing** is the timely and coordinated movement of food or liquid from the mouth to the stomach.
- Define aspiration:
 - **Aspiration** is when food or liquid enters the airway or lungs instead of the tube leading to the stomach (esophagus). Food and liquid should never be in the airway.
 - You cannot know for certain if someone is aspirating just by looking at them. However, there are often signs that you can observe that may suggest that

the infant or child is aspirating. Coughing and choking during feeding, for example, are often a sign that the body is trying to protect the airway and lungs from food, liquid, or saliva.

- Signs or symptoms of aspiration may happen during feeding or right after. The signs may depend on the age of the child, how often, and how much they aspirate. Infants and children may show one or many signs. Some who aspirate may not show any outward signs. This is called **silent aspiration**. In fact, research has shown that most aspiration in young infants is silent aspiration.
- Many infants and children with disabilities may be at higher risk for frequent aspiration.
- If aspiration occurs frequently, in large amounts, or the child is not able to cough sufficiently, it can be very serious and lead to respiratory problems such as pneumonia, dehydration, malnutrition, weight loss, and increased risk of illness.

Activity (15 minutes):

- Introduce the activity:
 - You will view a short video clip of an infant having difficulty swallowing. Watch carefully for signs that the infant is having difficulty swallowing. Afterwards, you will brainstorm a list of signs of aspiration. Use what you observed during the video and think about your own experiences with infants to make a list of signs of aspiration. *Note: It may be helpful to show the short clip more than once. The clip has sound, but can still be used if audio is not available.*
- Show the brief clip from the “A Small Baby’s Feeding Journey” video (from 1:13 to 1:23).
- Explain that the video will show a small infant. You will observe some possible signs of aspiration. Signs or symptoms of aspiration may look different depending on the child and the age of the child.
- Once participants have had a few minutes to make a list of the signs of aspiration, invite participants to share 1-2 examples.
- Record the signs and symptoms shared on a flipchart.
- Use this list of signs and symptoms of aspiration to add to or clarify the list:
 - Signs or symptoms of aspiration may include:
 - coughing or choking
 - wet-sounding or rattling voice
 - facial grimacing
 - change in color of face (e.g., redness or blue)
 - watering eyes
 - redness around the eyes during or after feeding
 - runny nose
 - gulping
 - difficulty breathing (e.g., fast breathing, wheezing)
 - frequent respiratory illness
 - poor weight gain
- Conclude this section:
 - Remember that aspiration can be very serious, can be silent, and can happen during or right after feeding.



Check before proceeding.

These are the key messages for this module. Have these been explicitly addressed and learners appear to have a good understanding of them?

1. Any infant or child can have difficulty with feeding and up to 80% of children with developmental disabilities have feeding difficulties.
2. Reasons for feeding difficulties may include medical, nutritional, feeding skill, and psychosocial issues. These may involve immature feeding skills, lack of responsive feeding practices, interruptions in typical development, poor nutrition, untreated illnesses, or other co-occurring complex medical needs or complications.
3. Aspiration can be very serious because it may lead to respiratory problems like pneumonia, dehydration, malnutrition, weight loss, or increased risk for illness.
4. Signs and symptoms of aspiration, like a wet-sounding voice or watering eyes, may happen during or right after feeding.

4.3 Identifying Feeding Difficulties

Time: 80 minutes

Preparation & materials required: Slide Deck, flipchart, markers, Feeding Scenarios activity sheet and answer key, Feeding Difficulties Screening Checklist handout.

Objectives: At the end of this module, learners will be able to:

- Recognize when infants and children are experiencing feeding difficulties.
- Describe key components of feeding that can be used to screen children for feeding difficulties.

Key message(s) to take away for learners:

1. It is important to take a systematic approach to look at various aspects of feeding to identify feeding difficulties and provide the information needed to take the next steps to address them.
2. Some conditions may contribute to delays in skill development. Some may affect the structure or function of a child's body. Many of these factors may make it difficult for the child to safely and effectively feed and to get adequate nutrition for healthy growth and development.
3. Knowing common symptoms for specific conditions can equip you to anticipate some of the feeding difficulties that a child with that condition may face. When you know what to look for, you will be able to better support mothers and caregivers to recognize and address feeding difficulties early.

Activity 4.3.1 (40 minutes)

Identifying feeding difficulties



Activity Summary	Key message(s)	Slides & Material(s)
Feeding scenarios activity Feeding Difficulties Screening Checklist overview	1	Slides 168-175 Flipchart, markers Mod 04_Activity Sheet_Feeding Scenarios Mod 04_Activity Sheet_Feeding Scenarios_Answers (1) Mod 04_Handout_Feeding Difficulties Screening Checklist

Instructions

Note: You may adapt scenarios to reflect the local context. This may include changing the names of children, modifying details to align with the realities of the country or community where the training is taking place, and incorporating references to local systems, services, and programs.

- Introduce this section by asking participants to share any strategies or tools they currently use to identify when a child has feeding difficulties.
- Present information on identifying feeding difficulties:
 - Many caregivers can identify when feeding is difficult or different than expected, but there are times they may not know exactly what the challenge is. Taking a systematic approach to screen for feeding difficulties at appropriate developmental stages helps you to intervene early for better outcomes and support for families.
 - Screening is a necessary step in the process of appropriately identifying and managing feeding difficulties for infants and children. It involves examining key aspects of feeding to inform next steps, such as how to counsel caregivers or the need for further assessment.

Activity (20 minutes):

- Introduce the activity:
 - It is important to practice applying what you have learned about development and feeding skills to help you identify feeding difficulties. This includes determining if the feeding described or observed is appropriate for the child's age and stage of development.
 - Remember that some children with disabilities may be at a developmental stage that does not match their age.
- Ask participants to pair up or work in small groups.
- Distribute the Feeding Scenarios activity sheets to participants.
- Explain the activity:
 - Read each feeding scenario and determine if it is appropriate for the child's age and stage of development. Use your knowledge of developmental feeding skills to consider:
 - What is appropriate for the child's age?
 - What is appropriate for the child's stage of development?
 - Does this affect the child's safety during feeding?
 - Be prepared to give your rationale.

- After 5-10 minutes, bring the group back together to review each scenario. Invite participants to share their answers and explain their reasoning.

Activity (15 minutes):

- Explain that the severity and complexity of specific feeding difficulties can vary widely. Research has shown that some key aspects of feeding can help us screen a child for risk of feeding difficulties.
- Introduce the Feeding Difficulties Screening Checklist handout and explain that it can be used as a job aid to systematically ask mothers about key aspects of feeding in order to identify children birth to five years of age at risk for feeding difficulties.
- Remind participants that caregivers are reliable reporters of their children's feeding behavior and know their children best. If they answer a question in a way that seems to conflict with information they have already provided, it may be helpful to explain what is meant by the aspect of feeding or the question to ensure they have understood what you are asking.
- Distribute a copy of the Feeding Difficulties Screening Checklist to each participant.
- Ask participants to spend around 5 minutes reading through the handout.
- Bring the group back together. Present each section of the Feeding Difficulties Checklist using the slides and the information below, pausing after each section to check for understanding. Use information below to clarify each aspect as needed.

1) *Hunger and fullness cues:*

- This refers to if the child is able to let the caregiver know about hunger and fullness.
 - Children communicate in many ways, even before they are able to talk.
 - Infants will give cues that they are hungry or full:
 - Early hunger cues say "I'm hungry." This includes stirring, mouth opening, and turning head seeking/rooting.
 - Mid hunger cues say "I'm really hungry." This includes stretching, increasing movement, and bringing hands to mouth
 - Late hunger cues say "Calm me, then feed me." This includes crying, lots of movement, and skin color turning red
 - Fullness cues say "I'm done." This includes the infant opening fists, arms lying low across the body, and falling asleep with body relaxed.
 - Ask:
 - How do children give you cues that they're hungry and full? (*Hunger: reaching for food, pointing to food, getting excited at the sight of food, pointing to mouth; Fullness: playing with food, closing mouth, turning away, pushing food away, falling asleep*)
 - It's important to watch and listen to children to communicate when they are hungry. It is also important to stop when a child communicates that they do not want to eat. The child may be full, uncomfortable, or even fearful. Responding to this communication allows a child to feel safe and makes the feeding experience more positive.

2) *Enough food:*

- This refers to, when there is adequate food available, if the child is consuming enough quantity of nutrient-dense foods to meet their needs for healthy growth and development.

3) *Duration:*

- This refers to how long it takes for the child to complete a meal. It is important for infants and children to eat the right amount of food in an appropriate amount of time.

- Most infants and children should be able to eat a meal in about 20-30 minutes.
- In places where duration is not monitored, you may still be able to identify if the child's rate is typical, too fast, or too slow compared to others of the same age.

4) *Respiratory problems:*

- This refers to if there are frequent signs of airway or respiratory problems.
 - Frequent respiratory problems, such as coughing and choking during feeding, are often a sign that the body is trying to protect the airway and lungs from food, liquid, or saliva. It's also important to note recurrent respiratory illnesses without a clear cause, like an infection, as these may be signs of aspiration.
 - Remember that you cannot know for certain if someone is aspirating just by looking at them. And there isn't necessarily a known amount of aspiration that leads to respiratory illness. For that reason, children with frequent airway or respiratory problems may benefit from a referral for further medical evaluation.

5) *Effort:*

- This refers to how much effort it usually takes the caregiver to get the child to eat, especially compared to other children the same age.
 - Level of effort is determined by the primary caregiver. If caregivers believe they have to do something special or additional to get children to eat, then it may be more effort than is typically required for children the same age. This may include making accommodations to the timing, environment, or the menu to meet the needs of the child. It may include the mother providing more support than is typically required at the child's age in order for the child to be fed.

6) *Growth:*

- This refers to if the caregiver perceives that the child's growth over the past month is concerning.
 - If a caregiver believes that the child has lost weight or not gained enough weight over the course of the previous month, this is important information.

7) *Mealtime stress:*

- This refers to if the mealtime is stressful for the child and/or the caregiver.
 - Mealtime can be stressful for many caregivers. However, if feeding the child is often bringing additional stress for the caregiver or mealtime is distressing for the child, this is important information.

8) *Caregiver concerns:*

- This refers to any concerns the caregiver may have about the child's feeding, especially after having responded to the previous questions.
 - Research has shown that caregivers are generally reliable reporters of their children's feeding difficulties. If the caregiver is feeling concerned about feeding their child, this is important information.
- Check for questions and clarify understanding before concluding.
- Conclude this section:
 - Using a systematic screening tool like this checklist can help you decide when to observe a child during feeding to better understand their specific challenges or when to refer the child to a health professional for further assessment. Screening is an important first step that provides critical information to identify and address feeding difficulties early.

Note: Some questions included in the Feeding Difficulties Screening Checklist were adapted from existing tools and literature including the ICFQ tool developed by Silverman et al (2020). References:

- Arvedson, J. (2017, October 27). *Evaluation Feeding and Swallowing Disorders in Infants and Children*. Lecture.
- Silverman et al (2020). (Silverman AH, Kristoffer BS, Linn C, et al. *Psychometric Properties of the Infant and Child Feeding Questionnaire*. *Journal of Pediatrics*. 2020 August; 223:81-86.e2. DOI: 10.1016/j.jpeds.2020.04.040.)

Activity 4.3.2 (40 minutes)

Feeding Difficulties Associated with Specific Conditions

Activity Summary	Key message(s)	Slides & Material(s)
Small group brainstorm	2, 3	Slides 176-183 Flipchart, markers

Instructions

- Introduce this section by explaining that each child is unique and many factors may contribute to their individual feeding needs and challenges. However, with certain conditions, we may be able to anticipate some of the feeding difficulties that an infant or child with that condition may face. Knowing what to look for can help you support mothers to watch for signs of feeding difficulties so that they can be identified early and provided with the support the infant needs.
- Provide an example of how understanding a specific condition may help you anticipate possible feeding challenges.
 - **Prematurity:** Infants born prematurely, that is before 37 weeks of gestation, commonly have reduced nutrient stores, immature digestive systems, immature or absent skills required for feeding, and other medical complications that can impact feeding. Often, infants born prematurely are at higher risk for sensory processing difficulties due to immature nervous systems and exposure to heightened sensory stimuli in NICU settings.
 - I might expect an infant born prematurely to have difficulties with alertness, readiness to feed and sucking for comfort.
 - I might expect to see reduced intake of breast milk, immature sucking, and difficulty coordinating sucking, swallowing, and breathing.
 - I might expect possible issues with frequent vomiting.
 - I might expect a child with a history of prematurity to be at higher risk of sensory-related sensitivities.

Activity (30 minutes):

- Divide participants into at least four small groups.
- Assign each group a specific condition (cerebral palsy, Down syndrome, autism, and blind or partially sighted).
- Provide each group with a blank piece of flipchart paper and markers.
- Explain the activity:
 - Based on your experience and discussions throughout this training about feeding skills and feeding difficulties, brainstorm potential feeding difficulties that you might anticipate for your assigned condition. You can use the Feeding Difficulties Screening Checklist to systematically consider which aspects of feeding are impacted by the condition.

- Use the flipchart paper to write down some of the key feeding-related challenges you anticipate for the assigned condition.
- After 15 minutes, ask each group to share and invite others to contribute to the lists of anticipated challenges. *Note: You can do this like a round robin, with the flipcharts posted on the wall and have everyone move from one to the next like a gallery. Or a group representative can bring their flipchart to the front of the class to present.*
- Provide additional detail or expand on each condition if not shared by participants:

Cerebral palsy:

- Children with cerebral palsy are likely to have issues with their muscle tone. If the child has high tone, the stiffness of the muscles may impact how they move their tongue, jaw, and lips and the child may require support to achieve a stable and safe position for feeding.
- For infants, the high tone may impact sucking both for comfort and for feeding.
- During feeding, the child may bite down instead of sucking, sipping, or taking a bite.
- With high tone, it may be difficult for the child to open the mouth wide enough or may open it too wide, making it difficult to achieve and maintain a good latch in infancy or to accept a bite of food from a spoon during complementary feeding. Some children with cerebral palsy may be at higher risk for aspiration, as well.
- Infants and children with cerebral palsy may be more tired than expected after feeding due to the inefficient feeding, which may mean they consume less and/or take a very long time to feed.
- In addition, children with high tone tend to burn more calories and may need more food to meet their needs. Often, infants and children with high tone can be more likely to vomit after feeding, as well.

Down syndrome:

- Children with Down syndrome tend to have low muscle tone. Children with low tone may not be alert enough to feed as infants, and may get tired quickly or not have enough stamina to complete an entire meal.
- Some infants with lower tone may require support to achieve and maintain an ideal state for feeding. Low tone may impact the infant's success with non-feeding sucking, as well. A weak seal or uncoordinated sucking may be observed for some infants with low tone.
- Infants with low tone may require additional support for positioning in order to breastfeed or to maintain good attachment. Children with low tone may also require additional support for safe and upright positioning for feeding.
- Low tone is associated with reduced sensation in the body, too, which includes within the mouth and throat. This may make it difficult for the child to feel food or liquids in their mouth and impact their ability to swallow at the right time, which can increase the risk for aspiration. Many children with low tone may also overfill their mouth, taking bites that are too large and difficult to manage, which puts them at risk for choking.
- Children with low tone may be more tired than expected due to inefficient feeding and are more likely to vomit after feeding.
- Children with Down syndrome experience some degree of intellectual disability, which can lead to difficulty with learning to chew and developing skills for self-feeding.

Autism:

- Some children with autism experience sensory-related feeding difficulties. Some children with autism may experience oral motor feeding difficulties such as difficulties learning to bite or chew foods.
- A child with autism may gag, shudder, or vomit at the sight, smell, or taste of certain foods. Or a child may become emotionally upset when encouraged to interact with non-preferred foods. These sensory-related feeding difficulties can contribute to picky or selective eating or even feeding aversion where the child consumes a limited variety of foods or food textures.
- Extremely limited diets can impact the child's growth and nutritional status. Poor diet can also contribute to GI problems such as constipation, which can lead to discomfort, pain, and can further limit the amount of food a child is willing to eat.

Blind or partially sighted:

- The severity of this condition can range widely from one child to the next.
 - Infants who are blind or partially sighted are capable of successful breastfeeding. Some may need additional support or tactile cues when establishing breastfeeding. Mothers should be encouraged to exclusively breastfeed and build connection with their child who is blind or partially sighted.
 - Low or no vision may make it difficult for a child to locate food on a plate, to introduce or transition to new textures or types of food, or to build skills for self-feeding. During self-feeding, it can be difficult to regulate the size of a bite of food on a utensil, which could lead to bites that are too small or too large. Beyond just the potential frustration, bites that are too large can be difficult for young children to manage and may increase their risk of choking.
 - Some children who are blind or partially sighted may not experience feeding difficulties at all, especially with proper support and access to adaptive equipment.
- Conclude this section:
 - Check for questions and clarify.
 - Certain conditions and developmental disabilities can limit or interfere with an infant or child's ability to feed properly. A number of conditions can contribute to delays in skill development. Some may affect the structures or functions of the body. Others may limit or increase the child's risk for aspiration. Many of these factors may make it difficult for them to get an adequate amount of nutrition for healthy growth and development.
 - Conclude this module:
 - This brings us the end of this module. Remember that the first step of managing feeding difficulties is to identify them. Following a systematic approach and knowing common symptoms for various conditions and disabilities can help you in that process. In the next modules, we will discuss how we can intervene to address feeding difficulties in infants and children and support their caregivers.
 - Ask participants:
 - What is a new understanding you gained today that changed how you think about feeding infants and children and how might you apply this in your work or daily practice?



Check before proceeding.

These are the key messages for this module. Have these been explicitly addressed and learners appear to have a good understanding of them?



1. It is important to take a systematic approach to look at various aspects of feeding to identify feeding difficulties and provide the information needed to take the next steps to address them.
2. Some conditions may contribute to delays in skill development. Some may affect the structure or function of a child's body. Many of these factors may make it difficult for the child to safely and effectively feed and to get an adequate amount of nutrition for healthy growth and development.
3. Knowing common symptoms for specific conditions can equip you to anticipate some of the feeding difficulties that a child with that condition may face. When you know what to look for, you will be able to better support mothers and caregivers to recognize and address feeding difficulties early.