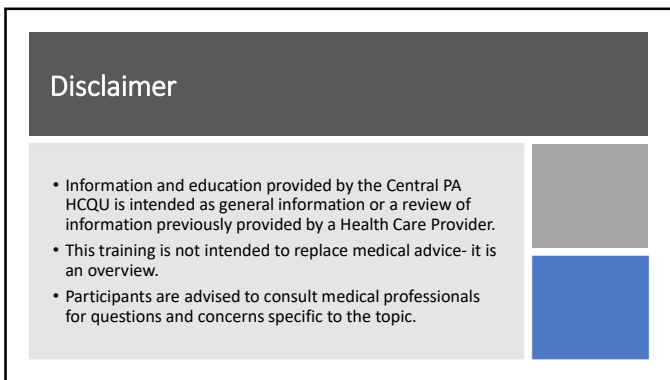
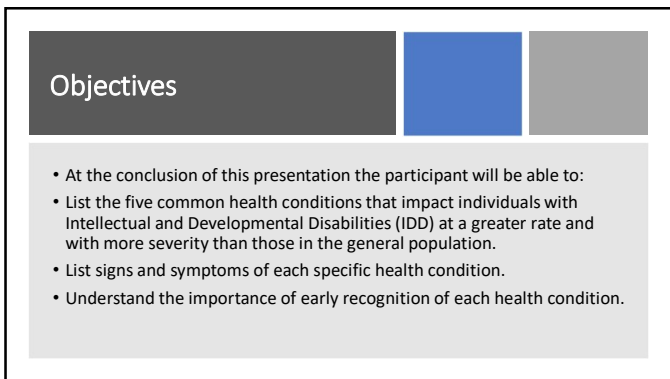


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3

Fatal Health Issues

- There are five top health issues that impact individuals with Intellectual and Developmental Disabilities (IDD) at a greater rate and with more severity than those in the general population.
- These health issues are linked to serious illness and **preventable** deaths in community-based settings.

4

The top FIVE fatal health issues are:



- Aspiration
- Dehydration
- Constipation
- Seizures
- Infection/Sepsis

5

Awareness and Education

These conditions often go unrecognized for several reasons, which calls for an increase need for awareness and education.

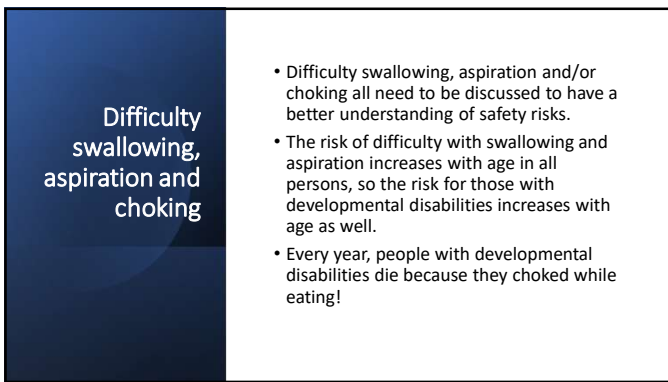
The following are reasons for the need to monitor each individual carefully:

- subtle symptoms
- communication challenges
- suddenness of the issue (Seizures)
- unpredictability

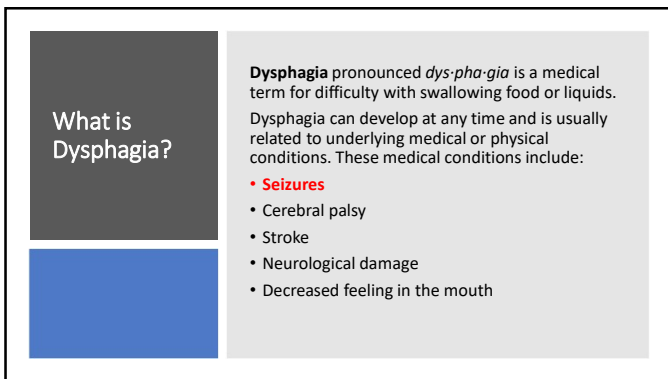
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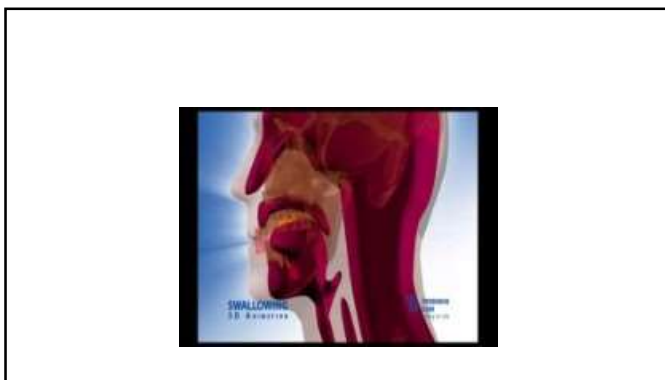
Dysphagia can cause both **choking** and **aspiration**, either of which can lead to injury, illness and death.

Normal
Oxygen (O₂)
Oxygen unable to reach blood stream

Pneumonia
Oxygen (O₂)
Fluid filling air spaces
blood stream

- This picture shows the closeness between the **esophagus**, which is the channel that carries food from the mouth to the stomach, and the **trachea** or windpipe leading to the lungs.
- This closeness of the esophagus and the trachea helps to explain why swallowing and choking issues are so serious and how it can happen.
- With aspiration, fluid gets in the lungs and pneumonia can develop.

10




11

Definitions and Complications	
Aspiration: When fluid, food, saliva or medication enters the lungs	Choking: When food or other items become lodged in the back of the throat.
Aspiration can lead to refusal to eat, weight loss, poor nutrition, wheezing, difficulty breathing, hypoxia, and/or pneumonia which can cause death.	Choking can lead to a blockage in the airway, <u>preventing oxygen</u> from entering the lungs and the blood stream.
	This can quickly lead to irreversible brain damage and death.

12

Signs and Symptoms	
ASPIRATION	CHOKING
<ul style="list-style-type: none"> Coughing or excessive drooling with eating or drinking Difficulty breathing or shortness of breath Wheezing Statement such as "food is getting stuck" Frequent throat clearing Eating too fast or packing the mouth 	<ul style="list-style-type: none"> Anxious or agitated state Reddened face Difficulty or noisy breathing Severe coughing or gagging Hands to throat Not able to talk Not able to breath Skin turning gray or blue Loss of consciousness <p>THIS IS AN EMERGENCY!</p>

13

Aspiration/Choking	
Causes	Risk Factors
 <ul style="list-style-type: none"> Difficulty swallowing -dysphagia Gastroesophageal reflux disease (GERD) Eating too rapidly Being fed too quickly Improper positioning Improper consistency or texture of food/liquids Constipation 	<ul style="list-style-type: none"> Dysphagia diagnosis Medical disorders, including neurological Low muscle tone Polypharmacy GERD, esophageal strictures, feeding tubes Decayed or missing teeth, ill-fitting dentures History of pneumonia Sedation (medications/illness)

14

Signs and symptoms of Dysphagia...
<p>There are many different signs and symptoms for dysphagia. Most of them can be observed during and after mealtime, and include:</p> <ul style="list-style-type: none"> Coughing before or after swallowing Trouble chewing and swallowing certain types of food or liquids Pocketing food inside the cheek Choking on certain foods Gagging during a meal Crying or face turning red during a meal

15

...Signs and symptoms of Dysphagia

- **Drooling** especially during meals
- **Throat clearing** frequently during and/or after a meal
- **Hoarse throat** during and after a meal
- **Refusal to eat** certain foods
- Unexplained **weight loss**
- Mealtime takes a very **long time** (defined as greater than 45 minutes and not due to cognitive ability)

(Consult with a health care provider if an individual has difficulty swallowing medications.)

16



Dysphagia and Mealtime

Carefully follow any special meal preparation and/or eating procedures!

Pay attention to:

- **Diet.** Carefully follow any special food preparation or eating procedure-never take shortcuts. Follow any special diet prescribed by the doctor or dietician.
- **Mealtime.** Encourage eating slowly and do not do other activities while eating. The person should be calm, alert, not tired or anxious when eating.
- **Position.** Help maintain proper eating position: Sitting upright with the help of supports if needed and NOT lying down for at least 30 minutes after a meal.
- **Observe the person during mealtime.** Encourage caregivers to follow the above recommendations. Make sure staff are trained in giving emergency first aid for choking.

17

What are the signs of individuals at risk for choking?

- Coughing or excessive drooling while eating
- Difficulty breathing or shortness of breath while or after eating
- Making statements such as "food is getting stuck" or "going down the wrong pipe."
- Frequent throat clearing while eating
- Eating too fast or packing one's mouth

18

Choking is a medical emergency

- Immediately begin First Aid for an individual who is conscious and choking, meaning the individual is alert and unable to cough, speak or breathe. If possible, have someone else call 911 at the same time.
- If the individual becomes unconscious, call 911 if this has not already been done, move him/her to the floor and begin First Aid/CPR care for an unconscious choking individual.
- **When calling 911, do not delay by seeking supervisory approval prior to calling 911.**

19

Prevention of aspiration and choking

- The initial treatment of choice is to **prevent** aspiration. Early identification of aspiration and choking are essential.
- Review and follow all treatment plans including level of supervision and assistance per orders
- Always follow the prescribed diet and **PREPARE FOOD AS INSTRUCTED**
- Avoid foods that were identified to increase risk
- Make sure dentures are securely in place and oral hygiene is complete per ISP

20

DEHYDRATION

21

Dehydration

Dehydration occurs when there is a loss of water in the body and an alteration in electrolyte levels (sodium, potassium, calcium, chloride and magnesium)

Complications can be serious and include

- **Constipation**
- Heat injury
- Acute kidney injury/kidney failure
- **Seizure** from abnormal electrolyte levels/cerebral edema
- Loss of consciousness/coma
- Loss of blood volume or shock which can lead to death

Dehydration should not be taken lightly.

22

Head to toe consequences of dehydration

Brain
Even 4 hours without water can lead to a drop in energy, mood, and cognitive function.

Heart
Dehydration reduces the amount of blood in your body, raising heart rate and blood pressure.

Kidneys
Without enough water, wastes and acids build up in the body leading to kidney stones and other blood infections. Mild but frequent dehydration can even cause permanent kidney damage.

Feet
Salt and fluid retention often accompanies dehydration which can lead to swelling of the feet, legs, arms, and hands.

Body Temperature
Dehydration limits your body's ability to regulate temperature and can cause hyperthermia, heat exhaustion and heat strokes.

A 360° Look at the Consequences of Dehydration
From head to toe, inside and out, dehydration can affect your body's systems.

23

Common risk factors...

Caregivers should recognize common factors that place a person with IDD more at risk of dehydration. Keep in mind the following vulnerable situations:

- A person who may **not be able to express** that they are thirsty or overheated
- A person who is **unable to access fluids** without assistance
- A person with **dysphagia with coughing** and **choking** during meals

24

...Common risk factors

- A person who **drools** (loses fluids that need to be replaced)
- A person who frequently **refuses foods and fluids**
- A person with **any type of stoma** (*opening in your belly's wall that a surgeon makes*) such as a colostomy
- Vomiting
- PEG Tube

*Restricting fluids to prevent incontinence has consequences. Restricting fluids can contribute to **constipation**, increased **seizure** frequency, drug toxicity and other health problems.

25

Common signs and symptoms of mild /moderate dehydration

- Dry mouth and tongue with thick saliva
- Dry eyes
- Increased thirst
- Dark concentrated urine
- Decreased urine volume
- Muscle weakness
- Headache
- Dizziness


26

Common signs and symptoms of severe dehydration

- Extreme thirst
- Confusion
- Lethargy
- Sunken eyes
- No sweating
- Low blood pressure
- Coma

27


Thirst as a sign




- Increased thirst** is the obvious sign of possible dehydration. When you crave water or other fluids, your body is sending a message that it needs more fluids.
- Yet, people with ID **may not be able to express thirst**, especially if they have mobility or other physical limitations.
- Some individuals may have an **impaired response to thirst** and not recognize when they are thirsty.

28

Urine color chart






*This color chart is not for medical use.

29

Assess skin elasticity

- One test for dehydration is to assess skin elasticity. **Skin elasticity** is the skin's ability to stretch and then go back to normal once the need to stretch is gone. Lightly pinch the skin on the back of the hand. If the skin is slow going back into place, this may indicate dehydration.
- Mild to moderate dehydration can be corrected by drinking more water alone, but if severe dehydration develops, it can be a medical emergency!



Pinched skin goes down slowly.

30

Tips to prevent dehydration

- Drink plenty of fluids
- Increase fruits and vegetables
- Remember to increase fluid intake with:-
 - presence of vomiting or diarrhea
 - strenuous exercise
 - heat exposure
 - fever is present
 - illness or on certain medications
 - the individual is very active, works hard or sweats heavily
- Do not ignore your thirst
- Avoid caffeine and alcohol

31

Constipation

32

What is constipation?

The body gets rid of waste through bowel movements (stool). The bowel movements should be soft, formed and it should not hurt or cause bleeding. Normal frequency of bowel movements varies from person to person

Constipation:
Infrequent, hard, or hard to pass stool
Infrequent is often defined as *fewer than three bowel movements a week*

33

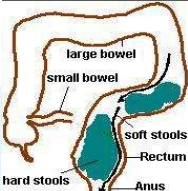
Constipation

The primary cause of "everything"

- Fever
- Anorexia
- Vomiting
- **Seizures**
- Medication intoxication
- Decreased Level of Consciousness
- Pneumonia
- Behavioral outbursts
- Death

34

Symptoms of constipation



- Hard and dry stool
- Hard, protruding abdomen
- Bloating and complaints of stomach pain
- Vomiting digested food that smells like feces
- Decreased or loss of appetite
- Change in behavior (irritable, aggressive behaviors, a new reluctance to walk)
- Fever
- Stool that is small, hard, and difficult to pass
- Pain, discomfort or blood with bowel movement
- Liquid stool moves around the partial obstruction

35

Risk factors of constipation

- Cerebral Palsy
- Cystic Fibrosis
- Muscular dystrophy
- Spinal cord injury
- Neurological damage
- Down syndrome
- Illness or injury
- Poor diet
- Polypharmacy

Causes of Constipation

- Poor or irregular bowel habits.
- Not enough fluid/fiber intake
- No regular exercise (wheelchair use or limited mobility)
- Medical conditions affecting muscle movements, and general weakness
- Prescribed and over-the-counter medications
- Drug toxicity
- Changes in toileting routines
- Ingestion of non-food items (Pica)
- Previous history of constipation








36

Complications of constipation

- Discomfort/pain
- Behavioral difficulties or change in behavior.
- Bowel problems from straining and passing hard stool (hemorrhoids, tear in bowel wall, bowel lining pushed outside, twisting of the bowel).
- Fecal impaction/ bowel obstruction-Loss of blood flow to the intestine, bowel perforation, **severe infection**, and death.


37

BRISTOL STOOL CHART

	Type 1 Separate hard lumps	Very constipated
	Type 2 Lumpy and sausage like	Slightly constipated
	Type 3 A sausage shape with cracks in the surface	Normal
	Type 4 Like a smooth, soft sausage or snake	Normal
	Type 5 Soft blobs with clear-cut edges	Lacking fibre
	Type 6 Mushy consistency with ragged edges	Inflammation
	Type 7 Liquid consistency with no solid pieces	Inflammation

38

Bowel movement record



BOWEL MOVEMENT RECORD

Name: _____ Date Commenced: _____

Date	Time	Comments (e.g. volume, blood, mucus, or change in colour, or change)	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	Type 7	Stool issues

Adapted from the Bristol Stool Scale developed by Hill and Lewis at the University of Bristol, 2007

39

Treatment/Prevention of Constipation

TREATMENT	PREVENTION
<ul style="list-style-type: none">Juice (apple/prune)SuppositoriesLaxativesStool softenersEnemaDisimpaction (removing stool)Nasogastric tube	<ul style="list-style-type: none">Track bowel movementsAdequate fluid intakeAdequate fiber intakeRegular exerciseProbiotic agentsBulking agentsLaxatives


40

SEIZURES

41

What is a seizure?

- A **seizure** is a sudden abnormal burst of electrical activity arising within the brain.
- A seizure disorder (**epilepsy**) is a disorder of the brain that is characterized by recurring seizures.



42

Common seizure symptoms

The symptoms of a seizure will depend on which area of the brain is affected.

- Unresponsive or staring
- Fluttering of eyes or rolling eyes up or in a specific direction
- Lip smacking
- Muscle spasms-on one side or full body
- Loss of bladder or bowel
- Numbness or tingling in extremities
- Hearing or smelling things that are not there

43

Causes of Seizures

- Missing doses of anti-seizure medication
- **Dehydration**
- **High fever**
- Too high or low blood sugar
- Sensory stimuli (strobe lights, video games)
- Polypharmacy
- **Constipation**
- Shunt Issues
- Stress

44

Risk factors for seizures


- Neurological disorders
- Cerebral palsy
- Down syndrome
- Traumatic brain injury
- Stroke
- Tuberous sclerosis
- Autism
- **Infections**
- Drugs or toxins
- Brain tumors
- Diabetes
- Menses
- Age

45

Complications of seizures

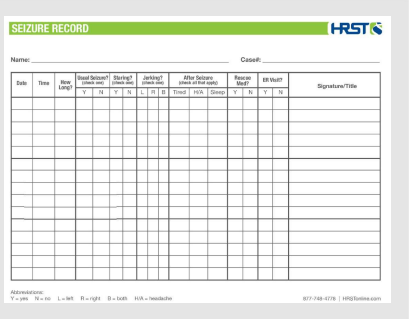
Seizures can cause complications that may have serious, long-term health repercussions. They may include:

- SUDEP (*Sudden Unexpected Death in Epilepsy*)
- Falls with injury
- **Aspiration** and/or aspiration pneumonia
- Automobile accidents
- Scalding (if seizure occurs during cooking)
- Tongue, lip or cheek injuries related to biting
- Status epilepticus
- Other traumatic injuries



46

Accurate seizure record VERY helpful in management



47

First Aid for seizures

Stay with the person, and call 911 ASAP if any of these apply:

- The seizure lasts longer than 5 minutes.
- If not breathing or having difficulty breathing after seizure.
- If the person does not regain consciousness after seizure.
- They experience repeat seizures.
- The person is pregnant, injured or has diabetes.
- The seizure occurs in someone who has never had a seizure.

48

First Aid for Seizures

(Convulsive, generalized tonic-clonic, grand mal)

DO NOT PUT ANYTHING IN MOUTH
LOOK FOR MEDICAL ALERT IDENTIFICATION
TIME THE SEIZURE WITH A WATCH
DO NOT HOLD DOWN
AS SEIZURE ENDS, OFFER HELP
CUSHION HEAD, REMOVE GLASSES
LOOSEN TIGHT CLOTHING
TURN ON SIDE
Clear the area around a person who is having a seizure to prevent possible injury.
Place the individual on their side and provide cushioning for their head.
Do not restrain the person or put anything in their mouth.
Follow your seizure protocol for your agency or individual specific protocol.

49

Observing and documenting seizures

It is important that all seizures are documented. Documentation includes: Seizure activity, duration and individual's response.

SEIZURES

- Marking Seizure Activity
- Timing
- Marking Seizure Signs
- Marking Seizure Response
- Marking Seizure Duration
- Marking Seizure Location
- Marking Seizure Characteristics
- Marking Seizure Triggers
- Marking Seizure Recovery

50

Treatment of seizures

Treatments for seizures depend on the cause. By treating the cause of the seizures, you may be able to prevent future seizures from occurring. With regular treatment, you can reduce or stop seizure symptoms.

The treatment for seizures due to epilepsy includes:

- anti-seizure medications
- surgery to correct brain abnormalities
- nerve stimulation
- a special diet, known as a ketogenic diet

51

Management of seizures

Most seizure disorders cannot be prevented, effective management is key.

- Compliance with medication and monitoring
- Avoid known **seizure** triggers
- Avoidance of **constipation**
- Avoidance of **dehydration**
- Early treatment of **infection** and fevers
- Reduce possible complications (do not drive or swim alone)
- Refrain from use of recreational drugs

52

Actions to reduce the risk to individuals

Review current and/or develop policies and procedures that:

- Address measures to identify individuals at risk
- Establish precautions to minimize or eliminate the causes
- Ensure appropriate documentation and accuracy of records
- Establish processes for emergency response and calling 911

53

INFECTION/SEPSIS


54

What is Infection?

- The invasion and growth of germs in the body. The germs may be bacteria, viruses, yeast, fungi, or other microorganisms. **Infections** can begin anywhere in the body and may spread all through it.
- Can also be atypical infections: trauma burns, heatstroke, myocardial infarction (MI), inflammatory processes (pancreatitis, appendicitis, etc.)

55

What is sepsis?



Sepsis is always a medical emergency.

To put it simply, sepsis is a term used to describe a serious illness characterized by a bacterial **infection** in the bloodstream.

Also known as blood poisoning.

Occurs when many infectious agents invade the bloodstream leading to bacteremia.

Sepsis is the body's overwhelming **immune response** to infection, which can lead to tissue damage, organ failure, amputations, and death.

56

What causes sepsis?

- Sepsis does not arise on its own. It generally comes from an **infection** in the lungs, urinary tract, skin, abdomen (such as appendicitis) or other part of the body.
- Invasive medical procedures like the insertion of a vascular catheter can introduce bacteria into the bloodstream and bring on the condition.

57

Who is at risk for sepsis?

- Anyone can get sepsis as a complication from an infection.
- Sepsis is more likely to affect very young children, older adults, people with chronic diseases (diabetes), and those with a weakened immune system.
- The risk is higher for individuals suffering from severe burns or wounds (*including pressure injuries*), being treated in an intensive care unit or exposed to invasive devices such as IV catheters or breathing tubes.

58

Signs and symptoms of Sepsis

A silent killer.
Early symptoms of **sepsis** should not be ignored. These include:





- A fever above 101 degrees F or a low body temperature below 96.8 degrees F – shivering, feeling very cold
- Fast heart rate higher than 90 beats per minute
- Rapid breathing, or more than 20 breaths per minute
- Probable or confirmed **infection**.

If you suspect sepsis, call 911 or go to a hospital right away.

Early recognition is important.

59

When it comes to Sepsis, remember it's about **TIME!**

	<p>Temperature higher or lower than normal</p>
	<p>Infection may have signs and symptoms of an infection</p>
	<p>Mental decline confused, sleepy, difficult to rouse</p>
	<p>Extremely ill "I feel like I might die," severe pain or discomfort</p>

If you suspect sepsis, call 911 or go to a hospital right away.

60


According to HRS:

Sepsis is a medical emergency.

“The difference in people with IDD is that your index of suspicion may need to be a little higher. Most of the time, when a person is "just not acting right," it is going to be something like **constipation**, **pneumonia**, sedation from medications, **seizures** and things along those lines, but keep your index of suspicion high for sepsis!”

61

Treatment of sepsis



- People with sepsis are usually treated with aggressive hospital care.
- Doctors focus on treating the **infection**, keeping the vital organs working, and preventing a drop in blood pressure.
- The first step is often treatment with broad-spectrum antibiotics, medicines that kill many types of bacteria. Doctors select medicine that specifically increase blood pressure, stabilize blood sugar, manage pain and reduce inflammation.

62

Infection Prevention

Reduce the risk of sepsis by preventing infections:

- Clean environment
- Practice good hygiene and good handwashing
- Good dental hygiene
- Stay current with vaccinations
- Avoid others with colds/flu
- Clean scrapes and wounds
- Routine catheter/line changes
- Proper positioning (**aspiration** risk, GT feeding, **pressure injuries**)
- Supervised feedings/enteral feedings
- Toileting routine/ control **constipation**

63

REMEMBER

For each hour that passes without treatment, there's about a 10 percent increase in the risk of death. The saying goes "**when in doubt, send them out.**" It may just save their life.

64

Awareness, advocacy and education

Thank you for all that you do and stay safe out there.

- Remember, Aspiration, Dehydration, Bowel Obstruction, Seizures and Infection/Sepsis are health issues linked to serious illness and **PREVENTABLE** deaths. Early recognition and prevention are critical.
- Although a lot of information, this training was meant to be an abbreviated basic overview of each condition to promote awareness.
- Contact the HCQU for more in-depth training on each specific health issue

65

Resources

- www.healthline.com
- <https://hrstonline.com>
- www.webmd.com
- www.medicinenet.com
- www.mayoclinic.com
- www.cdc.com
- www.sepsis.com
- www.medlineplus.gov
- www.nationaladvocacycampaign.org
- www.asha.org

66
