



The Fatal Four

Presented by:

KEPRO SW PA Health Care Quality Unit
(KEPRO HCQU)

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Disclaimer

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Certificates for training hours will only be awarded to those attending the training in its entirety. Attendees are responsible for submitting paperwork to their respective agencies.

Objectives



- Identify reasons why people with I/DD are at risk for the Fatal Four
- Describe strategies to prevent the Fatal Four from occurring
- Discuss the reasons the risk of the Fatal Four increase as people with I/DD age

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The Fatal Four



- **CHOKING / ASPIRATION**
- **CONSTIPATION**
- **DEHYDRATION**
- **SEIZURES**

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The Elderly Population

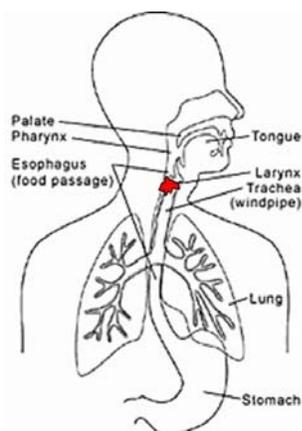


- People with I/DD are living longer, more healthier than ever (Tinglin, 2013)
- May be diagnosed with chronic health conditions at an earlier age (Tinglin, 2013)
- Caregivers know people with I/DD best
 - Know a person's baseline behavior
 - Observe for changes in behavior, health, welfare
 - Look for changes in ability to provide self-care
 - Realize that seizures are more likely to occur as person ages (CDC, 2018)



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Choking and Aspiration



- Dysphagia – difficulty or discomfort when swallowing (Mayo Clinic, 2018)
- Trouble chewing
 - Choking
 - Aspirating

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Who is at Risk for Choking?



- Disorders of the brain and nervous system
- Low muscle tone causing difficulty in swallowing
- Gastroesophageal reflux disease (GERD)
- Decayed or missing teeth
- Ill-fitting dentures / choosing not to wear dentures
- Medication side effects
- Poor eating habits
- Feeding tubes
- Tracheostomies

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Signs of Difficulty Swallowing



- Coughing or excessive drooling while eating
- Frequent throat clearing while eating
- Hitting the chest
- Shortness of breath, noisy breathing while eating
- States “food is stuck” or “went down the wrong pipe”
- Complaint of pain while swallowing
- Decrease in appetite and weight loss



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Signs of Choking



- Red face
- Anxious or agitated
- Difficult, noisy breathing
- Severe choking or gagging
- Putting hands on throat
- Unable to speak or breathe
- Facial color change to gray or blue
- Loss of consciousness



A single choking event may be a warning sign for future choking events. Choking may lead to aspiration, infection, and possibly death.

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Emergency Action



- Immediately begin First Aid for an individual who is conscious and choking, meaning individual is alert and unable to cough, speak or breathe
 - If possible, have someone else call 911 at the same time
- If the individual has choked and is now unconscious, call 911 and begin First Aid/CPR care.
- **Do not delay by seeking supervisory approval prior to calling 911**
- Contact person's healthcare provider after any episode of choking (Cherpes, 2018)

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Be Proactive



- Not all people with I/DD have been identified as having trouble chewing and swallowing
- Be proactive by recognizing who is at risk for choking
- When person has difficulty swallowing, inform other caregivers and notify physician
- Immediately make a plan to decrease the risk of choking

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Choking and the Elderly



- Muscles tend to lose strength and coordination over time which may interfere with proper chewing and swallowing
- Teeth often become weak or are absent
- Dentures may no longer fit properly
- Mouth and throat become less moist

Be especially observant with people who are aging, who may not be able to communicate a swallowing problem to caregivers.

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Strategies to Prevent Choking



Strategies to Prevent the Fatal Four: Choking and Aspiration

Be proactive and provide ACTIVE OBSERVATION during meals and snacks, especially for this vulnerable population.



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Constipation



- Defined as having fewer than 3 bowel movements a week (Mayo Clinic, 2018)
- May be different from person to person
- It is important to understand person's normal bowel habits
- Know agency's definition of constipation and policies for treatment

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Who is at Risk for Constipation?



- Lack fiber in diet
- Not drinking enough fluids
- Lack of exercise
- Side effect of medications
- Medical conditions: diabetes, stroke, spinal cord injuries



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Increased Risk for People with I/DD



- Low muscle tone
- Taking many medications with the side effect of constipation
- Inability to chew fibrous food
- Not enough time to use toilet, which may decrease urge to go
- Bathroom routine is not established
- Change in routine
- Inability to walk to the bathroom quickly
- Cannot sit comfortably on the toilet due to pain or discomfort

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Signs / Symptoms of Constipation



- Decrease in number of stools, small, hard stools, straining, possible rectal bleeding
- Lack of appetite, refusing meals
- Crying, grimacing, grunting on toilet
- Rectal digging
- Avoids using the bathroom due to pain
- Hard protruding abdomen, hitting abdomen
- Refusing to participate in activities
- Constant trips to the bathroom
- Staying in the bathroom for extended period



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Complications from Constipation



If these symptoms are noticed, have the person evaluated by a healthcare provider immediately.

- Seeping watery stool following several days with no BM
- Lack of energy
- Vomiting which may smell like feces
- Severe abdominal pain
- Possible back pain
- Sweating, rapid pulse, low blood pressure, if untreated may result in shock

Severe impaction can occur, causing a tear in the intestinal wall and seeping stool into the abdomen which will then enter the bloodstream and cause an infection in the blood.

This can be life-threatening!

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Constipation and the Elderly



- Diabetic neuropathy
- Dementia
- Parkinson's disease
- Irritable bowel syndrome
- Hemorrhoids
- Medications



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Strategies to Prevent Constipation



Strategies to Prevent the Fatal Four: Constipation

Many people with I/DD are at risk for constipation and whether or not identified as being at risk, be proactive and employ the preventative strategies for everyone to prevent pain and possible death.



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Dehydration



- Loss of fluids (water) in the body is greater than amount taken in
- Body does not have enough water it needs
- Body cannot function properly (Mayo Clinic, 2014)

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Who is at Risk for Dehydration?



- Diarrhea / vomiting
- Sweating excessively
- Fever
- Large burns
- Medications that increase urination
- Diabetes undiagnosed or uncontrolled



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Increased Risk for People with I/DD



- People dependent on caregivers to provide food and fluids at meals and snacks
- People using wheelchairs who rely on caregivers to obtain fluids for them
- People who cannot communicate verbally or are difficult to understand may be unable to communicate thirst
- Common medications may lead to dehydration:
 - Seizure medications
 - Blood pressure medications that cause person to urinate
 - Psychotropic medications
 - Medications that require fluids to be monitored

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Signs / Symptoms of Dehydration



- Dry mouth
- Headache
- Dizziness
- Lethargy, difficult to arouse
- Muscle weakness
- Decreased urination
- Dark concentrated urine



Severe dehydration symptoms may be a medical emergency

- Low blood pressure, rapid pulse, not sweating

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Dehydration and the Elderly



- Several chronic medical conditions
- Taking many medications
- May be in frail condition
- Changes in body
 - Total body water percentage has decreased
 - A reduced sense of thirst may no longer be a reliable indication of the body's need for water
 - Decreased kidney function interferes with body's ability to retain water and sodium

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Strategies to Prevent Dehydration



Strategies to Prevent the Fatal Four: Dehydration

***Dehydration can lead to serious medical complications,
including death.***

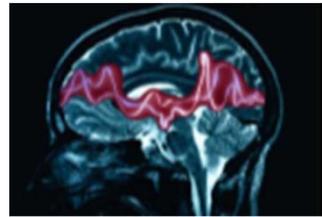


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Seizures



- Abnormal electrical activity in brain
- “Epilepsy is more common in people with intellectual disabilities than in the general population” (Robertson et al, 2015)



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Signs / Symptoms of Seizure Activity



- Staring, rapid eye blinking, unresponsive
- Shaking, rigid, jerking extremities
- Twitching of face/extremities, lip smacking
- Body stiffening
- Change in breathing pattern
- Sudden aggressive behavior
- Odd repetitive behavior
- Incontinent of bladder or bowel

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Common Triggers



- Late or missed seizure medication
- High or low blood sugar
- Dehydration
- High fever
- Severe constipation
- Fluctuating hormones around woman's menstrual cycle
- Inadequate sleep
- Stress
- Auditory triggers (sounds)
- Photosensitivity (bright, flashing lights)



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Triggers for Seizure Activity?



- Where did the seizure occur?
- What was the person doing before seizure?
- Was the person sick?
- Do the seizures occur at certain times of the day or month?
- Is the person not sleeping well?
- Was the person stressed?

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Researching Reason for Seizures



- Bowel movement record to identify if person is constipated
- Fluid record to ensure person is hydrated
- Food record to help keep blood sugars stable
- Menstrual record to identify if seizures occur near woman's menstrual period
- Sleep record to explore if lack of sleep is trigger

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Emergency Care



- Person's first seizure
- Not breathing
- Lasts over 5 minutes
- Seizures continue one after another
- Head injury or other bodily injury occurred during seizure
- Person has heart disease, diabetes, or is pregnant
- Occurs in water (CDC, 2018)



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Recording Seizure Activity



- Documenting specific characteristics important for physician to identify type of seizure
- Detailed seizure record to document seizure activity



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Seizures and the Elderly



- Strokes
- Head injuries
- Brain / nervous systems disorders, such as Alzheimer's disease
- Brain tumors



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Strategies to Support People with Seizure Disorder



Strategies to Prevent the Fatal Four: Seizures

Seizures may be life threatening if the person stops breathing, has an irregular heartbeat during a seizure, or falls and sustains severe injury.



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Increasing the Lifespan



Episodes of choking, constipation, dehydration, and seizures are causing early, unexpected deaths in people with I/DD.

Fortunately, all of these episodes can be prevented.

By following the strategies outlined in this training, caregivers can assist people to be safe, healthy, and happy.



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Related Training Topics



- Bowel Management
- Dysphagia
- Nutrition
- Seizure Overview

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health topic, please visit

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Test and Evaluation



Please take a few moments to complete the test and evaluation forms for this training.

Thank you!

STRATEGIES TO PREVENT THE FATAL FOUR

CHOKING AND ASPIRATION

- Offer 30 minute rest periods before eating which fosters a calmer mood during meals
- Turn off the TV during meals to allow the person to focus on chewing and swallowing
- Encourage the person to sit at an upright 90-degree angle unless otherwise recommended, including those eating meals in bed
- Remember to use the person's adaptive utensils during meals and snacks
- Ensure dentures are in place and fit properly
- Encourage small bites of food; consider using a smaller size fork or spoon for a person who places a large amount of food in mouth
- Encourage sips of fluids in between bites of food
- Reminders to eat at a slower pace
- Give plenty of time to finish meals so the person does not feel rushed
- Encourage the person to swallow food before speaking
- Report signs of difficulty swallowing to the healthcare provider

Check orders before serving foods and fluids for a specific consistency and *never* leave the person alone with food or fluids that are of a different consistency.

ACTIVE OBSERVATION: During all meals and snacks look at the person's face, watch the person chew and swallow to identify signs of difficulty swallowing.

***ONE SINGLE CHOKING EVENT MAY BE A WARNING SIGN FOR FUTURE CHOKING EVENTS.
CHOKING MAY LEAD TO ASPIRATION, INFECTION, AND POSSIBLY DEATH.***

When feeding a person:

- Sit down and face the person; do not stand to feed meals
- Offer small bites of food and sips of fluids during meals
- It is nice to make conversation during meals but, ask the person questions after food is swallowed
- Place food in the person's mouth according to the type of chewing/swallowing problem. (For example, if the person has right sided weakness, place the food in the left side of the mouth.) If the person has a particular feeding plan, be sure to understand and follow it.

Tube feedings:

- Keep the person in an upright position of 30-45 degrees during and one hour after feeding to prevent feeding from flowing back up into the lungs.

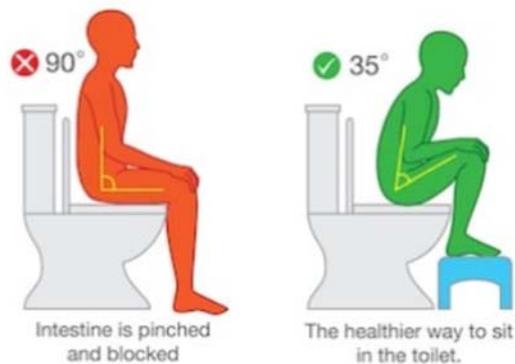
Source:

American Gastroenterological Association. (n.d.). Retrieved 2018 from <http://www3.us.elsevierhealth.com/gastro/policy/v108n4p1280.html>

KEPRO HCQU. (2017, November). Dysphagia Presentation. Retrieved 2018 from <https://hcqu-training.kepro.com/content/overview/Bowel%20Management%2011.17.pdf>

CONSTIPATION

- Provide and encourage fluids throughout the day especially to those who cannot obtain fluids on their own
- If unsure of the amount of fluids taken, document fluids on a daily record to review
- Increase dietary fiber, while increasing fluids as well
 - The Top Ten Sources for Fiber article can be found on the WebMD website at <https://www.webmd.com/diet/features/top-10-sources-of-fiber>
- If person is on a fluid restriction or low fiber diet a dietician can offer suggestions for meals and snacks
- Encourage physical activity most days of the week
- Offer the opportunity for toileting on a routine basis, with privacy, and allowing plenty of time
- To aid in facilitating a bowel movement provide a small stool to prop the person's feet and elevate the knees to help relax muscles as noted in the picture below



- Use a BM record that records the size and consistency of each BM
 - The Bristol Stool Chart identifies normal vs. abnormal stools.
- Document each BM ASAP; do not wait until the end of the shift, it may be forgotten
- Orders for PRN medications for constipation should include how many days without a BM before the medication can be given, what action to take if the medication is not effective, and when to notify the physician.
- Check the BM record daily to determine if a PRN medication is needed
- Document the effectiveness of the PRN medication

Source:

Cateora, D. (n.d.). Self-study program -0723C: Constipation. Retrieved August 8, 2018, from <https://www.oregon.gov/DHS/SENIORS-DISABILITIES/PROVIDERS-PARTNERS/Documents/0723C-Constipation-Modified.pdf>

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DEHYDRATION

Be proactive to prevent dehydration!

- Give each person a water bottle when out in the community, especially in the sun.
- Remind the person to drink fluids between meals, throughout the day.
- Educate the person with I/DD to their ability of understanding about the importance of drinking enough fluids every day.
- Unless specified by the person's physician, the 8x8 rule is suggested-eight 8oz glasses per day.
- Water is best, but for those who do not like water, flavored no calorie water can be offered.
- Discourage soda due to the sugar content and possible caffeine.
- Avoid caffeinated beverages such as coffee and tea.
- Increase fruits and vegetables with a high water content.
 - Cucumbers, iceberg lettuce, celery, tomatoes, green pepper, cauliflower, spinach
 - Watermelon, strawberries, grapefruit, cantaloupe, oranges
- Offer creative types of fluids such as Jell-O, Popsicles, soup.
- Offer fluids more often when outside in the sun and before, during, and after exercise.
- Increase fluids with fever, diarrhea, and vomiting, when tolerated.
- Contact the physician when ill to inquire about increasing the amount of fluids.
- Offer fluids throughout the day to people who cannot feed themselves, those who cannot access fluids independently, and those who cannot ask for drinks.
- If uncertain how much the person drinks, use a fluid record to record the amounts and types of fluids taken each day.



One of the best ways to prevent dehydration is to be a role model and drink fluids throughout your shift!

Source:

American Gastroenterological Association. (1994). American Gastroenterological Association Medical Position Statement: Guidelines for the Use of Enteral Nutrition. Retrieved October 2, 2018, from <http://www3.us.elsevierhealth.com/gastro/policy/v108n4p1280.html>

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SEIZURES

Always stay with the person throughout the seizure and keep the person safe by:

- Helping the person lie down on the floor or bed if necessary.
- Loosen clothing around the neck and remove glasses.
- Place person on their side to allow saliva to drain, also prevents aspiration if the person vomits.
- Do not put anything in the person's mouth; the tongue cannot be swallowed.
- Do not restrain the person; the seizure cannot be stopped.
- Provide padding under the person's head to prevent a head injury.
- Only move the person if the area is unsafe.
- Check for breathing throughout the seizure activity.

After the seizure, the person may be very groggy. Allow the person to rest or sleep as needed and check frequently. Do not administer medication, feed the person or provide fluids until fully awake. Document seizure activity when the person is stable; do not wait until the end of the shift to avoid forgetting important details.

Other ways to prevent seizures and keep the person safe are:

- Speak to the neurologist for specific orders on what action to take if seizure medications are not given or administered late.
- Encourage nutritious meals and support a healthy lifestyle, including getting enough sleep (avoid caffeinated products after 4pm).
- Provide opportunity to be active, choose activities wisely, avoiding activities where a change in awareness would be dangerous (high places).
- Consider safety precautions necessary for activities with specific risks (mowing lawn, cooking).
- Monitor the person during showers and baths by standing close by, outside the bathroom (follow agency's policies).
- Encourage the person to take a shower instead of a bath and consider using a shower chair.
- Help the person to manage stress.
- Use plastic dishes/cups instead of glass; use cups with lids for hot drinks to prevent possible burns.
- If the person has known triggers for seizures, such as bright, flashing lights, avoid these items.
- Some females have an increase in seizure activity during the menstrual cycle; be more vigilant for seizures at this time.
- If the person has a vagus nerve stimulator (VNS), be aware of how it works and how to use the magnet.

Sources:

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THE FATAL FOUR: PREVENTION

BRISTOL STOOL CHART

	Type 1	Separate hard lumps	SEVERE CONSTIPATION
	Type 2	Lumpy and sausage like	MILD CONSTIPATION
	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	MILD DIARRHEA
	Type 7	Liquid consistency with no solid pieces	SEVERE DIARRHEA

By Cabot Health, Bristol Stool Chart (<http://cdn.intechopen.com/pdfs-wm/46082.pdf>) [[CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0)], [via Wikimedia Commons](https://commons.wikimedia.org/wiki/File:BristolStoolChart.png)

Instructions: . Use 1-column for each event.

. Check off all behaviors that apply.

Name: _____

During Seizure	Date/Time						
Awareness							
Fully Aware							
Confused							
Responds to Voice							
Responds to Light Touch							
Not Responsive							
Facial Expressions							
Staring							
Twitching							
Eyes Rolling							
Eyes Blinking							
Head Movements							
Sudden Head Drop							
Turns to 1-Side							
Turns Side to Side							
Body Stiffens							
Whole Body							
Legs							
Arms							
Jerking Movements							
Whole Body							
Legs							
Arms							
Automatic Movements							
Hands clapping, rubbing							
Lip Smacking, Chewing							
Walking, Wandering							
Running							
Speech							
Able to Talk Normally							
Unable to Talk							
Incoherent/Nonsense Words							
Mixing Up Words							
Falls							
Yes/No							
Injury							
Yes/No							
Type of Injury							
Incontinent							
Yes/No							
After Seizure							
Fully Aware							
Responds Normally							
Confused							
Tired							
Asleep							
Agitated, Irritable							
Length of Seizure							
Before Return to Baseline							
Interventions							
VNS Magnet							
Medicine Given							
Triggers							
Name of Observer							