The Fatal Four

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Fatal Four

- Constipation (Bowel Disorders)
- Aspiration (Dysphagia)
- Dehydration
- Seizure Disorder
Constipation

Occasional– episode of constipation which resolves easily from time to time. Everyone has occasional constipation.

Chronic– requiring treatment with medications to control symptoms and maintain regular bowel movements.

Disorders of the Bowel

- Constipation
  - Occasional– episode of constipation which resolves easily from time to time. Everyone has occasional constipation.
  - Chronic– requiring treatment with medications to control symptoms and maintain regular bowel movements.
- Bowel Obstruction
  - Small Bowel Obstruction
  - Large Bowel Obstruction
Anatomy of the Bowel

- Small intestine
  - (also called the small bowel)

- Large intestine
  - (also called the large bowel, or colon)

Constipation

- Constipation is defined as having a bowel movement fewer than three times per week.
- Stools are usually hard, dry, small in size, and difficult to eliminate.
- Normal bowel function can range from three times a day or three times a week, depending on the person.
Individuals at Risk

- Developmental disabilities
  - Less active, poor dietary fiber, less fluid intake
- Neuromuscular disorders
  - Abnormal nerve and muscle response or coordination in the bowel
- Cerebral palsy
  - Poor nerve responses within the bowel causing motility problems
- Medication side effects
  - Slowing of the transit time or alteration of bowel consistency or fluid content

Constipation—Signs and Symptoms

- Spending a lot of time on the toilet
- Straining and grunting while passing stool
- Hard, small, dry feces
- Bloating and complaints of stomach discomfort
- Engages in rectal digging
Treatments for Constipation

- Conservative and/or preventive measures
  - Increase fluid intake if able
  - Increase fiber intake
  - Increase physical activity

- Laxative medications
  - Stimulants (such as senna, docusate)
    - These help stimulate the intestine to move food and fluid through.
  - Stool softeners (colace)
    - Increase the liquid content of the stool to make it easier to pass
  - Lubricant laxatives (mineral oil)
  - Osmotic agents (such as Milk of Magnesia, Miralax)
    - These act like a sponge, drawing fluid into the bowel to help with elimination.
Treatments for Constipation

- Rectally administered treatments
- Should not be used regularly but as needed for severe constipation. If using too frequently, re-evaluate the current regular treatment regimen
  - Glycerin suppository
  - Bisacoydal suppository
  - Enemas
    - Mineral oil, Fleet’s, soap suds, etc.

Bowel Tracking

- Agencies should have a bowel tracking system for all individuals who receive bowel related treatments so that agency staff and nurses can recognize when problems are arising.
  - Bowel tracking system should include day/time of bowel movement, quantity of stool, and character of the stool.
Every individual should have an area that addresses bowel elimination in the annual nursing assessment, with inclusion in the ISP when appropriate.

For individuals treated with any medication for constipation, the plan should reflect information from bowel tracking forms as well as how often a “prn” medication (i.e., a suppository or enema) is used to treat the individual.

- This type of review can often show trends that were perhaps not obvious at the time.
Bowel Complications

- Chronic constipation can lead to more serious bowel complications.
  - Hemorrhoids
  - Rectal prolapse
  - Fecal impaction
  - Bowel obstruction

Hemorrhoids

- Swollen or enlarged veins around the anal canal or just within the rectum are hemorrhoids.
- Caused by increased pressure, often from straining for bowel movements.

May treat topically for pain relief
Are often a cause of rectal bleeding
Resolving constipation is key
Rectal Prolapse

- This condition is caused by excessive straining during bowel movements over a long period of time. Rectal prolapse occurs when the rectal tissue extrudes from the anal sphincter.
- Treatment of the constipation to relieve the need to strain for bowel movements may reverse the condition.
- Severe prolapse may require surgical repair.
Fecal Impaction

- A fecal impaction is when hard stool becomes packed tightly within the rectum or colon such that the normal forces of the colon cannot dispel the stool.
- Treatment is usually in the form of enemas or manual disimpaction or a combination.
- Fecal impaction often occurs just prior to bowel obstruction.

Bowel Obstruction

- Bowel obstruction refers to the partial or complete blockage of the small or large intestine.
- This blockage can be “mechanical”
  - Such as a tumor or foreign object blocking the bowel
- Or “non-mechanical”
  - When the bowel just won’t move contents through
Anatomy of the Bowel

- **Small intestine**
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Bowel Obstruction

- **Small bowel obstruction (SBO)**–
  - When the small bowel becomes obstructed
  - Mechanical causes include adhesions, hernias, tumors, scarring or twisting of the small bowel.

- **Large bowel obstruction (LBO)**–
  - When the large bowel becomes obstructed
  - Mechanical causes include impacted feces (from severe constipation), tumors, scarring of the colon.
Bowel Obstruction

- Individuals with pica have a risk of bowel obstruction. Depending on the amount and size of ingested foreign material, this can cause a blockage within the bowel.

Non-mechanical Bowel Obstruction

- This type of obstruction is also called a “pseudobstruction”. This is caused when the normal ability to move fluid and food through the bowel is lost
- This is usually due to a problem with the nerves and/or muscles. There is nothing physically blocking the bowel in this type of obstruction.
Bowel Obstruction–
Signs and Symptoms

- Abdominal pain– often crampy and in waves
- Nausea
- Vomiting (occurs earlier with SBO)
- Abdominal distention
- No passing of stool OR gas
- Leakage of small amounts of loose stool around a mechanical obstruction
- SEEK MEDICAL CARE

Advanced Signs and Symptoms...

- Tachycardia
- Low blood pressure
- Fever
- Altered consciousness
- THIS IS A MEDICAL EMERGENCY
Responding to Suspected Bowel Obstruction

- A suspected bowel obstruction is a medical emergency. This condition can be FATAL.
- Individuals who exhibit symptoms of a bowel obstruction should be promptly evaluated by medical personnel. *Especially if they have a history of constipation, or pica*
- Constipation is a risk factor for developing a large bowel obstruction.

Recognizing Emergencies

- Bowel obstructions can progress quickly. Initial symptoms are often similar to a viral gastroenteritis (or “stomach flu”)
- Treat all cases of abdominal pain, nausea, and vomiting as a potential serious illness
- Notify nursing personnel early
- Prompt physician evaluation is key
Recognizing Emergencies

- Abdominal pain—often crampy and in waves
- Nausea
- Vomiting (occurs earlier with SBO)
- Abdominal distention
- No passing of stool OR gas
- May have leakage of loose stool around an obstruction
- Tachycardia
- Low blood pressure
- Fever
- Altered consciousness

Bottom Line

- Individuals with developmental disabilities are inherently at risk for constipation
- Recognition and adequate treatment of constipation will prevent serious medical complications
- Recognition of the signs and symptoms of bowel obstruction will allow for prompt medical intervention in the case of complications from constipation
Aspiration

Oral Motor Dysfunction

- Defined

- A dysfunction of the normal mechanism of chewing and swallowing. Can involve abnormal functioning of the mouth, throat, or esophagus.
Anatomy of mouth, throat, esophagus, and stomach

Dysphagia

- Difficulty in swallowing or inability to swallow.
  - Dysphagia can originate in 2 different areas
    - Oral/pharyngeal (mouth/throat)
    - Esophageal (“food tube” to stomach)
Aspiration

- The entrance of fluid or foreign matter into the air passages of the lungs
  - Often happens due to dysphagia (a difficulty with swallowing)
  - Can happen at any time
    - aspiration of oral secretions
  - Can happen unexpectedly (choking)
    - Food stuffing behavior
    - Vomiting

Who is at risk?

- Dysphagia is due to problems with the normal function of the muscles and nerves involved in one or more of the following phases of swallowing
  - Chewing
  - Propelling food to the back of the throat
  - Action of swallowing
  - Esophagus moving food to stomach
Who is at risk?

- Individuals who have problems with nerves and muscles will be at risk
  - Developmental disabilities
  - Neuromuscular conditions
  - Cerebral palsy
  - GERD (reflux)

How can I recognize aspiration or dysphagia?

- Review of health history specific risks
- Recognition of mealtime behaviors that may indicate a problem
- Recognition of signs and symptoms that may indicate an individual has an increased risk
Aspiration Risks – Health History

- Any past diagnosis of aspiration or aspiration pneumonia
- Individual with a diagnosis of cerebral palsy, muscular dystrophy, epilepsy, GERD, dysphagia, or hiatal hernia
- Any individual with unexplained weight loss or chronic dehydration

Aspiration Risks – Health History

- Individuals who take medications that may decrease alertness or alter muscle tone
- People with chronic chest congestion, frequent pneumonia, persistent cough, or chronic use of respiratory medications
Aspiration Risks– Mealtime Behaviors

- Eating slowly
- Coughing, gagging, or choking during meals
- Eating in unusual position or posture
- Unsafe eating/drinking practices (eating/drinking rapidly or food stuffing behavior)
- Needing to be fed by others

Aspiration Risks– Other signs and symptoms

- Irregular breathing or rapid breathing during or after meals
- Intermittent fevers
- Food or fluid falling out of the mouth during meals
- Vomiting after meals
- Change in voice during or after meals
Chronic recurrent aspiration will lead to pneumonia—also known as “Aspiration Pneumonia.”

The chronic exposure of the lungs to foreign material, as well as recurrent infection, will lead to scarring of lung tissue.

This damage is irreversible.

Over time, this will cause chronic lung disease and eventually death.

CHOKING

- Can be either from food stuffing behaviors or from dysphagia
- This is serious and can be fatal!
- All staff should be trained in emergency procedures for any choking episode.
Consequences of Dysphagia and Aspiration

- The key to preventing these complications from dysphagia and aspiration is **RECOGNITION** of the problem and active management of the risk.

Risk Assessment for Aspiration and Dysphagia

- There are several risk assessment tools that can be utilized to help identify individuals who may be at risk for aspiration and dysphagia.
- Being proactive by identifying those at risk will allow for interventions to be put in place to decrease the chances of complications.
- Adding a yearly aspiration risk assessment to be completed for all individuals is a helpful tool to identify and manage those at risk.
Evaluation and Diagnosis

- Individuals thought to have signs of dysphagia or aspiration should be evaluated by a healthcare provider.
- A clear history of the signs observed and the concerns for dysphagia should be presented to the healthcare provider.
- Swallowing mechanism can only be evaluated by specialized testing.

Video Oral Swallow Study (VOSS) is the most common test ordered to evaluate the swallow mechanism.

- It is generally conducted by a speech language pathologist in conjunction with a radiologist
- It is a “real time” x-ray of the swallow mechanism
- Individual is tested with various food and liquid textures
- Dietary recommendations or restrictions will be given in the final report if there is concern noted on the testing.
Diet Modifications for Aspiration and Dysphagia

- Individuals who are diagnosed with aspiration or dysphagia should have dietary recommendations from the swallow specialist for alterations to their diet consistency.
  - Soft food
  - Pureed food
  - Thickened liquids
- Severe cases may not be safe to take nutrition by mouth
  - (in these cases an alternative route for nutrition would need to be looked into, ie. G-tube access)

Diet Modifications for Aspiration and Dysphagia

- BE AWARE that some medications cannot be mixed with food as they will cause a choking hazard.
  - For Example: Bulk forming laxative powders such as Metamucil, Fibercon, and Genfibre **must only be mixed with water or juice.**
  - When mixed with food, they quickly harden and create a choking hazard for individuals
Program Planning for Dysphagia

- Individuals identified as having dysphagia or aspiration should have an individual program plan to address this issue.

- The program plan should address:
  - Assistance level needed (including verbal or physical cues needed)
  - Correct positioning for oral intake
  - Adaptive feeding equipment
  - Where meals should take place
  - Common signs of aspiration, what to do, where to document, and who to notify if these occur
Program Planning for Dysphagia

For Staff
- Ensure only trained staff assist the individual at mealtime
- Stop assisting with meal if person coughs, chokes or gags. Notify appropriate professional staff before resuming
- Avoid having individual lie down after meals for 30 to 60 minutes

Program Planning for Dysphagia

- Staff should be trained on all aspects of the individual’s mealtime protocol.
- Staff should be trained on emergency response to an aspiration or choking event.
- Appropriate emergency equipment should be in the room the individual receives meals (face mask for CPR, gloves, etc)
Program Planning for Dysphagia

- Individuals with dysphagia should be re-evaluated annually as the level of dysfunction often progresses, requiring modification of the individuals plan.

Roles and Responsibilities

- Agency
  - Must ensure all individuals are assessed for aspiration and dysphagia risk
  - Develop a policy for ensuring staff receive appropriate training in mealtime procedure for individuals known to have aspiration or dysphagia
  - Provide staff with appropriate emergency response training to incidents of choking and aspiration
Roles and Responsibilities

- **House Managers/QIDP**
  - Recognition of relevant health history or patterns of illness that may suggest aspiration or dysphagia
  - Ensure individual plans are appropriate to each person who needs a mealtime plan due to risk or presence of aspiration or dysphagia.
  - Advocate for individual during healthcare visits if there is concern for aspiration or dysphagia, so that it is addressed appropriately by the healthcare provider.

- **Staff**
  - Report observation of any signs or symptoms of aspiration or dysphagia to supervisor
  - Adhere to prescribed mealtime plans developed for all individuals with a risk for or presence of aspiration or dysphagia
  - Encourage safe eating habits for all individuals
Dehydration

- Lack of appropriate intake of free water needed by the body for essential functions
Signs of Dehydration

- Dry mucous membranes
- Extreme thirst
- Skin tenting
- Sunken eyes
- Lethargy
- Decreased urine output
- Concentrated urine
- Tachycardia

Prevention

Adequate intake of fluids!
  *caffeine is not your friend

Are there factors working against you?
  *medication
  *fever
  *environment
Prevention

- Individuals who rely on others for their fluid intake are the most at risk for dehydration
- Tracking of fluid intake in those individuals is essential
- Most people need 2–3 liters of fluid intake daily

Recognition

- Initial signs
  - Decreased urine output
  - Concentrated urine
  - Thirst
  - Dry mucous membranes
Recognition

- Later signs
  - Skin tenting
  - Sunken eyes
  - Lethargy
  - Altered consciousness

Complications

- Acute kidney failure
- Heart arrhythmias
- Hypovolemic shock
- Infections
Treatment

- Restoring body’s fluid balance
  - Generally done with IV fluids
  - If early on can be done with oral rehydration

Responsibilities

- Agencies should make sure staff understand the important role fluid plays in our health
- Be especially cognizant of those individuals who cannot access a drink when they are thirsty, or ask for a drink.
Seizure Disorder

- Common in individuals with ID/DD
  - Links to the neurodevelopmental issues
  - Many types of seizures
    - Tonic-clonic
    - Partial/ partial complex
    - Absence
Seizure Disorder

- There is an increase incidence of sudden death for individuals who are diagnosed with a seizure disorder.
  - Sudden Unexpected Death in Epilepsy (SUDEP)
  - Mortality rate anywhere from 2–9 times higher
    - Medical complications of seizures
    - Accidents due to seizures

Control of Seizures

- Medications
  - Prophylactic (daily)
  - Abortive
    - During seizure (diastat, others)

- Devices
  - Vagal verve stimulators, others
Responsibilities

› Maintaining accurate seizure log for physician review

› Ensuring staff are aware of appropriate care during a seizure and when to call 911
  ◦ Positioning to maintain airway
  ◦ Use of abortive medication/device
  ◦ When a seizure has been “too long”

Summary

› Accurate information and training for staff regarding these four common diagnosis is key to recognition and prevention of complications.