Paula and several other nursing assistants were sharing their observations at a team conference. Paula said, "Feeding Mrs. Anderson scares me to death. She eats really fast and sometimes chokes on her food. Other times, she'll leave food in her mouth for a long time. I'm not sure how to help her and keep her safe." Paula and the others discussed aspiration, a serious problem that can affect hospitalized patients.

**What is Aspiration?**

Aspiration is the drawing of food, fluids or other materials into the respiratory tract. These materials can be called foreign bodies, since they are not normally found in the respiratory tract and can be very harmful to it. There are three major problems that may occur with aspiration:

- **The person's airway may be blocked by a foreign body, preventing the flow of air in and out of the lungs. Without adequate air flow, the person may die within several minutes unless the obstruction is relieved.**
- **The foreign body may cause chemical damage to the lung tissue. Stomach acid, for example, will burn the lung tissue if aspirated. Like any damaged body part, the burned lung tissue swells, and cannot exchange oxygen effectively.**
- **Aspirated foreign bodies often carry bacteria with them. When bacteria get into the lungs, a serious infection—aspiration pneumonia, may develop.**

**Who is at Risk?**

Aspiration can happen to anyone, at any age. Even normal, healthy adults may suffer aspiration if they laugh while eating, or if food or fluids go down "the wrong way." But two age groups are most at risk for aspiration—young children (usually under age three) and seniors, age 65 and over. Young children are at risk because they have very small airways that can easily be blocked. Also, they tend to put things they find, such as buttons or coins, into their mouths. Changes that occur with aging increase the risk of aspiration for your elderly patients. Swallowing becomes less effective, and the protective gag reflex weakens. Other conditions also increase a patient's risk for aspiration:

- **Medications:** a patient who is drowsy after surgery or from other medications is more likely to aspirate.
- **Dementia:** patients with dementia may not remember how to eat properly. They may not chew their food well, or may put too much in their mouths at one time. These patients may also try to eat non-food items.
• Stroke: one side of the face may be paralyzed in the patient who has had a stroke. This patient will have difficulty chewing and swallowing on that side, and may choke.
• Missing teeth or ill-fitting dentures: patients who cannot chew their food properly are more likely to aspirate.
• Vomiting: there is a risk of aspirating stomach contents any time the patient vomits.
• Tube feeding: the tube may move out of the stomach and allow the feeding to enter the lungs. Or, the patient's stomach may not empty properly, leading to vomiting and aspiration.

Signs of Aspiration
There may or may not be obvious signs that the patient has aspirated. With an episode of acute choking, the patient often has a wide-eyed, anxious look. He may also put his hands to his throat, and be unable to make any sounds. With a "silent aspiration", however, there may be no signs until lung damage or pneumonia occur. Then, you may see signs such as shortness of breath, cough, pale or dusky skin color, chest pain, chills, or fever.

Preventing and Managing Aspiration
There are many ways that you can help to keep your patients safe from aspiration.

Infants and young children tend to put whatever they pick up into their mouths, so keep small objects out of their reach. Don't feed young children foods that are easily aspirated, such as sliced hot dogs, grapes or nuts. Also, never feed an infant by propping the bottle in the crib, as choking may result.

If your patient needs help with eating, cut food into small, bite-size pieces that can be easily chewed. Encourage the patient to eat slowly, and offer fluids between bites. Don't put food into the patient's mouth when his head is tilted back, as if he is looking up. In this position, his airway is open, increasing the risk of aspiration. Notify the nurse if you see that the patient has difficulty chewing due to missing teeth or ill-fitting dentures. Make sure the patient is swallowing the food before putting more into his mouth. If the patient tends to keep food in his mouth, check his mouth after the meal to ensure that it is empty. Have him either swallow or spit out remaining food.

When working with patients who have dementia, it is important to keep out of reach any non-food items they may try to eat, such as artificial fruit displays, or even perfume and aftershave. You may also need to remind them how to eat... "Put your fork in this piece of meat", "Chew each bite, now swallow." "Are you ready for a drink?"
Also, don't use plastic utensils with patients who have dementia, since they may break off inside the mouth.

If your patient has weakness on one side of her face due to a stroke, put food into the unaffected side. Watch closely to see that she can chew and swallow effectively on her "good" side. Liquids can be especially difficult for these patients to swallow, since it is harder to control liquids than solids. If your patient has this trouble, ask the nurse if a thickening product added to the liquid would help.

If a patient vomits, your first action should be to position him so that the vomitus runs out of his mouth, to prevent aspiration. If the patient is lying down, roll him to his side. If he is sitting in a chair, gently bend his head forward to promote drainage. Give mouth care after vomiting, not only to make the patient more comfortable, but to also remove any particles that may still be in the mouth.

Patients who receive tube feeding need your close observation. Never lower the head of the bed when a patient is receiving a tube feeding, since that may cause aspiration. Be very careful that the tube is not pulled while you are giving care. Notify the nurse immediately if the patient's abdomen is enlarged. This is a sign that the stomach is not emptying properly, and may result in vomiting and aspiration. Also, notify the nurse if the tube becomes dislodged, or if there are any signs of respiratory distress... coughing, choking or change in skin color.

Even with the best care, your patient may still aspirate. It is important that you be competent in performing the Heimlich maneuver. You should be tested every 1—2 years on skills for assisting the conscious and unconscious choking victim.

If your patient chokes, but is able to cough and make noises, stay with him and encourage him to cough. If his airway is completely obstructed and he cannot make noise, perform the steps you have learned for the Heimlich maneuver. Perform the Heimlich maneuver only if you have been properly trained to do so, and never on someone who can cough and speak. Make sure to report any choking episodes to the nurse, so that a respiratory assessment can be done.

Aspiration can have very serious, even fatal, consequences for your patients. Your quick observations and good care can help them to avoid this risk.
Learning Objectives:
After reading the newsletter, the nursing assistant should be able to:
1. Define aspiration.
2. Identify patients at increased risk for aspiration.
3. List three signs of aspiration.
4. Discuss measures to prevent and manage aspiration.

Suggested Clinical Adjunct Activities:
1. During a team conference, have the nursing assistants discuss patients who are at increased risk for aspiration, and ways to help prevent this.
2. Observe as the nursing assistants help patients to eat, to determine if they are taking measures to avoid possible aspiration.

Competency Assessment Tool Answer Key:
1. A. gets food or fluids into the respiratory tract
2. D. all of the above
3. B. False
4. B. False
5. D. tilted back, with his chin raised
6. C. unaffected side of the mouth
7. B. False
8. A. turn him onto his side
9. C. keeping the head of the bed elevated
10. A. stay with her and turn on the call bell
Directions: Place the letter of the one best answer in the space provided.

____ 1. Aspiration has occurred when the patient:
   A. gets food or fluids into the respiratory tract
   B. has a coughing spell
   C. shows signs of respiratory distress
   D. draws only small amounts of air into the lungs

____ 2. Aspiration can result in which of the following?
   A. blockage of air flow in and out of the lungs
   B. injury to lung tissue
   C. lung infection
   D. all of the above

____ 3. Aspiration happens only to the very young and very old.
   A. True
   B. False

____ 4. The signs of aspiration are obvious in every case, and include choking and a wide-eyed, anxious look.
   A. True
   B. False

____ 5. To prevent aspiration, a patient should never be offered food when his head is:
   A. bent toward his chest
   B. in a neutral position, looking straight ahead
   C. turned to one side
   D. tilted back, with his chin raised
6. When helping to feed a patient who has weakness on one side of the face, food should be placed in the:
   A. middle of the tongue
   B. affected side of the mouth
   C. unaffected side of the mouth
   D. back of the mouth

7. If a patient has difficulty swallowing due to a stroke, liquids are usually easier to manage than solids.
   A. True
   B. False

8. The nursing assistant is providing morning care for Mr. Hinckley when he suddenly begins to vomit. The nursing assistant’s first action should be to:
   A. turn him onto his side
   B. notify the nurse
   C. leave to get gloves
   D. turn on the call bell for help

9. All of the following conditions increase the risk of aspiration for a patient receiving tube feedings EXCEPT:
   A. the tube being pulled as the patient is turned
   B. an enlarged abdomen
   C. keeping the head of the bed elevated
   D. vomiting

10. The nursing assistant is in Mrs. Porter’s room as she is eating lunch. She starts to choke, and is coughing forcefully. The nursing assistant’s best action is to:
    A. stay with her and turn on the call bell
    B. go to the nurse's station for help
    C. perform the Heimlich maneuver
    D. pour a small amount of water into her mouth