

DEATH AND DYING: I

OBJECTIVE/RATIONALE

Knowledge of the physiological process of death will benefit the health care professional's in dealing with the emotional aspects of dying. The student will examine the physiological and emotional aspects of death and dying.

TEKS 121.23 1F, 3B, 3C, 7J
121.3 13H, 13I

TAKS ELA 1, 3, 4, 5
Science 2

KEY POINTS

PowerPoint

- I. Emotional transitions at life's end
 - A. There are several works on people's reaction to death and dying.
 1. The first and most well-known is that of Elisabeth Kubler-Ross
 2. Her work is entitled *On Death and Dying*.
 3. Identified five stages of emotion that might experience during the dying process.
 - a. Denial or "no not me"
 - b. Anger or "why me?"
 - c. Bargaining or "yes, but"
 - d. Depression or "it's me"
 - e. Acceptance or "it's part of life"
 4. People don't move through the stages in a linear progression
 5. People may vacillate between stages
 6. People may stay in one stage until death.
 - B. Fear is often an element when an individual encounters the prospect of death/dying.
 1. Emotionally and physically based reasons that people might fear death
 - a. fear of helplessness
 - b. fear of dependence on others
 - c. fear of physical faculties
 - d. fear of mutilation by surgery or disease
 - e. fear of uncontrollable pain
 - f. fear of being unprepared for death
 2. Socially based reasons that people might fear death
 - a. fear about separation from family or home
 - b. fear of leaving behind unfinished tasks or responsibilities
 3. Interventions that health care professionals might offer
 - a. talk as needed
 - b. avoid superficial answers, i.e. "It's God's will"
 - c. Provide religious support as appropriate

- d. Stay with the patient as needed
- e. Work with the family so they might be strong enough to offer support to the dying person.

II. Physiology of Dying

A. Somatic death is the death of the body

Involves series of irreversible events that leads finally to cell destruction and death.

B. Causes of death vary, but body goes through many physiological changes that occur with each event of death.

C. Physiological death preceded by an irreversible death of all vital systems.

D. Respiratory System: lungs

1. Unable to oxygenate the body enough for adequate gas diffusion
2. Respirations become stridorous or noisy, leading to “death rattle”
3. Cheyne-Stokes respiration sign of pulmonary system failure
 - a. Consists of alternate hyperpneic and apneic phases
 - b. These phases alter the concentration of carbon dioxide in the body – reducing the level.
 - c. Sensors within the body prevent the body from breathing in order to increase the level of carbon dioxide.
 - d. Never able to reach an adequate balance, and ultimately respirations cease.

E. Cardiovascular System: heart and vessels

1. Heart unable to pump strongly enough to keep blood moving
2. Blood backs up first throughout the heart
3. Ultimately backs up into the lungs and the liver, causing congestion
4. Decreased blood causes decreased circulation to the body
 - a. skin becomes cool to the touch, pale
 - b. Person appears cyanotic, possibly mottled
 - c. In dark-skinned people, perfusion and oxygenation of the body is determined by mucous membranes and palms of hands and feet.
 - d. Failure of peripheral circulation frequently results in a drenching sweat cooling the body surface.
5. Pulse becomes weak and thready, ultimately irregular
 - a. A stronger pulse will mean death is hours away
 - b. A weak, irregular pulse means that death is imminent in the next couple of hours.
 - c. An apical pulse might be required.

F. Metabolism rates decrease as the cardiovascular system fails.

G. The person might retain feces or become incontinent.

H. Urinary output decreases.

I. Neurologic function decreases with decreased oxygen to the brain.

1. Sensation and power of motion as well as reflexes lost in legs first, then arms.
2. Dying person turns toward light as sight diminishes.
3. Dying person hears only what is distinctly spoken.
4. Touch sensation diminished – pressure remains
5. Dying person might remain conscious or become unconscious/comatose

- a. Some dying people rally in clarity and consciousness just prior to their death
- b. A person's eyes might be open even if unconscious
- 6. Dying people might turn toward or speak to someone who is not visible to anyone else in room
- 7. Pupils might be sluggishly reactive to light or not react
- 8. Pain might be present
 - a. Pain medication should not be withheld as person nears death.
 - b. If unconscious or unable to talk assess for restlessness, facial expression (i.e. frown), or tightness of muscles.

III. Physiological aspect of death

A. Criteria for death

- 1. Often determined by a hospital's policy.
- 2. One can be pronounced dead in one hospital and alive in another, depending on the criteria used for determining death.
- 3. Most widely accepted criteria for death is a flat electroencephalogram, meaning that brain death has occurred.
- 4. Heart, lungs, and brain form the trinity on which standards for irreversible death are established.
 - a. absence of respiration
 - b. absence of heart beat
 - c. flat electroencephalogram
- 5. When the above signs are present along with absence of pupillary reflexes, clouding of the cornea, and absence of movement, death has certainly occurred.

B. Study of death known as thanatology

- 1. Studies show that clinical death (described above) is not the same as biological death.
- 2. For example after clinical death, the hair continues to grow for several hours, liver converts glycogen to glucose, and muscles contract (referred to as rigor mortis).
- 3. Rigor mortis generally begins about 2 hours after death; muscles remain contracted for about 30 hours.
 - a. Healthy muscle contraction works like this: Nervous system tells a muscle to contract, calcium channels are open to the muscle and calcium ions move into the muscle causing it to contract. In order to relax again, the muscle must get rid of the calcium; this happens in one of two ways, 1. The calcium is stored in the mitochondria, and 2. The calcium is pumped back through the channels.
 - b. In death, the calcium can't be pumped back, and remains in the muscle. This causes the muscles to contract and stiffen. The entire body stiffens and is called rigor mortis.

ACTIVITIES

- I. Complete Self-Study: How Do I Feel About Death and Dying? **Teacher Note:** *Have students complete the Self-Study prior to beginning the lesson on Death and Dying. The students need not share their feelings or hand the self-study into the teacher. This is meant to stimulate thinking about death and dying, a topic about which there might be little talk or thought by students.*

- II. Determine the emotional or physical stages of death and dying in specific scenarios. See Death and Dying Scenarios. **Teacher note:** *Divide the class into small groups. Give each one a handout with death and dying scenarios. Each group is to determine the physiological imminence of death or emotional stage of dying depicted in the scenario. Once determined, the students will summarize the scenarios to the class and state their determination. Classmates can challenge their findings*

- III. Optional Activity: Field Trip to County Examiner's Office. See Instructor's Guidelines for Field Trip to the County Examiner's Office.

MATERIALS NEEDED

Five Death and Dying Scenario packets. See Scenarios of Death and Dying

PowerPoint presentation on emotional and physical stages of dying. See PowerPoint: Death and Dying

Durham, Eileen and Weiss, Leslie. How Patients Die. *AJN*, December, 1997; Vol. 97 No.12: 41-47.

Turner, Jeffrey S. and Helms, Donald B. *Lifespan Development, 4th edition.* Harcourt Brace Jovanovich, Philadelphia: 1991, Chapter 12.

<http://www.pbs.org/wnet/onourown/terms/tools/index.html> (Excellent site from Bill Moyers PBS program On Our Own Terms)

<http://www.usnews.com/usnews/issue/970331/31near.htm> (Good discussion of the possible meanings of near death experiences)

<http://www.iands.org/aftereffects.html> (Good discussion of physiological and psychological aftereffects of near death experiences)

<http://encarta.msn.com/find/concise.asp?ti=04531000#s1> (Excellent summary of physiological death with related links)

<http://www.near-death.com/experts.html> (Quite good summary of theories causing near-death experiences)

<http://www.dying.miningco.com/health/dying/library/weekly/aa.121599a.htm> (Good variety of topics on death and dying)

ASSESSMENT

Successful completion of the Death and Dying scenarios.

Successful completion of objective written test.

ACCOMMODATIONS

For reinforcement, the student will make a chart identifying all body systems and listing the changes that occur prior to death.

For enrichment, the student will either:

- a. Research and write a paper on the theoretical perspectives of the dying process of Edwin Shneidman and E. Mansell Pattison, comparing them with Elisabeth Kubler-Ross, or
- b. Research and write a paper on the physiological and emotional causes and aftereffects of near death experiences.

REFLECTIONS

DEATH AND DYING SCENARIOS – 1

SCENARIO 1

Howard is an architect who has recently been diagnosed with advanced colon cancer. He has recently been hospitalized with pneumonia that developed after his last doses of chemotherapy. The night nurse reports that Howard openly talks about the seriousness of his illness and alludes to the fact he has little time to live. When his family comes to visit, Howard does an about face, chatting sincerely about his plans far into the future.

SCENARIO 2

Helen has learned that she has an aggressive form of breast cancer. She will require a radical mastectomy, followed by radiation therapy. Her priest came to visit the night before the surgery and found that Helen wanted to talk about the fact that she will no longer be a complete woman.

SCENARIO 3

Gordon has Huntington's Chorea. He has known this for some time, and the symptoms have become more intense over the past year. Realizing that he will reach a point where his awareness of his environment and other people will deteriorate, he has called his sons together and told them stories of his early life. He hopes that they will pass these stories on to their children.

SCENARIO 4

Anita has advanced emphysema. She has been admitted to the long-term care facility from the hospital. Upon admission her vital signs showed an irregular heart rate, and her sheets needed to be changed because she had drenched them with her perspiration. How close is Anita to dying?

SCENARIO 5

Randy had lived life to the fullest. He was profoundly overweight, and drank excessively every night. Earlier in his life he had experimented with illicit injectable drugs. Recently, he had been having some fatigue and noticed that his abdomen constantly looked distended. He also noticed that he would bleed profusely, even with the smallest of cuts. When he finally went to the doctor, he was told that he was in an advanced stage of Hepatitis C and that his condition was terminal. Almost overnight, Randy began to eat a balanced diet, never drank alcohol, and began to lose some of his excessive weight. He was overheard saying that his change in habits will make all of the difference in his illness.

DEATH AND DYING SCENARIOS – 2

SCENARIO 1

Amanda has been told that she has Multiple Sclerosis. She underwent extensive tests before the diagnosis was determined. In the last week Amanda has made an appointment with a doctor in town, whose practice was with a different group of doctors. She told the receptionist that she had been suffering from weakness in her extremities and had some numbness, as well. She never mentioned her diagnosis.

SCENARIO 2

Hal was just told by the doctor that he has a very large aortic aneurysm, and would die if he didn't have immediate surgery. His family visited him shortly after the doctor left and asked if the doctor had given him any information about his condition. Hal sincerely replied that the doctor had been in, but had not offered any explanation for his current condition.

SCENARIO 3

Margaret had suffered from severe indigestion for over one year. The doctor had prescribed antacids, told her to sleep more upright in bed – using several pillows, and tried several of the medications to decrease acid secretion in the stomach and reduce motility. Nothing seemed to work. After extensive testing, a diagnosis of terminal stomach cancer was rendered. She was overheard saying, “This is so unfair. I have been in such pain for so long and now I'm told I will die. Why has God done this to me?”

SCENARIO 4

William rang the call light. When the nurse entered, he indicated that he wanted to sit upright in bed. He was confused and disoriented. Suddenly, he became pale and blotchy; he also became incontinent of urine and feces and seemed extremely weak. Is William near death?

SCENARIO 5

Pat was dying from an oat cell carcinoma that had metastasized to her brain. She drifted in and out of consciousness. When conscious, she would ask for her husband and talk to him about her funeral arrangements – what music she wanted, the fact that she wanted to be cremated, and that she only wanted a memorial service.

DEATH AND DYING SCENARIOS 3

SCENARIO 1

Pearl was diagnosed with non-Hodgkin's lymphoma. She often talked of her illness calmly, and seemed at peace that all possible had been done. She talked with her children openly about their future and the fact that she would not be a part of it. Pearl always indicated that she would be always with them, looking down on them from heaven. One day you walked into Pearl's room and found her agitated and repeatedly slamming her fist on the furniture. "It's not fair," she said. "I should be given a chance to see my grandkids and watch them grow up. Why is this happening to me?"

What stages are represented in this scenario? What can you say about the fact that Pearl has changed stages?

SCENARIO 2

Mary had suffered a severe CVA. She was extremely weak. Her eyes had a faraway, sunken look. She stopped eating and took only occasional sips of water. Her breathing became increasingly noisy. How close would you say death was for Mary?

SCENARIO 3

A relative of Manny, a terminally ill patient, came to the nurses' station. She expressed concern that Manny was talking to his brother, who had died over 25 years ago. At times Manny would stop the conversation for long periods of time. Within a couple of hours, however, he would again begin to talk with his brother. What might you say to this relative?

SCENARIO 4

Eric had a persistent cough for several months. He finally went to the doctor, who ran a number of tests. The chest x-ray was consistent with advanced tuberculosis, which was further confirmed in his sputum test. When informed of his diagnosis, Eric insisted that the x-rays had been mixed up in the hospital and really belonged to someone else.

SCENARIO 5

Belinda was dying from terminal cystic fibrosis. Her family frequently came in to give her support. At each visit, they would begin to cry, and Belinda would be the one to support and comfort them. She had a calm about her that seemed unchanging.

DEATH AND DYING SCENARIOS 4

SCENARIO 1

Sandra was in such an advanced state of cancer that she knew death was only a few days away. Her son would be married in the next month. Day after day Sandra was found crying profusely about her impending death. Nothing said seemed to alleviate her sadness.

SCENARIO 2

Fred has hepatitis B. His liver is so damaged that it is unlikely that he will live past this week. Fred has expressed that he will closely follow all of the orders by the doctor; by doing so he might get an extension of a couple of days without pain or physical discomfort.

SCENARIO 3

Mike has an end-stage cardiomyopathy. He keeps his call light on and complains constantly about his roommate, who is extremely ill. Mike feels that he has paid so much money for some peace and quiet and privacy. He can become so verbally abusive to the nurses that it will cause him to become dyspneic.

SCENARIO 4

Ellen is dying from melanoma. Her daughter is to be married, and Ellen said that she hoped she could have the chance to see the wedding. With the help of hypnosis and pain medication, she was able to attend the wedding. Upon her return, she was tired and pale but said, "Don't forget, I have another unmarried daughter."

SCENARIO 5

Kevin was told that he has advanced cancer of the liver several weeks ago. Kevin's wife told neighbors of his diagnosis. When they expressed their regret over his diagnosis, Kevin sincerely appeared confused about their comments. He even responded that he had no idea of what they were referring.

ANSWER SHEET: DEATH AND DYING SCENARIOS

NUMBER 1

1. Denial
2. Depression
3. Acceptance
4. She will likely die within a few hours
5. Bargaining

NUMBER 2

1. Denial
2. Denial
3. Anger
4. He will die within a couple of hours
5. Acceptance

NUMBER 3

1. Acceptance, then anger. Patients can vacillate between stages.
2. She will most likely die within hours.
3. Patient close to death (within hours or days) might talk to an entity not seen by others.
4. Denial
5. Acceptance

NUMBER 4

1. Depression
2. Bargaining
3. Anger
4. Bargaining
5. Denial

Objective Test: Death and Dying

Name: _____

For each of the following select the best answer.

1. Patients experience emotional stages as they progress through the dying process. Usually these patients
 - a. move through the stages in a sequential manner.
 - b. experience each with equal intensity.
 - c. go back and forth between stages.
 - d. complete each stage before passing on to the next.

2. A dying patient has started to speak with his dead brother. You realize that this is
 - a. due to reduced blood flow to the brain
 - b. due to fear of dying.
 - c. something that can happen as someone approaches death.
 - d. a manipulative gesture.

3. In Cheyne-Stokes breathing
 - a. the patient increasingly hyperventilates until death arrives.
 - b. the carbon dioxide level fluctuates.
 - c. the apneic phase indicates death has arrived.

4. When assessing a patient with dark skin for oxygenation, it is best to assess
 - a. the eyes
 - b. the breathing pattern
 - c. the mucous membranes
 - d. the chest

5. If a conscious dying patient believes that death is near, it is best to
 - a. change the subject.
 - b. give him privacy by leaving the room.
 - c. give hope of a miracle.
 - d. stay with him.

6. An elderly woman with terminal leukemia, whose daughter is pregnant states, "If I can live long enough to see my grandchild, I will then die without regret." This woman is in
 - a. the anger stage.
 - b. the bargaining stage.
 - c. the denial stage.
 - d. the depressed stage.

7. Which physiologic change occurs as death approaches?
 - a. The heart delivers more blood to the tissues.
 - b. The lungs cannot adequately oxygenate the body.
 - c. The heart beats more forcefully.
 - d. The blood vessels compensate for the heart.

8. A weak, irregular pulse indicates
 - a. death is hours away.
 - b. death may occur in one – two hours.
 - c. the body is being adequately oxygenated.
 - d. the person is having a heart attack.

9. Because pressure sensation is present when other touch sensations are gone, it is best to
 - a. lightly stroke a dying patient.
 - b. not touch a dying patient since they won't feel it.
 - c. press on a patient's arm or hand to let them know you are present.
 - d. only speak with the person to communicate support.

10. It is possible that a dying person will stay in one stage until death.
 - a. true
 - b. false

11. Death occurs after an irreversible failure of all vital organ systems of the body.
 - a. true
 - b. false

12. In the dying process the heart cannot pump enough blood to meet body needs.
 - a. true
 - b. false

13. If a person is in a coma, they do not feel pain or need medication
 - a. true
 - b. false

14. Although a person might not be able to talk, a health care person might still interpret pain by watching for
 - a. a frown.
 - b. a tightness of the face muscles.
 - c. increased restlessness.
 - d. All of the above

15. As death approaches, we would not expect to see any change in urinary output.
 - a. true
 - b. false

16. A person's eyes may be open even when they are unconscious
- true
 - false
17. As a person nears death, the pupils of their eyes might no longer react to light.
- true
 - false
18. If a person, who received a diagnosis indicating a terminal illness, goes to several doctors for another opinion, this person is in the _____ emotional stage.
- denial
 - anger
 - acceptance
 - depression
19. If a radial pulse cannot be palpated, it might be necessary to take a(n) _____ pulse.
- brachial
 - femoral
 - apical
 - temporal
20. If a person realizes that death is a reality and feels tremendous loss, this person is in the _____ stage.
- acceptance
 - depression
 - anger
 - bargaining
21. A person loses sensation and motion in the arms first, then the legs.
- true
 - false
22. As the peripheral circulation fails,
- the skin becomes like parchment.
 - the heart begins to compensate by beating more forcefully.
 - the person might experience a "drenching sweat".
 - the skin feels extremely warm to the touch.
23. As death approaches, the person no longer needs any pain medications.
- true
 - false

24. A grandmother of 4 children and 12 grandchildren began to meet with each of her family members. She gave each of them a precious item of her life and explained the significance to them. This grandmother is in the ____ emotional stage.
- a. depressed
 - b. anger
 - c. acceptance
 - d. bargaining
25. We cannot assume that the fear of death has diminished as death draws near. Therefore it is importance to call a religious person to provide support and reassurance.
- a. true
 - b. false

ANSWER SHEET: Death and Dying

1. C
2. C
3. B
4. C
5. D
6. B
7. B
8. B
9. C
10. A
11. A
12. A
13. B
14. D
15. B
16. A
17. A
18. A
19. C
20. B
21. B
22. C
23. B
24. C
25. A

INSTRUCTOR'S GUIDELINES FOR FIELD TRIP TO COUNTY EXAMINER'S OFFICE

Schedule a trip to the County Examiner's Office. Outline the following information that you wish the County Examiner to address during the tour:

- A. Which bodies are brought to the County Examiner? Why?
- B. How is an autopsy performed? Are samples collected? If so, what is done with samples and how long are they kept? Under what circumstances are autopsies required by law?
- C. Observe an autopsy, if possible.
- D. What happens to the bodies after the County Examiner is finished with his/her examination?
- E. How does one determine the cause of death?
 1. For example, if multiple problems or injuries, which system actually caused death?
 2. How does one differentiate between a shotgun wound at close range and one farther away?
 3. How does one determine natural causes compared with causes by questionable means?
 4. How does one differentiate between suicide and homicide?
 5. How does one determine self-hanging versus homicidal hanging?
- F. What is rigor mortis? When does it occur and how long does it last?
- G. Does the body continue to perform certain functions even after death (i.e. hair growth)? If so, how does that happen?
- H. Have the Medical Examiner talk about his/her professions – university preparation, duration of preparation, prospects for employment, etc.
- I. What prompted the person to become a Medical Examiner?

STUDENT ACTIVITIES IN PREPARATION FOR FIELD TRIP:

1. Have students each write five – eight questions prior to the trip.
2. Students are to have journals. The assessment for this field trip will be a journal entry regarding what was learned and the student's reactions and feelings when visiting the county Examiner. See Journal Entry Rubric.

SELF STUDY: HOW DO I FEEL ABOUT DEATH AND DYING?

Adapted from "How Patients Die", *AJN*. December, 1997

Place a check next to each statement that expresses how you feel.

- I feel that I could talk comfortably with someone who is dying.
- I don't know what to say to a person who knows he is dying.
- I wouldn't want to inform a person that he has a terminal condition and will die.
- I think that I could talk with a person and help him become more comfortable with the fact he is dying.
- I don't want to talk with a dying person because I'm afraid I'll get too attached to him and as a result won't be able to control my feelings.
- I don't think that a person should be told his condition is incurable or terminal. Doing so adds to the person's suffering.
- I don't think death should be discussed in the presence of children.
- I have a feeling of disgust whenever I think of being around a dying person.
- I think that people are more fearful of death when they are younger.
- Being with a person who is dying reminds me that, I too, will die some day.
- I think that people should die at home, rather than in a hospital.
- I believe that it is wrong to donate organs at the time of death; we should be buried with the same parts we had when we were born.

- _____ I think that doctor-assisted suicide is the same as murder.
- _____ I think it is wrong to withhold water from a person that has no chance of survival.
- _____ I think it is wrong to withhold food from a person that has no chance of survival.
- _____ I think that all technology should be used to try to save someone, no matter what the circumstances.

If I think about the possibility of dying, I find I'm most fearful about (check any that apply)

- _____ Helplessness
- _____ Dependence on others for care
- _____ Loss of physical abilities
- _____ Mutilation through surgery or disease
- _____ Uncontrollable pain

I also think that if confronted with the prospect of dying, I might feel (check any that apply)

- _____ Fear and sadness about being separated from my family.
- _____ Unsettled about leaving behind unfinished tasks or responsibilities.
- _____ Robbed of the experiences that I will never have.
- _____ Fear about being unprepared for death.
- _____ Angry that this is happening to me.
- _____ Fear of what happens after death.