


# X-RAY NEWS



Volume 11, No. 2

Continuing Education Publication and Newsletter

April 2005

## DO YOU KNOW YOUR X-RAY RULES AND REGULATIONS?

Every x-ray operator should have a current copy of the rules and regulations that govern your x-ray license. You can print a copy from the internet by going to the home page of the Department of Health of the State of Tennessee at [www.state.tn.us/health](http://www.state.tn.us/health). Under *At this site...*, click on *Rules and regulations*. Click the drop box and select *0880 Medical Examiners*. Click *0880-5* to see the entire rules governing x-ray operators. This takes you to a page where you choose your licensing board. Once you choose your board, you will be directed to all the rules and regulations of that board including x-ray operators.

### X-ray Operator Boards

There are four boards that contain rules for x-ray operators; Medical, Osteopathic, Chiropractic, and Podiatry.

*In this article, we will deal strictly with excerpts from the rules and regulations of the x-ray operators of the Board of Medical Examiners. We will address other Board rules in a later issue.*

### Certification Requirement 0880-5-.03

All persons operating x-ray machines in physicians' offices in Tennessee must possess a certificate issued by the Board pursuant to this Chapter of rules with the exception of the following who are exempted from certification:

1. Licensed medical doctors
2. Medical interns, residents and clinical fellows
3. Students engaged in clinical practice while enrolled in a Board-approved radiological education course required to receive radiological certification.
4. Graduates of a Board-approved radiological education course who are awaiting examination, but only for a period not to exceed six (6) months from the date that the course was completed. After sitting for the examination, this exemption shall continue for a period not

to exceed seventy-five (75) days. At all times while awaiting examination or examination results and until certification is received, graduates shall practice *only under supervision as set forth in 0880-5-.05(2)(c)*.

### Limited Certification Licensure (General Summary)

1. Be at least 18 years of age
2. Possess a high school diploma or GED
3. Attend and successfully complete a Board-approved radiological certification training course
4. Complete supervised clinical training
5. Successfully complete the Board-approved examination (ARRT Limited Scope Exam)
6. Make application for certification to the Board of Medical Examiners and pay all fees

### Specialty Areas Defined for Limited Certification

1. **Chest:** Covers the visceral thorax only. This includes PA, AP, Lateral, Oblique, Decubitus, and Apical Lordotic projections, but does not include ribs or sternum.
2. **Extremities:** Upper Extremity includes the fingers up through the humerus including the shoulder joint, clavicle, scapula, and the acromioclavicular (A/C) joint. Lower Extremity includes the toes up through the femur including sunrise of knee and routine unilateral hip joint views, but not the pelvis.
3. **Skull/Sinus:** Skull allows only AP/PA, Townes, and Lateral Skull projections. Sinus includes routine sinus views: upright PA/Caldwell, Lateral, and Waters.
4. **Spine:** allows only AP/PA, Lateral, and spot lateral projections of the Lumbar Spine only.
5. **Bone Densitometry**

### Scope of Practice

1. Each person certified by the Board must practice only in the certified specialty areas contained on the certificate as issued or upgraded and only for the types of radiographs specified in these rules. Practicing radiography beyond the scope of certification is grounds for decertification.
2. Board-issued certificates shall be posted in a location visible to all patients receiving radiographic examinations.
3. Certificates issued by the Board are subject to being disciplined for the same causes, to the same extent and pursuant to the same procedures as issued medical licenses.
4. Under no circumstances may a person with limited certification perform any procedure utilizing contrast media or any invasive radiological procedure.
5. Under no circumstances may a person with limited certification perform any procedure utilizing CT (Computer-assisted Tomography) or Fluoroscopy (including C-Arm units).
6. Certification pursuant to these rules does not authorize the certificate holder to perform MRI (Magnetic Resonance Imaging) or Ultrasound procedures, both of which are beyond the scope and capabilities of limited licensed operators.

### Maintaining Certification

1. All certificate holders must renew their certificates every two years, which will fall on the last day of their birthday month, the year being even or odd depending if they were born in an even or odd year.
2. Each certificate holder must biennially complete twenty (20) hours of radiological-related continuing education from Board-approved courses.



### May is Osteoporosis Awareness Month

Talk about Osteoporosis, Learn more about it. Visit the National Osteoporosis Foundation at [www.nof.org](http://www.nof.org)

INSIDE: Direct Reading - 043 Learning New Ways to Care — page 4

## TABLE OF CONTENTS

### FRONT COVER

*Board News*  
*Do You Know Your X-Ray Rules?*

### DIRECT READING

*DR-043 Learning New Ways to Care — 4-10*  
*Answer Sheet Instructions — 11*  
*DR-043 Post-Test — 12-13*

### DEPARTMENTS

*Bulletin Board — 2*  
*Test Your Knowledge — 3*  
*Did You Know? — 3*  
*Fun Time Puzzle — 3*

### ALSO IN THIS ISSUE

*2005 X-Ray Class Schedule — 14*  
*XRN Subscription Order Form — 15*  
*Change of Address Form — Back Cover*

## BULLETIN BOARD

This Bulletin Board is free to doctors and techs. We will include items as long as room allows. We will also duplicate Bulletin Board items on our website

www.res-xraynews.com under "Classified Ads".

Fax, mail or email ad copy to:  
X-Ray News®

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Nashville TN 37220

Phone: (615) 333-9600

FAX: (615) 333-0171

email: xrn@res-xraynews.com

Uses for this Bulletin Board:

- Offices needing techs
- Techs wanting employment
- Offices with equipment for sale
- Offices wanting to buy equipment

## BULLETIN BOARD

**Nashville, Tenn.** Part-time or full time position open for experienced medical assistant in family practice/urgent care walk-in center near Harding Mall. Must have x-ray certificate and license. Please send resume with letter in confidence stating salary history and giving 3 work references. Fax to (615) 354-0466 or mail to P.O. Box 50035, Nashville, TN 37205.

**Old Hickory, Tenn.** Family practice - Full time x-ray tech/MA needed in Old Hickory area 5 days a week. Fax resume to: (615) 847-0221

**Nashville, Tenn.** Cool Springs Medical Clinic seeking Full-Time Limited scope X-Ray Tech/Medical Assistant. Medical office experience and state license preferred. Experience with MEDIC software a plus. Competitive salary and benefits. Fax resume including references to (615) 376-2601.

## LETTERS TO THE EDITOR

Are there certain subjects you would like to see addressed in future issues? Please send your comments, suggestions, or thoughts on any article in this newsletter or any other appropriate subject.

Mail or fax your letters to:

**X-Ray News®**

4721 Trousdale Dr., Suite 120, Nashville TN 37220

Fax: (615) 333-0171

## FROM THE EDITOR

The Editors would like to thank everyone for the many wonderful responses we have had. This confirms to us that our efforts are well-received and worthwhile.

Our objective in publishing X-Ray News® covers several areas:

— It is a way to provide the required continuing education credits.

— It is a way to communicate updated information on new or proposed legislation, rules changes, "state" news in general.

— It is a way to help build a better understanding of the most basic principles of radiography and patient care.

— It is a way to share tips that can be put to immediate use in the workroom for improvement.

— And it is our overall objective to increase awareness and understanding of the potential hazards of radiation, the importance of quality radiographs, and the necessity of staff and patient protection during radiography.

We encourage everyone to share their thoughts, ideas, and opinions. All Letters to the Editor will be considered for print.

*Sincerely,*  
*Phyllis Gregg, Editor*

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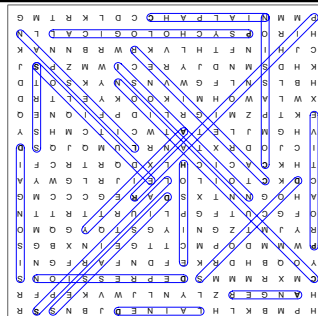
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## SOLUTION TO FUN TIME PUZZLE (PUZZLE ON PAGE 3)

stress  
anxiety  
depression  
communication  
relationship  
dental  
isolation  
psychological  
caregiver  
illness  
compassion  
solidarity  
spiritual  
chaplains  
hospice  
diseases  
diagnosis  
doctors  
anger



**TEST YOUR KNOWLEDGE**

- Which of the following radiographic techniques would provide the *least* amount of exposure to the patient?
  - 30 mAs at 120 kV
  - 50 mAs at 65 kV
  - 100 mAs at 85 kV
  - 200 mAs at 75 kV
- Universal (standard) precautions require health care personnel to protect themselves from contact with:
  - blood
  - open lesions
  - all body fluids
  - all of these
- Which of the following filtration amounts is required for kV ranges between 70-100?
  - .25 mm al added filtration
  - .5 mm pb inherent filtration
  - 2.5 mm al total filtration
  - 2.5 mm ph total filtration
- What is the primary source of occupational exposure received by a radiographer?
  - primary beam
  - scattered radiation from the patient
  - leakage radiation

**ANSWERS TO TEST YOUR KNOWLEDGE**

- a - 30 mAs at 120 kV
- d - all of these
- c - 2.5 mm al total filtration
- b - scattered radiation from the patient

*You prove your worth with your actions, not with your mouth.*

Pat Riley

**DID YOU KNOW?**

- that density is directly proportional to mAs.
- that increased OID causes magnification of an image, which causes loss of detail.
- that to maintain the same density but obtain a longer scale contrast, increase the kVp by 15% and halve the mAs.
- that artifacts caused from the guide shoes on the processor are straight lines at regular intervals.
- that pound for pound, hamburgers cost more than new cars.

H P M B K L H L A I N E D J B N S S R  
 H A N G E R Z L Y N L J W V K E P F R  
 C M X R M M M S D E P R E S S I O N S  
 Y O Q B H D R K E F D N F A R F G N I  
 P W M M D O P M C T T G E I N X B G S  
 R Y J M T Z G N I Y G S T Q Y G Q M O  
 O F G C U T F G P L I U R T T R T T N  
 A H O G N N T X S D A R E G C C C M G  
 C D K C T O I L O L E I J R L G W Y A  
 T H K C A C I C H L X D Q R T R C F I  
 I C J O D R X T A N R L U M Q J Q S D  
 V H G M J L E T A T W C I T C M H S Y  
 E K T P Z M I G R L I D P F I Q N E Q  
 X W L A W O H M I K O O K Y E L T R D  
 H B L S N L F G W V N S N Y K S O T D  
 K H D S M N D J Y R E C I W M Z P S J  
 C J H I N F T H L V K R W R B N N A K  
 H I R O P S Y C H O L O G I C A L L N  
 P M M N I A L P A H C C D L K R T M G

**FUN TIME!**

The words used in this word search puzzle are taken from *DR-043 Learning New Ways to Care* contained in this issue. Words may read normally, from right to left, bottom to top, top to bottom, or on any diagonal.

*Solution is on page 2.*

- stress
- anxiety
- depression
- communication
- proactive
- relationship
- denial
- isolation
- diagnosis
- doctors
- anger
- lifespan
- compassion
- solitude
- spiritual
- chaplain
- hospice
- diseases
- psychological
- caregiver

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*(X-Ray News<sup>®</sup> is designed for continuing education for Tennessee Limited X-ray Certification. ARRT R.T.'s can get continuing education through our Self Learning Activities. (Call (615) 333-9600 for SLA Order Form.)*

**To receive 2 credits for this Continuing Education Direct Reading, read this article, read the Post-Test questions on pages 12-13, read the Answer Sheet Instructions on page 11, answer the questions on the Answer Sheet Insert, then mail the Answer Sheet to X-Ray News<sup>®</sup>.**

## Direct Reading DR-043

### Learning New Ways to Care

By Kim Callahan, R.T. (R) (ARRT)

Can you teach someone else to care? This is a question most of us, as educators, are faced with today. We as professionals care for our patients without giving it a second thought. However, if we take a moment to reflect, do we really know at what point we learned to care? At some time in our lives we were all students, and it is important that we remember what that felt like. We need to remember all the questions we had, as well as the fears of the unknown career world we were planning on entering.

Sometimes our lives are hectic as we juggle our family, job, school and other daily pressures. During this, we may forget how important caring is for our patients. If you have ever been on the other side of the waiting room as a patient, you can sympathize with the difficult situation faced by most of our patients.

First, a nurse comes in to take your history and any complaints you are having. Then you wait for the doctor to come in to see you. If this seems overwhelming, imagine the lab or x-rays to follow. After all this, there is still the prescription to be filled and follow up appointments to be made.

Since we are in the field of radiology, let's take a moment to look at what may occur in an x-ray department. We are all teachers, whether we realize it or not. "To the world you may be one person, but to one person you may be the world." We influence others without even knowing it, so I guess one can conclude that we are all teachers, and we are all students. If there is anything we can share, impart, or teach to another, it our duty to do so. It is also our duty to learn anything we can from any source available. Also, there are often new employees that are very much like students, and look to us for guidance. We must have an understanding ourselves of learning how to care, and how to teach others new ways to care. For these reasons, the word "student" will be used to represent all caregivers.

Since we are all in the field of radiology, let's see if there are some new thoughts we can understand, and therefore learn new ways to care for our patients, our co-workers,

and ourselves as caregivers.

The first thing to remember is that the patients are most often sick or they would not be in our department in the first place. More often than not, the patients may have some anxiety about what is going on around them. They may have fears of hearing bad results from their impending tests, or worse, they may be afraid of being hurt during the exams. In the rush of our day, many times the patients' feelings are quickly forgotten and are referred to as just another exam or procedure. I am sure we have all said something similar to "I will get this chest in room two, while you take the pelvis in room one." I know I have, so here is the problem: if we do this in practice, how do we teach our co-workers and reinforce our own practices? By example, of course.

From the moment of contact with the patient, we need to teach our students how to care for and deal with each patient as an individual. It is well known that there are many types of patients and each has his own personality. Some patients are easy to deal with, while others can be difficult at times.

It is our duty to teach students that, through experience, they can learn how to deal with the varying personalities of each patient.

First, let's take a look at how to deal with "problem patients." We can identify problem patients by both their actions and the feelings we perceive from them. We must keep in mind that the patient may be feeling frustrated, angry, or may just be uncertain about the procedures they are undergoing. As health care professionals, we must remain nonjudgmental of our patients. They may be undergoing undue stress or emotional strain. It is not our job to analyze why their behavior is such, only to try to be empathetic toward them. Simply by taking the time to listen to our patients, we can understand them, and can use that understanding to further help them reach their comfort zone.

*(Continued on page 5)*

(Continued from page 4)

As healthcare professionals, we need to be able to recognize the “problem patients.” Difficult patients are identified mainly by their behavior and by their actions. There has been extensive research done on the “problem patient.” There are several factors associated with identifying these patients.

**Please note the chart below<sup>1</sup>:**

- Feelings of guilt, worthlessness, incompetence, shame
- Loneliness, social isolation
- Fear of abandonment
- Life stress
- Concern about personal safety: at home, on the street, other
- Survivors of childhood abuse, sexual or other
- Irrational need for medical information or treatment
- Somatoform disorders
- Hypochondriasis
- Personality disorders: dependent, obsessive or paranoid
- Mood disorders: anxiety, panic, depression
- Borderline personality disorder
- Involvement with tort law or workers' compensation system

The most important thing we can do for our patients is recognize that they may be having frustrations or behavioral problems. Once we realize this, we can be assured that the patient is not angry with us; therefore, we should not get upset or frustrated with them. We should look at things from their perspective and try to make them feel as unthreatened as possible. The environment we work in can be structured to be comforting and reassuring for each of our patients.

Caring for these “problem patients” requires strong character and good interpersonal skills.

**There are ten skills that may be used to aid the health care provider in dealing with these particular patients<sup>1</sup>:**

- 1. Allow patients to vent their feelings.** Listen to the patient long enough to show your empathy, but remember to set practical time limits.
- 2. Strengthen your communication skills.** Remember to conform your explanations and guidance to each patient's needs.
- 3. Become a more effective history taker.** Ask the patient what has been happening with him recently. Answers to questions like these may give you insight into the behavior of the patient.

**4. Try not to judge.** Understand the difference between having high personal standards and trying to impose those standards on your patients. *View patients' disruptive actions as opportunities to learn more about their concerns, beliefs, and needs.*

**5. Remain calm and confident.** Stay in control while working with patients who are angry, depressed, manipulative, seductive, or overly dependent. Strong, self-confident professionals can tolerate such behavior; others cannot.

**6. Understand your own strengths and vulnerabilities.** Know when to set limits on patients' demands in order to protect yourself from burnout.

**7. Be patient.** The problem behaviors you see in patients have taken many years to develop, and human behavior seldom changes quickly.

**8. Be proactive.** Cultivate the ability to move ahead with patient care in the face of incomplete diagnoses and possible complex psychosocial problems.

**9. Avoid becoming an enabler.** It is unhealthy for a patient to be overly dependent on you. There is a proper amount for empathy.

**10. Respect your patients.** Protect patients' confidentiality, keep promises, and show that you respect their feelings.

By teaching our students to follow these simple guidelines, we can aid them in dealing with difficult situations.

Next, let's look at how to educate ourselves and our students on dealing with the terminally ill patient. This particular group of patients is in a different class altogether. We must remember that these patients are looking death in the face, and they are preparing for their final days. Because of this, these patients have the greater need of conversation and communication with their caregivers. Most of this group tends to feel isolated from the world around them; therefore, it is our job to make them feel as comfortable as possible.

In our busy day-to-day routine, we sometimes forget that our patients are people and not just exams. It is extremely important that our patients do not feel like objects instead of people. Keep in mind that facing death can seem very scary, as well as lonely. The patient may be withdrawn or depressed, and a simple smile and a friendly voice can booster their morale. Always remember to introduce yourself and explain the exam you are doing. This will help to alleviate fears the patient may be experiencing.

(Continued on page 6)

(Continued from page 5)

**There are seven objectives for working with the terminally-ill and dying patients<sup>2</sup>:**

- 1. Construction of a dependable working relationship** - Reassure the patient that he is not alone, and that you are there to help him.
- 2. Relieve loneliness** - Respond to patient questions.
- 3. Give hope** - Listen to your patient.
- 4. Reduce anxieties** - Provide human contact.
- 5. Accept apparently unjustified “negative feelings”** - Empathize with the patient.
- 6. Do not break down defense mechanisms** - Respect the patient; allow him to deal with his situation as he needs to.
- 7. Involve the family** - Give basic explanation to the patient’s family about procedures.

Take extreme care when choosing your words, and use the greatest amount of feeling possible. **Elisabeth Kubler-Ross** is renowned for her research into death and dying. She studied hundreds of dying patients and concluded that people pass through certain stages in their final period of life. While not *all* the patients pass through *all* the stages, they do work through most of them. Each patient is different; one particular individual may spend more time in one phase and less time in another. Also, the stages sometimes do not occur in order.

**There are five (5) basic stages that most go through in dealing with his own imminent death:**

**Stage 1. Denial and isolation (refusal)**

The first reaction of a patient told that he is incurably ill and will die soon is “Not me, that’s impossible” Sometimes this stage can be dramatic for the patient if he is informed too early or is unprepared. This refusal and self-denial allows him to cope with this event in his life.

The patient may believe that the diagnosis is false or a mistake (the x-ray or blood sample was confused with another patient), or even if he admits the diagnosis is correct, he is not acceptive of a fatal outcome.

During this stage, the patient may see several doctors to seek different advice, and to find alternative methods. The patient, however, should not be confronted with his behavior or thoughts during this phase. The patient has to take his own time in coming to terms with his diagnosis.

This stage usually does not last long, but is still a very disturbing time for the patient.

**Stage 2. Anger**

The angry stage is a very difficult one for the patient to go through. The patient’s anger not only affects him, but also those around him. This anger can be directed at his family as well as his health care providers. It is important to see that this anger is random and we should not feel that it is directed to us on a personal basis.

**Stage 3. Bargaining**

This particular stage is usually very short, but is very helpful for the patient. After he realizes that he is seriously ill, and that his anger will not change his situation, he starts to bargain in a similar way that children do. The desires of the patient in this phase seem to have a longer lifespan, a few days without pain, and peace. Kubler-Ross said, “This bargaining usually takes place with God, and is kept strictly secret, at the most being mentioned in discussions with the priest or minister. We have discovered that while talking privately to these patients, that many are willing to pay the price for an increased lifespan by ‘serving the Lord.’ As guilt and broken promises can underlie such offers, such comments should not be ignored. Cooperation with the priest or minister can be especially helpful at this stage.”

**Stage 4. Depression**

This phase brings with it a feeling of terrible loss. It is a stage where any loss the patient experiences may upset him. The most important loss the patient fears is that of his own life.

There are two forms of depression in the fourth stage:

**a. Reactive depression** to the loss of money, occupation, physical integrity or status. This is a very real problem for the patient and he would like to arrange everything possible he can before his death. It is important that the patient resolve these problems because he can relieve a great deal of stress from his remaining time.

**b. Preparatory depression** is the second form of depression. This form is completely different to that of the reactive depression. This form of depression requires a different reaction on the part of the caregivers. The healing process allows for the patient to think about his death and to prepare himself for it. Kubler-Ross explains it very plainly: “He himself must be allowed to grieve.” During this depression, the patient is very quiet and a lot of conversation is not needed. It is very important that the caregivers show comforting gestures, such as smiles and compassion, but not to the point of appearing patronizing.

**Stage 5. Acceptance**

After the patient has been through the previous stages, he can accept his death with more peaceful readiness. During this stage, the patient is most often in need of solitude, and the problems with the world outside do not seem to affect him as before his illness. Again, communication is not so much needed with words as with gestures. It is important to remember that the family at this point may need more help dealing with the situation than the patient himself.

(Continued on page 7)

(Continued from page 6)

We as caregivers must remember that what the terminally ill patient needs the most is to be cared for, not just cared about. It is important that we are familiar with the ways in which we can help those that are dying. *By simply listening, we may be doing more for our patients than we can ever realize.*

**The four main areas of care for the terminally ill are:**

**1. Physical** - As technologists, we want to do our job with the least amount of pain and discomfort to the patient as possible. Remember to smile and be sincere. The patient is probably going through various physical discomforts such as dehydration, weakness, vomiting, nausea, loss of appetite, and shortness of breath. Allow the patient to do as much as he can for himself. Don't force him down on the table or into difficult positions. Explain why you are placing him in an uncomfortable position. These simple steps will help to put the patient at ease and therefore make your job a great deal easier.

**2. Psychological** - It is very important that we take into account the feelings of those who are dying. They may be angry or sad. They may even express fear or anxiety. When faced with these feelings, many caregivers are uncomfortable. They wonder what they should say or do. There is no right thing to say or do, and several things may be helpful. Simply by our presence and our honesty and our listening, we can comfort the patient. Often a gentle touch can help the healing. Many dying people are comforted when caregivers gently touch their wrist or arm, or simply hold their hand during a difficult procedure.

**3. Social** - Just because a person is dying doesn't mean that they don't still need social contact. They worry about who will care for their family and loved ones. Caregivers can help by letting the patient talk about his or her concerns, and to think about their options. Sometimes we can be too helpful and cause the patient to feel helpless. It is important to be there to support the patient, but be sure to ask the patient in which areas he needs or wants help.

**4. Spiritual** - Terminally ill patients often wonder if they have made a difference during their lifetime. They may wonder if they have accomplished their goals and what will happen to them after death. Dying persons often bring up issues that are spiritual in nature. When they ask these questions, they are not usually looking for a certain response, but rather voicing their own questions. Again, our role is to simply listen and to be empathetic to the patient.

Terminally ill patients benefit from a combination of emotional support, flexibility, appreciation, and realization of their strengths and weakness. This helps the patient develop both closure and completion. Sometimes a social

worker can provide the patient with a social network for coping, and a chaplain can provide the patient with spiritual support.

We can't learn to deal with terminally ill patients without learning about the hospice concept. Hospice was born in medieval times. It symbolized a safe place for travelers, the sick, the wounded, or the dying to find both rest and comfort. In today's society, hospice is a program for the comprehensive care of patients and their families as they face life threatening diseases. Because hospice is centered on palliative care rather than curative care, the patient's *quality* of life is more important than the *quantity* of life. Hospice supports both the patients and their family's emotional, practical and spiritual needs. This care is only provided to those who have a limited life expectancy, and is done so regardless of age or type of illness.

**There are six steps to becoming and effective caregiver for those undergoing hospice care:**

- 1. Work and communicate effectively with the patient.**
- 2. Support the patient's spiritual concerns.**
- 3. Help to resolve the patient's unfinished business.**
- 4. Work with health professionals.**
- 5. Work with family and friends.**
- 6. Take care of your own needs and feelings.**

This is a challenging job, and the person you are caring for must deal with both the physical effects and psychological effects of his disease. Whenever we deal directly with these patients, it is our job is to be supportive to the best of our ability.

Some people, when facing a terminal illness, pretend that it is simply not happening to them. This can aid a patient in dealing with his disease, and is part of the denial stage discussed earlier. It can become harmful if the patient does things that make his illness worse, such as avoiding medication or participating in physically harmful activities. Sometimes the patient may simply be trying to protect loved ones from their situation. We can best help our patients by being willing to listen and talk about their illnesses.

Let your patients know that you are available to them and that they are your primary concern during your time with them. People with terminal disease want to share many things. They may express themselves in nonverbal ways as well, such as touching, gestures, or just asking that you be present to hold their hand.

(Continued on page 8)

(Continued from page 7)

Remember that terminally ill patients may become anxious or depressed. They may be leery of certain medical procedures that are upcoming, or they may be concerned for their future well being. Keep in mind that their anxiety may also be a side effect of the medicine they are taking, as well as the disease itself. Don't be afraid to seek advice from other caregivers in your area. They are full of experience and are usually more than willing to share their knowledge.

There are times when we are required to perform a procedure on a terminally ill patient that may be difficult for that patient. The first thing we need to do is establish the limits for that particular patient. Some good questions to ask are: "What area is most painful to you?" "How do you sleep, sitting up or lying flat?" "Do you think you could hold still for five minutes on my table?" It is helpful to do a trial run on the positioning for the procedure. See if you are able to obtain the correct positioning before going any further. More times than not in these situations, we have to be creative and unique in obtaining our films. Always carefully evaluate each situation differently.

Remember that no two patients are the same. Take time to explain all that you have to do, even if you think it may not be of importance to do so. Make each exam teamwork. Tell your patient what you have to do and ask him if he can do certain things to help.

Although we have discussed several aspects of dealing with terminally ill patients, one of the most often dealt with by caregivers are the patient's spiritual concerns. When one is faced with death, it is expected that questions will arise about what happens after. "What is a good life? Why am I here? What happens to me after death?"

As a caregiver, we can support the patient by thinking about their *his* answers to these questions. Let him come up with the answers—don't try to provide them. All of us have different faith and belief systems. Mine may not be the same as yours, but that does not make mine more right or wrong than yours. Spiritual questions are not answered easily. The most important thing is to show our support and to reinforce to the patient that these feelings are perfectly normal. Ask the patient what beliefs were important to him *before* the illness. They can still be important *during* the illness as well. Suggest that the patient seek help from his clergy or spiritual counselors. Let the patient know that there are support groups to assist him with his spiritual needs. Hospice can help locate someone with the necessary skills to help patients near the end of their lives.

If you notice that the patient seems seriously depressed due to their spiritual concerns or just their closeness to

death, steer them toward help from a mental health professional or clergy with mental health training. Remember that if medication is prescribed by the mental health professionals, it might take several weeks for the medication to have the desired effect. So try to notice these needs for depression as early as possible.

Again, always be available to listen. Allowing the patient to speak freely with you as an understanding person can help him put his thoughts into perspective, and also help him feel appreciated. The patient may want to try to make sense of his life by remembering past experiences and discussing them with us.

We must be careful to accept and respect the views that are different from our own. Let them discuss their faith and allow them to work through their own spiritual issues. It can be most difficult to not inject our personal views into the conversation. Share your views and feelings *only* if you are asked directly. *Always let the person you are caring for guide you; never impose your beliefs.*

Working with someone who is dying can sometimes bring up very difficult issues. These may include unfairness of the situation, fear of the unknown, fears of your own death, and confusion and anxiety about life itself. Talking with counselors, hospice staff or clergy can help you work through these issues. Don't be afraid to ask for help if you need it.

Feelings of anger are normal when caring for the terminally ill. For example, the patient in your care may become demanding at times. It is only human nature to become angry when you feel your life has been turned upside down by a terminal illness such as cancer. The feelings themselves are not of primary importance, but rather what you do with those feelings. We must first recognize *our* feelings of anger and find some appropriate way to express them. If we do not deal with our anger, it can get in the way of both our professional and personal lives.

**Listed below are five steps provided by hospice to help the caregiver deal with his own anger:**

**1. Try to see the situation from the other person's point of view, and understand his reactions.**

Recognize that the patients are under extreme stress and may not be able to deal with stressful situations as well as others.

**2. Express your anger in an appropriate way before it becomes too severe.**

If we wait until our anger becomes severe, our judgment will be impaired, and we are likely to make mistakes, or say or do things we will regret.

(Continued on page 9)

(Continued from page 8)

**3. Get away from the situation for awhile.**

Try to cool off before you go back and deal with what made you angry.

**4. Find safe ways to express your anger.**

Try beating on a pillow or yelling aloud in a closed room. Sometimes exercise, such as running, helps.

**5. Talk to someone about why you feel angry.**

Simply explaining our feelings to another person can help us to understand why we reacted as we did.

As caregivers, we can't expect ourselves to be perfect. We all make mistakes. The point is that we must not dwell on our mistakes. We must accept them and get beyond them as best we can. Repetitive, negative thoughts only rob us of our precious energy that we need to deal with our day-to-day tasks. The most important thing we can teach ourselves and other caregivers is to think positive, constructive thoughts, even when things are not going as we planned.

Before any of us begin care of the terminally ill, we must foresee the possible obstacles that we might face, and learn how best to deal with them.

**Below is a list of some obstacles other caregivers have faced:**

**1. The patients do not want to communicate.**

Your patients may not be ready to talk about their feelings. Your job is to be ready to listen when and if they decide to talk.

**2. If I don't do it, it won't get done.**

This attitude causes much undo stress. Remember, no one is indispensable. First, do the things that must be done, and then address the things you would like to see done.

**3. Not asking for help when it is needed.**

If we refuse to ask for help, we may get weighted down with all our duties and soon reach our breaking point.

There is one more type of patient that we in the radiology field often come in contact with: the radiophobic patient. Most people are aware of the connection between cancer and radiation. This fact is well documented and has led to much fear and anxiety among patients set to receive diagnostic radiology, and especially radiation therapy. Although x-rays were discovered over one hundred years ago by Wilhelm Conrad Roentgen, the general population is still in fear of radiation. This causes a problem for us as technologists when faced with dealing with these fearful patients. Our best weapon is still knowledge. If we learn how to properly handle radiation and how to minimize the effects, we can be confident and therefore help to relieve those fears in our patients.

First, let's take a quick look at where our patients get most of their information about radiation...television. Even today, popular television shows and movies use radiation in less than accurate ways to create excitement for the viewers. These stories lead to misconceptions and misunderstandings about radioactivity for the general public. Despite all the myths about radiation, it is a fact that radiation is the best studied carcinogen by man.

When discussing radiation and its cancer-causing ability with our patients, several concepts must be understood. There are two categories of the effects of radiation exposure: **a.** directly occurring, and **b.** those that occur on a statistical basis. For example, if a person is exposed to 100 rads of radiation (.1 Gray) or the equivalent of 100 cat scans to the total body, the results would be a slight decrease in white blood cells and platelets. This will happen to everyone who is exposed to the dose, and is a direct occurrence. The induction of cancer or genetic abnormalities, however, occurs only in a percentage of those exposed to a certain radiation dose. This would be a statistical occurrence.

Doses and dose rates are also important. If I sit out in the sun without any sun screen for three hours, I will likely get sunburn. If I sit in the same sunlight for three minutes a day for sixty days, I probably won't even develop a tan. In both cases I spent 180 minutes in the sun. The difference is the length of exposure and the healing time between exposures. The same is true for radiation damage. Fifteen rads given at once will temporarily decrease the sperm cells being produced in a male. If that same exposure is extended over a period of weeks or months, those changes will not be seen.

It is important to note that although cancer may be caused by DNA damage, DNA damage occurs on a regular basis even without the presence of radiation. All of our normal cells have the ability to repair genetic damage. If the damage is not identified or if the damage is too high for repair, cancer may result. Even though there is a definite link with high dose radiation and cancer, the same link exists biologically in nature. When viewed under a microscope, a lung cancer cell caused from radiation and a lung cancer cell caused by spontaneous occurrences are no different.

A recent theory called hormesis assumes that additional radiation given at low doses can cause some genetic damage, but also stimulates the cells to fix the naturally occurring genetic damage at an earlier stage. This means that a naturally occurring DNA abnormality that may later lead to cancer could be repaired due to the additional radiation damage triggered by the repair mechanism.

(Continued on page 10)

(Continued from page 9)

Therefore, this theory claims that there are fewer cancers when people are exposed to small amounts of radiation. It is difficult to believe that small amounts of radiation can be healthy, but there are a growing number of scientists and studies that are in support of this claim.

All of the diagnostic studies performed in the radiology area fall under this low-level radiation group. The risk of developing cancer from any one of these studies is minute, but, according to these studies, the benefit can be significant. Always consider the “risk versus benefit” aspect of the study.

It is important for us as caregivers to be aware of the various support groups and organizations that are available for our patients.

**Here is a list of websites that may be useful:**

- The American Cancer Society - [www.cancer.org](http://www.cancer.org)
- The National Childhood Foundation - [www.curesearch.org](http://www.curesearch.org)
- Online Peer Support for Cancer Survivors, Family, and Friends - [www.oncochat.org](http://www.oncochat.org)
- Hospice Hands - [www.hospice-cares.com](http://www.hospice-cares.com)
- Y-ME National Breast Cancer Organization - [www.y-me.org](http://www.y-me.org)
- National Cervical Cancer Coalition - [www.nccc-online.org](http://www.nccc-online.org)
- Lymphoma Research Foundation - [www.lymphoma.org](http://www.lymphoma.org)
- American Prostate Society - [www.ameripros.org](http://www.ameripros.org)

If we confront our patients armed with the knowledge that the studies we are doing are more for their benefit than harm, we can help disarm their fears. Remember—knowledge is power. It’s what we do with that power that makes us a better professional and a better technologist.

Teaching ourselves, our co-workers and our students to care for our patients is not an easy task. We as educators need to find creative ways to learn these much needed skills, and set examples for teaching them. For some, this comes easy, but for others the task is more challenging.

Let’s end with the same thought that began this article: “We are all teachers, whether we realize it or not. ‘To the world you may be one person, but to one person you may be the world.’ We influence others without even knowing it, so I guess one can conclude that we are all teachers, and we are all students. If there is anything we can share, impart, or teach to another, it our duty to do so. It is also our duty to learn anything we can from any source available. Also, there are often new employees that are very much like students, and look to us for guidance. We must have an understanding ourselves of learning how to

care, and how to teach others new ways to care. For these reasons, the word “student” will be used to represent all caregivers.”

Always be encouraging and understanding, and most of all listen to your students and find the areas they need the most help in. By doing this, we establish a lasting relationship that continues to go forward from teacher to student to patient.



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The Post-Test begins on page 12.

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## Direct Reading DR-043 Post-Test

### Learning New Ways to Care

By Kim Callahan, R.T. (R) (ARRT)

1. There are several factors used to identify the “problem patient”. Which of the following are included in those factors?
  1. fear of abandonment
  2. mood disorders: anxiety, panic, depression
  3. survivors of a lost loved one
  4. somatoform disorders
    - a. 1 & 2 only
    - b. 1, 2 & 3 only
    - c. 2 & 3 only
    - d. 1, 2 & 4 only
2. What are some skills we can use with our problem patients?
  1. allow patients to vent their feelings
  2. avoid becoming an enabler
  3. be proactive
  4. judge and handle the patient accordingly
    - a. 1, 2 & 3 only
    - b. 1, 2 & 4 only
    - c. 1, 3 & 4 only
    - d. 1, 2, 3 & 4
3. Which of the following is essential to avoid burnout?
  - a. understand your own strengths and vulnerabilities
  - b. always give in to the patients’ demands and needs
  - c. tell the patients how stressed you are
  - d. take on more responsibilities
4. When patients ask questions about spiritual concerns, what should you do?
  - a. listen and try to get them to voice their questions
  - b. give them your beliefs and comfort them according
  - c. don’t let him start remembering past experiences
  - d. be an enabler
5. Terminally ill patients have a greater need of conversation and communication with their caregivers.
  - a. true
  - b. false
6. Which of the following is **NOT** true about working with the terminally ill patient?
  - a. reassure the patient that he is not alone and that you are there to help him
  - b. don’t involve the patient’s family since this can cause conflicts
  - c. listen to your patient
  - d. provide human contact
7. What person is well known for his/her research in death and dying?
  - a. Wilhelm Conrad Roentgen
  - b. Thomas Edison
  - c. Elisabeth Kubler-Ross
  - d. Marie Curie
8. Put in order the five stages that most terminally ill patients experience.
  1. anger
  2. denial and isolation
  3. depression
  4. acceptance
  5. bargaining
    - a. 1, 2, 3, 4, 5
    - b. 1, 5, 4, 2, 3
    - c. 2, 1, 5, 3, 4
    - d. 5, 3, 1, 2, 4
9. The stage of denial keeps the patient from coping with this event in his life.
  - a. true
  - b. false

*(Continued on page 13)*

**See page 11 for instructions on the Answer Sheet Insert**

(Continued from page 12)

10. Which of the following is/are type(s) of depression seen in the fourth stage?
1. reactive depression
  2. proactive depression
  3. preparatory depression
    - a. 1 & 2 only
    - b. 1 & 3 only
    - c. 2 & 3 only
    - d. 1, 2 & 3
11. Which of the following is **NOT** listed as one of the four main areas of care for the terminally ill?
- a. physical
  - b. psychological
  - c. social
  - d. funeral support
12. Hospice is centered on which type of care?
- a. curative
  - b. palliative
  - c. supportive
  - d. practical
13. Which of the following is considered a step to becoming an effective caregiver according to Hospice?
- a. take care of the patients' feelings and needs, but not your own
  - b. work with the patient only
  - c. support the patient's spiritual concerns
  - d. work and communicate with health professionals, not the patient
14. How can caregivers best help with the patients' spiritual concerns?
1. show support
  2. ignore the concern
  3. reinforce to the patients that their feelings are normal
  4. tell them there is nothing to worry about
    - a. 1 & 2 only
    - b. 1 & 3 only
    - c. 2 & 4 only
    - d. 1, 2, 3 & 4
15. If you notice serious depression in a patient due to his spiritual concerns you should:
- a. leave him alone - he will get over it
  - b. steer him toward help from a mental health professional or clergy
  - c. it is not our job to analyze why his behavior is such
  - d. tell him all will be taken care of
16. Which of the following is **NOT** recommended by Hospice in dealing with the caregiver's anger?
- a. get away from the situation for a while
  - b. try to see the situation from the other person's point of view
  - c. find safe ways to express your anger
  - d. express your anger openly and vividly for all to see
17. Which of the following is an acceptable and safe way to express anger?
- a. yelling aloud at your patient
  - b. throwing objects at the wall
  - c. beating on a pillow, or exercise
  - d. taking it out on your spouse
18. Where do patients get most of their information about radiation?
- a. books
  - b. television
  - c. newspaper
  - d. other people
19. Cancer can be caused from damage to what?
- a. red blood cells
  - b. white blood cells
  - c. platelets
  - d. DNA
20. Which theory assumes that additional radiation given at low doses allows cells to fix the genetic damage?
- a. hormone therapy
  - b. hydrosis
  - c. hormesis
  - d. hyperthyroidism

Please also answer the following question on your answer sheet. It *does not* count toward your score.

21. Did you enjoy this article?

- a. yes
- b. no
- c. undecided



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## Change of Address Form for *X-Ray News*<sup>®</sup>

**OLD:** Name \_\_\_\_\_

Address \_\_\_\_\_

\*\*\*\* (Is this your *HOME*  or *WORK*  address? Please check one.) \*\*\*\*

City, State, Zip \_\_\_\_\_

Home Phone (\_\_\_\_) \_\_\_\_\_; Work Phone (\_\_\_\_) \_\_\_\_\_; Fax (\_\_\_\_) \_\_\_\_\_

**NEW:** Name \_\_\_\_\_

Address \_\_\_\_\_

\*\*\*\* (Is this your *HOME*  or *WORK*  address? Please check one.) \*\*\*\*

City, State, Zip \_\_\_\_\_

Home Phone (\_\_\_\_) \_\_\_\_\_; Work Phone (\_\_\_\_) \_\_\_\_\_; Fax (\_\_\_\_) \_\_\_\_\_

**If your name or address has changed, please mail this form to:**

**X-Ray News<sup>®</sup>, 4721 Trousdale Dr., Ste. 120, Nashville TN 37220**

**OR Fax to (615) 333-0171**