The Psychology of Radiation Safety
Simple Tools for Health Physicists
Continuing Education Lecture
CEL 9  7 – 8 am
Thursday, June 30, 2011
Annual Meeting of the Health Physics Society
West Palm Beach, FL

Presented by
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The Psychology of Radiation Safety
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Agenda

7:00  Welcome, Introductions, Review Agenda

7:05  Think of a scenario where you would like to have better communication skills

7:10  Greatest challenge – dealing with feelings

7:15  The most powerful tool – Active Listening

7:25  Roadblocks to effective communication

7:35  Identifying images, “What’s so bad about that?”

7:45  Eight steps from cause to effect

7:50  Practice with your communication scenario

8:00  Summary, Questions, Evaluations
You do not have to be a trained psychologist to use a few simple counseling tools for helpful responses to radiation workers or members of the public. The first thing to remember is that all fears are OK. Our role in radiation safety is not to change people’s fears, at least not directly. Telling people, “You do not need to be afraid,” may not be the most helpful approach. A better approach may be to provide good information or evidence (hands-on is best) as a basis for people to change their own views. Before a fearful person is ready to hear our best information, however, we need to let them know that their fears are OK and we understand their feelings. We can do this by an easily learned tool called “Active Listening.” We will practice this tool. Another useful tool is to ask, “What do you think will happen to you, if you are exposed to radiation?” The answers to this question will help identify the underlying images that are driving a person’s fears.

Behind all anger or fear there is a powerful image of unacceptable consequences. Remember not to laugh or offer a judging response to whatever people may say. Their images are based on their imagination or perceptions and may have no connection to reality as we know it or believe. Keep in mind that each person’s perception is truth to them. Fearful radiation images may also be identified by responses to the question, “What’s so bad about that?” This question has to be used gently and is not appropriate when a person is in the midst of their anger or fear. The answers to this question are at a subconscious level and not accessible at the time of strong emotion. We also cannot answer this question by ourselves. When we attempt to answer this question, we will likely stop when the answers become difficult. You may have to raise this question repeatedly to peel away the layers (like an onion) to get to the primary underlying image. Another tool for persons asking about safety is to help them answer the question for themselves by guiding them through the eight steps from radiation cause to effects. 

To get the most value from this CEL, attendees should bring real scenarios for practice of counseling tools.
Perhaps our greatest challenge when talking with people about radiation risks is when the dialogue gets emotional. We may find ourselves not knowing what to do when our best technical data and logical analyses are not accepted by those who are afraid of radiation. What can we do when confronted with hypothetical questions which do not seem to have clear rational answers? How can we respond when our best answers seem to be causing the other person to become more and more upset? Suppose we do not have the data from which to give a good technical answer? Is there any hope?

The effectiveness of any communication is not about the message that we send, but the response of the other person. Thus, the best opportunity for communication is to start with what the other person is saying. This may be difficult for specialists in radiation safety when the information provided by the other person does not make any technical sense. Typically we want to hear good data for which we can apply our well developed analytical logic to resolve the problem and give an answer accordingly. When the other person appears to be speaking emotional nonsense, what options do we have? The answer is active listening. This may be the single most powerful tool for effective risk communications. Active listening does not take ownership of the problem. In other words, we do not have to give a problem-solving answer. Active listening is also non-defensive and avoids a dozen roadblocks to effective communications. Active listening is based on the insight that every communication has two parts, a feeling or emotional part and a content part. By training and experience, we are usually very good at hearing the content part of a message. Identifying the feelings is more difficult. For technical types, it may help to suggest that all feelings can be captured by synonyms of four words, mad, sad, glad, and afraid. An active listening response paraphrases the content and identifies the underlying feeling. For example, a person says, “Radiation, I do not want anything to do with that!” An active listening response could be, “You are worried that radiation may be harmful for you.” By hearing the feelings first, we may find that the feelings are defused (when you really hear the feeling, the other person does not have to keep trying to express that feeling). Hearing feelings also opens the door for further dialogue and helps identify the real issues. In this session we will describe the process of active listening and provide opportunities for practice.

Learning Objectives

Upon completion of this presentation, the attendees should be able to:

1. Recognize emotional situations where radiation risk communication tools will be helpful
2. Hear and identify the feelings involved in these situations
3. Reflect the message content and the feelings by Active Listening
4. Respond to feelings non-defensively
5. Begin practicing Active Listening skills to deal with emotional situations
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Hearing Feelings - 1

Would our jobs as health physicists be easier if people left their feelings at home? Dealing with feelings is perhaps the most difficult aspect of communications which we confront either as health physicists or in our daily lives. We all have feelings, we get angry, sad, afraid, and happy. We may even understand our own feelings, but the feelings of others are often difficult to comprehend. When we apply our normal approach to logically analyze feelings, we find ourselves baffled by the effort. Analyzing feelings, or the associated circumstances related to the feelings, does not seem to provide answers that we can understand.

When someone speaks in the feeling language, it seems like a foreign language. We hear the words, but they make no sense. They provide no data for logical analysis. In the process of trying to understand someone else's feelings, so we can provide answers, invariably our own feelings get hooked. We may easily get frustrated, annoyed, angry, or fearful of where the feelings may lead. When confronted with feelings, we want to run away. Our natural preference is to avoid feelings, because we don't know what to do with them. For most of us feelings are outside of our comfort zone and to be avoided as much as possible.

What can we do when feelings are an issue?

A counselor and friend, Jim Morgan, stresses two principles for consideration:

1) feelings are more important than what is said, and

2) hearing feelings is more important than solving problems.

But, How Do We Hear Feelings?

Hearing feelings is a skill that can be learned and developed by anyone. Not many, if any, are born with a gift for hearing feelings. Even gifted counselors take years of specialized training to master effective listening skills. However, you can begin today to practice what is called active listening. This is a process for hearing and reflecting feelings, described in several books by Dr. Thomas Gordon.*

To reflect feelings, you respond with a synonym that describes the feelings you perceive. For example, "You are feeling let down by your boss." Your response shows that you heard the message and the feelings which accompany the message.

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Hearing Feelings - 2

Perceptions of radiation risks are tied to feelings about the consequences of exposure to radiation. Those with greater concerns will likely have stronger feelings. These feelings may be expressed as outrage and resistance to hearing the best information which HPs have to provide.

Workers and their families at Paducah are now expressing their outrage at finding out they were exposed to plutonium. And now workers have cancer, which they are convinced could only be due to radiation exposures from plutonium that they were not told about. Will good logical scientific information answer their concerns?

Feelings Are the Issue Here!

The workers are angry at big government taking advantage of working people in the name of the war effort. They are angry about getting cancers and other ailments that should have been prevented by the government. They are angry that their lives should be threatened unknowingly, so they could not protect themselves.

In their hearts, they feel hurt that big government doesn't care about them. If anyone cared, how could they let workers be exposed to deadly plutonium?

What Do These Workers Expect Now?

Most of these workers probably expect that the government will try to cover up or minimize their exposures to plutonium and other radioactive materials. They expect HPs will try to tell them in scientific jargon that there is no cause for alarm. Meanwhile they feel they are destined to die horrible deaths from radiation, alone, abandoned, destitute, and uncared for. Will anyone hear their concerns and fears?

What can HPs Do?

The normal response of HPs is to gather the best available information for risk assessment by logical analysis of potential exposures and effects. This is the thinking approach favored by most HPs. Unfortunately, most of the workers are looking for a response in the feeling language and the best thinking response of HPs may not be heard. Effective communication with these workers will require speaking in the feeling language with words and actions that convey caring, compassion, empathy, comfort, solace, consolation, sympathy, sensitivity, understanding, commiseration, and feelings.

Speaking in the feeling language will seem difficult and unnatural for most HPs. But, skillfulness in this language can be achieved, as we will see in future Insight columns.
People don't care how much you know, until they know how much you care!

This simple axiom may be the central key to dealing with people's feelings about radiation. When we are seen as pro-nukes, the assumptions are that we are being paid for supporting nuclear technology and we don't care about radiation effects on people. But, we do care! We care deeply, but how do we show it? Can we show how much we care, by demonstrating our technical knowledge of radiation safety? Most people, who are frightened by radiation, may not consider our credentials as measures for credibility.

Our credentials may gain us the opportunity to speak on a radiation issue, but our credibility may be related more to how we present our message, rather than what we have to say. For frightened people, the issue is about their feelings or fears, it is not about technology or the logical analysis of risks. They are not looking for technical answers, that they cannot understand. They are looking for indications that their fears are heard, understood, and responded to.

Unfortunately, for most HPs, feelings are part of our shadow (Insights #44-53). Feelings are an aspect of the world that we do not accept for ourselves and we have tried to avoid our entire life. Consequently, we have not developed an ability to communicate in the feeling language. We may see those who communicate in the feeling language as illogical and irrational. We may doubt their motivations and see them as wrong.

How Can We Show that We Care?

To show that we care, we have to learn to communicate in the feeling language. This will seem exceedingly difficult, but it is not impossible. We can show caring by our attempts to communicate in the feeling language, even when we are inept. Feeling types will appreciate the effort and usually want to help us make the translation from our normal thinking approach.

One possibility is to ask for help to understand the feelings. People want you to understand their feelings and will usually try to help. This should not be a challenge to feeling types to defend their feelings to your logical satisfaction. Feelings are not to be logically analyzed and judged, they are only to be heard.

How Can You Show That You Heard the Feelings?

Hearing feelings is demonstrated by paraphrasing the feelings as you heard them. Check next month for more
Hearing Feelings - 4

What do you say to a man who says, "I don't want anything to do with radiation!"? Do you try to tell him that we live in a sea of radiation and it cannot be avoided? Do you tell him that radiation is one of the primary means of treating cancer? Or, do you respond with the active listening approach?

Active Listening

This is an approach to verbally show acceptance of the other person and respect for his feelings. The statement of the man above invites us to give data to try to change his mind about radiation. As well meaning as such efforts may seem, however, they discount his feelings, which is his reality. Dr. Thomas Gordon* has identified 12 such categories of responses, including:

1) ordering, directing, commanding,
2) warning, admonishing, threatening,
3) exhorting, moralizing, preaching,
4) advising, giving solutions, suggestions,
5) lecturing, teaching, giving logical arguments
6) judging, criticizing, disagreeing, blaming
7) praising, agreeing
8) name-calling, ridiculing, shaming
9) interpreting, analyzing, diagnosing
10) reassuring, sympathizing, consoling, supporting
11) probing, questioning, interrogating
12) withdrawing, distracting, humoring, diverting.

Active listening is a way of responding that does not discount feelings. The listener does not send a message of his own, such as an evaluation, opinion, advice, logic, analysis, or a question. Instead, he responds with only what he feels the speaker's message meant, nothing more, nothing less. An active listening approach to the man above would take into account his apparent feelings. The listener's response was, "Radiation is scary, isn't it?"

The man then said, "Yes it is, because you cannot feel it, see it, or taste it and you have no way of knowing when you are being exposed." Active listening gives the other person permission to express his feelings. All feelings are OK. Active listening does not try to change feelings. Whether we agree or not, we do not have to make the other person wrong for their feelings.

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"No contaminated materials should be released for recycle and all previously released materials should be recalled!!" These were the words of a person protesting at a Nov. 1 NRC workshop on criteria for release of contaminated materials. Protesters are claiming that the recycling of contaminated metals will result in radioactive forks, baby carriages, and braces for children's teeth. These activists are playing on peoples' fears of radiation to build public opposition. How will the public respond?

These protesters know that feelings are the most powerful of all motivators. Whatever the facts may be, risk decisions are more often a matter of feelings rather than logic. This is especially true when the decisions involve risks with great uncertainty, such as low dose radiation effects. Consequently, a logical presentation of the facts may not lead to changes in feelings. The facts that support the feeling decisions will be heard and the facts that do not will not be heard or believed.

Interestingly, the protesters at the NRC workshop also said that they felt they were wasting their time in this meeting when the technical people had already made up their minds. They all concluded that their efforts would be better spent communicating with the public, where their views (feelings) would be appreciated. This approach follows the guidance of WAND (Women Against Nuclear Destruction) which says that women should not attempt to argue in the domain of facts, figures, and technojargon, but rather they should use the power of their emotions to speak out with feeling and conviction on radiation issues.

Is There Any Hope for Risk Communication?

One answer is to use Active Listening to open doors for dialogue. By this approach, you respond only with your understanding of the speaker's feelings and message. This approach allows you quickly and accurately to get to the real issues of concern. You do not respond with an evaluation, opinion, advice, analysis, or questions. Such responses come from "your own stuff" so you can take control of the communication. Leaving the initiative with the other person is not easy, especially when you believe they are misconstruing the facts. Also, as HPs, our lives are about giving answers and we want to immediately respond with "our" answers.

If we want others to hear our good scientific information, we first have to listen to their feelings. Active Listening is our best hope for connection with the concerned public.
Why do we have so much trouble hearing feelings? One reason is that our own feelings get hooked. Whether we realize it or not, the emotional elements of another person's communication do affect our feelings. When we hear anti-nuclear statements, we may feel frustrated, annoyed, perplexed, or criticized. When such feelings get hooked, our critical judgment immediately takes charge and we feel a need to defend ourselves.

Our defensiveness can proceed in two directions, fight or flight. In our minds most of us want to avoid confrontation and we would prefer to run away. However, if pushed to the point of response, we will likely attack. Our normal attack is to challenge the facts or the logic of the other person.

How do we respond to demands for zero exposures to radiation or claims for radiation effects? There seems to be no logical basis for such demands. Furthermore, such demands seem critical of our professional understanding and judgment about radiation risks. After all, as specialists in radiation safety, are we not the holders of the truth on matters of radiation safety? We usually see ourselves as right and we may see the criticizers of our technology as either misguided or having ulterior motives.

We are often annoyed at what appears to be abuse of good science to justify anti-nuclear demands. We are appalled at how easily people accept presumption of causation. Why do people believe that if radiation is there, it is automatically the cause of health effects? And worse even, if the people did not know of their exposures, they seem to see the risks or the effects as greater.

We live in an age of enlightenment where we believe that every effect must have a cause. And, many believe that cause is the result of negligence of bureaucracy and technology. They demand retribution by emotional appeals arising from their own sense of justified anger.

Will our logical responses prevail? How many billions of dollars have we spent to logically demonstrate the safety of radioactive waste disposal options? Have our logical analyses been successful? We may ruefully conclude the answer is NO. Then, if logic is not prevailing, what is? The answers, we may conclude with great frustration, are feelings. Feelings that we cannot hear and for which we have no adequate response. Is there a way not to be frustrated and defensive?
Hearing Feelings - 7

There are two fundamental principles for listening that are particularly difficult for health physicists, namely;

1. **Feelings are more important than what is said**
2. **Listening is more important than solving problems.**

When a reporter or a member of the public asks questions that seem illogical or emotional, we should be wary of attempting to correct the logic. We may find ourselves making technically logical arguments, when the real issues of concern to the reporter or her audience are conflicts in views, values, and feelings. This is not to say that we should condone erroneous technical logic, but we might do better to deal with the feelings first and get the audience on our side before attacking differences in logic.

When we address the logic first we may find that we have won the battle, but lost the war. The reason that hearing feelings first is so difficult for managers and technical professionals is that we want to analyze the situation to figure out a solution. Health physicists, in particular, are generally very adept at problem solving. This is what we are good at and this is what we get paid for. Now, there is nothing wrong with problem-solving, which is often necessary for resolving issues. However, there may be pitfalls in moving to problem-solving too quickly.

We may discover that while trying to solve the problem, we are:

1. Solving the wrong problem
2. Solving problems, when the audience is not looking for answers
3. Missing feelings, which the audience wants us to hear
4. Taking away the opportunity for others to solve their own problems
5. Not allowing others to build problem-solving skills
6. Inferring that others do not have the right, responsibility, or capacity to solve their own problems
7. Giving our answers, which others can reject with the game of, "Yes, but ......."

Giving answers to problems may seem like the most expedient way to resolve the immediate issues, and that may be true. We have to consider the circumstances to determine whether a problem-solving approach will meet the needs, maintain or enhance credibility, and keep the doors open for continuing communication. As with all communications, *it's not a matter of right or wrong, but does our approach bring us closer to our communication goal.*
The Psychology of Radiation Safety - Simple Tools for HPs

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Approach for Today
- Think of a scenario where you would like to have better communication skills
- Greatest challenge – dealing with feelings
- The most powerful tool – Active Listening
- Roadblocks to effective communication
- Identifying images
- Eight steps from cause to effect
- Practice with your scenario
- Summary, Questions, Evaluations

Communication Scenarios
- Please describe one or more scenarios for application of Active Listening
  - Real or hypothetical
  - Communication with (suggestions.....)
    - The media
    - Emergency responders
    - State or local government staff
    - Co-workers
    - Members of the public
    - Friends or Family

Scenarios

What is Best for Your Scenario?
- Will a better understanding of radiation, risks, technology be most helpful?
- Will understanding of feelings, fears, and risk perceptions be most helpful?
- What have you tried or thought of trying?
- Are there magic words that will make a difference?
- Is there “An answer?”

Challenges for HPs
- Which may be the greatest challenge for HPs day-to-day
  - Issues about technology
  - Issues involving people
- Most of us have extensive training to deal with technical issues
- How much of our career has been devoted to dealing with people issues?
  - Such as understanding how people feel?
  - Developing risk communication skills?
Our Greatest Challenge
- When the dialogue gets emotional
- What can we do when our best information is not accepted?
- How do we answer hypothetical questions?
- What if our answers cause more upset?
- What if we do not have enough data?
- Is there any hope?

Questions about Feelings
- Would our jobs be easier if people left their feelings at home?
- Are feelings difficult to comprehend?
- Does logical analysis of feelings help?
- Are feelings a foreign language?
- In our best efforts, do our own feelings get hooked?
- Would we like to run away?
- If we open the door to feelings, will we be overwhelmed?

Building Bridges
- Canyon of Differences
- What's in It for me?
- Communication Tools
- Active Listening
- Listener's Stance
- Goal is for Adult Response - Ability
- \( R_t + R_p + C_s \) to TCOL
- Be aware of feelings
  - Anxiety, defensiveness
  - How to identify defensiveness and stay non-defensive

Active Listening
- Hearing and responding to feelings
- A skill that can be easily learned
  - Through practice
- Most powerful tool for risk communication
- Process of Active Listening
  1. Paraphrase the content
  2. Respond with a synonym that describes the feeling
  3. Let the other person correct you as needed

Listening
- Communication is not the message you send, but the response that you get!
- Response is in two forms:
  - Verbal and visual
- Listening is more than hearing data for understanding
- Risk messages also involve feelings
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What to Do With Response You Get
- Communication is a two way process
  - observe verbal and visual cues
- Hear feelings - How?
- Use Active Listening to develop rapport
  - restate content and feeling of message
  - keep ownership of problem with other person
- Be aware of roadblocks that may prevent open communications

Active Listening
- Hearing the message and the feelings
- Why bother?
  - To establish rapport as basis for presenting your risk message
  - To get down to the real issue of concerns for radiation risks
- Active listening is not easy for technical experts and managers

Hearing and Reflecting Feelings
1. Best answer for upset person
2. Describe feeling we perceive
   1. Do not analyze or evaluate
   2. Paraphrase content and reflect feelings
   3. Let other person correct your understanding
3. Temptation for technical people
   1. Go directly to technical answers
   2. Without addressing or connecting with feelings

Why Not Troubleshoot Right Away?
- By giving answers first
  - You miss an opportunity to connect with feelings and real reasons for concern
- Hearing feelings establishes basis for rapport and credibility
  - They may then "hear" your answers
- When you go directly to answers you may discover you are answering the wrong question
- Fearful people may not want specific answers, but rather to know that someone hears their feelings

Why Hear Feelings Rather than Give Answers?
1. Hearing feelings establishes rapport and credibility
2. You may discover your answers are about the wrong question or concern
3. Fearful person may not expect answers,
4. People may not care how much you know, until they know how much you care

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**Asking Questions vs Giving Answers**
- People can discount your answers
- Position yourself as a resource to help people find their own answers
  - Behavior guided more by their own answers derived from observations
- Provide options for experience or observation
- Encourage skepticism

**Natural to Give Answers**
- Not a matter of right or wrong responses
- Two precautions when giving answers:
  - Are you answering the right question?
  - Who owns the problem?
- The giver of answers assumes the responsibility
- Giving answers sets up opportunities for adversity

**Roadblocks That May Close Communications**
1. Ordering, directing, commanding
2. Warning, threatening, promising
3. Moralizing, preaching, shoulds, oughts
4. Advising, giving solutions, suggestions
5. Teaching, lecturing, logical arguments
6. Judging, criticizing, disagreeing

**Roadblocks That May Close Communications**
7. Praising, agreeing
8. Name calling, labeling, stereotyping
9. Interpreting, analyzing, diagnosing
10. Reassuring, sympathizing, consoling
11. Probing, questioning, interrogating
12. Withdrawing, distracting, humoring, sarcasm, diverting, indirection

**Roadblock 11- Asking Questions**
- How can asking questions become a roadblock?
- Typically when technical people ask questions – it is to gather data for giving answers
- A better use of questions could be to lead the other person to resolve their own problems

**Review & Questions**
- Greatest challenge for HPs
  - Dialogues that involve emotion (feelings)
- Answer is to hear feelings
  - By Active Listening
  - Paraphrase content and feelings
- Requires moving outside our comfort zone
- As trained “givers of answers” we want to quickly get into troubleshooting
How Not to Respond
- Avoid giving an evaluation, opinion, advice, analysis, or questions
- Such responses come from your own stuff, so you can take control of the communication
- Hard to leave initiative with other person
- Especially when you think they are wrong or misconstruing the facts
- Try to avoid getting defensive

Communicating to Hear Feelings
1. Develop **Active Listening** skills
2. Talk in terms of -
   - personal values... caring...
   - harmony... appreciation...
   - compassion... what is good for the people involved.
3. Use criticism gently - look for harmony first
4. Be personal - avoid complex analyses

Name Some Feelings

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<td>Does not take away from:</td>
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Active Listening Approach
- Respond to your perception of speaker's message and feelings
- There are four feelings:
  - Mad, Sad, Glad, Afraid
- Opens doors to "real issues"
- Does not take away from: Other person's right, responsibility, and capacity to solve their own problems

Examples of Active Listening
- "I don't want to go near radiation"
  - "Radiation makes you nervous"
- "Yes, I might still like to have children"
  - "You are afraid that radiation may affect whether you can have children"
- "Yes, I do not want children with 3 eyes"
  - "So your real concern is whether radiation will affect future children"
- "Yes"
  - "Ok, here is what I have learned"

Hearing and Reflecting Feelings
- Fears are best handled by hearing and reflecting feelings
- Do not say, "I know how you feel."
  - You can never know another's feelings
- Describe the feeling in your own words
  - Let the other person correct you
- Four feelings - Mad, Sad, Glad, and Afraid
- Dialogue process
  - Paraphrase and reflect
  - Do not interpret or rationalize
Examples of Active Listening

- "Radiation, I don’t want anything to do with it!"
  - "Radiation is scary isn’t it?"
- "I don’t believe a word you are saying!"
  - "You are concerned that I may not be telling you the truth?"
- "I know what happens when you are exposed to radiation?"
  - "If you are exposed to radiation, you feel that something bad will happen?"

Listening is the Key

- People’s concerns are about images of losses or consequences of radiation
- Identifying the basis for fears requires listening and asking lots of questions
  - Rather than giving answers
- Active listening is difficult for technical people whose lives are about giving answers
- Giving answers also takes ownership of the problem

Axioms on Listening

- Feelings are more important than: What is said
- Listening is more important than: Solving problems

Hearing Feelings

- Have you noticed when people are repeating their story?
- People will keep on repeating until you hear the feelings
  - When you hear the feelings they do not need to tell you their story again
- When you really hear the feelings, the feelings will go away

Listening is the Key

- Worker concerns are about images of losses or consequences of radiation
- What is the basis for upset or fears?
  - Upset ← fear ← images ← hurt
  - sadness ← want
- Identifying the basis for fears and upset requires listening and asking lots of questions
  - Rather than giving answers
- Giving answers also takes ownership of the problem

Identifying Images / Fears

- Dealing with upset or fears is about dealing with the underlying images
- Images can be identified by the question, “What's so bad about that?”
- This has to be used with sensitivity
  - Do not use when a person is fearful
  - The reason for fears is outside of their awareness
- May need to raise the question several times
  - Like peeling away layers of an onion
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**Common Fears**
- Dying
- Loss of control
- Loss of self
- Loss of home
- Sickness
- Loss of livelihood
- Loss of family
- Loss of respect

**Steps from Cause to Effect**
1. What are properties of radiation - $\alpha, \beta, \gamma, x$-ray? Form and quantity?
2. Where is it located?
3. How is it contained?
4. How will it move in the environment?
5. What are the exposure conditions?
6. How much energy is deposited in the body?
7. What is the health risk?
   - Based on evidence of actual effects
     “It is actually very difficult to seriously harm someone with radiation.”

**Responding to Concerns**
1. Hear feelings first
2. Check out views and images
   1. Ask yourself, “What’s so bad about that?”
3. Establish rapport by identifying with the perceptions - (Active Listening)
4. Share personal experience
5. Lastly, provide factual information

**Practice of Active Listening**
- Review one of your scenarios
- Pick a partner, decide who goes first
- Speaker - Briefly describe the situation
  - 10 to 15 seconds at most
- Listener – Respond with content and feeling
- Switch roles, share scenario and respond
- Note: This is NOT troubleshooting

**How Was Your Experience of Active Listening?**
- Did it work?
- Was it difficult?
- Were you able to stay with the model of Active Listening?
- Were you tempted to troubleshoot?
- Did you find yourself giving answers?

**Review**
- Greatest challenge for HPs
  - Dialogues that involve emotion (feelings)
- Answer is to hear feelings
  - By Active Listening
  - Paraphrase content and feelings
- Requires moving outside your comfort zone
- As trained “givers of answers” we want to quickly get into troubleshooting
Review

- Troubleshooting takes ownership and may solve wrong problem
- Listener’s Stance
  - $R_1 + R_o + C_o$ to TCOL
- Avoid defensiveness
  - Active listening is NON-defensive
- Four feelings – Mad, Sad, Glad, Afraid
- Axioms on listening
  - When you hear the feelings, they go away

Summary

- Many workers may have concerns for possible exposures to radiation
- Use Active Listening to hear their fears and feelings
- Ask lots of questions to determine the basis of their fears
  - Ask, “What’s so bad about that?”
- Provide information only as a resource
- Help workers find their own answers
  - Steps from cause to effect

Learnings from this Session

Questions & Evaluation
Experience

2010 – pres. Director, Radiation Safety Counseling Institute. Workshops, training, and counseling for individuals, companies, universities, or government agencies with concerns or questions about radiation safety. Specialist in helping people understand radiation, risk communication, worker counseling, psychology of radiation safety, and dealing with fears of radiation and nuclear terrorism for homeland security.


1984 - 2007 Director, Radiation Safety Academy. Providing x-ray and radiation safety training, audits, and consulting to industry (nuclear gauges and x-ray), universities, research facilities, and professional organizations.

1988 - 2006 Manager and Contractor to National Institutes of Health (NIH) for radiation safety audits of 3,500 research laboratories and 2,500 instrument calibrations a year, along with environmental monitoring, hot lab and analytic lab operations, and accelerators and x-ray inspections.

1990 - 2005 President of Key Technology, Inc. a manufacturer and primary laboratory for radon analysis with over 1,500,000 measurements since 1985. Primary instructor at Rutgers University 1990-1998 for radon measurements, radion measurements, radiation risks, radiation instruments, and radon risk communication courses.

1986 - 1988 Laboratory Director, RSO, Inc. Directed analytical programs and Quality Assurance for samples from NIH, Aberdeen Proving Ground, radio pharmaceutical companies, and the nuclear industry.


Health Physics and Professional Activities


Publications

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