

Is Telling the Truth about Radiation the Answer to Risk Communication?

Health Physics Society

Annual Meeting

Baltimore, MD

Technical Presentation

5:00 pm, Wednesday, July 16, 2014

(WPM – C.9)

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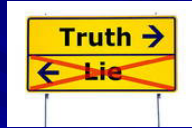
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Overview

- Have we been telling the truth about radiation ?
- What is the TRUTH ?
- Is lying the opposite of truth ?
- Truth, beliefs, faith, ethics
- How we determine truth
- Possible answers to public communication



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Did You Know ?

- “You can save 15% in just 15 minutes”
- And the answer is ?
 - “Everybody knows that”
- “Well, did you know ----- ?”
- “Radiation is not nearly as dangerous as most people believe it is!”
- “It is actually very difficult to seriously harm someone with radiation”
 - Is this true?
 - If so, “Why aren’t we telling people that ?”

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Is the Answer to Tell the Truth ?

- Anecdote of HP at ACS meeting - 1985
- “So Ray, you are going to tell us the answers to risk communication”
 - “I do not pretend to have all the answers, I hope to share a few helpful insights”
- “Ray, the answer is simple, “Just tell people the truth”
- “I agree, however, MBTI shows that truth based on logical analysis is only favored by ½ the population”

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Have We Been Telling the Truth About Radiation ?

- Yes or No ?
- Is telling the truth working ?
- Is public opinion of radiation any different today than 50 years ago ?
- If telling the truth is NOT the answer,
 - Should we forego telling the truth ?
 - What is the answer ?

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What is the Truth ?

- We agree it is important to tell the truth
- But, “What is the Truth?”
 - In accord with fact or reality
 - Fidelity to an original or to a standard or ideal
- What is the process for deciding how words, symbols, ideas, and beliefs may accepted as truth ?



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Is Telling the Truth About Radiation the Answer to Risk Communication

Ethics and Public Communication

- Are we ethical in our communications ?
- Is there a right and wrong way to tell people about radiation risks ?
- What is morally justified ?
 - Do we have moral principles to follow ?
- Is “telling the truth,” the answer ?
- Should we, “Just present the facts” ?
- If so, “What are the ‘true’ facts” ?
- How do we know what is true ?

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Truth, Facts, Meaning

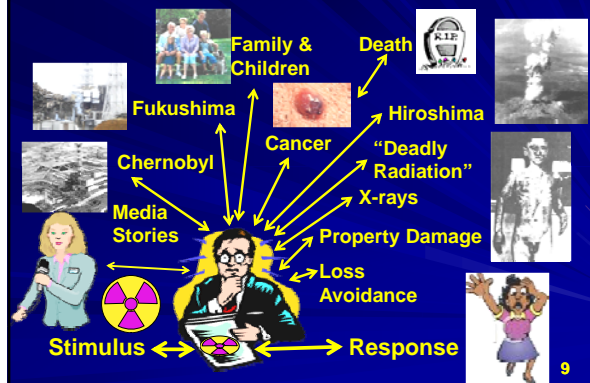
- “A fact is a synthesis of impressions”
 - Love and Mr. Lewisham,
 - H. G. Wells, 1900
- How do we assess meaning and truth ?
- All information is first processed subconsciously by association with stored memories, experience, and beliefs (truths)



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Instant Subconscious Processing



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Role of the Subconscious Mind

- Influences our conscious view of the world in fundamental ways
 - How we view ourselves and others
 - The meanings (truth) we attach to everyday events in our lives
 - Our ability to make quick judgments
 - The actions we take in response to instinctive experience of the world

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Ethical Answers to Public Communication?

- Help people find the TRUTH
- Let people know its OK to be afraid
- Show that you care
- Hear and reflect feelings
- Be a resource to help people to find their own answers
- Provide guidance on steps from Cause to Effect

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Steps from “Cause to Effect”

1. What are properties of radiation
 - α , β , γ , x-ray ? - Form and quantity ?
2. Where is it located - Inverse square law ?
3. How is it contained - Shielding ?
4. How will it move in the environment ?
5. What are the exposure conditions – mR / hr ?
6. What is the duration of the exposure – hr ?
7. How much energy is deposited in our body - mrem ?
8. What are the health risks at 1 death / 1,000 person - rem

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Is Telling the Truth About Radiation the Answer to Risk Communication

What have we Learned Today ?

- Is telling the truth – the answer ?
- Have we been telling the truth about radiation ?
- What is the TRUTH ?
- Is lying the opposite of truth ?
- Truth, beliefs, faith, ethics,
- How we process data
- Possible answers to public communication



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References

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Questions ?



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