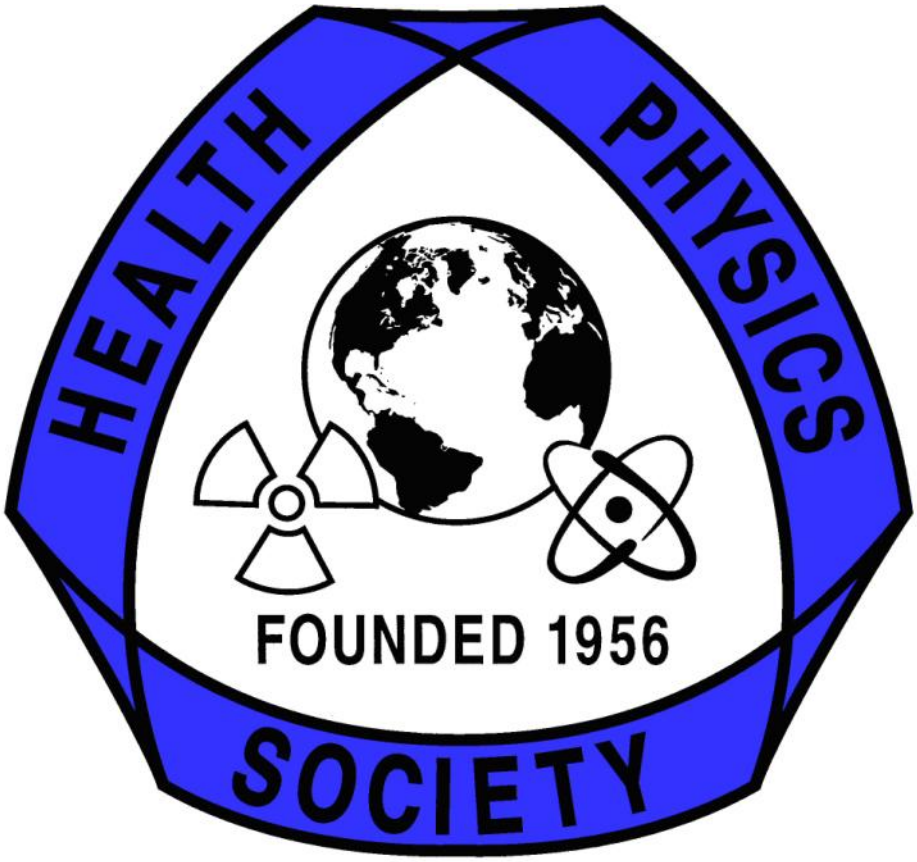
Health Physics Society Media Guide for Members

Tips and tools when working with media



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Colleagues,

The information provided in this brochure is to aid you in discussions you may have with members of the media and public.

The opportunity to share information about radiation and about our work is both exciting and challenging at the same time. It is exciting because we can ensure awareness about the benefits of radiation while providing sound, scientific information in response to questions.

It is challenging because the subject of radiation often spurs intense emotions and it can be difficult to make a technical subject easy to understand.

That is why this guide has been created. We understand the need to be able to convey your message in a manner that allows maximum comprehension during what may be a brief encounter.

If you are contacted by the media, please let the Society know of the contact and provide a brief synopsis of the interaction (webed@hps.org). At any time, feel free to contact us for assistance or additional information.

Sincerely,

The HPS Board of Directors

General Considerations

This information, which has been modified to apply to health physics, is from the results of two focus groups and a national survey conducted by the American Society for Therapeutic Radiology and Oncology.[1] Keep this information in mind to create clearer, more understandable answers to questions being asked.

- **Do not assume the media or public understands what you do or what health physics/radiation safety is.**
  The media or public's understanding of radiation and radiation safety may be limited. Be sure to clearly explain that the role of a health physicist is to understand, evaluate, and control potential risks of radiation and that radiation has beneficial uses but does carry risk at high levels.
- **Use the most basic terms possible to explain radiation technologies and benefits/risks.**
  Even though you know the radiation basics, like dose versus exposure or external exposure versus contamination, the media and public are not generally aware of the differences, so you may need to explain some fundamentals prior to answering a question.
- **The media and public will make their own decisions.**
  You are not establishing levels of acceptable risk. Realize and accept that, after your explanation, members of the media and public will make up their own minds regarding the acceptability of the risk. Your purpose is to inform, not convince.

[1]Used with permission of ASTRO, www.astro.org or www.rtanswers.org

General Considerations

- **The media and public want to know that highly qualified individuals are involved in setting public health policies and regulations that affect them.**
  When discussing public health policies and regulations, note that health physicists, radiation science specialists, and their organizations are involved at all levels of decision making. Avoid the impression that public health policy is set with no qualified scientific input.
- **If it fits within the interview or Q&A process, try to mention beneficial uses of radiation.**
  Beneficial uses of radiation need to be emphasized to offset the mainstream opinion that radiation at any level is a bad thing. Nearly everyone is familiar with beneficial uses (disease diagnosis and treatment), but they don't initially think of radiation in that manner.
- **The media and public like to know you are well qualified to answer their questions.**
  Feel free to discuss the extensive education you needed to have to be considered a radiation science specialist.
- **Radiation doesn't hurt.**
  If needed, emphasize that exposure to radiation is painless.
- **Biological effects of high levels of radiation are the same as those that occur naturally.**
  Cancer can be induced by many environmental agents and it can be induced by radiation. Cataracts can be induced by prolonged exposure to ultraviolet light and cataracts can be produced by radiation. Diseases and conditions that occur from a variety of sources, and some which may occur naturally, can also occur from exposure to radiation.

Media Tips[1]

- **Do your homework.**
  If a reporter calls you for a story, find out as much as you can about the topic and what the reporter might ask. For example, is it a general article reviewing a topic, is it specific about a medical treatment, or is it about a new technology? Once you know this, ask the reporter if you can have a few minutes to collect yourself and your thoughts. Be timely, collect your thoughts, and get back to the reporter at the time you said you would.
- **Learn about the medium.**
  There are thousands of media outlets—magazines, newspapers, Web sites, television, radio, etc. Find out the type of media being used so you can phrase your answers for that audience.
- **Keep it short.**
  Once you collect your thoughts, keep your answers short and simple. Develop brief take-home messages. Jotting down your messages helps you stay organized and on track during the interview.
- **Practice your thoughts.**
  When you have your brief messages in mind, practice them so they come naturally and take only a short amount of time to convey.

[1]Used with permission of ASTRO, www.astro.org or www.rtanswers.org

Media Tips

- **Bridge your message.**
  If the reporter drifts off topic or tries to raise the level of emotion, be able to bridge his or her thoughts back to the message you want to convey. If you find yourself drifting off topic, refer to your notes or think of a bridge to your main message.
- **Keep it simple.**
  Radiation sciences are very complex and technical. Try to avoid the use of technical terms if you can help it. If a technical term is important to the topic, be sure to explain it in an understandable manner before you use it.
- **Avoid distractions.**
  Focus on the interviewer to avoid distractions. If you are interviewed in person, maintain eye contact. If you are interviewed over the phone, standing during the interview can help minimize distraction. Turning off your computer screen and closing your office door can also help. If you are on camera, do not look at the camera unless you are asked to do so.
- **Dress conservatively.**
  If you will be interviewed in person, dress conservatively, avoiding flashy jewelry and strong-smelling fragrances. If you look neat and professional, the interviewer is more likely to focus on what you are saying.

Media Tips

- **Don't lie or guess.**
  If you don't know the answer to a question, answer honestly. It is always okay to say "I don't know." This gives you much more credibility than lying or guessing.
- **Never go "off the record."**
  It can be easy to lapse into being more open with a reporter than you might be otherwise if you go off the record. Unfortunately, there is no guarantee that the information you provide won't end up in the story.
- **Your comments are your own.**
  Comments you make to the media or public should not be attributed to the Health Physics Society. If you reference Society position papers or other official documents, then it is appropriate to state these reflect the views of the Society.
- **Reporters deal with news.**
  Reporters deal with news, not education. They want to know the risk, know how many people are or can be affected, and gain advice on what can be done. This makes it very important that your thoughts are brief, to the point, and true. If you can be educational at the same time, that is a plus.

The Use of Graphics[1]

Risk Ladders

- A "risk ladder"—with probabilities (number of additional deaths), risk comparisons (e.g., to cigarette smoking), an action standard, and advice—has been found to be the best communication tool for public understanding of risk.
- Groups perceived risks to be greater when items were placed closer to the top of the ladder. So, for "action" items, place the threat level closer to the top, and for low-risk activities, place the threat level closer to the bottom.
- Adding action standards/guidelines to the ladder reduced perceived risk.
- Adding comparison risks does not change the level of perceived risk but increases understanding.
- A useful risk ladder for communicating about radiation is found on Page 12 of this guide.

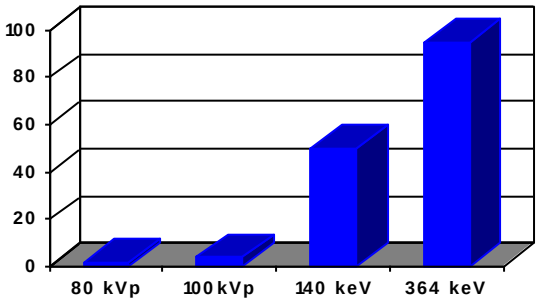
[1]Lipkus IM, Hollands JG. The visual communication of risk. Monogr Natl Cancer Inst 25:149-163; 1999.

The Use of Graphics[1]

Graphs and Text

According to a focus group, a graph in addition to text makes information clearer, although it does not affect perceived risk.

When possible, graphs should include a reference point to indicate when actions are to be taken.



Lead aprons are more effective at low x-ray energies, letting less than 10 percent of the radiation through.

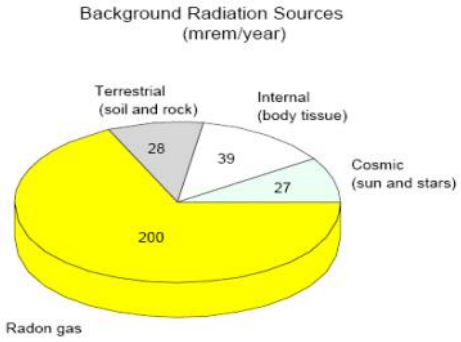
Any Visual with Text

Visuals with text were more encouraging to individuals to do something (behavioral intentions) to avert risk (e.g., use sunblock) but did not affect perceived risk.

Accounting for one-fifth of all skin cancers, squamous cell carcinoma is directly related to ultraviolet light (sun) exposure.

Pie Charts

Pie charts are very confusing to the public, especially without text (although text can improve comprehension of the chart).



Background radiation consists of radon and terrestrial, internal, and cosmic radiation.

[1]Lipkus IM, Hollands JG. The visual communication of risk. Monogr Natl Cancer Inst 25:149-163; 1999.

The Use of Graphics

Stick or Face Pictures

Depicting disease or death by x-ing out stick figures or faces is poorly received.

However, this type of visual may be used in the "positive" to influence people to do something so they do not get the disease (e.g., breast cancer).

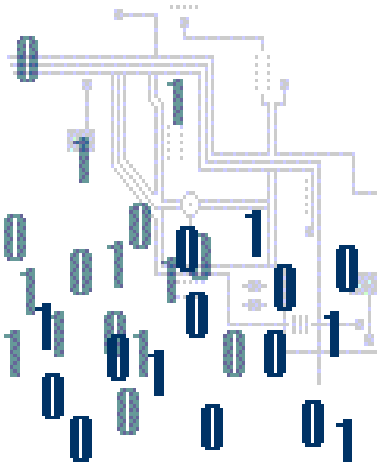
This is not a good visual with radiation.

Number Size

Perceived risk was lowered when a large population (1,000, 10,000, 100,000) with a relatively low number of affected individuals (<100) was used.

When both are small (1 in 20, 12 in 100), the probability of an effect was perceived even less likely.

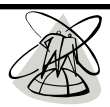
A large numerator, even with a large denominator, draws negative attention.



Probability Less Than One

For a probability of incidence less than one (e.g., 0.5 in 100), use "<1."

The use of whole numbers is better understood than decimals or fractions (e.g., 5 in 1,000 versus 0.5 in 100).



Framing Risk[1]

Our perception of risk can be affected by the way communications are framed. There is positive and negative framing and gain and loss framing.

Positive framing (chance of survival) is more persuasive when trying to convince people to accept a risk. Loss framing (chance of death) is more persuasive when trying to convince people to take action.

In the following example, the positive frame is meant to influence the reader that the chance of breast cancer is low, while the loss frame is likely to generate a wanted action, which, in this case, is to be screened for breast cancer.

> Positive: Nearly 90 women in 100 will not be diagnosed with breast cancer regardless of screening.
>
> Loss: Each year, hundreds of women will die from undiagnosed breast cancer because they were not screened.

In this second example, the positive frame is staged to show the reader that low levels of radiation exposure of a fetus are unlikely to result in cancer.

> Positive: Even if the abdomen of a pregnant woman is exposed to diagnostic levels of radiation, the child has a >99 percent chance of not getting cancer (as a result of the radiation).

[1]Lipkus IM, Hollands JG. The visual communication of risk. Monogr Natl Cancer Inst 25:149-163; 1999.

Risk Ladder Example[1]

Lifetime Cancer Risks from Various Levels of Radiation Exposure

Radiation Dose	Lifetime Cancer Risk	Equivalent Smoking Risk
0.1 sievert[2] or 10 rem	Approx. 600 in 100,000	 1 pack per week
0.01 sievert or 1 rem	Approx. 60 in 100,000	 2 cigarettes per week
0.001 sievert or 0.1 rem	Approx. 6 in 100,000	 1 cigarette per month
0.0001 sievert or 0.01 rem	Less than 1 in 100,000	 0.5 cigarettes per month

[1]Adapted from Lipkus IM, Hollands JG. The visual communication of risk. Monogr Natl Cancer Inst 25:149-163; 1999.and The Committee on the Biological Effects of Ionizing Radiation, BEIR VII, Phase 2.

[2]Sievert is a unit of radiation dose. One sievert is equal to 100 rem.

Who Is the HPS?

The Health Physics Society is a group of over 5,000 scientists, teachers, physicians, engineers, and others with an interest in the safe use of radiation and radioactive materials.

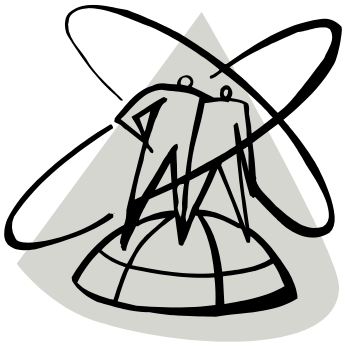
Our activities include providing support to radiation safety professionals to ensure the safe and beneficial uses of radiation and radioactive materials, assisting in the development of standards and regulations, and communicating radiation safety information.

The Society is a nonprofit organization formed in 1956. Our primary mission is excellence in the science and practice of radiation safety. Within that mission, we have five broad goals:

- Support the science and sound practice of radiation safety.
- Enhance support for Society membership.
- Provide enhanced scientific and professional development.
- Sustain the health physics profession.
- Foster the use of sound science in public policy and the recognition of the HPS.

The Society has members in approximately 70 countries and has established nearly 50 chapters and 10 student branches.

Visit www.hps.org or www.radiationanswers.org for more information.



Health Physics Society

HPS Members Media Guide
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