Why we have failed to effectively communicate “patient dose”

From presentation by Samei, Pavord, Casler

Objectives

To assess the adequacy of our communication methods regarding this essential point
To review relevant scientific facts, uncertainties and misunderstandings
To explore impediments to effective communication
To review alternative methods of communication and assess their effectiveness

Outline

Experiential Learning role-play
What is the goal of this communication?
Review of basic scientific facts
Common misconceptions, impediments and resources
A different way to have this discussion
Role play, to explore new approach

In our scenario, this is a 2-way exchange of info or ideas. You may (or may not) agree......
When Humans Encounter New People, We Evaluate Others on Two Criteria:

Reference: A. Cuddy, P. Glick, and A. Beninger, Advances in Experimental Social Psychology 40, New York, NY, 2008

Competence
Warmth / Likability

What is It?
Who is it for?
What are the unique benefits?

Photo credit: FreeImages


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Fundamentally, the LNT model implies a uniform cancer risk per unit dose from higher to lower doses, meaning that, for example, a radiation dose of 10 mSv has one hundredth the risk from a radiation dose of 1,000 mSv.

Because the LNT model assumes there is no threshold dose for radiation-induced cancer, even a dose of as low as 0.1 mSv is associated with a nonzero excess risk (i.e., one hundredth the risk from 10 mSv).

http://jnm.snmjournals.org/content/58/1/7.full

Scientific Facts about Dose
(This you know, and can look up more!)

- Dose = energy/mass
- Background radiation
- Units: mGy, mrad, mCi
- Effective Dose (ICRP 106)
- ESE, CTDI, AGD, Effective Dose
- Latency effect
- LNT Hypothesis

More in a moment, “Resources”
“Although the debate over LNT will not be resolved anytime soon, one point should be abundantly clear, as reinforced by the article by Siegel et al.:

the scale of the associated uncertainties is such that it is not appropriate to use such risk factors for clinical decision making and the management of individual patients.”


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Common Misconceptions

- Dose – an hour in the sun at the beach
- Dose – cross country flight in a plane
- Dose – “I take 700 mg dose of Tylenol”

- 1 chance in a million
  - If I want a good thing, it will happen to me (Lotto)
  - If I am afraid, the bad thing will happen to me (Cancer)
  - If I want to do it, bad thing won’t happen to me (Smoking)

- Radiation mysteriously changes you
- Doctors and scientists conspire to take advantage of me

What does the patient think?

Is it OK for her to have this exam, or am I protecting my child by saying no!

http://www.imagegently.org/Portals/6/Parents/Image_Gently_8.5x11_Brochure2pg.pdf
What are the risks from medical radiation?

There is no conclusive evidence that radiation from diagnostic X-rays causes cancer. However, some studies of large populations exposed to radiation have demonstrated slight increases in cancer risk even at low levels of radiation exposure. Therefore, if we are to keep radiation as low as reasonably achievable, we should act as if low doses of radiation may cause harm.

The risk from radiation induced cancer should be evaluated against the statistical risk of developing cancer in the entire population. The overall risk of a cancer death over a person’s lifetime is estimated to be 20-35% for women and 10-20% for men. For every 1,000,000 persons exposed to 0.05 mSv, 20-35% will eventually die of cancer. For every 1,000,000 persons exposed to 0.1 mSv, 10-20% will eventually die of cancer. For every 1,000,000 persons exposed to 0.2 mSv, 5-10% will eventually die of cancer.

Putting radiation in context

<table>
<thead>
<tr>
<th>Everyday Activities</th>
<th>Radiation Dose</th>
<th>Medical Imaging</th>
<th>Radiation Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watching television</td>
<td>0.03 mSv/year</td>
<td>Chest X-ray</td>
<td>0.1 mSv</td>
</tr>
<tr>
<td>Air travel (roundtrip from D.C. to L.A.)</td>
<td>0.05 mSv</td>
<td>CT</td>
<td>0.14 mSv</td>
</tr>
<tr>
<td>Average annual exposure from nuclear power plants</td>
<td>0.02 mSv/year</td>
<td>Nuclear medicine</td>
<td>0.3 mSv</td>
</tr>
<tr>
<td>Average annual exposure living in the United States</td>
<td>0.05 mSv/year</td>
<td>PET/CT</td>
<td>1.1 mSv</td>
</tr>
<tr>
<td>Annual dose limit for radiation workers in U.S.</td>
<td>50 mSv/year</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Balancing Benefit and Risk

With an understanding of the effects of radiation and the doses for standard examinations, a physician (possibly with the help of a radiologist) can make a determination of which examination provides the most benefit to the patient at the lowest possible dose.

To do this, the physician needs to consider the following criteria:

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LISTENING AND HEALTHCARE

- Physicians interrupt 69% of patient interviews within 18 seconds of the patient beginning to speak. As a result, in 77% of the interviews, the patient’s true reason for visiting was never elicited (Lee, 2000).
- Healthcare practitioners who use more patient-centered communication, including listening, have patients who are more satisfied with their practitioners and their overall medical care (Wanzer, Booth-Butterfield & Gruber, 2004).
- Effective listening is a significant predictor for patient satisfaction (Wanzer, Booth-Butterfield & Gruber, 2004).
- Active listening on the part of both the physician and the patient increased compliance and the perception of a supportive atmosphere (Hausman, 2001).

http://www.listen.org/page-1860273

Does this look like good communication?


Practical tips

- Ask the patient “How may I help you” or “What are you thinking about that concerns you?”
- Send the message “I am with you…”
- Simple gestures, phrases
  - Eye contact
  - Nodding, smiling
  - “Tell me more…”
  - “Uh-Huh”
- Pause to allow time to let their words sink in
- Repeat key phrases (active listening)
  - “What I hear you saying is…”
  - “Do I understand you correctly that…”

http://mindthegoacademy.com

LEARN strategy

- LISTEN, actively with respect
- ELICIT health beliefs of the patient or parent
- ASSESS priorities, values and supports
- RECOMMEND a plan of action, with adequate explanation and understanding
- NEGOTIATE by involving the patient in next steps and decisions

Non-verbal (for F2F)

- Sit square to the patient
- Avoid “across the desk”
- Lean slightly forward
- Eye contact
- Relaxed posture
- React to their words with slight changes in facial expression
- Turn off or ignore cell phone
- (“You are my priority at this moment”)
- Demonstrate empathy

http://cliparts.co/people-talking-images
How do people make decisions?

- Emotionally driven or fact-based
- Judge opposing views
- Trust in “surety” vs. “honest uncertainty”?
- Under stress, even rational people often shift to emotional response, and have difficulty processing info they would easily understand, absent the stress factor

Talking “down” to a patient communicates lack of respect or arrogance.

Be sure to discuss both Radiation Risk and Benefit

Benefits should be clearly explained by your doctor

Maybe in the future, a slight increased risk of cancer

Fast results for best treatment

Not having the procedure, delay in treatment

Describe immediate benefits

Roger of Salerno, c 1180
https://trinitycollegelibrarycambridge.wordpress.com/2015/07/29/surgery/

Tip #1

- Driving (or being passenger in a car) is the riskiest think most of us do
- We intuitively balance Benefit and Risk every day, without thinking about it
- Consider this example
The patient has been told she should have a Head CT scan after she was in a car accident. They trust me, and asked for my advice. I am unsure because I have read that CT scans use a lot of x-rays, and carcinogenesis is a concern.

Referring Physician

"My patient has been told she should have a Head CT scan after she was in a car accident. They trust me, and asked for my advice. I am unsure because I have read that CT scans use a lot of x-rays, and carcinogenesis is a concern."

Do

- Communicate respect
- Eye contact
- Body language
- Active listening
- Describe real, immediate benefits and the "possibility" of risks years later
- Act like talking to your mother, grandmother

Think about these..........

Role play, to explore new approach

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Tip #2

You know, if this were my daughter/niece, granddaughter, I would ask "Do you use any dose reduction methods for children?"

.........if yes, then have them go ahead with the study

...because the real benefit to her NOW is more important than the very small chance that something might happen (but probably won't).
Take away points

- Helping patients requires effective communication
- Communication is not just about reporting facts
- Try active listening techniques, to establish respect and rapport
- Be aware of eye contact
- Develop a concise, flexible “elevator speech”
- Emphasize Benefits-Risk, find your own analogy

Think about it...

“Blind obedience to authority is the greatest enemy of the truth.”

Albert Einstein