Risk Communication
working w/ parents and pediatric patients

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Conflicts of Interest: none
Communicating Benefits

• Benefit-to-risk ratio… a physicist’s perspective
• As medical physicists we do not order examinations
• BUT we should be aware of the Appropriateness Guidelines
  – Demonstrate evidence-based benefit-to-risk ratio
  – Developed by experts (both radiologists and physicists)
  – e.g., parents may come with specific questions as to why a CT was ordered instead of US
Key to reading Appropriateness criteria

- Based on expert panels of radiologists and physicists
- Provides summary of
  - Differential variants and the imaging to help diagnose
  - Special imaging considerations
    - By modality
    - Sensitivity & specificity breakdown
  - Extensive reference list
• Example w/ a total of 5 variants
• Demonstrates 4 imaging modalities
  – Ultrasound (US)
  – MRI
  – CT (3-10 mSv)
  – X-ray (0.03-0.3 mSv)
Communicating with Providers

“To effectively communicate risk, health care providers must understand how patients and guardians perceive risk and subsequently makes decisions. A key factor in risk perception is an individual’s sense of control.”*  

Communicating with Providers

• Number one goal: help parents feel in control of the clinical situation
  – When physicians work with patients from the beginning they will have a greater sense of control

  “[parents] should be reassured that their questions are good ones and, even when discussion is challenging, that their advocacy for the health and welfare of their children is appreciated.”*

*Broder & Frush (2014). JACR, 11, 238-242
“I’ve learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel”

Maya Angelou
Communicating with Providers

“It is prudent to advocate for integration of education about radiation and medical imaging into general medical education curricula.”*

- Unfortunately, most benefit-to-risk communication occurs outside of radiology
- Medical physicists are primary educators to radiologists… need to expand to other specialties

Communicating with Providers

• Physicists/Radiologists need to team up and help educate ordering physicians on
  – What does it mean to use radiation in imaging
  – Radiation risk communication
  – Etc.
• Use hospital platforms such as Grand Rounds and other specialty conferences (e.g., nephrology)
• Image Gently® forthcoming campaign to educate medical students/residents outside of Radiology
Communicating with Parents/patients

- A lot of parents are getting their medical education from Dr. Google
- We should control the source of information by developing:
  - Handouts
  - Guidebooks
  - Online resources (YouTube, etc.)
    - Describe the examination
    - Provide links to Image Gently®
    - Provide key phone numbers to contact Radiology experts
Communicating with Parents/patients

• Most hospitals/clinics now provide (in near real-time)
  – the patient key images AND
  – radiologist’s dictated reports
    • which includes CT dose reports
• Provide resources for parents to understand their child’s results
  – Phone numbers and/or links to hospital/clinic websites
Communicating with parents/patients

• Parents will still have questions in spite of all our best efforts to publish information

• As medical physicists we need to receive basic training on communication
  – **Graduate programs**: adopt seminars/classes
  – **AAPM**: provide symposia
    • PISC—white paper on communicating risk with pediatric patients and parents
  – Independent **societies and universities/hospitals**: provide classes
Communicating with parents/patients

• General course syllabus (Todd Atwood, PhD):
  – Didactic training
  – Analysis of physicist-patient interactions
  – Role playing exercises
  – Simulated patient interactions

https://vimeo.com/338954678
A Questioning Parent

• Why is the parent questioning?
• What does the parent really need?
  – **Patience & compassion** from us
    • A sick child almost always raises the stress level of the parent/caregiver
    • To impart answers and knowledge about questions, we must fundamentally **recognize the stress and work with it**… never add to it
  
  – **Reassurance**
  • Don’t promise anything you can not guarantee
    – e.g. this CT scan will not cause your child to get cancer
    – This may be your personal/profession belief/opinion… but outside of your control
Responding to a Question/Concern

• The science behind answering a question:
  – Listen
  – Understand
  – Respond
  – Follow up
Listen

- Listen to the **WHOLE** question… never interrupt
  - We often have **preconceived** ideas of how to answer a question such that we don’t actually hear the question…
  - e.g., you just got a call from a technologist and a parent wants:
    - To know their child’s dose
    - Are concerned with the amount of radiation used in the exam
    - Concerned that their child has already received their annual radiation limit
    - Wants to know why their child doesn’t have Pb shielding too
Understand

• Check for understanding
• Address the question with a question?
• Two strategies to employee:
  – Confirm by **paraphrasing** the question
  – Ask additional questions to understand the **underlying concern**:
    • the **ROOT** concern is the **REAL** question
Understand

“I don’t want my daughter to get her CT scan, I heard CT scans can cause cancer.”

• Paraphrasing technique
  – Use synonyms

“You believe that your daughter will get cancer because of her CT scan?”
Understand

• Address the **underlying** question/concern:
  – Gently ask additional questions:

  “Why do you think your daughter will get breast cancer?”

• Need to understand the parents **background & bias**
  – To understand their **source of knowledge** is to understand their concern
  – It turns out the parent was concerned because they had a history of breast cancer in their family
Respond

• We don’t always need to ANSWER their question
  – We need to address it
  – We need to acknowledge it
  – We need to respond to it

• For some questions we do not have answers:
  “Will my child get cancer from his/her CT scan?”
  – You can not answer this question directly, BUT you can use knowledge to reassure
Respond

• How do we communicate risk?
  – Most common is to use effective dose \((E)\)
    • \(E\) is limited… some have advocated to not use it since it is not patient specific
  – Traditionally, we have compared familiar risk
    • e.g., 1 in 304 Americans will die due to a car accident*
  – Or used pseudo-epidemiological calculations to come up with mortality rates
    • e.g., 1 in 2560 may die from cancer following a [Tc-99m] MDP study*

Respond

• How do we communicate risk?
  – Stating that only 1 in 4000 (0.025%) 10 year olds will die from a 3 mGy exposure*
    • Is an inherently a negative statement… parents hear “die”, “death”, “cancer”
  – Stating that 99.98% of 10 years receiving a 3 mGy scan will experience no negative effects
    • Is an inherently positive statement
  – Most people can not conceptualize 0.025%, but they can 99.98%

Respond

• How do we communicate risk?

  – Other options are to communicate without statistics or numbers*

  *Broder & Frush (2014). JACR, 11, 238-242
Follow up

• Printed material handouts
  – As stated before, most questioners are seeking reassurance only

• Some want facts!
  – Provide documents that allow follow up from the safety of their home
  – I like to give my business card … personal touch
    • Rarely do parents, after they have gone home and decompressed, call me for additional questions
Non-verbal Cues

• Be aware of how you project yourself
  – Don’t turn your back to them while speaking
  – Always be at the same eye level
    • If they are standing, stand
    • If they are sitting, sit
  – Crossing your arms is a sign of being closed or defensive
  – Be aware of how you use your hands
    • Do not point your finger or shake it at them
  – Do not use your cell phone… **give them your undivided attention**
Things to Avoid

• Don’t use complex scientific jargon, *unless necessary*
  – You are the expert, you do not need to remind them of that by using large words and complex sentence structure
  – Prepare verbal/written responses to common questions… then you will be prepared to explain in *simple terms*

• Don’t make a *mini presentation* out of your response
  – The parent’s of a child in a hospital are already overwhelmed
  – Keep your comments succinct and straight forward
Things to Avoid

• Don’t get defensive
  – If the parent is agitated/angry… take a deep breath & stay calm
    • Project yourself as calm, centered, and self-assured
    • Let them finish talking, never cut across them
Things to Avoid

• Don’t get defensive
  – De-escalate the situation
    • Validate parent/patient experience… use empathetic phrases: “I can sense______”
  – Modulate your tone of voice using reassuring, respectful, and nonjudgmental tone/words
    • Studies have shown that a parent/patient in distress will maintain an internal locus of control
Conclusions

• Avoid the questions by being prepared:
  – **Educate our colleagues** in other medical fields
  – **Create educational material**… *control* the information as much as possible
  – **Create consistent policies** in department
    • When surveyed at CCHMC, parents/patients were confused/frustrated by inconsistent application of policies across hospital enterprise (i.e., main hospitals vs. satellite clinics)
Conclusion

• Communicate through understanding
  – Listen, understand, respond, follow up
  – Address their ROOT concern
  – If they are frustrated, help them maintain or regain a sense of control of the situation
  – Never lie to them

• There is a risk involved using radiation
• Telling a parent there is no risk can discredit you in their eyes
Thank you

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