



Annual Student Meeting

Patient Communication:

A Future Role for Clinical Medical Physicists

Horizontal lines for notes

**AAPM 2019** JUL 14-18  
 BUILDING BRIDGES. CULTIVATING SAFETY. GROWING VALUE.  
 61<sup>ST</sup> ANNUAL MEETING & EXHIBITION | SAN ANTONIO, TX



**Sunday July 14<sup>th</sup> - Student & Trainee Day Events**  
 8:30 – 10 am | **Annual Student Meeting** | Stars at Night Ballroom 4  
 10 – 10:30 am | **Undergrad Networking Session** | Stars at Night Ballroom 4  
 10 – 11:30 am | **Non-Clinical Career EXPO** | Stars at Night Ballroom Foyer  
 11:30 – 1 pm | **WGSTR Lunch** (ticket reqd) | Stars at Night Ballroom 4  
 1 – 3 pm | **Residency Fair** | Stars at Night Ballroom Foyer  
 3 – 3:30 pm | **Society of Physics Poster Session** | ePosters Area  
 6 – 8:30 pm | **Student Night Out** (ticket reqd) | Casa Rio

**Other Events**  
 (Tues) 1:45 – 3:45 pm | **Interview Workshop** | Partners in Solutions Room  
 (Tues) 9:30 – 10:30 am | **Expanding Horizons** | ePosters Area  
 (Tues) 4:30 – 6 pm | **New Member Symposium** | Room 302  
 (Wed) 7:30 – 8:30 am | **Breaking out of Clinic** | Room 302  
 Sun 3:30 pm, Mon 10:30 am & 2 pm, & Wed 11 am | **Partners for the Future** | Exhibit Hall Meetup

Horizontal lines for notes



Wednesday, July 17<sup>th</sup>, 10:15 am – 12:15 pm  
Stars at Night Ballroom 2-3

Horizontal lines for notes



Social Q&A:  
[aapm.socialqa.com](http://aapm.socialqa.com)



Wi-Fi AAPM 2019:  
[Bridges2019](http://Bridges2019)

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## Why Should Medical Physicists Communicate with Patients?

**Todd Atwood, PhD**  
Associate Professor  
Radiation Medicine & Applied Sciences

**UC San Diego Health**

RETHINKING MEDICAL PHYSICS



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## How did this project begin?

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## Patients

More patients are searching for ways to be involved in their care  
Ritten L, et al. Patient Educ Couns (2005)

Online patient information is too complex for the general population  
Rosenberg S, et al. Pract Radiat Oncol (2017)

Patient related distress can negatively impact outcomes following radiation therapy  
Habboubh Y, et al. Adv Radiat Oncol (2017)



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## Radiation Oncologists

Faced a dilemma of clinical practice in the latter half of last century

Often viewed merely as technicians treating referrals

Began to participate in tumor boards, multidisciplinary clinics, etc.

Transformed from radiotherapist to radiation oncologist



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## Physics Direct Patient Care Initiative

Establish an independent professional relationship with the patient

Take ownership of all technical aspects related to the patient's care

Meet with the patient at regularly scheduled appointments

Initially assess the impact this has on patient anxiety and satisfaction

Lay the groundwork for future innovations and patient responsibilities

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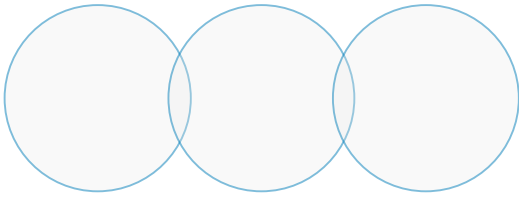
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## Clinical Trial



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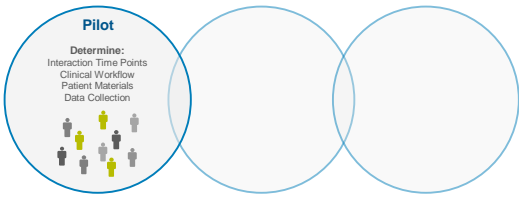
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## Clinical Trial



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## Initial Observations



- Easily integrated into care team
- Wide variety of patient "types"
- Patients eager to know more
- Unexpected interactions
- Rewarding experience



- Some timepoints less beneficial
- Words should be chosen carefully
- Technical systems too complex
- Medical questions not deferred
- Communication training necessary

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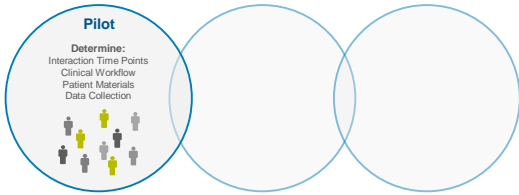
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## Clinical Trial



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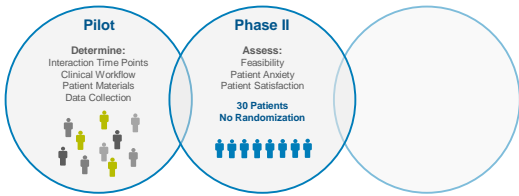
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## Clinical Trial



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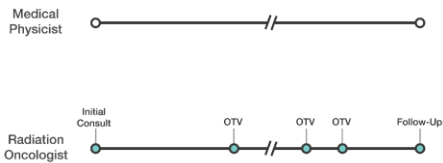
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## Patient Interactions



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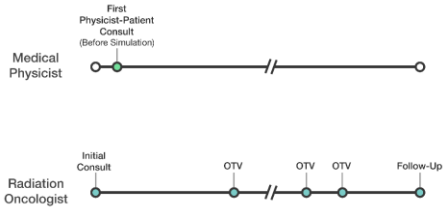
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## Patient Interactions



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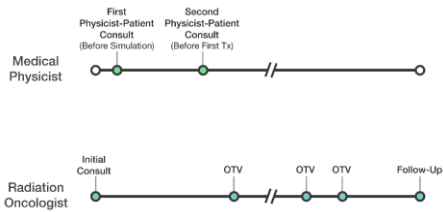
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## Patient Interactions



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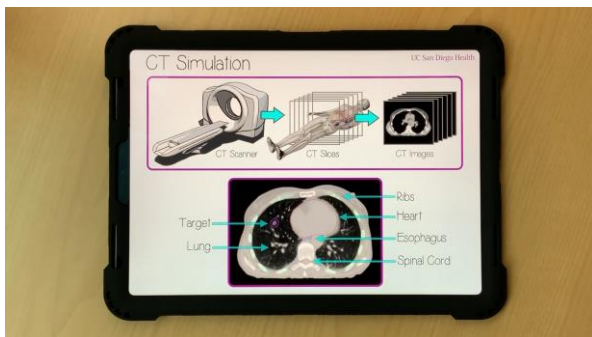
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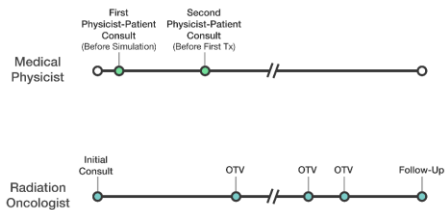
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## Patient Interactions



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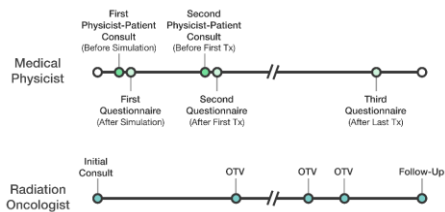
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## Data Collection



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## Data Collection

**Anxiety**  
Validated State-Trait  
Anxiety Inventory  
(single score)

**Technical & Overall Satisfaction**  
Modified questions from  
validated questionnaires  
(single score for each)

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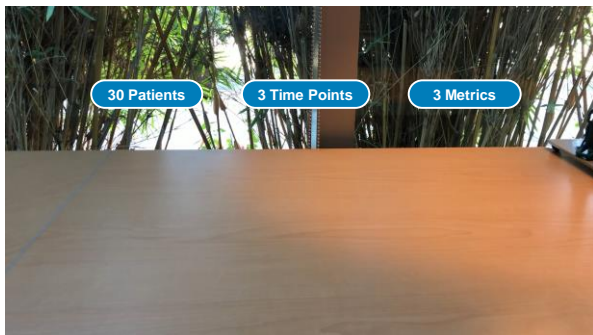
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## Results (Anxiety)



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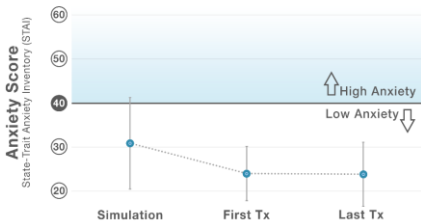
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## Results (Anxiety)



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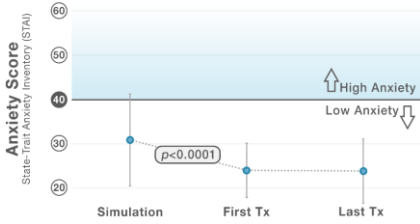
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## Results (Anxiety)



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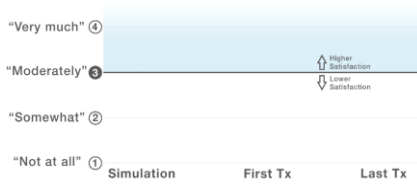
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## Results (Technical Satisfaction)



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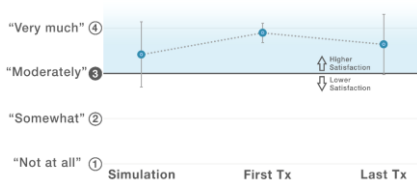
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## Results (Technical Satisfaction)



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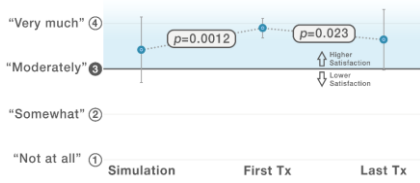
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## Results (Technical Satisfaction)



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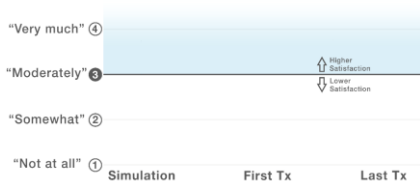
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## Results (Overall Satisfaction)



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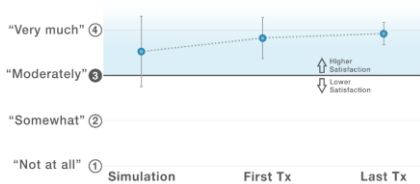
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## Results (Overall Satisfaction)



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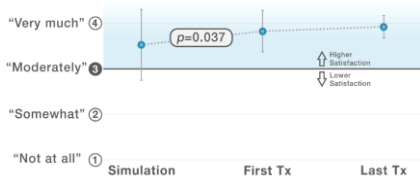
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## Results (Overall Satisfaction)



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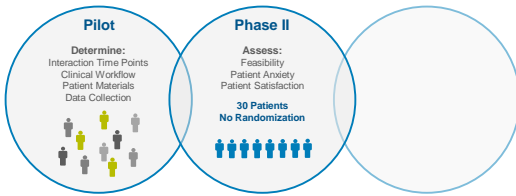
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## Clinical Trial



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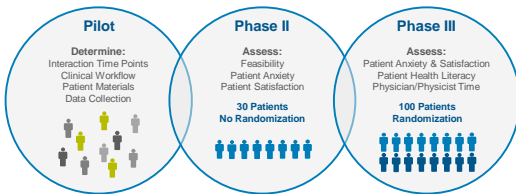
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Lay the groundwork for future innovations and patient responsibilities

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Recognize changing landscape

Utilize unique skillset

Expand the profession

Provide more value

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RETHINKING MEDICAL PHYSICS

Collaborators

Derek Brown, PhD  
Kevin Moore, PhD  
Titania Juang, PhD  
James Murphy, MD  
Todd Pawlicki, PhD  
A.J. Mundt, MD

Clinical Trial

HRPP #161700X

Publications

- "Care for Patients, Not for Charts: A Future for Clinical Medical Physics"  
Atwood TF, et al. *Int J Radiat Oncol Biol Phys.* 2018
- "Establishing a New Clinical Role for Medical Physicists: A Prospective Phase II Trial"  
Atwood TF, et al. *Int J Radiat Oncol Biol Phys.* 2018
- "A Program to Train Medical Physicists for Direct Patient Care Responsibilities"  
Brown D et al. *J Appl Clin Med Phys.* 2018

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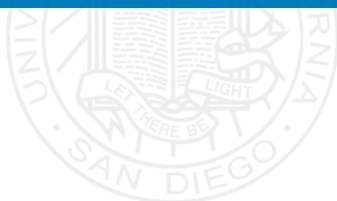
Patient Communication

Physicist-Patient Interactions

Derek Brown, PhD  
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Where do we find training?

How can we make this training available to others?

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**PATIENT COMMUNICATION**  
for **MEDICAL PHYSICISTS**

**Workshop**  
@UC San Diego Health

Learn and use prescriptive communication strategies to develop positive, productive professional relationships with patients

- 1 Didactic training
- 2 Practical exercises
- 3 Simulated patient interactions

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**Simulated Patients**



**Patient: Robert Adams**  
 Type: Prostate cancer  
 Characteristics: Non-technical, nervous, reserved

**Patient: Jennifer Klogmire**  
 Type: Breast cancer  
 Characteristics: Tech-savvy, highly educated, inquisitive

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## Simulated Patient Interactions



Therapy Physics Patient #1

Therapy Physics Patient #2

Imaging Physics Patient #1

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### PATIENT COMMUNICATION for MEDICAL PHYSICISTS

Workshop  
@UCSanDiegoHealth

Aug 23-24, 2019

- 3 free registrations
- Send us <100 words by email to enter

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## Effective Communication Strategies

### The Good News

Communication is a skill that can be taught, learned and assessed <sup>2,8</sup>  
Improvement requires practice and experience <sup>9,10</sup>

### The Four E's



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## Effective Communication Strategies

### 1. Engage

Try and find some way to connect with the patient on a personal level (e.g. traffic/weather/hobbies/sports/children/etc.)

This is important because it sets the stage for the entire interaction

Non-verbal communication skills can play a big role here <sup>11</sup>

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## Effective Communication Strategies

### Engage – Body Positioning

How do you position yourself in the room with respect to the patient?



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## Effective Communication Strategies

### Parallel Non-Confrontational Position



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## Effective Communication Strategies

Information Triangle Position



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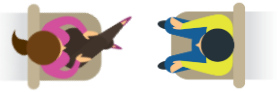
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## Effective Communication Strategies

Engaged Oppositional Position



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## Effective Communication Strategies

Information Triangle Position



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## Effective Communication Strategies

### Engage – Eye Contact

Too much can feel intimidating

Too little is awkward

Aim for balance – enough that the patient knows you are engaged but not so much that they feel like you are interrogating them

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## Effective Communication Strategies

### 2. Empathize

'I see you', 'I hear you', 'I understand you', 'I accept you'

Patients want this and will give clues – if you miss the clues most patients will repeat them <sup>12</sup>

Language and touch can be useful tools



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## Effective Communication Strategies

### Empathize – Useful language

**Reflect** – "It sounds like you're concerned this may mean ..."

**Normalize** – "Anyone would feel scared ..."

**Self-disclose** – "We never seem to stop worrying about our kids ..."

**Partner** – "We can figure this out together ..."

**Highlight** – "I'm impressed with how you've ..."

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## Effective Communication Strategies



### Empathize – Touch

Many of us will shy away from this entirely

Some of our patients will be entirely uncomfortable with this

Many of our patients will benefit tremendously from this

When? How? How do you know?

**Humerus** <sup>11</sup>

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## Effective Communication Strategies

### 3. Educate

Critical to assess a patient's comfort with technical language and to use patient-appropriate language

Use "chance" or "more/less likely" instead of "risk"

Use "9 out of 10 people" not "90%"



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## Effective Communication Strategies

### Educate – Speech/Language

Loud, fast speech can be effective in an academic environment, but most patients will find this off-putting

Unless you're a naturally slow speaker, speak slower than you would normally

Use a 'calm' tone – you have time and you want to know more about what the patient is concerned about

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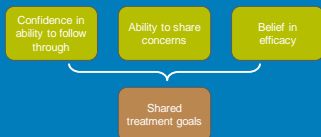
# Effective Communication Strategies

## 4. Enlist

Patients can and should play an active role in their treatment

Most often used in combination with **educate**

How does enlistment influence adherence? <sup>14</sup>



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# Effective Communication Strategies

## Enlist – Use open-ended questions

"Do you feel ok about your treatment today?"

"What concerns do you have about treatment today?"

"Are you feeling ok about your CT scan today?"

"How are you feeling about your CT scan today?"

"Are you feeling good about the plan that I discussed today?"

"How are you feeling about the plan **we've** discussed today?"

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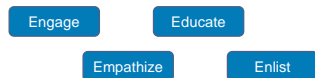
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# Effective Communication Strategies

## The Four E's



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Collaborators

Todd Atwood  
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Kevin Moore  
Titania Juang

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PATIENT COMMUNICATION for MEDICAL PHYSICISTS

Physicist-Patient Interaction

Prostate Cancer Patient Before CT Simulation

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Effective Communication Strategies

Negative Aspects

No mention of what his role is in the clinic (missed opportunity for engagement/education)

Asks if patient understands and then immediately interrupts him

Tells patient it would be a waste of his time to worry (missed opportunity for empathy)

Missed opportunity to enlist the patient when he describes back pain

Dismisses patient's questions about how this will be different than last time

Even someone who is good at communicating is still missing many cues from the patient

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## Effective Communication Strategies

### Positive Aspects

- Introduction is good (**engagement**)
- Eye contact (**engagement**)
- Explanation of CT Sim is good (**Education**)
- Great job of **empathizing** with patient about back pain

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**PATIENT  
COMMUNICATION  
for MEDICAL  
PHYSICISTS**

### Physician-Patient Interaction

Breast Cancer Patient Before First Treatment

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## Effective Communication Strategies

### Negative Aspects

- Doesn't introduce himself (**missed opportunity for engagement**)
- Dismisses patient's concerns about whether she was treated last time (**missed opportunity for education**)
- Missed opportunity for empathy** when patient says it's kind of a big deal
- Tells patient multiple times that they are really busy
- Never asks the patient if anything he's saying is clear (**missed opportunity for enlistment**)

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## Effective Communication Strategies

### Positive Aspects

- Information Triangle (**engagement**)
- Eye contact (**engagement**)
- Speaks slowly and clearly (**education**)

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Social Q&A:  
[aapm.socialqa.com](http://aapm.socialqa.com)



Wi-Fi AAPM 2019:  
[Bridges2019](#)

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