

RSNA Public Information Committee Patient-Centered Care Trainee Modular Interactive Learning Set

To fulfill ACGME-mandated instruction in patient-centered care, the RSNA Public Information Committee (PIC) has constructed a curriculum of interactive patient-centered care learning modules for educating radiology trainees.

The learning objectives of this curriculum are to:

- Sensitize radiology trainees to the importance of patient-centered care
- Equip radiology trainees with methods and tools to allow them to provide patient-centered care
- Train the next generation of patient-centered radiologists
- Promote a patient-centered culture in radiology departments and practices

The topics in the framework are designed to be reviewed in small groups and can be tailored to individual program environments. Each of the 11 interactive modules includes a set of preparatory tasks and small group activities built from the toolkits on RSNA's Radiology Cares website. For example: review one video, read two articles, perform a specific task related to the topic, and answer three questions with group discussion. The latter work is designed to occur in a classroom environment supervised by the program director or other faculty or resident leaders. Programs are encouraged to create their own learning objectives for the modules that are specific to their own learning environments and expertise. The modules purposefully include content and suggest delivery methods, but we encourage creativity at the program level. One common theme for the curriculum is roleplay. Although state-of-the-art communication skills training in medicine involves high-fidelity, experiential simulation-based learning with professional confederates (i.e., actors), most programs do not presently have access to such facilities for the full spectrum of topics involved in patient-centered care in radiology. We therefore anticipate that roleplay as suggested in the modular curriculum is an important first step that will help prepare learners for more intensive training as it becomes available at individual sponsor institutions.

Patient-Centered Care in Radiology – Table of Contents
Trainee Modular Interactive Learning Set

There are 11 modules in the curriculum as outlined below.

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Module 1 – The Basics of Patient-Centered Care

SECTION 2: Empathy/Cultural Awareness

Module 2 – Empathy/Cultural Awareness

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Module 11 – Teamwork: Developing a Team Approach to Patient-Centered Radiology

Patient-Centered Care in Radiology – Table of Contents with Program Requirements

Trainee Modular Interactive Learning Set

There are 11 modules in the curriculum as outlined below. Roman numerals indicate the ACGME common program requirements mapped to the patient-centered care activity.

SECTION 1: The Basics of Patient-Centered Care

Module 1 – The Basics of Patient-Centered Care **IV.B.1.a, IV.B.1.b)**

SECTION 2: Empathy/Cultural Awareness

Module 2 – Empathy/Cultural Awareness **IV.B.1.a).(1).(a), IV.B.1.a).(1).(e), IV.B.1.e).(1).(a)**

Module 3 – Reducing Health Care Disparities/Recognizing Diversity **IV.B.1.a).(1).(e IV.B.1.d).(1).(d)**

SECTION 3: Communication

Module 4 – Communication: Socioeconomic and Cultural Backgrounds **IV.B.1.e), IV.B.1.e).(1).(a)**

Module 5 – Communication: Diagnostic Testing/Therapeutic Results Sharing **IV.B.1.e), IV.B.1.e).(1).(a), IV.B.1.e).(1).(b)**

Module 6 – Communication: Partner with Patients to Assess Care Goals **IV.B.1.e).(2), IV.B.1.f).(2)**

SECTION 4: Safety: Culture of Safety VI.A.1.a).(1), VI.A.1.

Module 7 – Safety: Radiation Safety and Radiation Exposure Education **VI.A.1.a).(1).(a)**

Module 8 – Safety: Imaging Utilization **IV.B.1.f).(1).(f), IV.B.1.f).(1).(g)**

Module 9 – Safety: Consent **IV.B.1.e).(2), IV.B.1.e).(1).(d)**

Module 10 – Safety: Disclosures of Adverse Events **VI.A.1.a).(3), VI.A.1.a).(3).(a).(i), IV.D.1.f).(1).(g)**

SECTION 5: Teamwork IV.B.1.e).(1).(e), IV.B.1.e).(1).(c), VI.E.2., IV.B.1.f).(1).(b)

Module 11 – Teamwork: Developing a Team Approach to Patient-Centered Radiology **IV.B.1.e), IV.B.1.f).(1).(d)**

Patient-Centered Care in Radiology

(Note: Roman numerals in **BOLD** indicate the ACGME common program requirements)

SECTION 1: The Basics of Patient-Centered Care

Module 1 – The Basics of Patient-Centered Care **IV.B.1.a, IV.B.1.b)**

Pre Team Based Learning:

1. Watch Radiology Cares: Patient Stories video:
<https://youtu.be/Q-9N8ESkeXw>
2. Read: *Radiographics* article: Invited Commentary: Time to Step Out of the Dark
<http://pubs.rsna.org/doi/10.1148/rg.2015150214>
3. Read: New York Times article: Radiologists are Reducing the Pain of Uncertainty
<https://www.nytimes.com/2014/11/25/health/radiologists-are-reducing-the-pain-of-uncertainty.html>
(may require subscription to access)
4. Read: *Radiographics* article: Patient-Centered Radiology
<https://pubs.rsna.org/doi/full/10.1148/rg.2015150110>

During Team Based Learning:

1. Watch Radiology Cares Video: The Untold Future
<https://www.youtube.com/watch?v=IBKQtmw4yMk&feature=youtu.be>
2. Group Questions and Discussion:
 - Which scenario from the Untold Future video best exemplifies your current perception of radiology and why?
 - Have you been a patient or caregiver before? If so, what did you like or not like about your experience?
 - What obstacles to patient-centered care have you experienced?
 - What can you, as a resident, do to change the future of radiology to be more patient focused?
 - When you chose the specialty of radiology, did expectations of patient interaction influence your decision at all? If so, in what way? Has this learning exercise changed your expectations?

SECTION 2: Empathy/Cultural Awareness

Module 2 – Empathy/Cultural Awareness IV.B.1.a).(1).(a), IV.B.1.a).(1).(e), IV.B.1.e).(1).(a)

Pre Team Based Learning:

1. Watch Cleveland Clinic Empathy video: https://youtu.be/cDDWvj_q-o8
2. Watch Dr. Brené Brown video describing the difference between empathy and sympathy:
<https://www.youtube.com/watch?v=1Evwgu369Jw>
3. Read:
 - a. Empathy's Vital Role in Putting Patients First
<http://pubs.rsna.org/doi/full/10.1148/radiol.13122731>
 - b. The Service Encounter in Radiology <https://www.ncbi.nlm.nih.gov/pubmed/25572928> (*may require subscription to access*)
4. Do one implicit bias test (Harvard site) <https://implicit.harvard.edu/implicit/takeatest.html>

During Team Based Learning:

1. Review/watch Cleveland Clinic Empathy video together: https://youtu.be/cDDWvj_q-o8
2. Answer questions together:
 - a. Each participant should describe one thing he or she believes each of us can do to increase the **empathy** of radiologists and thus promote our ability to put patients first. Rank the ideas in your group from highest yield potential to lowest.
 - b. Role-play the scenario described in article number 1 above. In teams of four, have one resident be the patient, one the spouse, and one the doctor while the other video records (cellphone) the encounter. Allow ten minutes for the “production,” then review together to share the videos and discuss what worked and what can still be improved upon from the perspective of the patient and family experience.
 - c. Discuss as a group what empathetic actions can be taken to calm an upset, angered, bewildered patient.

SECTION 3: Communication

Module 3 – Reducing Health Care Disparities/Recognizing Diversity **IV.B.1.e), IV.B.1.e).(1).(a)**

Pre Team Based Learning:

1. Read: How We Got Here: The Legacy of Anti-Black Discrimination in Radiology
<https://pubs.rsna.org/doi/10.1148/rg.220112>
2. Read: Racial Disparities in Digital Breast Tomosynthesis Screening
<https://pubs.rsna.org/doi/10.1148/rycan.2021219016>
3. Read: Racial and Ethnic Disparities in Lung Cancer Screening Eligibility
<https://pubs.rsna.org/doi/10.1148/radiol.2021204691>
4. Read: Radiology: Hear the Call to Action in Overcoming Health Care Disparities
 - a. Part 1 <https://www.rsna.org/news/2021/february/health-care-disparities>.
 - b. Part 2
<https://www.rsna.org/news/2021/march/Pediatric%20Radiology%20Health%20Care%20Disparities>
 - c. Part 3 <https://www.rsna.org/news/2021/june/Rural%20Radiology%20Equity>
 - d. Part 4 <https://www.rsna.org/news/2021/september/Imaging-Transgender-Patients>

During Team Based Learning:

1. As a group, identify and discuss at least three major drivers of disparities in health care
2. The U.S. Preventive Services Task Force (USPSTF) recently lowered lung cancer screening (LCS) eligibility to specifically address racial disparities in LCS access. As a group, discuss whether you can identify other broad screening recommendations that fail to address racial disparities.
3. As a group, identify and discuss at least three ways in which you can identify and address a health care disparity in everyday practice.

SECTION 3: Communication (cont'd)

Module 4 – Communication: Socioeconomic and Cultural Backgrounds **IV.B.1.e), IV.B.1.e).(1).(a)**

Pre Team Based Learning:

1. Review: power point presentation on Radiology Communication Skills:
<https://www.acr.org/-/media/ACR/NOINDEX/RFS-Communication-Toolkit/Radiology-Communication-Skills-Learning-Module.pdf>
2. Watch: three short videos on plain language and clear communication
<https://pacificu.libguides.com/HLeT/PlainLanguage#s-lg-box-15106038>
3. Read: Communication and Empathy Skills: Essential Requisites for Patient-Centered Radiology Care
<https://pubmed.ncbi.nlm.nih.gov/33964705/>
4. Read: Improving Imaging Care for Diverse, Marginalized and Vulnerable Patient Populations
https://pubs.rsna.org/doi/10.1148/rg.2018180034?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%200pubmed
5. Read: Racial and Ethnic Disparities in Radiology: A Call to Action
<https://www.sciencedirect.com/science/article/pii/S1546144018315898?via%3Dihub>
6. Watch RSNA Video: The Key to Success in Radiology? Build Your Communication Skills by Melissa Silverberg May 24, 2021: <https://www.rsna.org/news/2021/may/Communications%20Skills>

During Team Based Learning:

1. Divide into groups of no greater than 6 (three teams of two) and take turns explaining to each other 1.) a brain MRI; 2.) a percutaneous image-guided liver biopsy, with one resident being the radiologist and the other the “patient.” Make certain that the “patient” is from a different culture and different ethnic background of the “radiologist” in this role-playing. Examples include but are not limited to: different gender; different religion (an Orthodox Jewish woman/man, an observing Muslim woman modestly dressed with head cover); LGBT, a single parent with challenging socioeconomic status; a refugee or new immigrant from Africa, from a country in war conflict, or a patient with a language barrier (no English at all, English second language, hearing impaired). If possible, the third team of two should be split and act as the videographer. Take no more than 3 minutes for each explanation, and after all residents have had the opportunity to serve once as a patient, a radiologist, and a videographer, review all videos together, taking notes of what was done well and which parts need refinement. In the final 10 minutes of the session, report your reviews to the class at large.

SECTION 3: Communication (cont'd)

Module 5 – Communication: Diagnostic Testing/Therapeutic Results Sharing **IV.B.1.e), IV.B.1.e).(1).(a), IV.B.1.e).(1).(b)**

Pre Team Based Learning:

1. Read: Sick and Scared and Waiting, Waiting, Waiting
<http://www.nytimes.com/2005/08/20/health/sick-and-scared-and-waiting-waiting-waiting.html> (*may require subscription to access*)
2. Read: Rethinking the Role of the Radiologist: Enhancing Visibility through Both Traditional and Nontraditional Reporting Practices <http://pubs.rsna.org/doi/full/10.1148/rg.352140042>
3. Read: Radiology Reporting: Current Practices and an Introduction to Patient-Centered Opportunities for Improvement <https://www.ajronline.org/doi/10.2214/AJR.17.18721> (*may require subscription to access*)

During Team Based Learning:

1. Create a glossary of commonly used words in radiology reports with explanations given in layman's terms, which could help alleviate patient confusion and anxiety and be used as a resource for either departmental websites or paper materials to distribute to patients in anticipation of their viewing reports on secure patient portals. Divide the teams into subspecialty areas (Neuro, Chest, Breast, Abdominal imaging, etc.) to avoid repetition.
2. As a group, review the glossary and consider how it might be utilized in your department.
3. Role-play delivering difficult news to a patient about findings on an imaging study (see above section).

SECTION 3: Communication (cont'd)

Module 6 – Communication: Partner with Patients to Assess Care Goals IV.B.1.e).(2), IV.B.1.f).(2)

Pre Team Based Learning:

1. Read: Goals-of-Care Conversations: 3 Ways to Improve Your Skills <https://acpdecisions.org/goals-of-care-conversations-3-ways-to-improve-your-skills/>
2. Read: A Guide to Employing Shared Decision Making in Clinical Practice <https://acpdecisions.org/a-guide-to-employing-shared-decision-making-in-clinical-practice/>
3. (Optional) Review: Goals of Care Conversations Training for Physicians, Advance Practice Nurses, & Physician Assistants curriculum <https://www.ethics.va.gov/goalsofcaretraining/Practitioner.asp>
4. Read: Patient Electronic Access to Final Radiology Reports: What Is the Current Standard of Practice, and Is an Embargo Period Appropriate? <https://pubs.rsna.org/doi/10.1148/radiol.2021204382>

During Team Based Learning:

Role-play confirming the patient's health care goals for treatment in the following scenario while other residents role-play as family members:

An 88-year-old diabetes patient has just suffered a significant stroke. She is paralyzed on her right side and her speech is slurred. She is not able to eat or drink but she is aware and communicative. The stroke was caused by a small blood clot in the brain stem that cannot be mechanically removed. Blood thinners are not recommended for treatment given existing hypertension and diabetes. The neuroradiologist presents and discusses the benefits and risks of three general treatment approaches to the family and patient:

- Employ neurointervention treatment(s) to remove the clot
- Employ physical rehabilitation to maximize recovery
- Suspend all treatment

Each option would have a different family member advocating for it. Role-play should focus on determining the patient's true wishes and a least harm treatment strategy. Consider: how does the neuroradiologist separate out the family's interests to correctly and fully identify the patient's wishes (provided the patient is compos mentis)?

SECTION 4: Culture of Safety CPR VI.A.1.a).(1)

Module 7 – Safety: Radiation Safety and Radiation Exposure Education VI.A.1.a).(1).(a)

Pre Team Based Learning:

1. Read: Managing Radiation Use in Medical Imaging: A Multifaceted Challenge
<https://pubs.rsna.org/doi/full/10.1148/radiol.10101157>
2. Read: Radiation Dose in X-Ray and CT Exams
<https://www.radiologyinfo.org/en/info/safety-xray>
3. View the video on CT dose estimates on the *RadiologyInfo.org* website for patients:
<https://www.radiologyinfo.org/en/gallery/video/1033>
4. Read: X-ray, Interventional Radiology and Nuclear Medicine Radiation Safety
<https://www.radiologyinfo.org/en/info/safety-radiation>
5. Read: CT Safety During Pregnancy <https://www.radiologyinfo.org/en/info/safety-ct-pregnancy>
6. Take the pledge to image wisely at <https://www.imagewisely.org/>

Note: the information contained on *RadiologyInfo.org* is updated through annual peer review. You might wish to download a Radiation Dose Chart for patient information: <https://www.acr.org/-/media/ACR/Files/Radiology-Safety/Radiation-Safety/Dose-Reference-Card.pdf?la=en>

During Team Based Learning:

1. Read: Informed Consent for Radiation Risk from CT is Unjustified Based on Current Scientific Evidence <https://pubs.rsna.org/doi/10.1148/radiol.2015142859> and The Information Imperative: Is it Time for an Informed Consent Process Explaining the Risks of Medical Radiation? <https://pubs.rsna.org/doi/10.1148/radiol.11110616>. Ask each person to discuss which opinion they agree with in the selected article and why.
2. Break into small groups of 4 or less and role-play: answer the “patient’s” questions about radiation safety regarding the following clinical scenarios: an adult’s abdominal CT scan; a mammogram in a 52-year-old woman; a 30-year-old pregnant patient with arm x-ray, an abdominal/pelvic CT in a child compared to a > 65-year-old-woman. Specifically try to explain risks in terms of background radiation, and what your department is doing to reduce exposure for each type of exam.

SECTION 4: Culture of Safety (cont'd)

Module 8 – Safety: Imaging Utilization IV.B.1.f).(1).(f), IV.B.1.f).(1).(g)

Pre Team Based Learning

1. Read: Selecting the Right Test and Relative Radiation Dose as They Relate to Appropriateness
Criteria <http://www.imagewisely.org/imaging-modalities/computed-tomography/imaging-physicians/articles/selecting-the-right-test-and-relative-radiation-dose>
2. Read: CT Dose Optimization in Pediatric Radiology: A Multiyear Effort to Preserve the Benefits of Imaging While Reducing the Risks <http://pubs.rsna.org/doi/10.1148/rg.2015140267>
3. Read: Strategies for Managing Imaging Utilization [https://www.jacr.org/article/S1546-1440\(09\)00393-7/fulltext](https://www.jacr.org/article/S1546-1440(09)00393-7/fulltext) (may require subscription to access)

During Team Based Learning

1. Watch: Image Wisely During CT-guided Procedures in Pregnant Patients
<https://www.imagewisely.org/Educational-Tools/Radiation-Safety-Cases/Case-11>
2. Watch: Child-sizing CT Dose: Optimizing Patient Care Through Quality Improvement – Pediatric and Adult Imaging
<https://www.imagewisely.org/Educational-Tools/Radiation-Safety-Cases/Case-10>
3. Discuss these scenarios (look up references if there is not group consensus)
 - a. Post-menopausal patient with 4cm simple cyst. What f/u recommendation?
 - b. Pre-menopausal patient with 4 cm simple cyst. What f/u recommendation?
 - c. 6 yo with RLQ pain. What is initial test of choice?
 - d. What test would you recommend for a pregnant patient, 2nd trimester, with shortness of breath and +D dimer?

SECTION 4: Safety

Module 9 – Safety: Consent **IV.B.1.e).(2), IV.B.1.e).(1).(d)**

Pre Team Based Learning

1. Read: Radiation Therapy Consent Forms Too Difficult to Read <https://www.reuters.com/article/us-health-radiotherapy-informed-consent-idUKKCN1SE2FR>
2. Read: Informed Consent in Radiation Oncology [https://www.redjournal.org/article/S0360-3016\(20\)34223-1/fulltext](https://www.redjournal.org/article/S0360-3016(20)34223-1/fulltext)
3. Read: ACR Practice Parameter on Informed Consent <https://www.acr.org/-/media/ACR/Files/Practice-Parameters/informedconsent-ro.pdf>
4. Read: ACR Practice Parameter on Informed Consent for Image-guided Procedures <https://www.acr.org/-/media/ACR/Files/Practice-Parameters/InformedConsent-ImagGuided.pdf>
5. Read: ACR Practice Parameter for Imaging Pregnant or Potentially Pregnant Adolescents and Women with Ionizing Radiation <https://www.acr.org/-/media/acr/files/practice-parameters/pregnant-pts.pdf>
6. Read: Radiologist's Guide to Informed Patient Consent <https://www.diagnosticimaging.com/view/radiologists-guide-informed-patient-consent>

Team Based Learning:

1. Watch: Informed Consent for Medical Imaging (March 2012 *Radiology* podcast) https://www.youtube.com/watch?v=t8EFt1_Mrv0
2. Watch: Informed Consent in Interventional Radiology video <https://www.youtube.com/watch?v=0ZskUzcZFH4>
3. Watch: Informed Consent: In a Patient's Shoes video https://www.youtube.com/watch?v=g_LEAp7_isU

SECTION 4: Culture of Safety (cont'd)

Module 10 – Safety: Disclosures of Adverse Events **VI.A.1.a).(3), VI.A.1.a).(3).(a).(i), IV.D.1.f).(1).(g)**

Pre Team Based Learning:

1. Read: The Disclosure Dilemma – Large-Scale Adverse Events
<http://www.nejm.org/doi/full/10.1056/NEJMhle1003134>
2. Read: Managing an Acute Adverse Event in a Radiology Department
<http://pubs.rsna.org/doi/full/10.1148/rg.285085064>
3. Read: Stepping Out Further from the Shadows: Disclosure of Harmful Radiologic Errors to Patients
<http://pubs.rsna.org/doi/full/10.1148/radiol.11110829>

OPTIONAL READING:

4. Read: To Disclose or Not to Disclose Radiologic Errors: Should “Patient-First” Supersede Radiologist Self-Interest? <http://pubs.rsna.org/doi/full/10.1148/radiol.13130193>
5. Read: Root Cause Analysis: Learning from Adverse Safety Events
<http://pubs.rsna.org/doi/full/10.1148/rg.2015150067>
6. Read: Survey of Radiologists' Knowledge Regarding the Management of Severe Contrast Material–induced Allergic Reactions <http://pubs.rsna.org/doi/full/10.1148/radiol.2513081651>

During Team Based Learning:

1. Watch the Adverse Event Disclosure video https://www.youtube.com/watch?v=CRHXFh_jV4o
2. Discuss the video and think of situations in radiology and how you would approach them.

SECTION 5: Teamwork IV.B.1.e).(1).(e), IV.B.1.e).(1).(c), VI.E.2., IV.B.1.f).(1).(b)

**Module 11 – Teamwork: Developing a Team Approach to Patient-Centered Radiology IV.B.1.e),
IV.B.1.f).(1).(d)**

Pre Team Based Learning:

1. Read: The Role of Radiology in the Diagnostic Process: Information, Communication, and Teamwork <http://www.ajronline.org/doi/abs/10.2214/AJR.17.18381> *(may require subscription to access)*
2. Read: Effective Radiology Teams
[http://www.jacr.org/article/S1546-1440\(04\)00328-X/fulltext](http://www.jacr.org/article/S1546-1440(04)00328-X/fulltext) *(may require subscription to access)*
3. Read: Building a Team for Change in an Academic Radiology Department
<http://pubs.rsna.org/doi/full/10.1148/radiol.2322032115>

During Team Based Learning:

1. Define the potential members of the imaging team that should be included in creating a patient-centered radiology service.
2. Discuss potential barriers and strategies to make imaging teams more effective.

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