R-SCAN: Engaging Clinicians in Value-based Care

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R-SCAN Director
What is R-SCAN?

A collaborative between referring clinicians and radiologists to improve patient care

R-SCAN Aims:

- Ensure patients receive the most appropriate imaging exam based on evidence-based appropriate use criteria
- Reduce unnecessary imaging tests focused on imaging Choosing Wisely® topics
- Lower the cost of care
R-SCAN Sponsor

- R-SCAN is funded primarily by a CMS Transforming Clinical Practice Initiative (TCPI) grant—awarded Sept. 2015

1. Support more than 140,000 clinicians in their practice transformation work

2. Improve health outcomes for millions of Medicare, Medicaid and CHIP beneficiaries and other patients

3. Reduce unnecessary hospitalizations for 5 million patients

4. Generate $1 to $4 billion in savings to the federal government and commercial payers

5. Sustain efficient care delivery by reducing unnecessary testing and procedures

6. Build the evidence base on practice transformation so that effective solutions can be scaled

https://innovation.cms.gov/initiatives/Transforming-Clinical-Practices/
Why Participate?

- **It’s the right thing to do for patients:** Highlights the ordering of imaging exams based upon the ACR’s evidence-based appropriateness criteria.

- **It’s a data-driven way to demonstrate improved imaging utilization:** Provides quantitative results demonstrating the benefit of clinician collaboration.

- **It fosters communication and collaboration:** Presents the opportunity for face-to-face interaction
  - R-SCAN collaborators have reported it’s fun!
Why Participate?

- Supports fulfilling Quality Payment Program (QPP) requirements under the Merit-based Incentive Payment System (MIPS) track

<table>
<thead>
<tr>
<th>Quality</th>
<th>Improvement Activities</th>
<th>Advancing Care Information</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replaces PQRS.</td>
<td>New Category.</td>
<td>Replaces the Medicare EHR Incentive Program also known as Meaningful Use.</td>
<td>Replaces the Value-Based Modifier.</td>
</tr>
</tbody>
</table>
Why Participate?

- Approved for 7 medium-weight Improvement Activities under MIPS.
  - For referring physicians and radiologists
- Provides the type of data that will be beneficial for participation in advanced alternative payment models.
  - Demonstrate improved care, avoid unnecessary tests, reduce cost
Why Participate?

- Provides an opportunity to try out imaging Clinical Decision Support
  - Ahead of Protecting Access to Medicare Act (PAMA) Implementation
  - Target implementation: January 2019
- CMS to require consultation of appropriate use criteria (AUC) in the ordering of advanced imaging exams
  - A condition for reimbursement to imaging physicians
  
Who Can Participate

- Physicians: radiologists, primary care physicians, emergency care physicians, hospitalists, & other specialists
- Nurse practitioners
- Residents and medical students
- Physician assistants
- Imaging technologists

Anyone with an interest in improving imaging care can initiate an R-SCAN Project
How R-SCAN Works

- All the tools and materials are available on the R-SCAN website: rscan.org

- A 3-phase approach leads clinicians through the process of improving the ordering of value-added imaging exams based on Choosing Wisely® recommendations.

- Participation is free—both for radiologists & referring clinicians.
How R-SCAN Works

Phase 1: Baseline Data Review

A. Establish a collaboration and select a Choosing Wisely topic
<table>
<thead>
<tr>
<th>Specialty Area</th>
<th>Choosing Wisely Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal Imaging</td>
<td>Avoid ordering CT of the abdomen in otherwise healthy emergency department (ED) patients age &lt;50 with known histories of renal colic</td>
</tr>
<tr>
<td>Measure</td>
<td><strong>ACEP Quality Measure #8</strong>: Appropriate imaging for recurrent renal colic</td>
</tr>
<tr>
<td>Chest Imaging</td>
<td>Avoid admission or preoperative chest x-rays for ambulatory patients with unremarkable history and physical exam.</td>
</tr>
<tr>
<td>Measure</td>
<td><strong>PQRS #322/NQF #0670</strong>:</td>
</tr>
<tr>
<td>Chest Imaging</td>
<td>Do not perform chest CT angiography to evaluate for possible pulmonary embolism in patients with a low clinical probability and negative results of a highly sensitive D-dimer assay</td>
</tr>
<tr>
<td>Cardiac Imaging</td>
<td>Don’t use coronary CT angiography in high-risk* patients presenting in the emergency department with acute chest pain.</td>
</tr>
<tr>
<td>Measure</td>
<td><strong>ACEP CEDR #22 Registry CEDR #4</strong>: Appropriate Emergency Department Utilization of CT for Pulmonary Embolism</td>
</tr>
<tr>
<td>Genitourinary Imaging</td>
<td>Don’t perform follow-up imaging for clinically inconsequential adnexal cysts.</td>
</tr>
<tr>
<td>Measure</td>
<td><strong>ACR Diagnostic Imaging Measure Set #13</strong>: Appropriate Follow up Imaging for Simple Ovarian Cysts</td>
</tr>
<tr>
<td>Specialty Area</td>
<td>Choosing Wisely Topic</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Genitourinary Imaging</td>
<td>Don’t perform PET, CT, and radionuclide bone scans in the staging of early prostate cancer at low risk for metastasis.</td>
</tr>
</tbody>
</table>
| Musculoskeletal Imaging  | Don’t do imaging for low back pain within the first six weeks, unless red flags are present.  
  **Measures**  
  1. HOQR OP-8: MRI Lumbar Spine for Low Back Pain  
  2. PQRS #312: Use of Imaging Studies for Low Back Pain |
| Neuroimaging              | Don’t order sinus CT or indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.  
  **Measures**  
  1. PQRS #333: Adult Sinusitis: Computerized Tomography (CT) for Acute Sinusitis  
  2. PQRS #334: Adult Sinusitis: More than One Computerized Tomography (CT) Scan Within 90 Days for Chronic Sinusitis  
  3. HOQR OP-14: Simultaneous Use of Brain Computed Tomography (CT) and Sinus CT |
| Neuroimaging              | CT scans are not necessary in the immediate evaluation of minor head injuries  
  **Measure**  
  PQRS #416: Emergency Medicine: ED Utilization of CT for Minor Blunt Head Trauma for Patients Aged 2 through 17 Years |
| Neuroimaging              | Neuroimaging (CT, MRI) is not necessary in a child with simple febrile seizure.                                                                                                                                                 |
| Neuroimaging              | Don’t do imaging for uncomplicated headache.  
  **Measure**  
  AAN Set #7: Overuse of neuroimaging for patients with primary headache and a normal neurological examination |
Current Urological Choosing Wisely Topics

- Avoid ordering CT of the abdomen in otherwise healthy emergency department (ED) patients age <50 with known histories of renal colic
  - ACEP recommendation

- Don’t perform PET/CT, and radionuclide bone scans in the staging of early prostate cancer at low risk for metastasis
  - ACR recommendations
  - Several collaborations ongoing (Michigan, California)

- Continue to add more topics
AUA Imaging Choosing Wisely Topics

- Don’t obtain computed tomography scan of the pelvis for asymptomatic men with low-risk clinically localized prostate cancer.
- A routine bone scan is unnecessary in men with low-risk prostate cancer.
- Don’t order creatinine or upper-tract imaging for patients with benign prostatic hyperplasia.
- Don’t routinely use computed tomography (CT) to screen pediatric patients with suspected nephrolithiasis.
- Don’t routinely perform ultrasound on boys with cryptorchidism.
Other Possibilities

A few suggestions based upon Dr. Remer’s observation:

- Don’t order pelvic CT in follow-up surveillance after partial nephrectomy.
- Don’t order multiphasic renal mass CT in follow-up after partial nephrectomy.
- Selectively use CT urogram after cystectomy.
How R-SCAN Works

Phase 1: Baseline Data Review

A. Establish a collaboration and select a Choosing Wisely topic

B. Identify previously ordered cases for a retrospective review

C. Rate baseline cases using the ACR Appropriateness Criteria/ACR Select and review reports
Review with CDS Example

[Diagram showing a session creation page with options selected for age (45), sex (Male), body area (prostate), and modalities (PET-CT)].

- **Clinical Indications**:
  - Clinical focus
    - Neoplasm: prostate, staging
  - Known condition
    - Neoplasm: prostate, rx monitor or tru
  - Suspect condition
    - Neoplasm: prostate, recurrence, suspected/known
    - Neoplasm: prostate, suspected

- **Clinical Scenarios**:
  - Post-treatment Follow-up of Prostate Cancer
    - Prostate cancer metastatic, androgen antagonist bx, rising PSA, follow-up
    - Prostate cancer radical prostatectomy, rising PSA, follow-up
    - Prostate cancer, treated with radiation therapy, rising PSA
  - Prostate Cancer—Pretreatment Detection, Surveillance, and Staging
    - Prostate cancer susp, PSA persistent or rising, all cores negative
    - Prostate cancer, high risk (T2c or higher or GS=8-10 or PSA >=20)
    - Prostate cancer, Int risk (T2b or GS >7 or PSA=10-20)
    - Prostate cancer, low risk (T1-2a, GS <=5, PSA <=10)
# Review with CDS Example

## Appropriateness rankings for a 45 year old male

<table>
<thead>
<tr>
<th>Indications:</th>
<th>Ranking</th>
<th>Appropriateness</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>MR, pelvis, prostate, wo/iv contrast</td>
<td>7</td>
<td>$$$</td>
<td>select this exam</td>
</tr>
<tr>
<td>MR, pelvis, wo iv contrast</td>
<td>5</td>
<td>$$</td>
<td>select this exam</td>
</tr>
<tr>
<td>CT, abdomen-pelvis, w iv contrast</td>
<td>2</td>
<td>$$</td>
<td>select this exam</td>
</tr>
<tr>
<td>CT, abdomen-pelvis, wo iv contrast</td>
<td>2</td>
<td>$$</td>
<td>select this exam</td>
</tr>
<tr>
<td>NUC, bone scan, whole body, Tc-99m</td>
<td>2</td>
<td>$$</td>
<td>select this exam</td>
</tr>
<tr>
<td>NUC, tumor scan, pelvis, prostate, In-111 capromab pendetide</td>
<td>2</td>
<td>$$</td>
<td>select this exam</td>
</tr>
<tr>
<td>PET-CT, whole body, FDG</td>
<td>2</td>
<td>$$</td>
<td>select this exam</td>
</tr>
</tbody>
</table>
Review with CDS Example

Imaging Decision Support

Requested Exam: PET-CT, whole body, FDG
Reason(s) for Exam: Prostate cancer susp, PSA persistent or rising, all cores negative
Appropriateness Score: 2

Do you want to proceed?

Reason(s) for Exam: *Physician Preference
Comment: *Comment here

Accept
Edit Indications/Scenarios Proceed with exam Cancel Session
Review with CDS Example

<table>
<thead>
<tr>
<th>DSN</th>
<th>Age</th>
<th>Gender</th>
<th>Modality</th>
<th>Clinical Indication</th>
<th>Clinical Scenario</th>
<th>Exam</th>
<th>Rating</th>
<th>Reason for Proceeding</th>
<th>Comments</th>
<th>Case Type</th>
<th>Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td>25099229</td>
<td>30</td>
<td>Male</td>
<td>MR</td>
<td>Prostate cancer, low risk (T1-2a, GS ≤6, PSA ≤10)</td>
<td>Prostate Cancer—Pretreatment Detection, Surveillance, and Staging</td>
<td>MRI, pelvis, prostate, w/o IV contrast</td>
<td>5</td>
<td>Patient preference</td>
<td>comment</td>
<td>BSL</td>
<td>Delete</td>
</tr>
<tr>
<td>25099222</td>
<td>30</td>
<td>Male</td>
<td>CT</td>
<td>Prostate cancer, high risk (T2c or higher or GS=8-10 or PSA &gt;20)</td>
<td>Prostate Cancer—Pretreatment Detection, Surveillance, and Staging</td>
<td>CT, abdomen-pelvis, w/o IV contrast</td>
<td>7</td>
<td></td>
<td></td>
<td>BSL</td>
<td>Delete</td>
</tr>
<tr>
<td>25099103</td>
<td>30</td>
<td>Male</td>
<td>PET-CT</td>
<td>Prostate cancer suspi, PSA persistent or rising, all cores negative</td>
<td>Prostate Cancer—Pretreatment Detection, Surveillance, and Staging</td>
<td>PET-CT, whole body, FOG</td>
<td>2</td>
<td>Physician Preference</td>
<td>Comment here</td>
<td>RSL</td>
<td>Delete</td>
</tr>
</tbody>
</table>

Baseline Case Data Summary

Number of exams entered: 133
Average exam value rating: 3.61

Exams ordered ratings

- Exams ordered rated: >=7: 29 (22%)
- Exams ordered rated: 4, 5 and 6: 20 (15%)
- Exams ordered rated: <=3: 84 (63%)

Reasons recorded for why lower rating value exams were ordered

- Contraindication: 2 (2%)
- Patient Preference: 2 (2%)
- Physical Preference: 45 (43%)
- Unknown: 24 (23%)
- Other: 31 (30%)

Total: 104 (100%)
How R-SCAN Works

Phase 2: Carry out an educational program

A. Team works to design an educational program

B. Access educational resources on the R-SCAN website
Educational Resources at rscan.org

Patient Educational Materials

Instructional Videos
Educational Resources at rscan.org

- Podcasts (CME Available)
- Journal Articles
- Ordering Simulation (CME Available)
How R-SCAN Works

**Phase 3: Review post-education exams**

A. Repeat case review

B. Complete the final report

C. Share your success story and choose a new topic!
Success Story

Baseline Review

Post-Education Cases

High value exams ordered
Medium value exams ordered
Low value exams ordered

Baseline Cases

High value exams ordered
Medium value exams ordered
Low value exams ordered

Post Ed. Review
Next Steps: Support to Implement R-SCAN

- Explore expanding R-SCAN Choosing Wisely imaging urologic topics
- Help with outreach to practices
- Webinars for individual practices
- Answer your questions
- Contact: Nancy Fredericks; nfredericks@acr.org