Managing the Paradigm Shift: Demand and Utilization of SPECT MPI in an Era of Value Based Payment

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American Society of Nuclear Cardiology
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Objectives

- Current trends in demand for SPECT MPI
- Legislative and Regulatory Challenges on the horizon (AUC mandate and MACRA)
Medicare Population expected to Increase Exponentially

- The U.S. market will grow as baby-boomers become Medicare-eligible.
- In the 2000 census the Medicare population totaled 35.1 million.
- That number is expected to grow to 69.7 million in 2030 and to 81.9 million by 2050.
Medicare Part B Physician Payments for Myocardial Perfusion SPECT

Year


$0 $200,000,000 $400,000,000 $600,000,000 $800,000,000 $1,000,000,000 $1,200,000,000 $1,400,000,000

3.0 m 2.7 m 2.6 m

2009 2010 2011
ASNC/MedAxiom Member Survey

Graph 1 - Trends in Key Cardiovascular Volumes

- OP Echo
- IP Echo
- OP Nuclear
- IP Nuclear
- Total Cath

Year: 2008 to 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>OP Echo</th>
<th>IP Echo</th>
<th>OP Nuclear</th>
<th>IP Nuclear</th>
<th>Total Cath</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>357</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>378</td>
<td>388</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>256</td>
<td>264</td>
<td>281</td>
<td>241</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>76</td>
<td>76</td>
<td>28</td>
<td>31</td>
<td>568</td>
</tr>
<tr>
<td>2012</td>
<td>154</td>
<td>143</td>
<td>146</td>
<td>131</td>
<td>525</td>
</tr>
</tbody>
</table>
ASNC/ MedAxiom 2013 Member Survey

- **63.7%**  
  SESTAMIBI

- **22.1%**  
  Tetrofosmin

- **13.9%**  
  Thallium

- **0.3%**  
  Other
H.R. 4302- Protecting Access to Medicare Act of 2014

• §218(b) of the Protecting Access to Medicare Act of 2014 mandates the development of a program that requires a professional who orders advanced imaging procedures to consult appropriate use criteria using clinical decision support tools before payment will be made to the rendering physician.
H.R. 4302- Protecting Access to Medicare Act of 2014

• The program applies to payments made under the Hospital Outpatient Prospective Payment System and the Medicare Physician Fee Schedule.

• The first deadline contained in the legislation requires the Secretary to establish which appropriate use criteria are to be used by November 15, 2015.

• The Secretary will have to publish a list of approved clinical decision support mechanisms by April 1, 2016.
Appropriate Use End Users

American Society of Nuclear Cardiology

AXDEV
Mind before matter

a behavioral and performance needs assessment of interprofessional referrals and collaboration in nuclear imaging

September 10th, 2014
### Appropriateness of referrals

**Imaging specialists report most inappropriate referrals from primary care**

<table>
<thead>
<tr>
<th>Referral Source</th>
<th>% of those who receive referrals from this source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse Practitioners from Primary Care</td>
<td>86%</td>
</tr>
<tr>
<td>Physician Assistants from Primary Care</td>
<td>73%</td>
</tr>
<tr>
<td>General Practitioners/Family Physicians</td>
<td>66%</td>
</tr>
<tr>
<td>Physician Assistants from General Cardiology</td>
<td>35%</td>
</tr>
<tr>
<td>Nurse Practitioners from General Cardiology</td>
<td>26%</td>
</tr>
<tr>
<td>General Cardiologists</td>
<td>8%</td>
</tr>
</tbody>
</table>

“The percentage of inappropriate studies ordered by community primary care docs is very high. If I did a consult on all-comers prior to testing, half of them would be cancelled.”

- Imaging Specialist, Pennsylvania
Comparison of ACCF/AHA/ASNC AUC with ACR AUC
For the Evaluation of Coronary Artery Disease
Lack of Detail

• The ACR AUC lacks the clinical detail of the 2013 ACCF/AHA/ASNC AUC and the 2009 ACCF/AHA/ASNC
  – Missing several clinical categories
  – Does not distinguish based on ECG (interpretable or not)
  – Does not distinguish based on ability to exercise or not
  – Does not use TIMI score
  – Does not use Troponin
Differences in Clinical Categories

Preoperative Cardiac Assessment
- Pre-op Assessment?
  - Yes: Tables 3.1 – 3.4
  - No: Cardiac Rehab Evaluation
    - Prior Procedure?
      - Yes: PCI or CABG, Tables 2.4 – 2.5
      - No: Prior Test, Tables 2.0 – 2.3
    - No: Table 4.2

Prior Evaluation or Known CAD
- Symptomatic (Ischemic Equivalent)?
  - Yes: Table 1.1
  - No: Other CV Conditions?
    - Yes: Table 1.3
    - No: Exercise Prescription?
      - Yes: Table 4.1
      - No: Asymptomatic (without Ischemic Equivalent)?
Potential Impact on Utilization

• Implementation of the AUC program will be key.
• Ordering clinicians whose ordering patterns are outliers will subject to pre-authorization.
• If the program presents significant administrative barriers there may be a shift to other modalities not subject to the program.
Medicare Access and CHIP Reauthorization Act of 2015, H.R. 2 (MACRA)

• H.R. 2 was passed on April 14th, 2015 and signed into law on April 16, 2015. The program repeals the Sustainable Growth Rate and provides a period of stable Medicare payments for physician services from July 1, 2015 through the end of 2019.

• MACRA replaces Medicare’s various quality reporting program with the new Merit-based Incentive Payment System, or MIPS system.

• MACRA is a pay for performance system under the current fee for service program that will give bonuses for providers who score well and penalties for those who do not. The program will build upon current quality measures in PQRS, MU, and VBM.
Potential Impact on Utilization

• It is essential that physician discretion to choose the most clinically appropriate modality is maintained and that choices are not made based solely on cost

• We must be sure that measures used in the quality programs recognize the value of SPECT.