The Institute for Clinical and Economic Review

Using Evidence to Improve Health Care Value
Using Comparative Effectiveness

- Disseminated to patients
- Disseminated to clinicians

How can insurers use the information?
- Patient-clinician decision support
- Physician group compensation (P4P)
- Reimbursement policy
- Value-based insurance design
Health technology appraisals

- The process: build trust
- The format: support dialogue
- The outcome: foster innovation, improve value
ICER

- Collaborative academic model
- Diverse funding
- First series of appraisals
  - IMRT for localized prostate cancer
  - CT colonography
  - Pegfilgrastim
ICER Appraisal Process

- **Principles: Rigor, Collaboration, Transparency**
  - Scoping committee
  - Systematic review and economic analysis
  - ICER staff formulate draft appraisal, share with stakeholders for comment
  - Draft presented to Evidence Review Group (ERG)
  - ERG formulates final Integrated Evidence Ratings
Integrated Evidence Rating

Comparative Clinical Effectiveness
- Superior A
- Incremental B
- Comparable C
- Pot/Unprov P/U
- Inadequate I

Comparative Value
- a High
- b Reasonable/Comparable
- c Low
Comparative Value Rating

High Value

Low Value

$0 $50K $100K $150K $200K

Cost saving

Cost per additional Quality Adjusted Life Year (QALY)
## Integrated Evidence Rating

### Comparative Clinical Effectiveness

<table>
<thead>
<tr>
<th>Superior</th>
<th>A</th>
<th>Comparative Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental</td>
<td>B</td>
<td>a High</td>
</tr>
<tr>
<td>Comparable</td>
<td>C</td>
<td>b Reasonable/Comparable</td>
</tr>
<tr>
<td>Pot/Unprov P/U</td>
<td></td>
<td>c Low</td>
</tr>
<tr>
<td>Inadequate</td>
<td>I</td>
<td></td>
</tr>
</tbody>
</table>

### Comparative Value

- **High**
- **Reasonable/Comparable**
- **Low**

### Evidence Rating

<table>
<thead>
<tr>
<th>Aa</th>
<th>Ab</th>
<th>Ac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ba</td>
<td>Bb</td>
<td>Bc</td>
</tr>
<tr>
<td>Ca</td>
<td>Cb</td>
<td>Cc</td>
</tr>
<tr>
<td>Pa</td>
<td>Pb</td>
<td>Pc</td>
</tr>
<tr>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
</tbody>
</table>
ICER Appraisal 1.0: IMRT vs. 3D-CRT

- **Background**
  - Potential benefits/harms of IMRT
  - Coverage
  - Reimbursement: $42,000 vs. $10,000
  - 2002-2004: 32%-73% penetration
Key Findings: IMRT vs. 3D-CRT

- No evidence of disease-free survival benefit
- Decreased risk of proctitis
  - 2-4% vs. 14-16%
- Cost per case of proctitis avoided = $313,000
- Cost per QALY = $706,000
## Integrated Evidence Rating
### IMRT vs. 3D-CRT Rx 75-80 Gy

<table>
<thead>
<tr>
<th>Comparative Clinical Effectiveness</th>
<th>Superior A</th>
<th>Incremental B</th>
<th>Comparable C</th>
<th>Pot/Unprov P/U</th>
<th>Inadequate I</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aa</td>
<td>Ba</td>
<td>C</td>
<td>Pa</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>Ab</td>
<td>Bb</td>
<td>C</td>
<td>Pb</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>Ac</td>
<td></td>
<td>C</td>
<td>Pc</td>
<td>I</td>
</tr>
</tbody>
</table>

### Comparative Value
- **a**: High
- **b**: Reasonable/Comparable
- **c**: Low

- **IMRT**
Radiation for low-risk prostate CA

Comparative Clinical Effectiveness

<table>
<thead>
<tr>
<th>Superior A</th>
<th>Ac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental B</td>
<td>Bc</td>
</tr>
<tr>
<td>Comparable C</td>
<td>Cc</td>
</tr>
<tr>
<td>Pot/Unprov P/U</td>
<td>IMRT</td>
</tr>
<tr>
<td>Inadequate I</td>
<td>Proton Beam Therapy</td>
</tr>
</tbody>
</table>

Comparative Value

- a High
- b Reasonable/Comparable
- c Low
From Tech Appraisal to Medical Policy

- Brachytherapy (Ba)
- IMRT (Pc)
- Hypofraction (Pa)
- Proton Beam (I)
- ++ patient-clinician tools
  Premium price
  0% co-pay
- -- patient-clinician tools
  Lower reimbursed price
  20% co-pay
- Prior auth/CED
- Non-covered
Translating CE Research into Action

- How can insurers use the information?
  - The process: build trust
  - The format: support dialogue
  - The outcome: foster innovation, improve value