External Beam Radiotherapy for Bone Metastases (EBRT) (NQF #1822)

New Quality Measure
Beginning With PCHQR Program Year 2017

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Presentation Topics

- Goals
- Denominator and Initial Population
- Numerator
- Sampling Methodology
- Step Completion
- Data Collection
- Reporting Requirements
- Reminders
- Resources
Goals – General

• Address the Measure Application Partnership (MAP) priority of palliative cancer care.
• Support the National Quality Strategy (NQS) domain of effective clinical care.
• Reduce the rate of EBRT services overuse.
• Support CMS’ commitment to promoting patient safety.
Components of EBRT goals include usage issues:

- Identify performance gap in treatment variation.
- Ensure appropriate use of EBRT.
- Prevent the overuse of radiation therapy.
Components of EBRT goals include patient considerations:

• Address patient preferences for shorter EBRT schedules
• Ensure patient safety, given that shorter treatment courses show similar or fewer side effects while producing similar clinical outcomes
Specifications – Denominator

The EBRT Measure Denominator includes:

• All patients with painful bone metastases; and
• No previous radiation to the same site.
Specifications – Denominator-Excluded Patients

EBRT Denominator Exclusions include:

• Previous radiation to the same site;
• Femoral axis cortical involvement > 3 cm length;
• Previous surgical stabilization procedure; and/or
• Spinal cord compression, cauda equina compression, or radicular pain.
Initial Population and Denominator Algorithm

NQF #1622: External Beam Radiotherapy for Bone Metastases

Measure Description: This measure reports the percentage of patients, regardless of age, with a diagnosis of painful bone metastases and no history of previous radiation who receive external beam radiation therapy (EBRT) with an acceptable fractionation scheme as defined by the guideline.

Numerator Statement: All patients, regardless of age, with painful bone metastases, and no previous radiation to the same anatomic site who receive EBRT with any of the following recommended fractionation schemes: 30 Gy/10 frac., 24 Gy/6 frac., 20 Gy/5 frac., 20 Gy/5 frac.

Denominator Statement: All patients with painful bone metastases and no previous radiation to the same anatomic site who receive EBRT.

Table 1: Diagnostic Code
199.6 Secondary malignant neoplasm of bone and bone marrow

Table 2: Current Procedural Terminology (CPT) Codes
77255 Therapeutic radiation treatment planning, simple
77252 Therapeutic radiation treatment planning, complex

Diagram:

Start initial patient population logic sub-routine

Diagnostic of bone metastases (see Table 1: Diagnostic Code)
Yes

Prescription for EBRT (see Table 2: CPT Code)
No

No history of previous radiation therapy to same anatomic site
Yes

No remnant after surgical intervention 
≤ 0 cm in length
Yes

Did not undergo surgical intervention procedure
No

No specific compression cause
Yes

In Denominator
No

Numerator Population
Yes

Not in Measure Population
No

Legend:
D = In Denominator Population
N = In Numerator Population
E = Not in Measure Population
Initial Population and Denominator Algorithm Example
Specifications – Numerator

- Assesses the percent of patients (Medicare & non-Medicare) with painful bone metastases and no history of previous radiation who receive EBRT with an acceptable dosing schedule.
- EBRT dosing schedule using any of the following:
  - 30Gy/10fxns
  - 24Gy/6fxns
  - 20Gy/5fxns
  - 8Gy/1fxn
Numerator – Algorithm
### Step Completion – Example

**NQF #1822: External Beam Radiotherapy for Bone Metastases**

**Measure Description:** This measure reports the percentage of patients, regardless of age, with a diagnosis of painful bone metastases and no history of previous radiation who receive external beam radiation therapy (EBRT) with an acceptable fractionation scheme as defined by the guidelines.

**Numerator:** All patients, regardless of age, with painful bone metastases and no previous radiation to the same metastatic site who receive EBRT with any of the following fractionation schemes: 32/1.8 (Gy), 20/2.5 (Gy), 20/2.5 (Gy), or 18F-

**Denominator:** All patients with painful bone metastases and no previous radiation to the same metastatic site who receive EBRT.

#### Table 1: Diagnostic Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>501021</td>
<td>Therapeutic radiotherapy treatment planning, simple</td>
<td>yes</td>
</tr>
<tr>
<td>501022</td>
<td>Therapeutic radiotherapy treatment planning, interventional</td>
<td>no</td>
</tr>
<tr>
<td>501023</td>
<td>Therapeutic radiotherapy treatment planning, complex</td>
<td>no</td>
</tr>
</tbody>
</table>

#### Population & Sampling Example

- **1,000 source pts**: 408 diagnosed with bone metastases
- **300 had Rx for EBRT**
- **276 had no Rx of previous radiation therapy to same metastatic site**
- **229 had no femoral shaft cortical involvement >1 cm in length**
- **216 did not undergo a surgical stabilization procedure**
- **190 had no spinal cord or cauda equina compression, or radicular pain**
- **128 had no specified patient reason for treatment decline, unacceptable response, discontinuation of treatment**
- **128 remain in the denominator population**

#### Denominator Calculation

- **Total**: 1,000
- **Excluded**: 300
- **Excluded (denominator)**: 229
- **Excluded (denominator)**: 190
- **Excluded (denominator)**: 128

**Measure rate:** 22 divided by (25 + 98 + 68)
BONE METASTASES DATA COLLECTION INSTRUMENT

Confirm Bone Metastases Diagnosis

Determine if the patient had a documented diagnosis of painful bone metastases and no previous radiation to that anatomic site and was prescribed external beam radiation therapy (EBRT).

___ Yes
___ No/not documented

Bone Metastases

Determine if patient, with painful bone metastases, was prescribed EBRT with any of the following fractionation schemes: 30 Gy/10 fxns, 24 Gy/6 fxns, 20 Gy/5 fxns or 8 Gy/1 fxn.

___ Yes
___ No/not documented
___ No/medical reason(s)

record medical reason(s)

(verbatim text)

___ No/patient reason(s)

record patient reason(s)

(verbatim text)
## Data Collection Tool – Resource

<table>
<thead>
<tr>
<th>DATA ELEMENTS/VARIABLE NAMES</th>
<th>INSTRUCTIONS (DEFINITIONS, VALID VALUES)</th>
<th>INCLUSIONS/SYNONYMS</th>
<th>EXCEPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic Name [CLNAME]</td>
<td>Instruction: Enter the name of the clinic.</td>
<td>Clinic – 1, Clinic – 2, Clinic – 3, Clinic – 4, Clinic – 5</td>
<td>None</td>
</tr>
<tr>
<td>Confirm Bone Metastases Diagnosis [BONEMETCONFIRM]</td>
<td>Instruction: Determine if the patient had a documented diagnosis of painful bone metastases and was prescribed external beam radiation therapy (EBRT).&lt;br&gt;&lt;br&gt;Yes (1): Select this option if the patient had a documented diagnosis of painful bone metastases and was prescribed EBRT.&lt;br&gt;&lt;br&gt;No (0): Select this option if the patient did not have a diagnosis of painful bone metastases and was not prescribed EBRT.</td>
<td>Secondary malignant neoplasm of bone and bone marrow</td>
<td>None</td>
</tr>
<tr>
<td>Bone Metastases-Fractionation Schemes [BONFRACTION]</td>
<td>Instruction: Determine if patient, with painful bone metastases, was prescribed EBRT with any of the following fractionation schemes: 30 Gy/10 fxns, 24 Gy/6 fxns, 20 Gy/5 fxns or 8 Gy/1 fxn.&lt;br&gt;&lt;br&gt;Yes (1): Select this option if the patient, with painful bone metastases, was prescribed EBRT</td>
<td>See Table One for eligible population criteria</td>
<td>No/medical reason(s) (2) may include:&lt;br&gt;Previous treatment to the same anatomic site; patients with femoral axial cortical involvement greater than 3 cm in length; patients who have undergone a surgical stabilization procedure; patients with spinal cord compression.</td>
</tr>
</tbody>
</table>

*Created by the American Society for Radiation Oncology*
## Data Collection – Resource

<table>
<thead>
<tr>
<th>No (0):</th>
<th>Select this option if the patient, with painful bone metastases, was not prescribed EBRT with any of the following fractionation schemes: 30 Gy/10 frxs, 24 Gy/6 frxs, 20 Gy/5 frxs or 8 Gy/1 frx.</th>
</tr>
</thead>
</table>

No/medical reason(s) (2): Select this option if the patient, with painful bone metastases, was not prescribed EBRT with any of the following fractionation schemes: 30 Gy/10 frxs, 24 Gy/6 frxs, 20 Gy/5 frxs or 8 Gy/1 frx due to medical reason(s).

No/patient reason(s) (3): Select this option if the patient, with painful bone metastases, was not prescribed EBRT with any of the following fractionation schemes: 30 Gy/10 frxs, 24 Gy/6 frxs, 20 Gy/5 frxs or 8 Gy/1 frx due to patient reason(s).

cauda equina compression or radicular nerve pain; documented other medical reason(s) (not indicated/contraindicated)

No/patient reason(s) (3) may include: Patient declined treatment; social or religious reasons; other patient reason(s)
Sampling Methodology

- CMS finalized a sampling methodology that is consistent with the sampling methodology standards finalized for the clinical process/oncology care and SCIP measures.
- CMS will incorporate this EBRT sampling methodology in the next feasible regularly scheduled PCHQR Specifications Manual semiannual update.
Sampling Methodology

The sampling methodology:

• Allows for different numbers of cases to be reported based on each PCH’s cancer patient population size.

• Accommodates bed size variations among PCHs from 20 to >250 beds.

• Decreases the reporting burden on PCHs while producing reliable measure rates.
## Population & Sampling Grid

<table>
<thead>
<tr>
<th>Average quarterly initial population size “N”</th>
<th>Minimum required sample size “N”</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;125 ...........................................</td>
<td>25.</td>
</tr>
<tr>
<td>51–125 ...... ..................................</td>
<td>20 percent of the initial patient population.</td>
</tr>
<tr>
<td>10–50 ........ ..................................</td>
<td>10.</td>
</tr>
<tr>
<td>&lt;10 ............... .........................</td>
<td>No sampling; 100 percent of the initial patient population.</td>
</tr>
</tbody>
</table>
Data Submission - Reminders

- Use all-patient (both Medicare and non-Medicare) data from the four quarters of CY 2015.
- Submit aggregate data for the measure for each of these quarters during a data submission window open from July 1 through August 15, 2016.
- Submit aggregate-level data through the CMS Web-based Measures Tool, or submit an aggregate data file through a vendor (via QualityNet).
EBRT Reporting Requirements
FY 2017 Program

• PCHs, starting with January 1, 2015 discharges and for subsequent years, are required to report the EBRT measure to CMS using a CMS Web-based Measures Tool on an annual basis (July 1 through August 15 of each respective year).

• PCHs are already preparing to submit PCHQR data using the same submission timeline.
EBRT Reporting Requirements
FY 2017 Program

• An annual data submission (once per year) as opposed to quarterly data submission (four times per year) will reduce PCHs’ costs and burden.
• The proposed dates will provide enough advance notice for PCHs to prepare to report the measure.
EBRT Reporting Periods and Submission Timeframes

Finalized External Beam Radiotherapy for Bone Metastases (NQF #1822) Measure: Reporting Periods and Submission Timeframes for the FY 2017 Program and Subsequent Years

<table>
<thead>
<tr>
<th>Program year (FY)</th>
<th>Reporting periods (CY)</th>
<th>Data submission deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsequent Years</td>
<td>Q1 discharges (January 1–March 31 of each year 2 years before the program year) Q2 discharges (April 1–June 30 of each year 2 years before the program year). Q3 discharges (July 1–September 30 of each year 2 years before the program year). Q4 discharges (October 1–December 31 of each year 2 years before the program year).</td>
<td>July 1–August 15 of each year before the program year.</td>
</tr>
</tbody>
</table>
• CMS supports protection of patient safety in the PCH setting by addressing potentially unnecessary and harmful radiation doses.
Therefore:
  ▪ CMS will conduct a “performance gap analysis” to assess the appropriateness of the EBRT measure in the PCH setting.
• CMS intends to conduct the analysis with data collected beginning with the FY 2017 PCHQR Program.
EBRT Measure - Resources

• CMS FY 2015 Final Rule

• ASTRO
  www.astro.org

• NQF
  www.qualityforum.org/Home.aspx

• QualityNet Website (PCH pages)
  www.qualitynet.org
EBRT Measure

Questions?
PCHQR ListServe

- PCHQR ListServe will be the official means for CMS to communicate important and official PCHQR Program information, via email, to subscribed users.
- Notifications sent by CMS via the PCHQR ListServe will be published for historical reference on the QualityNet website under “Email Notifications.”
- PCHs are encouraged to subscribe by December 1, 2014, to the PCHQR ListServe at: www.qualitynet.org/dcs/ContentServer?pagename=QnetPublic/ListServe/Register.
ListServe Registration

Provide the required user information below. Then, select the Notifications you wish to receive or the Discussion group you wish to join.

User Information

Your Name: ___________________________ (required)
E-mail: _______________________________ (required)
Verify E-mail: _________________________ (required)
Password: _____________________________ (required)
Verify Password: _______________________ (required)

*Passwords must be a minimum of 8 characters long and contain at least:
  • one uppercase letter [A-Z]
  • one lowercase letter [a-z]
  • one numeric character [0-9]
  • one special character (e.g., ! @ # $ % ^)
Announcement - Farewell

- 15 years serving as an educator/trainer and project coordinator in quality improvement programs
- Began her nursing career in 1980 and landed in quality reporting programs in 1999
Questions regarding the PCHQR Program may be directed to the PCHQR Support Contractor via:

• The online PCHQR Questions and Answers tool at https://cms-ip.custhelp.com/app/home4

or

• The toll-free numbers:

  844-472-4477 or 866-800-8765

  (Weekdays - 8 a.m. to 8 p.m. ET)