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

New Quality Measure
Beginning With PCHQR Program Year 2017

November 19, 2014

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Chair, American Society for Radiation Oncology (ASTRO) Guidelines Subcommittee

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PCHQR Program Lead
FMQAI/HSAG
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.
Goals – Usage

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
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
Initial Population and Denominator Algorithm Example

NQF #1522: 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 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 fractionation schemes: 30 Gy in 10 fractions, 24 Gy in 8 fractions, or 24 Gy in 10 fractions.

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

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
</table>

**Algorithm Example**

1. Start
2. **Diagnosis of Bone Metastases**
3. **Population & Sampling Examples**
   - 1,100 cases
   - 10% of 1,100 = 110 cases

**Table 1: Diagnostic Codes**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>120.1</td>
<td>Therapeutic radiology treatment planning, simple</td>
</tr>
<tr>
<td>120.2</td>
<td>Therapeutic radiology treatment planning, interventional</td>
</tr>
<tr>
<td>120.6</td>
<td>Therapeutic radiology treatment planning, complex</td>
</tr>
</tbody>
</table>

**Table 2:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>122</td>
<td>Bone metastases, bone destructive, primary site</td>
</tr>
</tbody>
</table>

**Measure rates:** 22 divided by (20 + 3.36 + 0.8)
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

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 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: 30.6Gy/10fr, 24Gy/8fr, 20Gy/5fr, 90Gy/1fr

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

Legend:
- D = In Denominator Population
- N = In Numerator Population
- E = Not in Measure Population

Table 1: Diagnosis Code
- 198.5 secondary malignant neoplasm of bone and bone marrow

Table 2: Current Procedural Terminology (CPT) Codes
- 77231 Therapeutic radiology treatment planning simple
- 77232 Therapeutic radiology treatment planning intermediate
- 77233 Therapeutic radiology treatment planning complex

Diagram:

- Yes
- Diagnosis of bone metastases (see Table 1, Diagnosis Code)
- Yes
- Prescription for EBRT (see Table 2, CPT Codes)
- Yes
- Prescribed one of the recommended fractionation schemes: 30.6Gy/10fr, 24Gy/8fr, 20Gy/5fr, or 90Gy/1fr

- No
- Not in Measure Population
Step Completion – Example

**NQF #1522: External Beam Radiotherapy for Bone Metastases**

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**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 fractionation schemes: 30Gy in 10 fractions, 24Gy in 8 fractions, 20Gy in 5 fractions.

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

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**Numerator**

**Population & Sampling Example:**

- 1,100 patients screened
  - 406 diagnosed with bone metastases
  - 1,100 patients screened

**Population Size**

- Medullary: 180
- Non-Medullary: 25
- Total: 205

**Sample Size**

- Medullary: 2
- Non-Medullary: 5
- Total: 7

**Measure Rate:** 22 divided by (25 + 5) = 44%

---

**Eligible in Eligibility**

- 22 had the recommended fractionation scheme
- 3 patients not eligible

**Not Eligible in Eligibility**

- 3 patients not eligible

---

**Eligible in Appropriate**

- 22 had the recommended fractionation scheme
- 3 patients not eligible

**Not Eligible in Appropriate**

- 3 patients not eligible

---

**Eligible in Delivered**

- 22 had the recommended fractionation scheme
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**Not Eligible in Delivered**

- 3 patients not eligible

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**Eligible in Follow-up**

- 22 had the recommended fractionation scheme
- 3 patients not eligible

**Not Eligible in Follow-up**

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**Eligible in Outcome**

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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)

___ 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;Yes (1): Select this option if the patient had a documented diagnosis of painful bone metastases and was prescribed EBRT.&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 fxs, 24 Gy/6 fxs, 20 Gy/5 fxs or 8 Gy/1 fxn.&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: 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>
Data Collection – Resource

<table>
<thead>
<tr>
<th>with any of the following fractionation schemes: 30 Gy/10 fxns, 24 Gy/6 fxns, 20 Gy/5 fxns or 8 Gy/1 fxn.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No (0): Select this option if the patient, with painful bone metastases, was not 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.</td>
</tr>
<tr>
<td>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 fxns, 24 Gy/6 fxns, 20 Gy/5 fxns or 8 Gy/1 fxn due to medical reason(s).</td>
</tr>
<tr>
<td>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 fxns, 24 Gy/6 fxns, 20 Gy/5 fxns or 8 Gy/1 fxn due to patient reason(s).</td>
</tr>
<tr>
<td>cauda equina compression or radicular nerve pain; documented other medical reason(s) (not indicated/contraindicated)</td>
</tr>
<tr>
<td>No/patient reason(s) (3) may include: Patient declined treatment; social or religious reasons; other patient reason(s)</td>
</tr>
</tbody>
</table>

Created by the American Society for Radiation Oncology
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.
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.
• 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

<table>
<thead>
<tr>
<th>Program year (FY)</th>
<th>Reporting periods (CY)</th>
<th>Data submission deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(January 1, 2015–March 31, 2015)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q2 2015 discharges</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(April 1, 2015–June 30, 2015)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q3 2015 discharges</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(July 1, 2015–September 30, 2015)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q4 2015 discharges</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(October 1, 2015–December 31, 2015)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(January 1, 2016–March 31, 2016)</td>
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<td></td>
<td>(October 1, 2016–December 31, 2016)</td>
<td></td>
</tr>
<tr>
<td>Subsequent Years</td>
<td>Q1 discharges</td>
<td>July 1–August 15 of each year before the program year.</td>
</tr>
<tr>
<td></td>
<td>(January 1–March 31 of each year 2 years before the program year)</td>
<td></td>
</tr>
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<td></td>
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</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
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: 
E-mail: 
Verify E-mail: 
Password: 
Verify Password:

*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., ! @ # % ^)

Program Notifications

Select the appropriate list(s) below to subscribe to e-mail notifications about related QualityNet enhancements, new releases, timeline or process/policy changes, and application or initiative alerts.

- [ ] Ambulatory Surgical Centers
- [ ] CART (CMS Abstraction & Reporting Tool)
- [ ] HDC (Hospital Data Collection)/Public Reporting
- [ ] Hospital IQR (Inpatient Quality Reporting) and Improvement
- [ ] Hospital Inpatient Value-Based Purchasing (HVBPI) and Improvement
- [ ] Hospital OQR (Outpatient Quality Reporting)
- [ ] Hospital Reporting EHR (Electronic Health Record)
- [ ] Inpatient Psychiatric Facility Quality Reporting Program
- [ ] PPS-Exempt Cancer Hospitals Quality Reporting Program
- [ ] QIO Clinical Warehouse
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
Contact Information

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
- The toll-free numbers: 844-472-4477 or 866-800-8765 (Weekdays - 8 a.m. to 8 p.m. ET)