EOM ELECTRONIC PATIENT-REPORTED OUTCOMES GUIDE

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ENHANCING ONCOLOGY MODEL

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Introduction and Rationale for ePROs Implementation

This document guides Enhancing Oncology Model (EOM) participants in the gradual implementation of collecting and monitoring electronic patient-reported outcomes (ePROs), one of eight required participant redesign activities (PRAs).

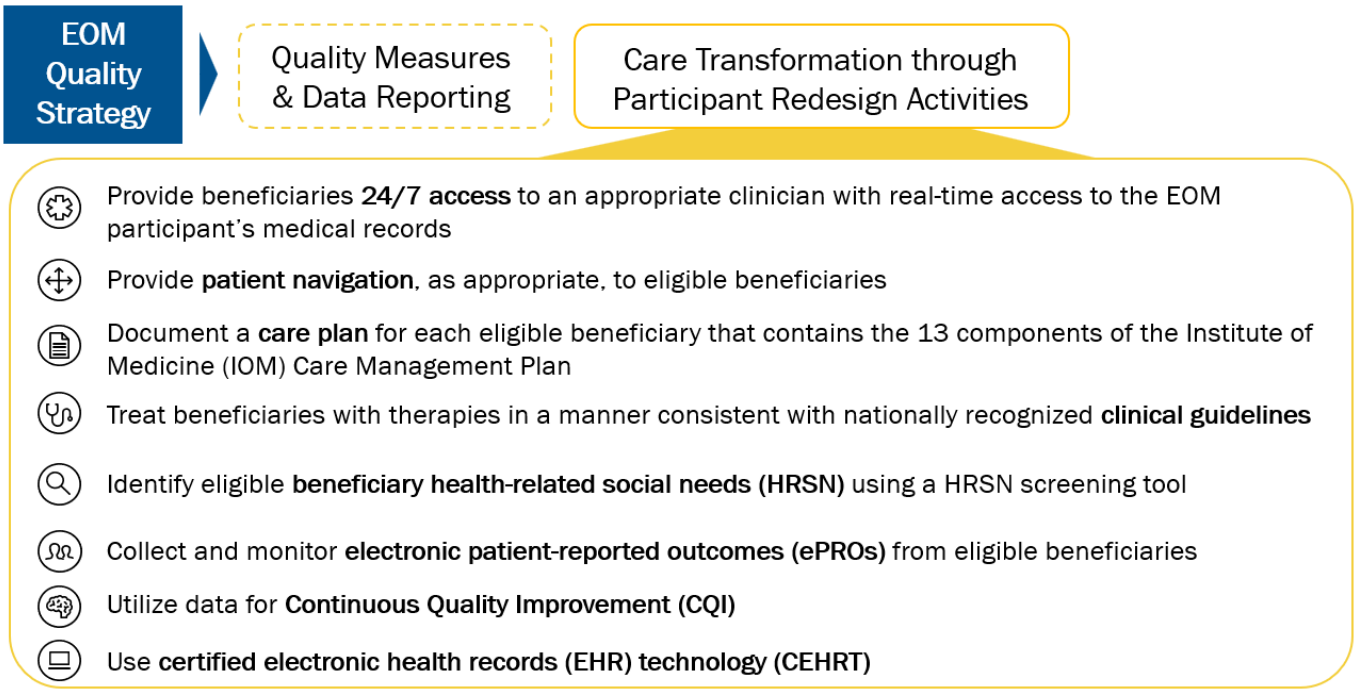
EOM is a Center for Medicare & Medicaid Innovation (Centers for Medicare & Medicaid Services [CMS] Innovation Center) alternative payment model designed to promote high-quality, person-centered care, promote better care coordination, improve access to care, reduce costs, and improve outcomes for Medicare fee-for-service beneficiaries with cancer who receive cancer treatment. EOM builds on lessons from the Oncology Care Model and shares certain features with it, including episode-based payments that financially incentivize physician group practices (PGPs) to improve care and lower costs. EOM participants are oncology PGPs that prescribe and administer cancer therapy for included cancer types. The model is centered on 6-month episodes of care triggered by receipt of an initiating cancer therapy for an included cancer type. The model includes seven cancer types:

- Breast cancer [a]
- Chronic leukemia
- Lung cancer
- Lymphoma
- Multiple myeloma
- Prostate cancer [a]
- Small intestine/colorectal cancer

Under terms of the Participation Agreement (PA), EOM participants must implement eight PRAs. (**Figure 1**). In alignment with CMS' commitment to focusing on whole-person care, EOM foregrounds patient-centeredness. To that end, one PRA required of EOM participants is the "gradual implementation of collecting and monitoring ePROs for eligible EOM beneficiaries". Patient-reported outcomes (PROs) are measurements based on a report that comes directly from the patient, without amendment or interpretation of the patient's response;[1] ePROs are the electronic capture of this data.[2] This document provides guidance on the details necessary to furnish this PRA to eligible beneficiaries.

[a] Low-risk breast cancers and low-intensity prostate cancer are not included in EOM. For the purposes of EOM, low-risk breast cancer is defined as breast cancer treated with only long-term oral endocrine therapy; low-intensity prostate cancer is defined as prostate cancer treated with androgen deprivation, anti-androgen therapy, or both without any other chemotherapy.

Figure 1. EOM PRAs



The collection and use of ePROs tools in oncology settings can lead to

- increased patient self-awareness of symptoms;
- improved communication between patients and care teams;
- increased ability to monitor symptoms longitudinally;
- increased patient feeling of involvement in their care;
- more open and honest discussions around symptom management;
- better identification of patients' needs;
- higher patient satisfaction with care experience and improved quality of life; and
- improvements in cancer outcomes, such as decreased emergency department visits, decreased hospitalizations, and, in several studies, improved survival among certain cancer types.[3,4,5,6,7,8,9,10]

ePROs can also aid both process and outcome quality improvements, including clinician awareness of concerning changes in a beneficiary's clinical status on a timely basis, translating to improved survival outcomes when part of oncology treatment.[11,12,13] The COVID-19 public health emergency has emphasized the need for additional beneficiary-reported data outside of in-person visits, as demonstrated by the increased uptake of telehealth and remote communication technologies.[14,15,16,17]

The sections of this guide provide more detail about the EOM ePROs implementation:

- **Section 1** provides considerations for ePROs implementation, including ePROs standard domains, EOM's gradual ePROs implementation timeline, and frequency and method of ePROs administration.
- **Section 2** provides an overview of emerging tenets for successful ePROs implementation in oncology.
- **Section 3** lists additional EOM resources.

Section 1: ePROs Implementation Considerations

1.1 ePROs Survey Standard Domains

CMS does not currently require use of a specific ePROs survey. Instead, CMS has outlined defined domains and standards for use of ePROs under EOM to ensure the use of high-quality surveys and to help meet EOM's goal of improved care quality. Prior implementation research and clinical guidelines provide additional details on the validity and reliability of items administered; **Section 3: Additional EOM Resources** contains these references. Defined domains preserve flexibility, allow for new ePROs development, and allow EOM participants to continue using ePROs tools and instruments that they already use.

EOM participants must use ePROs surveys that capture, where applicable, beneficiary-level outcomes for each of the following domains, at minimum:

- Symptoms and symptomatic toxicities
  - Individual evaluation of symptoms that are common across cancer types, such as anorexia (appetite loss/decreased oral intake), constipation, diarrhea, dyspnea, mucositis, nausea, pain, sensory neuropathy, sleep disturbance, and vomiting[18]
- Functioning
  - Physical functioning, role functioning (e.g., activities of daily living or instrumental activities of daily living)
- Behavioral health
  - Anxiety, depression, and other behavioral health concerns
- Health-related social needs
  - Financial distress/toxicity, transportation insecurity, food insecurity, and housing instability

This document uses several terms and definitions to discuss social determinants of health (SDOH), also known as the population- or community-level factors that influence health and quality of life outcomes. CMS has most often referred to individual-level nonclinical needs that are identified through screening in a clinical setting as health-related social needs (HRSNs). For example, while shelter and community safety may be the SDOH, the individual-level HRSN related to housing might be homelessness or housing insecurity.

HRSNs are the adverse social conditions that negatively impact a person's health or health care.[19] These include challenges in obtaining proper nutrition during cancer treatment, challenges accessing transportation for infusion appointments, or housing instability and financial toxicity/concerns because of the cost of cancer therapy. They also impact the health and well-being of many Medicare beneficiaries with cancer. To address this, EOM participants should identify and mitigate HRSNs through referrals to community resources and other patient navigation efforts.[20,21]

We encourage EOM participants to use patient-first language with their beneficiaries. For example, "financial toxicity" is a term more commonly used in academic settings, whereas the term "financial distress" is often used with patients. For more information on the HRSN requirement, please see the EOM Health-Related Social Needs Guide.

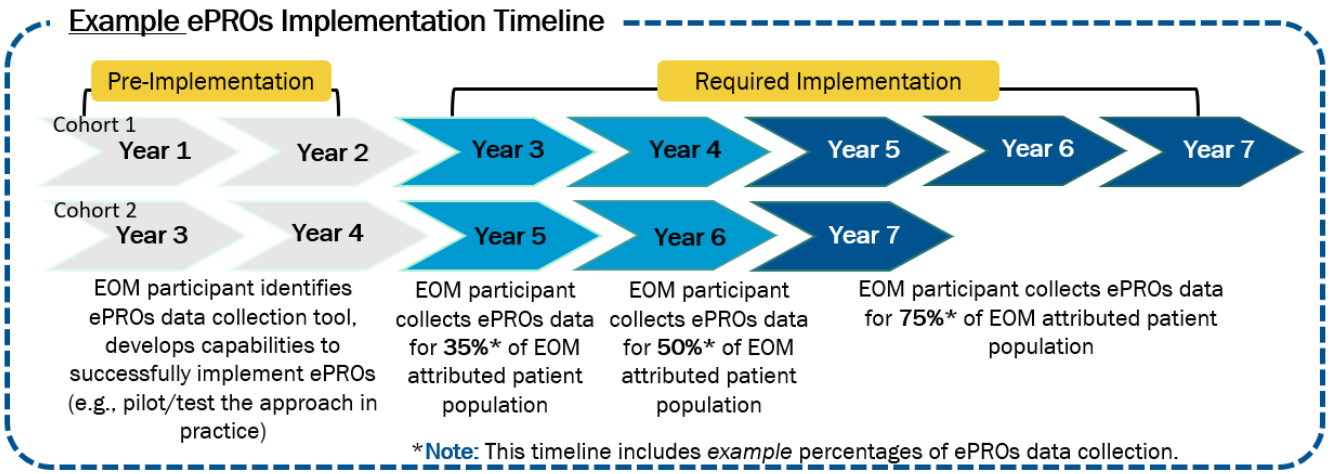
Additionally, when EOM beneficiaries have HRSNs such as transportation concerns, food insecurity, or housing instability, beneficiary access to financial counselors, social workers, and/or community health workers may improve care and access. More information on HRSN screening can be found on the EOM website in the EOM Health-Related Social Needs Guide.

These domains represent areas for potential quality improvement in oncology service delivery. **Section 2.2: ePROs Survey Selection** contains specific examples of ePROs surveys that EOM participants can use to collect this information. CMS encourages the use of nonproprietary [b] ePROs surveys (e.g., Patient-Reported Outcomes version of the Common Terminology Criteria for Adverse Events [PRO-CTCAE] or Patient-Reported Outcomes Measurement Information System [PROMIS]) to promote transparency and consistency across CMS models and programs. EOM participants should consider ePROs surveys that have been previously tested and shown to be valid and reliable in diverse populations (e.g., linguistic and culturally relevant ePROs surveys, including PRO-CTCAE, which is offered in more than 50 languages[22] and European Organization for Research and Treatment of Cancer (EORTC) Quality of Life (QOL) Item Library, which is offered in more than 120 languages).[23]

1.2 ePROs Implementation Timeline in EOM

This section provides an overview of the ePROs implementation timeline required of EOM participants. EOM participants will implement ePROs capabilities in a stepwise manner over the course of the model. **Figure 2** provides an example ePROs implementation timeline, including an overview of pre-implementation and required implementation expectations. This timeline includes *example* percentages of ePROs data collection beginning in EOM Model Year 3 or Performance Period (PP) 5 for Cohort 1 and EOM Model Year 5 or PP 9 for Cohort 2. Note that currently, these percentages are examples, with the intent for EOM participants to gradually increase the uptake of ePROs over time. More information on the requirements for implementation is forthcoming.

Figure 2. ePROs Implementation Timeline



[b] For any ePROs surveys (e.g. PRO-CTCAE or PROMIS), EOM participants should check with organizations that manage each tool for rules concerning modifications and use.

For Cohort 1, EOM Year 1 (PP1 and PP2) and Year 2 (PP3 and PP4) will be optional pre-implementation years for ePROs, during which EOM participants will develop the capabilities necessary to successfully implement ePROs in a manner consistent with the standard domains and implementation requirements. Beginning in Model Year 3 (PP5 and PP6), CMS will require all EOM participants to implement ePROs. EOM Cohort 2 will follow a similar gradual implementation timeline, where the optional pre-implementation period will be in EOM Model Years 3 (PP5 and PP6) and year 4 (PP7 and PP8). Please see Figure 2, the example ePROs timeline, above for additional details.

EOM participants must obtain standardized beneficiary-level ePROs response data from an increasing percentage of beneficiaries each EOM Model year, beginning with Model Year 3 for Cohort 1 and Model Year 5 for Cohort 2 (e.g., 35 percent, 50 percent, 75 percent). EOM participants will engage with patients through implementation of ePROs to better identify patients' needs and improve patient-provider communication, care management, patient satisfaction, and cancer outcomes.

Engagement with patients through ePROs data collection can also aid in process and quality improvement, including timely clinical awareness of concerning changes in a patient's clinical status. CMS expects EOM participants to increase engagement over time (e.g., increased patient enrollment, timely follow-up with patients, symptom report monitoring, alert notification tracking, and more). CMS is taking a gradual implementation approach to provide flexibility for EOM participants with and without experience with ePROs. This approach also allows for the necessary time to adjust workflows and technology to integrate this important enhanced service into clinical care delivery. Once CMS requires ePROs implementation, EOM participants must collect ePROs data and integrate it into their information system workflow. Ideally, this will include some level of integration with electronic medical records (EMRs), for example, by visualizing ePROs data in the EMR, identifying eligible patients for ePROs participation, documenting ePROs data, or communicating about the ePROs data between providers.

We acknowledge logistical challenges, such as technical design and workflow configuration, and are sensitive to potential costs associated with an ePROs integration requirement. We believe data that are readily available, integrated into the workflow, and easy to view are more actionable and lead to improved patient outcomes. Integrating ePROs within EMRs has facilitated symptom reporting, automated triage, and referral for psychosocial and supportive care as well as improvements in standardized care and workflow.[24,25]

Acknowledging the current diversity in ePROs surveys available, emerging standards, and the varying degree to which oncology practices have implemented these surveys to date, ***CMS does not currently require EOM participants to submit ePROs data (i.e., the results of ePROs surveys themselves) to CMS.*** However, as the ePROs field progresses and CMS assesses the implementation of ePROs under EOM, CMS may require that EOM participants report ePROs data to CMS in later performance periods.

During practices' participation in EOM, CMS may ask practices to submit documentation, feedback, and additional information about implementation of ePROs, as described in the EOM PA in Article VII, Section 7.2, and ***Appendix B***. Should an EOM participant be selected for a monitoring site visit, an electronic health record audit may be performed as part of the monitoring visit for CMS to validate that ePROs data are being collected. Participants may be asked to share additional information with CMS, such as describing how ePROs implementation is progressing and any best practices or challenges with implementation.

1.3 Frequency and Method of ePROs Administration

One of the first steps EOM participants take toward ePROs implementation is integrating ePROs into their various workflows. EOM participants must collect ePROs data from each eligible EOM beneficiary *a minimum of once before each visit where participants furnish one or more qualifying evaluation and management (E&M) services to the EOM beneficiary during an episode* (except for the beneficiary's first visit with the EOM participant). Additional ePROs administration may vary depending on beneficiary need. ePROs programs and research have demonstrated the benefits of beneficiaries completing ePROs surveys on a regularly scheduled basis, such as weekly from home.[26,27]

In addition to the gradual implementation of ePROs, another PRA requirement is using established, validated screening tools to collect HRSN data from EOM beneficiaries and developing a plan for addressing those needs. EOM participants must use ePROs surveys that capture, where applicable, beneficiary-level outcomes for four required domains, one of which is HRSNs. For the HRSN screening requirement, CMS expects EOM participants to screen each EOM beneficiary, at a minimum, once per performance period. EOM participants should consider whether additional screening is necessary, based on beneficiary need. For ePROs collection criteria related to HRSN screening requirements, at a minimum, EOM participants have the option to conduct a full HRSN screening at each E&M visit or to conduct a full HRSN screening once every 6 months. Should an HRSN screening only be conducted once every 6 months, the EOM participant should ask the EOM beneficiary at each E&M visit whether there have been any changes from the previous visit in their needs around food, transportation, and housing.

Note: The EOM-5 quality measure requirements may also overlap with the behavioral health domain of the ePROs requirement. The requirements for ePROs and quality measure reporting are separate. Should an EOM participant collect data on depression screening via ePROs, the EOM participant will still need to meet model requirements for the quality measure submission (e.g., submitting to CMS EOM-5 a minimum of once per performance year for patients seen during that performance year). As a reminder, the measure specifications for EOM-5, Screening for Depression and Follow-Up Plan, are aligned to Merit-based Incentive Payment System (MIPS) specifications. These specifications list examples of acceptable depression screening tools and allow for the use of validated, age-appropriate screening tools. All tools listed within the MIPS 134 clinical quality measures document for the applicable performance year will satisfy the measure. CMS does not require participants to use these tools for ePROs data collection unless they plan to use such data to also satisfy the quality

measure requirements. For additional information, please refer to the EOM Quality Measures Guide on the EOM website.

CMS does not require EOM participants to collect ePROs data in advance of the first visit or during the first visit. Rather, EOM participants should use this first visit to introduce and discuss the benefits and logistical details of using ePROs with the EOM beneficiary. EOM participants may administer the ePROs questions at any point prior to the qualifying E&M service via an electronic format, which could include

- web-based remote access,
- interactive voice response systems (i.e., automated telephone systems),
- screen-based reporting devices (e.g., smartphones),
- SMS text systems,
- in the waiting room immediately before the appointment (e.g., by tablet computer or kiosk), and
- telephone interviews by a staff member with data entry into the ePROs system.

CMS does not favor paper surveys as a primary means to collect ePROs, because this approach requires subsequent manual data entry and can introduce errors. Additionally, CMS cannot monitor compliance of paper surveys easily or in real time.[28] However, paper surveys with real-time data entry can be a backup data collection approach for patients unable to report via other ways. Backup data collection approaches may also include staff-administered surveys via tablets or kiosks.

Helpful Tip: To reduce EOM beneficiary burden, ePROs assessments for patients should be brief—for example, no longer than 10 minutes per assessment. This translates into fewer than 20 questions per assessment. CMS expects EOM participants to review EOM beneficiary ePROs responses with the beneficiary at each visit where the EOM participant furnishes a qualifying E&M service.

Section 2: Emerging Tenets for Successful ePROs Implementation

To guide practices through design and in implementing strategies, CMS has developed key tenets from prior ePROs program experiences and research.[29] Successful implementation of ePROs data collection helps ensure that the beneficiary and clinical care team receive the full benefits of a symptom monitoring program. Essential tenets for EOM participants to consider implementing relate to the following areas:

- Software function
- Survey selection
- Alert notifications
- Clinical and nonclinical staffing
- Patient engagement
- Commitment and sustainability

This document discusses each of these tenets in detail below.

2.1 Software Function

ePROs software can be "stand-alone" or can be integrated with other practice information systems such as the EMR, symptom management/triage software, and patient portal. EOM participants should use ePROs data collection surveys that incorporate key interface features for the patient, care team, and administrative staff, as described below.

2.1.1 Patient Interface

An effective patient interface should be simple to use and access for a variety of beneficiaries. Some considerations for key features:

- Screen visualization
  - Easy-to-read text (font and size)
  - Clear and concise instructions in plain language
  - User-friendly page design
- Functionality
  - Ability to complete an ePROs survey via computer, smart device, or automated telephone system
  - Electronic prompts for remote ePROs monitoring programs via email, text message, EMR portal message, or automated telephone call
  - Direct links to surveys with password-less or one-time password access
  - Survey offered in different languages
- Alert and trending capabilities
  - Ability to convey alert notifications to clinical care team electronically for worsening symptoms and urgent needs
  - Optional ability to view past and present self-reported symptoms to identify trends

2.1.2 Care Team Interface

The care team interface should allow for viewing of real-time alert notifications for urgent needs and worsening symptoms and allow the care team to record actions in response to the notifications either in the ePROs software, other care management software (e.g., nursing triage software), or the EMR itself. The care team interface features should also include options to do the following:

- Receive notifications through email, EMR, or secure messaging, with a link to a beneficiary's reported symptoms and concerns, contact information, and unique identifier to enable looking up the beneficiary in the EMR.
- Import ePROs data directly into clinical notes and messaging.
- Create user-friendly reports for the clinical care team and the beneficiary.

2.1.3 Administrative/Staff Interface

The ePROs software's administrative/staff interface should enable manual and automated enrollment of patients into the ePROs system, enrollment monitoring at the practice and/or site level, and functions to monitor and ensure that the care team documents responses to alerts. The interface should also ensure that response times are recorded and consistent with institutional goals for responding to beneficiary concerns that come through other channels, such as voicemail or portal message. Some key features of this interface include enrollment options, alert notifications, and tracking of ePROs data collection. Table 1 includes more details.

Table 1. ePROs Administrative Staff Software Interface: Recommended Enrollment, Notifications, and Tracking Functionalities

Enrollment Functionality	Notifications Functionality	Tracking Functionality
Registration of patients in monitoring program	Prompts and reminders for survey completion	Patient enrollment with self-reporting
Assignment of surveys specific to beneficiary information	Specified type of notification sent (email, shared in-basket, etc.)	Patient compliance with self-reporting
Automatic/manual enrollment of beneficiaries	Updates on provider review (i.e., has the provider read/reviewed the alert notification?)	Metrics at patient and aggregate levels (i.e., dashboard)

2.2 ePROs Survey Selection

Nonproprietary and established ePROs surveys and other resources are available to EOM participants. The following are examples only and do not constitute an endorsement by CMS or CMS affiliates. EOM participants have the flexibility to use other ePROs surveys as they see fit.

There are multiple well-established and tested sources for capturing symptoms in PRO monitoring programs, including the following:

- National Cancer Institute's Patient-Reported Outcomes version of the Common Terminology Criteria for Adverse Events (PRO-CTCAE)[30]
- Patient-Reported Outcomes Measurement Information System (PROMIS)[31]
- Edmonton Symptom Assessment Scale (ESAS)[32]
- MD Anderson Symptom Inventory (MDASI)[33]
- European Organization for Research and Treatment of Cancer (EORTC) Quality of Life (QOL) item library[34]
- Patient Health Questionnaires (e.g., PHQ-2 and PHQ-9) for depression screening

Additional resources are available to support survey selection and clinical practice considerations related to PROs, including the following:

- The PROTEUS Guide to Implementing Patient-Reported Outcomes in Clinical Practice: A Synthesis of Resources (the PROTEUS-Practice Guide)[35] and PROTEUS Champion Tool and Benefits in Clinical Practice Infographic
- ESMO Clinical Practice Guidelines[36]
- Integrating Patient-Generated Health Data into Electronic Records in Ambulatory Care Settings: A Practical Guide[37] and environmental scan[38]

For common outcomes, CMS discourages practices from developing their own items, although creating items may be necessary for less-common outcomes or questions about demographics. Items to assess physical functioning or frailty include the following:

- Patient-reported Eastern Cooperative Oncology Group criteria[39]
- Comprehensive Geriatric Assessment Form[40]
- PROMIS Global-06 item from PROMIS global items[41]

Nonproprietary and established HRSN screening tools are available to EOM participants at no cost. These HRSN screening tools, presented in the EOM HRSN Guide and listed below, are examples only and do not constitute an endorsement by CMS or CMS affiliates. EOM participants have the flexibility to use other HRSN screening tools as they see fit. For any screening tools, EOM participants should check with organizations that manage each tool for rules concerning modifications and use.

Example HRSN screening tools:

- The National Comprehensive Cancer Network (NCCN) Distress Thermometer and Problem List[42]
- Accountable Health Communities Screening Tool[43]
- Protocol for Responding to and Assessing Patients' Assets, Risks and Experiences (PRAPARE)[44]

For more information on the HRSNs requirement, please see the EOM Health-Related Social Needs Guide.

2.3 ePROs Alert Notifications

Care teams should receive alert notifications whenever a symptom becomes severe enough to reach an absolute threshold or show significant worsening. Examples of alert thresholds include the following:

- Setting an absolute threshold for triggering notifications any time a patient reports a symptom as severe or frequent on a verbal descriptor scale (such as the PRO-CTCAE) or above a certain numerical score (which may vary based on the survey or scale). For example, setting a threshold at a numerical score of 6 on a 0–10 numerical rating scale, a threshold for worsening at a 2-point increase on a 0–4 numerical or verbal rating scale, or a threshold for worsening at a 3-point increase on a 0–10 scale.
- Setting a lower threshold (will trigger more alerts): Setting the threshold for alerts to moderate (for example, if there are not accompanying alerts for worsening or in the postoperative setting, where catching problems early is particularly desirable), or setting a threshold at a numerical score of 5 on a 0–10 rating scale, or a 1-point increase on a 0–4 numerical or verbal rating scale, or a 2-point increase on a 0–10 scale.

Some providers implementing ePROs data collection have only included absolute thresholds for notifications and not worsening, which is discouraged, as many of the most clinically meaningful notifications are related to worsening of symptoms.[45]

Strategies to reduce the number of triggered notifications include the following:[46]

- Assess whether the patient's needs can be addressed without an office visit.

- Consider a "do not call" check box for patients to indicate symptoms are manageable.
- Enable clinicians to selectively turn off or pause specific notifications for specific beneficiaries (e.g., pausing diarrhea alerts for a beneficiary with known short bowel syndrome) to determine which problems are likely to lead to downstream complications, thereby warranting immediate action.

The number of notifications will depend on the selected thresholds, which providers can adjust if they feel that it is appropriate for a given beneficiary population. Thresholds may be adjusted for specific symptoms; for example, higher thresholds may be appropriate for fatigue during certain cancer treatments because of a high baseline prevalence. Lower alert thresholds will increase the number of alert notifications, so selection of alert thresholds should consider staffing capacity to field these notifications. Clinical and nonclinical staff responsible for addressing alert notifications should be prepared to respond to beneficiaries within one business day.

2.4 Care Team Staffing to Manage ePROs Data Collection and Notifications

For an ePROs program to be successful, it is important to enroll and engage leadership, identify key stakeholders, and clearly define roles and responsibilities. Prior research suggests that providing information on the value of ePROs monitoring for quality of care and patient-centeredness may increase staff enthusiasm to participate in and engage with ePROs data collection. Once providers and other care team members participate in ePROs data collection and follow-up, most recognize the value of symptom monitoring for care quality and efficiency.

Various members of the patient care team (e.g., nurses, nurse navigators, coordinators, medical assistants, and front desk staff) can support beneficiary engagement with ePROs data collection by

- inviting beneficiaries to participate in the data collection,
- registering beneficiaries into the software system/survey,
- assisting beneficiaries with training and onboarding to use the system/survey, and
- providing beneficiaries with technical or logistical assistance.

In addition to supporting beneficiaries with system navigation, a key step to success and sustainability is planning for care team members to answer, triage, and manage increased messaging volumes. EOM participants should designate and train the care team to receive and respond to alert notifications. The care team member(s) assigned to receive the alert notifications can vary depending on the existing structure for fielding beneficiary voicemails or portal messages and symptom management.

To prepare for message volume increases, EOM participants may need to set aside and protect additional time for reviewing and addressing notifications. The volume of notifications will depend on the selected thresholds, which the care team can adjust if they feel that is appropriate for a given beneficiary population. Because it may be a challenge for some EOM participants to increase staffing or adjust roles to support ePROs data collection and follow-up based on notifications, we encourage EOM participants to be proactive in developing staffing and workflow strategies related to ePROs

during the planning years (EOM Model Years 1 and 2 for Cohort 1 and EOM Model Years 3 and 4 for Cohort 2).

EOM participants may experience an increase in message volume and alert notifications, including other communications, like portal messages and voicemails. EOM participants should prepare to assess how much time staff and care team members need to address alert notifications and evaluate whether additional staff, support, or other personnel are needed to meet the needs of beneficiaries. Suggested workflow changes that may help participants manage staffing requirements to support ePROs data collection and follow-up include the following:

- Review current workflows to identify areas of "mud" or waste (e.g., transportation, inventory, motion, waiting, over-processing, overproduction, and defects) that can be eliminated. Eliminating wasteful activities can allow for more-productive tasks such as ePROs implementation and management.
- Invest in digital health care to accommodate a higher volume of communication between EOM beneficiaries and participants (e.g., an updated portal, omnichannel communication, or artificial intelligence–enabled triage enhancements).
- Enroll and engage leadership from the beginning and throughout implementation.
- Define roles and responsibilities among the team to drive efforts and provide staff training.
- Partner with nurses, navigation teams, and other staff members to collaborate and coordinate efforts.

EOM participants should train staff on how and when to follow up with eligible beneficiaries who do not engage with the ePROs surveys or whose engagement is delayed. CMS expects staff members to reach out to beneficiaries to inquire into their reason for not responding, as a nonresponse could indicate other potential concerns. Preparing follow-up scripts may help standardize this process.

To learn more about other EOM participants' experience with implementing ePROs, please refer to the webinar resources available on EOM Connect:

- 2024 EOM ePROs Fireside Chat Webinar [47]
- 2025 EOM ePROs Fireside Chat Webinar[48]

These fireside chats are an opportunity to hear from a few EOM participants who are beginning to or are currently implementing ePROs within their practice. These events facilitated collaborative exchanges of information between participants; highlighted successes, barriers, best practices, and strategies of ePROs implementation; and provided dedicated time for discussion and questions from the audience. The appendixes of this report include additional EOM participant ePROs resources, as does EOM Connect.

2.5 Engaging Beneficiaries

EOM participants should not expect EOM beneficiaries to participate in ePROs data collection without adequate information about its value to them and their care team. Beneficiaries should understand that ePROs monitoring is a standard part of how their care is delivered. They should also understand

the rationale behind their oncologist's and other care team members' desire for them to use it, and how their participation can lead to proactive/earlier symptom management.

A potential risk to implementation, access, and use of ePROs is varying experience levels with technology among beneficiary populations. For example, beneficiaries with limited prior technology experience (e.g., lack of broadband or smart devices), those with limited data plans, or those with different communication preferences may not reap the full benefits of ePROs monitoring if the care team cannot adequately engage with beneficiaries.[49] CMS encourages EOM participants to meet the needs of their unique beneficiary population; these efforts may include finding alternative ways to collect and monitor beneficiary ePROs (e.g., automated phone calls or an in-clinic solution, such as staff-administered surveys).

Beneficiaries' participation in ePROs reporting will increase if EOM participants offer them a choice of interfaces (e.g., web, smart device, or automated telephone system, with options for prompts by email, text, or automated phone call).

EOM participants should inform all beneficiaries about the ePROs monitoring system, regardless of their assumed experience with technology. Research has found that beneficiaries with limited prior computer experience have a high level of engagement with ePROs data collection surveys and software and in fact yield greater benefits from ePROs than more technically advanced beneficiaries, likely because of baseline communication barriers that the ePROs software can transcend.[50] Beyond the mode of administration, EOM participants may need to consider language preferences or other ways of communicating about and discussing ePROs, depending on the patient population.

2.6 Organizational Commitment and Sustainability

In any form of care enhancement, implementation can bring changes in workflow, information flow, deployment, and culture. It is important for EOM participants to have commitment from organizational leadership with messaging across staff and clinicians that program success is a priority for successful ePROs adoption and implementation.

EOM participants can enhance leader and staff engagement by providing information on the clinical benefits of ePROs monitoring for quality of care, patient-centeredness, and other benefits, such as increased adherence to treatment regimens, reduced hospitalizations, and reduced emergency department visits. Care team leaders should play a role in orienting staff to ePROs data collection goals and timelines, mapping processes, engaging with frequent updates and communication, and tracking specific metrics to ensure ePROs data collection is robust and complete.

Prior ePRO implementations have used key metrics to monitor ePRO data as it is received. Table 2 includes some specific metrics to continuously collect.[51]

Table 2. Beneficiary Engagement Metrics

Metric	Target Engagement
Proportion of beneficiaries that are offered participation with ePRO self-reporting	100% of eligible beneficiaries should be offered participation.
Proportion of beneficiaries that agree to participate	65% to 80% of eligible beneficiaries should participate.
Proportion of participating beneficiaries who provide ePROs data at least once	A target of 80% to 90% is reasonable in medical oncology.
Proportion of participating beneficiaries that comply with ePRO self-reporting at expected time points (e.g., before each E&M visit)	60% to 80% of participating eligible beneficiaries should comply.
Proportion of ePRO alert notifications with a navigator and nurse response/outreach	55% to 75% of ePRO alert notifications should receive a response from navigators and nurses, as clinically appropriate.

Additional key metrics to consider collecting include the following:

- Prevalence of each symptom across the beneficiary population
- Number of providers and staff trained on ePRO systems
- Proportion of patients trained to use the ePRO system
- Number of alert notifications generated
- Care team members' time to provide responses to alert notifications and alert closure
- Other considerations include the following:
    - Potential care team responses to alerts include a telephone call to counsel the beneficiary, prescription of a supportive medication, a new appointment, referral to urgent care/emergency room, or no action necessary (symptom already addressed; can wait for next visit).
    - Always document a response.
    - Responses should be timely (e.g., responding to beneficiaries within one business day, as is clinically appropriate).

The engagement metrics listed above are example metrics for EOM participants' internal tracking. We encourage EOM participants to tailor and track metrics that make sense for your practice and beneficiary needs. As described in the EOM PA Article VII, Section 7.2, and ***Appendix B*** of this document, and in accordance with Article XIV, the EOM participant shall maintain documentation of its implementation of PRAs to eligible beneficiaries and provide access to such documentation as requested by CMS EOM participants, for example, for purposes of monitoring and compliance.

EOM participants should be committed to engaging beneficiaries in ePROs reporting. Engagement should be monitored from the initial outreach. ePROs engagement with beneficiaries is a spectrum and may differ across different points. For example, four key points of the engagement timeline are as follows:

1) Initial outreach: When initially communicating with beneficiaries about ePROs, it is key to explain that ePROs are a part of routine care delivery and will be used to inform and improve care and

care outcomes and enable the best possible beneficiary experience. EOM participants should explain that practitioners will be reviewing the beneficiary's reported information, but beneficiaries should not rely on ePROs as the sole method for communicating symptoms. EOM participants should offer ePROs to all EOM-eligible beneficiaries, but some beneficiaries may choose to not use ePROs or decline ePROs survey administration. For example, some patients may signal they can wait until the next visit. EOM participants should follow up with beneficiaries who choose to initially not use ePROs reporting, as beneficiary needs and interest in ePROs may shift over time and the course of treatment. We encourage EOM participants to follow up with beneficiaries who choose not to report via ePROs, as this may signal other concerns (e.g., lack of awareness of ePROs or their potential benefit as part of care, barriers in access to or various levels of comfort with technology or broadband, comfort in sharing information with the clinical team). An example conversation introducing the use of ePROs to patients is in ***Appendix D*** and on EOM Connect. An example brochure introducing the use of ePROs to patients is in ***Appendix E*** and on EOM Connect.

2) ePROs Reporting: For beneficiaries who submit ePROs, EOM participants should provide a brief training session or video on the key functionalities of the software and practice workflow for ePROs, their potential benefit, and how EOM participants will use them to inform care. Provide contact information for any questions or difficulties that beneficiaries may have.

3) Clinical follow-up to reported ePROs: A clinical team member should review all real-time alert notifications that the ePROs system triggers within 1 business day. There should be documentation of either outreach or clinical action in response to the alert notification, if warranted, or that no outreach/action was needed. Team members should review longitudinal reports of symptoms at visits and review them with patients as warranted. Please note that team members should direct patients to call 9-1-1 or visit the emergency department if they are having a medical emergency.

4) Monitoring over time: EOM participants should be deliberate in care redesign as they navigate how to manage the heightened awareness of symptoms across their beneficiaries that results from ePROs data collection. EOM participants can use longitudinal data both at the beneficiary level for understanding trends and at the practice level for identifying quality improvement activities (for example, activities related to pain management or symptom control more broadly during treatment). Proactive symptom monitoring will likely reveal issues previously unaddressed in beneficiaries that now need to be addressed. EOM participants should consider directing beneficiaries with newly identified symptoms to supportive care programs such as palliative care, behavioral health, support groups, and family learning resources. Other care transformation activities to help EOM participants manage more beneficiaries with identified needs include increasing the pool or use of navigators, social workers, clinical pharmacists, counselors, community health workers, home health services, and palliative care providers.

In addition to implementing ePROs data collection, EOM participants should commit to regularly reviewing the processes and procedures for ePROs data collection. There are often initial challenges with care team acceptance (resistance to the idea because of the additional or altered workflow) and

a slow start to beneficiary participation and engagement. It is important to recognize these challenges and identify process improvement opportunities through deep dives into barriers or staff concerns to improve and optimize engagement. Regularly reviewing and updating ePROs data collection processes and procedures is one way EOM participants can meet the PRA requirement of utilizing data for continuous quality improvement. Continuous messaging should emphasize the importance of ePROs data collection.

Section 3: Additional EOM Resources

CMS EOM Website

- https://innovation.cms.gov/innovation-models/enhancing-oncology-model

EOM Connect:

- https://app.innovation.cms.gov/CMMIConnect/IDMLogin

EOM Support:

- EOMSupport@cms.hhs.gov
- 1-844-734-6433 option 3

Appendix A: Key Terms Used in this Guide

Term	Definition
Alert notification	Notices/messages that are sent to a patient's care team on the basis of the level of severity of their PROs.
PRO	Patient-reported outcomes (PROs) are measurements based on a report that comes directly from the patient, without amendment or interpretation of the patient's response.[52] ePROs are the electronic capture of this data. [53]
ePRO (singular version)	Electronic patient-reported outcomes; in other words, electronic capture of PROs.
ePROs software	The technical system for administering ePRO surveys to patients.
Domains	Outcomes of interest, like patients' pain or physical function
Instruments or Tools	The actual questionnaires, developed scientifically, which contain items or questions that represent the outcome.
Surveys	The groups of items assembled for administering ePROs questionnaires to patients.
Items	Questions that represent the outcome, included on the instruments or tools, and surveys.

Appendix B: Additional Key Terms Related to ePROs Collection and Implementation

Term	Working Definition	Additional Context
Remote symptom monitoring	Use of connected health technologies to systematically collect patient-reported symptoms and convey this information to care team members via alert notifications and reports	https://ascopubs.org/doi/full/10.1200/CCI.22.00187
Remote therapeutic monitoring	Use of connected health technologies for remote managing and collection of non-physiological patient data, with specific definitions and parameters defined by current CPT codes 98975, 98976, 98977, 98980, 98981	https://www.cms.gov/files/document/mm12446-2022-annual-update-therapy-code-list.pdf
Remote patient monitoring	Use of connected health technologies for remote managing and collection of physiological patient data, with specific definitions and parameters defined by current CPT codes 99453, 99454, 99457, 99458, 99091	https://www.cms.gov/newsroom/fact-sheets/final-policy-payment-and-quality-provisions-changes-medicare-physician-fee-schedule-calendar-year-1
Software as a medical device	Software intended to be used for one or more medical purposes that perform these purposes without being part of a hardware medical device	https://www.fda.gov/medical-devices/digital-health-center-excellence/software-medical-device-samd

Appendix C: Checklist: Preparing for ePROs Implementation

EOM participants in Cohort 1 will begin implementation in EOM Model Years 1 and 2, and Cohort 2 participants will begin implementation in EOM Model Years 3 and 4. CMS will require all EOM participants to develop the capabilities necessary to successfully implement ePROs in a manner consistent with the standard domains and implementation requirements by EOM Model Year 3 for Cohort 1 and by EOM Model Year 5 for Cohort 2. We designed this checklist to support participants' successful ePROs planning and implementation. We acknowledge that participants will be at different stages of ePROs implementation, and some of these questions may not apply to all participants. Resources to assist participants are at the end of the checklist and included throughout this guide.

Preparing for EPROS Implementation

Preparing for EPROS Implementation

This checklist is intended to be used as a resource to support Enhancing Oncology Model (EOM) participants during the pre-implementation period of electronic patient-reported outcomes (ePROs) data collection. We acknowledge that participants will be at different stages of ePROs implementation, and some of these questions may not apply to all participants. This checklist is for your own use and does not need to be submitted to CMS. The overall goal is to support successful implementation. Resources to assist you are provided at the end of this checklist.

1. **My EOM PGP already collects PROs using surveys in any patient population at my practice.**

- ◯ No
- ◯ Yes

My PGP uses _____

1a. If yes, my PGP collects PROs either electronically or via paper.

- ◯ Electronic
- ◯ Paper

1b. If electronic, my EOM PGP collects ePROs via our EMR system or a third-party vendor.

- ◯ Part of EMR system
- ◯ Third-party vendor

2. **My EOM PGP already collects PROs, for example symptoms or distress. My PGP has developed alert notifications to get triggered by the PRO system.**

- ◯ No
- ◯ Yes

Preparing for EPROS Implementation

2a. If yes, this occurs in the following way: (Describe)

2b. If no, are you considering starting? (Please provide details)

(If your EOM PGP has already implemented ePROs, you may want to stop the checklist here.)

Getting Started

1. **My EOM PGP has accessed and begun to review the surveys suggested in the ePROs Guide.**

- ◯ No
- ◯ Yes

Preparing for EPROS Implementation

2. My EOM PGP has already decided on a particular survey to use for our beneficiaries.

- ◯ No
- ◯ Yes

My PGP has decided to use _____

3. My EOM PGP has already contacted IT vendors to begin preparing for ePROs implementation.

- ◯ No, we have not yet contacted vendors to begin preparing for ePROs implementation.
- ◯ Yes

Which IT vendor? _____

4. Does your EOM PGP foresee future challenges or barriers with implementation of ePROs in your practice?

- ◯ No
- ◯ Yes

How will your practice address/mitigate these challenges or barriers?

Clear Form Print 3

Appendix D: Introducing ePROs to Patients

The following example conversation introduces the use of electronic patient-reported outcome (ePRO) surveys to patients.

We hope these conversations will be informative and natural, not prescriptive. The sample text is simply meant to help facilitate productive conversations and identify key points to cover. Please feel encouraged to tailor your own ePROs script, share additional context about your practice's specific use of ePROs, and answer questions the patients may have in the moment.

Although we suggest using "survey" rather than "ePRO" to use patient-friendly language, we also included some language below that would help distinguish these surveys from patient experience surveys. Unlike other surveys patients may receive, these specific surveys are a new way to help provide high-quality, personalized care by allowing the team to get to know the patient on a personal level. This allows the team to tailor the care better to each individual patient over the course of treatment.

Greeting

My name is [ ], and I am a member of your clinical team with Dr. [ ].

High-Level Introduction

Obtaining feedback on how you are feeling outside of regular visits is an important aspect of expanding the partnership between patients and their care team. We care about making sure your voice and preferences are heard and incorporated in your care plan. In addition to the conversations you have during clinical visits, like the one we are having now, another way we will be incorporating your feedback is through surveys between visits. The surveys will ask you to provide feedback on how you are feeling and key experiences. Although these surveys may be a new part of your care experience, we are working to incorporate them as a regular and important part of our clinic's standard for high-quality, personalized care.

More-Detailed Information

The survey will include questions on symptoms you are experiencing, activities of daily life, how you are feeling overall, and other stressors and needs you may have, which may include concerns about finances, access to healthy food, or transportation. Although your clinical care team won't collect these answers directly [we will instead collect these answers through *survey, text, etc.*], your clinical care team will review your answers and use them to inform your care plan and treatment, similar to how providers in the past may have asked you to fill out health history information before seeing them.

Disclaimer about immediate care/urgent topics

Reporting your own symptoms this way will be an important part of your care, but should not be the sole way of communicating with your care team and will not replace other existing forms of communication. If you have an emergency, you should still go to the emergency room or call 911. For other serious concerns, you should still message or call the doctor's office.

Frequency of Questions

These new questions/surveys will be collected [insert time period, e.g., before every appointment, every 6 months].
If anything changes between when you are surveyed and your appointment, please make the care team aware so the care team can address your needs.

Next Step

You will receive technical instructions on how to complete the survey at a later time.
or
Here is a sheet describing the next steps and what you can expect.
or
I'll walk you through how to set up and access the portal/app.

Once you complete your patient survey, your provider and care team will receive your responses [and will follow-up with you about next steps *OR* and review your responses to address concerns identified].

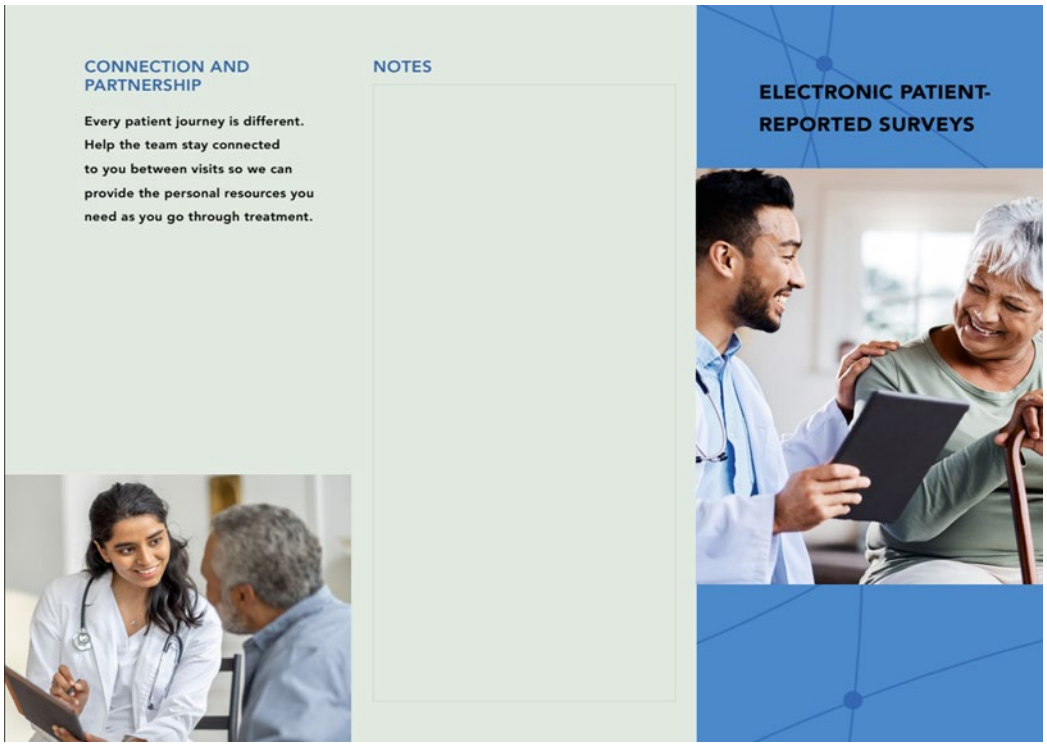
Information on confidentiality

The information you provide as part of these surveys will be kept confidential, similar to the way your other health care information is kept confidential and protected.

Questions from Patients

Do you have any questions about the new process, survey, or questions at this time?
Feel free to ask any [additional] questions in the future as we go through this journey together.

Appendix E: Electronic Patient-Reported Survey Patient Brochure



CONNECTION AND PARTNERSHIP

Every patient journey is different. Help the team stay connected to you between visits so we can provide the personal resources you need as you go through treatment.

NOTES

ELECTRONIC PATIENT-REPORTED SURVEYS

WHAT ARE ELECTRONIC PATIENT REPORTED SURVEYS?

Electronic patient-reported outcomes surveys help your care team stay connected with you between clinic appointments:

This survey asks about your:

- Symptoms
- Physical activities
- Challenges you may be facing, such as finances, transportation, and mental health

WHAT'S IN IT FOR ME?

Research has shown the benefits of collecting this information from patients, some of which include:

- Improvement of symptoms
- Improved quality of life
- Fewer trips to the emergency room
- Improved physical functioning
- Survival benefit

HOW DOES THIS WORK?

You may be asked to complete the survey by:

- Using your smart phone or computer
- Taking a phone call with automated prompts
- Text messaging
- Using a tablet in the clinic

HOW OFTEN WILL I BE ASKED TO COMPLETE A SURVEY?

The frequency will depend on your provider, but the survey will come regularly so the team can remain connected with you throughout your journey.

If there are changes to your wellbeing in between surveys, your team wants to know! Please message or call your team updating them with new concerns or needs.

WHAT ABOUT MY PRIVACY?

Your information will be protected and is confidential, just like all your other health care information.

Appendix F: Acronyms and Abbreviations

Acronym	Definition
CMS	Centers for Medicare & Medicaid Services
CPT	Current Procedural Terminology
E&M	Evaluation and Management
EMR	Electronic Medical Record
EOM	Enhancing Oncology Model
ePRO	Electronic Patient-Reported Outcome
HRSN	Health-Related Social Need
MIPS	Merit-based Incentive Payment System
PA	Participation Agreement
PGP	Physician Group Practice
PP	Performance Period
PRA	Participant Redesign Activity
PRO	Patient-Reported Outcome
SDOH	Social Determinants of Health

Revision History

Version	Revision Date	Description of Change
1.0	June 20, 2023	• Initial Version
2.0	November 29, 2023	• Section 1: ePROs Implementation Considerations: Updated • Section 2: Emerging Tenets for Successful ePROs Implementation: Updated • Section 3: Additional EOM Resources: Updated • Appendix A: Key Terms Used in this Guide: Updated • Appendix B: Additional Key Terms Related to ePROs Collection and Implementation: Added to include additional key terms. • Appendix C: Checklist: Preparing for ePROs Implementation: Added an example checklist for preparing for ePROs implementation.
2.1	June 28, 2024	• Section 1.2: ePROs Implementation Timeline in EOM: Updated timeline • Section 2.4 Care Team Staffing to Manage ePROs Data Collection and Notifications: Updated • Appendix A: Key Terms Used in this Guide: Updated • Appendix D: Acronyms and Abbreviations: Added.
2.2	March 24, 2025	• Updated document in line with CMS Innovation Center priorities.
2.3	May 30, 2025	• Section 1.2: ePROs Implementation Timeline in EOM: Included Cohort 2 information • Section 1.3: Frequency and Method of ePROs Administration: Added note about ePROs and QM overlap • Section 2.2: ePROs Survey Selection: Included additional resources to support survey selection • Section 2.4: Care Team Staffing to Manage ePROs Data Collection and Notifications: Updated • Appendix C: Checklist: Preparing for ePROs Implementation: Updated to include Cohort 2 information • Appendix E: Electronic Patient-Reported Surveys Patient Brochure: Added as Appendix E • Appendix F: Acronyms and Abbreviations: Updated to Appendix F
2.4	November 25, 2025	• Updated CMS branding for guide • Revision History: Moved to end of guide

Version	Revision Date	Description of Change
2.5	May 22, 2026	• Updated language in guide from passive to active voice • Section 2.4 Care Team Staffing to Manage ePROs Data Collection and Notifications: Updated with reference links to the 2024 and 2025 ePROs Fireside Chat Webinars

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