



Data Sources for Quality Measurement

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This document provides information about [data sources](#) for quality measurement. Data used to assess healthcare quality are available from many sources, including administrative data, claims data, patient [medical records](#), electronic clinical data, registries, standardized patient assessments, patient-reported data and surveys, and chief complaint data. The measure developer should consider that the primary purpose of several of these data sources is not for quality measurement. There is more information about registries because registries must go through additional steps to obtain qualified status from CMS for CMS reporting. [Qualified Clinical Data Registries \(QCDRs\)](#) also have additional steps to have their measures approved for CMS reporting. This information supplements the information found in the *Blueprint*, Chapter 5.2.

1 ADMINISTRATIVE DATA

Administrative data include multiple types of information originally collected for administrative purposes. Examples include program services provided to enrollees, organizational staffing, and organizational policies. Similar data elements may exist in the provider’s billing system. Examples of administrative data sources are birth registries and tax records.

Other types of administrative data include patient demographics obtained from eligibility or enrollment information, crime reports, and census information. Payroll data and other databases containing information about providers can also be a source for some types of measures.

2 CLAIMS DATA

The source of claims data is healthcare reimbursement or payment information. This information can come from submitted and adjudicated claims or from the provider's billing system. Claims include admission and discharge dates, diagnoses, procedures, and source of care.

3 PATIENT MEDICAL RECORDS (PAPER-BASED OR ELECTRONIC)

Patient medical records are a traditional source of clinical data for measures and documentation of the data may be on paper or electronic. These records may include data from the clinical laboratory, imaging services, personal health records, and pharmacy.

4 ELECTRONIC CLINICAL DATA

Electronic clinical data consist of patient-level information amenable for extraction or pushed in an electronic format usable by a measure, for example, data from bedside vital sign monitoring devices and personal health devices. Bedside vital sign data can be directly pushed to the electronic health record (EHR) and personal health device data may be uploaded to the EHR.

5 REGISTRIES

The term registry can apply to a variety of electronic sources of clinical information for use as a data source for quality measures. In general, a registry is a collection of clinical data for assessing clinical performance quality of care. The Quality Payment Program (QPP) accepts data from QCDRs and Qualified Registries.

Registries may be part of a larger regional or national system that may operate across multiple clinicians and institutions. Examples of national registries include the Chest Pain – MI Registry™ (from the American College of Cardiology and American Heart Association), the [Society of Thoracic Surgeons™ \(STS\) National Database](#), and the [Paul Coverdell National Acute Stroke Registry](#).

Public health departments have used registries for many years to record cases of diseases with importance to public health. This type of registry can provide epidemiological information used to calculate incidence rates and risks, maintain surveillance, and monitor trends in incidence and mortality. The use of immunization registries is to collect, maintain, and update vaccination records to promote disease prevention and control.

5.1 QUALIFIED CLINICAL DATA REGISTRY

A QCDR is a CMS-approved vendor that is in the business of improving healthcare quality. These organizations may include specialty societies, regional health collaboratives, large health systems, or software vendors working in collaboration with one of these medical entities.¹ One way the QCDRs can help to improve the quality of care patients receive is by collecting clinical data from clinicians and reporting this data to CMS on their behalf for purpose of meeting Merit-based Incentive Payment System (MIPS) requirements. QCDR submission differs from Qualified Registry submission in that QCDRs can submit QCDR measures as well as MIPS quality measures. They may also submit data for the

¹ Beginning with the MIPS 2020 performance period, a QCDR is defined as an entity with clinical expertise in medicine and in quality measurement development that collects medical or clinical data on behalf of a MIPS eligible clinician for the purpose of patient and disease tracking to foster improvement in the quality of care provided to patients.

Promoting Interoperability and Improvement Activity performance categories on behalf of clinician(s). QCDRs must submit data through secure submission methods – in either the [Quality Reporting Document Architecture \(QRDA\)](#) Category III or an approved QPP JavaScript Object Notation (JSON) or eXpression Modeling Language (XML) format.

QCDRs can develop and/or submit QCDR measures to CMS for CMS review and approval. In a given program year, a QCDR may submit no more than 30 measures, of which a portion CMS may approve, provisionally approve, or reject.

Provisionally approved measures may require revisions, [harmonization](#), or performance data submission for the next year's approval. CMS provides a rationale for the provisional status and may require performance data on QCDR measures approved in a previous year to show a continued performance gap.

There is no reconsideration of rejected measures unless the measure developer revised the measure or there is evidence of a performance gap.

QCDRs may submit a QCDR measure that is

- not contained in the annual list of MIPS quality measures
- directed toward a population that is substantively different from the [population](#) covered by an existing MIPS measure
- a different manner of submission from an existing MIPS measure
- developed by the QCDR, specialty society, or regional quality collaborative
- a National Quality Forum (NQF)-endorsed measure that is not part of MIPS

CMS permits QCDRs to customize the Clinician and Group Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey and should consider including non-Medicare beneficiaries.

Development of QCDR measures should be in accordance with the Blueprint, but do not need to go through the pre-rulemaking process. Submission of QCDR measures is part of the self-nomination process and measures reviewed and approved annually regardless of their previous approval status. CMS is willing to meet with QCDRs to review measure concepts prior to the start of self-nomination period. [Figure 1. QCDR Measure Development, Review, and Posting Process](#) depicts the development, review, and posting process.

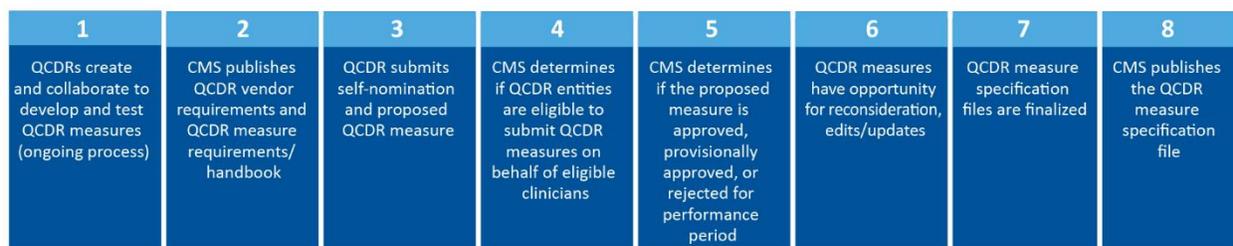


Figure 1. QCDR Measure Development, Review, and Posting Process

Annually, CMS opens the self-nomination period on July 1 and closes it by September 1 in the year prior to the performance period. A Self-Nomination Toolkit for QCDRs and [Qualified Registries](#) is published in the [QPP Resource Library](#) prior to the start of the self-nomination period. The Toolkit contains

- MIPS Self-Nomination User Guide for QCDRs and Qualified Registries
- MIPS QCDR Self-Nomination Fact Sheet

- MIPS Qualified Registry Self-Nomination Fact Sheet
- [QCDR Measure Development Handbook](#)
- Self-Nomination QCDR Measures Submission Template

QCDRs must self-nominate annually, regardless of whether they were previously approved. The self-nomination application will be available through the QPP portal for the 2021 performance period. The requirement is for applicants to provide all information at the time of self-nomination.

There are several benefits of using a QCDR. A few examples are

- QCDRs streamline data collection and manage the submission of three MIPS categories to CMS.
- There is a requirement for QCDRs to provide quarterly feedback reports to their participating clinicians, which provides the clinicians the opportunity to make more rapid changes to improve quality of care.
- QCDR measures are clinically relevant measures that address gaps in care for specialties, preventive care, and/or disease management.
- The annual list of MIPS CQMs does not contain the QCDR measures for the applicable performance period of MIPS.
- Publicly reporting QCDR data on Physician Compare expands the [quality measure](#) data available for eligible clinicians and group practices regardless of specialty and provides more quality data to consumers to help them make informed decisions.
- Since many QCDRs are specialty-based, QCDR measures may be more meaningful and applicable to the eligible clinician.
- Reporting through a QCDR reduces burden for MIPS reporting.

5.2 QUALIFIED REGISTRY

A [Qualified Registry](#) is a CMS-approved vendor that collects clinical data from an individual MIPS eligible clinician, group, or virtual group and submits it to CMS on their behalf. The CY2017 Quality Payment Program final rule codified the definition a Qualified Registry at [42 C.F.R. §414.1305](#) to be “a medical registry, a maintenance of certification program operated by a specialty body of the American Board of Medical Specialties or other data intermediary that, with respect to a particular performance period, has self-nominated and successfully completed a vetting process (as specified by CMS) to demonstrate its compliance with the MIPS qualification criteria specified by CMS for that performance period” ([81 Fed. Reg. 77382](#)). Clinicians work directly with the Qualified Registry of their choosing to submit data on the selected MIPS quality measures or a specialty set of measures. Qualified Registries can help to improve the quality of care patients receive by collecting clinical data from clinicians and reporting this data to CMS for purposes of MIPS. Qualified Registry submissions differ from QCDR submissions in that Qualified Registries may not submit QCDR measures. There is a requirement for Qualified Registries to submit data on MIPS quality measures and may choose to support data submission for the Promoting Interoperability and Improvement Activity performance categories.

6 STANDARDIZED PATIENT ASSESSMENTS

CMS uses data items or elements from validated health assessment instruments and question sets to provide the requisite data properties to develop and calculate quality measures. Examples of these types of data include the [Long-Term Care \(LTC\) Facility Resident Assessment Instrument \(RAI\)](#), the [Outcome and Assessment Information Set \(OASIS\)](#), and [IRF Patient Assessment Instrument \(PAI\)](#).

7 PATIENT-REPORTED DATA AND SURVEYS

Patients may provide data directly in the form of a survey, questionnaire, or assessment. Surveys (e.g., [CAHPS surveys](#)² that collect information on beneficiaries' experiences of care) are advantageous because they ask about concepts such as satisfaction and patients' feelings. Patient-reported outcomes (PROs)^①, such as pain assessments and quality of life indices, provide the patient's perspective on their health, quality of life, or functional status.

8 CHIEF COMPLAINT DATA

Chief complaint data document the primary symptoms that led a patient to seek care. The development of chief complaint-based electronic clinical quality measures (eCQMs)^① is new and should follow established guidelines and standards for specifying the data elements, numerator^①, and denominators^① as for any eCQM. However, due to the variability in documenting chief complaints, there is a need for several intermediate steps to ensure reliable specifications^①. First, consider implementing an established chief complaint vocabulary linked to SNOMED CT (e.g., HaPPy, or HierArchical Presenting Problem ontology). A vocabulary provides a finite universe of presenting problems to choose from and supports the reliability of the specifications in that the identified problems are from a standard list. Specifying eCQMs requires the identification of the appropriate Quality Data Model (QDM)^① category and/or data type, and selection of an appropriate value set^① or direct reference code^①. The value set may be an existing one, or else a new one created through the *Value Set Authority Center* (VSAC). Consider several QDM categories should for chief complaint-based measures^① including symptom, diagnostic study, procedure, and intervention. For more information, see the NQF report [Advancing Chief Complaint-Based Quality Measurement](#)².

9 KEY POINTS

Data used to assess healthcare quality are available from many sources:

- Administrative data consist of data elements originally collected for administrative purposes. Examples include covered services used by enrollees in a program and patient demographics.
- The source of claims data are reimbursement or payment information. Examples include admission and discharge dates, diagnoses, procedures, and source of care.
- Patient medical records^① may be paper or electronic. Examples include data from the clinical laboratory, imaging services, personal health records, and pharmacy.
- Electronic clinical data consist of patient-level information amenable to extraction or pushed in an electronic format for measurement purposes (e.g., from bedside vital sign monitoring devices and personal health devices).
- Registry data are electronic sources of clinical information from collections of clinical data for assessing clinical performance quality of care. Sources of registry data include QCDRs and qualified registries.
- Standardized patient assessments are data items or elements from validated health assessment instruments and question sets.
- Patient-reported data and surveys include information about beneficiaries' health and healthcare related experiences and perspectives. Examples include self-reported quality of life, and/or functional status and patient satisfaction.

² CAHPS® is a registered trademark of AHRQ.

- Chief complaint data document the symptoms that led a patient to seek care. The source of these data are primarily electronic patient records and are the basis for [eCQMs](#)  assessing chief complaints.

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