

Quality Payment
PROGRAM

2024 Data Aggregation Resource



Data Aggregation



Prior to submitting quality measure data to the Quality Payment Program (QPP), Shared Savings Program Accountable Care Organizations (ACOs) must first determine whether to report using Electronic Clinical Quality Measures (eCQMs), Merit-Based Incentive Payment System Clinical Quality Measures (MIPS CQMs), or Medicare Clinical Quality Measures for Accountable Care Organizations Participating in the Medicare Shared Savings Program (Medicare CQMs).

Next, they need to aggregate patient data across all ACO participant Taxpayer Identification Numbers (TINs) and then de-duplicate the patient data.



Let's look at four different
ACOs who are submitting data
for the same quality measure.

[Example ACO 1](#)

Single ACO Participant TIN reporting eQMs

[Example ACO 2](#)

Multiple ACO Participant TINs reporting eQMs

[Example ACO 3](#)

Multiple ACO Participant TINs reporting MIPS CQMs

[Example ACO 4](#)

Multiple ACO Participant TINs reporting Medicare CQMs

Step 1

Example ACO 1 Single TIN reporting eCQMs



Step 1 is to select
how to report.

Example ACO 1 is a
single TIN entity
that uses Certified
Electronic Health
Record Technology
(CEHRT).

Example ACO 1 may report using

- eCQMs
- MIPS CQMs
- Medicare CQMs

Example ACO 1 chooses to report
using eCQMs.

Step 2

Example ACO 1 Single TIN reporting eCQMs



Step 2 is to
aggregate the
data.

The diagram features a black silhouette of a person's head and shoulders on the left. Two blue thought bubbles are connected to the person by a series of small circles. The first bubble is smaller and contains the text 'Step 2 is to aggregate the data.' The second bubble is larger and contains the text 'Since there is only one CEHRT product/system being used across the ACO, data does not need to be further aggregated or de-duplicated.'

Since there is only one CEHRT
product/system being used
across the ACO, data does not
need to be further aggregated or
de-duplicated.

Step 1**Example ACO 2**
Multiple TINs reporting eQMs

Step 1 is to select how to report.

Example ACO 2 is a multi-TIN entity, each of which uses different CEHRT.

TIN 1
CEHRT A

TIN 2
CEHRT B

TIN 3
CEHRT C

Example ACO 2 may report using:

- eQMs
- MIPS CQMs
- Medicare CQMs

Example ACO 2 chooses to report using eQMs.

Step 2

Example ACO 2
Multiple TINs reporting eQMs

Step 2 is to
aggregate
the data.

Even if an ACO is able
to capture all patient
data for the measure
through different
CEHRTs, they still
need to aggregate
the data.

There are a total of
20 patients in the
aggregated patient
data.

Aggregation for eQMs

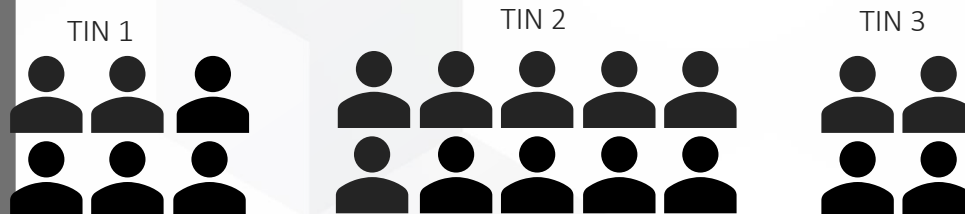
Example ACO 2 has 3 TINs and each TIN saw a different
number of patients last performance year:

TIN 1/CEHRT A = 6 patients total

TIN 2/CEHRT B = 10 patients total

TIN 3/CEHRT C = 4 patients total

Total across all TINs = 20 patients



Step 3

Example ACO 2 Multiple TINs reporting eQCMs

Step 3 is to de-duplicate the patient data to ensure that the same patient is not included multiple times for a measure.

For example, if patient B was screened for depression at TIN 1 and then later seen at TIN 2 where they were not screened for depression, not de-duplicating the data could result in the patient being counted as 2 unique patients: 1 who met numerator criteria and 1 who did not.

De-Duplication for eQCMs

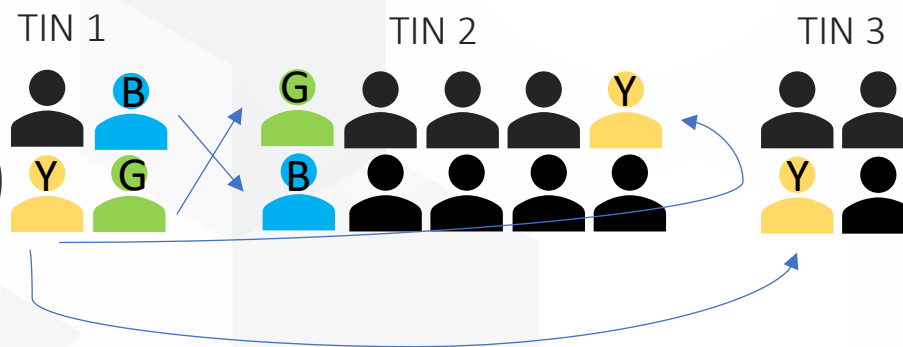
Example ACO 2 now has to de-duplicate the patient data that was aggregated in step 2.

They have matched 3 patients that have duplicate records across all 3 TINs/CEHRTs:

Patient Blue (B) - Appears in TIN 1 & TIN 2

Patient Green (G) - Appears in TIN 1 & TIN 2

Patient Yellow (Y) - Appears in TIN 1, TIN 2 & TIN 3



Step 3
continued**Example ACO 2**
Multiple TINs reporting eQCMs

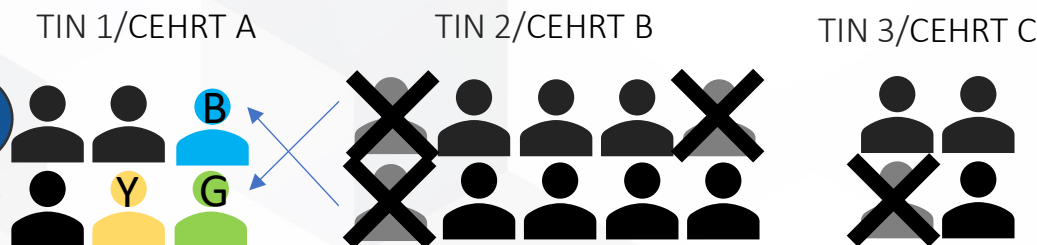
Once we remove the duplicate patient records, we find that the aggregated and de-duplicated total is 16 patients.

Note: If TIN 2 performed a quality measure for Patient B, they will still receive credit for the quality action or credit in the numerator.

De-Duplication for eQCMs (continued)

Once those patients' duplicate records are removed from the aggregate data, Example ACO 2 finds:

Aggregated & De-Duplicated Total = 16 Patients



Step 1

Example ACO 3

Multiple TINs reporting MIPS CQMs

Step 1 is to select how to report.

Example ACO 3 is a Multi-TIN entity, only some of which use CEHRT.

TIN 1
No CEHRT

TIN 2
CEHRT

TIN 3
No CEHRT

Example ACO 3 may report quality through:

- MIPS CQMs
- Medicare CQMs

Because there is not 100% CEHRT use, example ACO 3 may not report through eCQMS.

Example ACO 3 chooses to report using MIPS CQMs.

Step 2

Example ACO 3
Multiple TINs reporting MIPS CQMs

Step 2 is to
aggregate the
data.

For ACOs using MIPS
CQMs, the measure
specifications allow for
the use of multiple
data sources, and data
aggregation is required
across all sources.

There are a total of
20 patients in the
aggregated patient
data.

Aggregation for MIPS CQMs

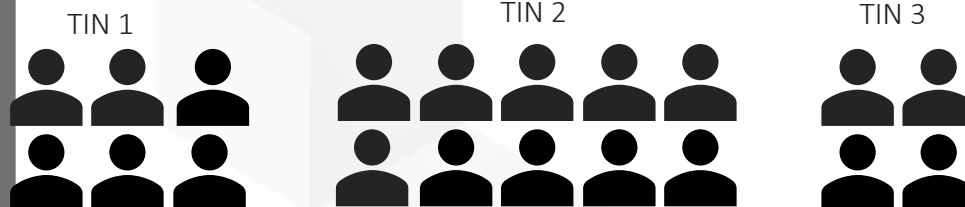
Example ACO 3 has 3 TINs and each TIN saw a different
number of patients last performance year:

TIN 1 = 6 patients total

TIN 2 = 10 patients total

TIN 3 = 4 patients total

Total across all TINs = 20 patients



Step 3

Example ACO 3 Multiple TINs reporting MIPS CQMs

Step 3 is to de-duplicate the patient data to ensure that the same patient is not included multiple times for a measure.

For example, if patient B was screened for depression at TIN 1 and then later seen at TIN 2 where they were not screened for depression, not de-duplicating the data could result in the patient being counted as 2 unique patients: 1 who met numerator criteria and 1 who did not.

De-Duplication for MIPS CQMs

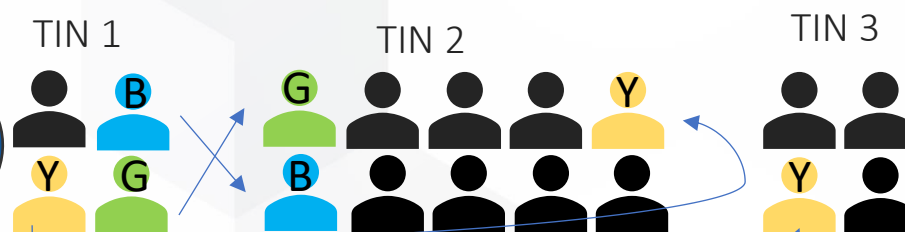
Example ACO 3 now has to de-duplicate the patient data that was aggregated in step 2.

They have matched 3 patients that have duplicate records across all 3 TINs:

Patient Blue (B) - Appears in TIN 1 & TIN 2

Patient Green (G) - Appears in TIN 1 & TIN 2

Patient Yellow (Y) - Appears in TIN 1, TIN 2 & TIN 3



Step 3
continued**Example ACO 3**
Multiple TINs reporting MIPS CQMs

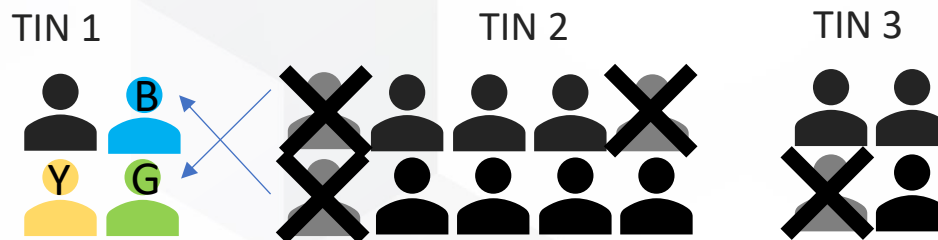
Once we remove the duplicate patient records, we find that the aggregated and de-duplicated total is 16 patients.

Note: If TIN 2 performed a quality measure for Patient B, they will still receive credit.

De-Duplication for MIPS CQMs (continued)

Once those patients' duplicate records are removed from the aggregate data, Example ACO 3 finds:

Aggregated & De-Duplicated Total = 16 Patients



Step 1

Example ACO 4

Multiple TINs reporting Medicare CQMs

Step 1 is to select how to report.

Example ACO 4 is a Multi-TIN entity, only some of which use CEHRT.

TIN 1
CEHRT A

TIN 2
CEHRT A

TIN 3
No CEHRT

Example ACO 4 may report quality through:

- MIPS CQMs
- Medicare CQMs

Because there is not 100% CEHRT use, example ACO 4 may not report through eCQMs.

Example ACO 4 chooses to report using Medicare CQMs.

Step 2

Example ACO 4
Multiple TINs reporting Medicare CQMs

Step 2 is to
aggregate the
data.

For ACOs using
Medicare CQMs, the
measure specifications
allow for the use of
multiple data sources,
and data aggregation
is required across all
sources.

There are a total of 9
patients in the
aggregated patient
data received from
CMS.

Aggregation for Medicare CQMs

CMS will provide a list of Medicare fee-for-service beneficiaries eligible for Medicare CQMs on a quarterly basis. The quarterly lists will also include beneficiary-level information to assist ACOs in identifying the eligible population for each measure. The final quarterly list for Quarter 4 contains information for all beneficiaries eligible for Medicare CQM reporting.

Example ACO 4 has 3 TINs. CMS sends the list Medicare fee-for-service beneficiaries eligible for Medicare CQMs:

TIN 1 = 3 patients total

TIN 2 = 4 patients total

TIN 3 = 2 patients total

Total across all TINs = 9 patients

TIN 1/CERHT A



TIN 2/ CERHT A



TIN 3/No CERHT



Step 3**Example ACO 4**
Multiple TINs reporting Medicare CQMs

Step 3 is to de-duplicate the patient data to ensure that the same patient is not included multiple times for a measure.

For example, if patient B was screened for depression at TIN 1 and then later seen at TIN 2 where they were not screened for depression, not de-duplicating the data could result in the patient being counted as 2 unique patients: 1 who met numerator criteria and 1 who did not.

De-Duplication for MIPS CQMs

Example ACO 4 now has to de-duplicate the patient data that was aggregated in step 2. ACO 4 does not identify any duplicate records.

TIN 1 = 3 patients total

TIN 2 = 4 patients total

TIN 3 = 2 patients total

Total across all TINs = 9 patients

TIN 1/CEHRT A



TIN 2/CEHRT A



TIN 3/No CEHRT



And that's it! But here
are a few things to
remember....

Matching Duplicate Patient Records

ACOs that have experience reporting eQCMs and MIPS CQMs have described success in achieving patient matching rates of 90% or higher using common variables such as: first name, last name, date of birth, phone number, and email.

Under current CEHRT requirements, EHRs are required to support each of these data elements. ACOs have also indicated the benefits of using solutions such as an Enterprise Master Patient Index (EMPI). For ACOs using the Medicare CQM collection type, the Medicare Beneficiary Identification Number (MBIN) can be used for patient matching.

CMS May Request Technical Documentation

While variable selection and matching criteria may vary across organizations, ACOs should identify an appropriate combination of variables to achieve consistent and replicable patient matching that provides the most complete and accurate data to meet the measure specification and valid and reliable measure performance.

CMS may request the ACO's technical documentation and internal organizational policies that document the ACO's approach to patient matching, parsing, and data cleansing to ensure that the ACO's reporting is true, accurate, and complete at the ACO level.

Data Completeness

Before submitting data to CMS, ACOs also need to confirm they have met the data completeness requirement applicable for the performance year.

Submissions must include 100% of eligible and matched patients across all ACO participants' (i.e., TINs) patients. This is referred to as the "Initial Population" count for an ACO. Any patients removed from the data due to matching and deduplication prior to submission are not included in the "Initial Population" and are not considered when calculating a measure's performance rate, data completeness, and case minimums.

For more information on Data Completeness, please see the [2024 Data Completeness Quick Start Guide](#).