



APPENDIX A

Population & Sampling



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MBOIP Domain	EMERGENCY DEPARTMENT TRANSFER COMMUNICATIONS
SPECIFICATION SHEET SUMMARIES BY SUB MEASURE	
Definitions	Sent: Medical record documentation that indicates information went with the patient or was communicated via fax or phone or internet/Electronic Health Record connection availability within 60 minutes of the patient's discharge.
Sampling	Hospitals need to submit a minimum of 45 cases. Hospitals that choose to sample have the option of sampling quarterly or sampling monthly. A hospital may choose to use a larger sample size than is required. Hospitals whose initial patient population size is less than the minimum number of cases per quarter for the measure set cannot sample.
Population Inclusions	<p>Include Discharge Codes:</p> <ul style="list-style-type: none"> 3 Hospice – healthcare facility 4a Acute Care Facility- General Inpatient Care – including emergency department 4b Acute Care Facility- Critical Access Hospital – including emergency department 4c Acute Care Facility- Cancer Hospital or Children’s Hospital – including emergency department 4d Acute Care Facility – Department of Defense or Veteran’s Administration – including emergency department 5 Other health care facility: <ul style="list-style-type: none"> ☐ Extended or Intermediate Care Facility (ECF/ICF) ☐ Long Term Acute Care Hospital (LTACH) ☐ Long Term Care Facility ☐ Nursing Home or Facility, including Veteran’s Administration Nursing Facility ☐ Psychiatric Hospital or Psychiatric Unit of a Hospital ☐ Rehabilitation Facility, including Inpatient Rehabilitation Facility/Hospital or Rehabilitation Unit of a Hospital ☐ Skilled Nursing Facility (SNF), Sub-Acute Care, or Swing Bed ☐ Transitional Care Unit (TCU) <p>Note: ED patients that have been put in observation status and then are transferred to another hospital or health care facility should be included</p>
Population Exclusions	<p>Exclude Discharge Codes</p> <ul style="list-style-type: none"> 1. Home: <ul style="list-style-type: none"> ☐ Assisted Living Facilities ☐ Court/Law Enforcement – includes detention facilities, jails, and prison ☐ Board and care, foster or residential care, group or personal care homes, and homeless shelters ☐ Home with Home Health Services ☐ Outpatient Services including outpatient procedures at another hospital, Outpatient Chemical Dependency Programs, and Partial Hospitalization 2. Hospice-home 6. Expired 7. AMA (left against medical advice) 8. Not documented/unable to determine

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Population and Sampling Specifications

Introduction

Population

Defining the population is the first step to estimate a hospital’s performance. A population is generally defined as a collection of patients sharing a common set of universally measured characteristics, such as an ICD-10-CM Principal Diagnosis or CPT® Code. The outpatient population and diagnosis/CPT® codes meet this description for the hospital outpatient quality measures. For the purpose of measuring hospital outpatient quality measures, the term “outpatient population” is defined below:

- An outpatient population refers to all patients (Medicare and non-Medicare) who share a common set of specified, administratively derived data elements. This may include ICD-10-CM diagnosis codes, CPT® codes, or other population characteristics such as age. For example, the population for the Acute Myocardial Infarction (AMI) outpatient OP- 2, 3, and 5 measures include all patients with an *E/M Code* on Appendix A, OP Table 1.0, an *ICD-10-CM Principal Diagnosis Code* as defined in Appendix A, OP Table 1.1, and a Patient Age (*Outpatient Encounter Date – Birthdate*) ≥ 18 years.

Six outpatient population sampling algorithms have been developed for the selected 13 measures. Each algorithm defines the initial population on the basis of a limited number of criteria such as age, CPT® codes (including Evaluation/Management [E/M] codes), and ICD-10-CM codes. These basic data elements could be easily obtained from electronic files (e.g., from the billing department) and usually allow a computer-based sampling process to be employed.

Note: Data entry for OP-22 will be achieved through the secure side of QualityNet.org via an online tool available to authorized users. Because the measure uses administrative data and not claims data to determine the measure’s denominator population, OP-22 is not included in the ED-Throughput Population Algorithm.

The measure sets and measure populations are presented in Table 1 below.

Table 1: Hospital Outpatient Measure Sets and Measure Populations

Measure Set:	AMI
Population:	Acute Myocardial Infarction (AMI)
Measure(s):	OP-2, OP-3, OP-5
Measure Set:	CP
Population:	Chest Pain (CP)
Measure(s):	OP-5
Measure Set:	ED-Throughput
Population:	Throughput
Measure(s):	OP-18
Measure Set:	Stroke
Population:	Stroke
Measure(s):	OP-23
Measure Set:	Measures Submitted via a Web-Based Tool
Population:	Endoscopy/Cataract/EBRT
Measure(s):	OP-29, OP-31, OP-33

Note: Data entry for OP-29, OP-31, and OP-33 will be achieved through the secure side of QualityNet.org via an online tool available to authorized users. These measures use chart-abstracted data to enter a numeric value as numerator and denominator via the web-based tool.

For the definition of the outpatient population for each sampling population, refer to the appropriate outpatient population discussion in the Measure Information section of this manual.

Sampling

Sampling is a process of selecting a representative part of a population in order to estimate the hospital's performance without collecting data for its entire population. Using a statistically valid sample, a hospital can measure its performance in an effective and efficient manner. Sampling is a particularly useful technique for performance measures that require primary data collection from a source such as the medical record. Sampling should not be used unless the hospital has a large number of cases in the outpatient population because a fairly large number of sample cases are needed to achieve a representative sample of the population. For the purpose of sampling hospital outpatient quality measures, the terms "sample," "effective sample," and "case" are defined below:

- The "sample" is the fraction of the population that is selected for further study.
- "Effective sample" refers to the part of the sample that makes it into the denominator of an outpatient measure set. This is defined as the sample for an outpatient measure set minus all the exclusions and contraindications for the outpatient measure set in the sample.
- A "case" refers to a single record (or an encounter) within the population. For example, during the first quarter a hospital may have 100 patients who had a principal diagnosis associated with the OP-- 2, 3, and 5 measures. The hospital's outpatient population would include 100 cases or 100 outpatient records for these measures during the first quarter.

To obtain statistically valid sample data, the sample size should be carefully determined, and the sample cases should be randomly selected in such a way that the individual cases in the population have an equal chance of being selected. Only when the sample data truly represent the whole population can the sample-based performance outpatient measure set data be meaningful and useful. Each hospital is ultimately responsible for adhering to the sampling requirements outlined in this manual.

As a general rule/policy of CMS, providers are encouraged to submit as many cases as possible up to the entire population of cases if reasonably feasible. For example, if the raw data can be easily extracted from an existing electronic database or the abstraction burden is manageable, providers should consider submitting the entire population of cases that meet the initial selection criteria. Otherwise, a statistically valid sample can be selected.

Note: Hospitals are **not** required to sample their data if they elect to include all eligible cases. For example, a hospital has 100 cases for the quarter and must select a sample of 80 cases. The hospital may choose to use all 100 cases given the minimal benefit sampling would offer.

Order of Data Flow

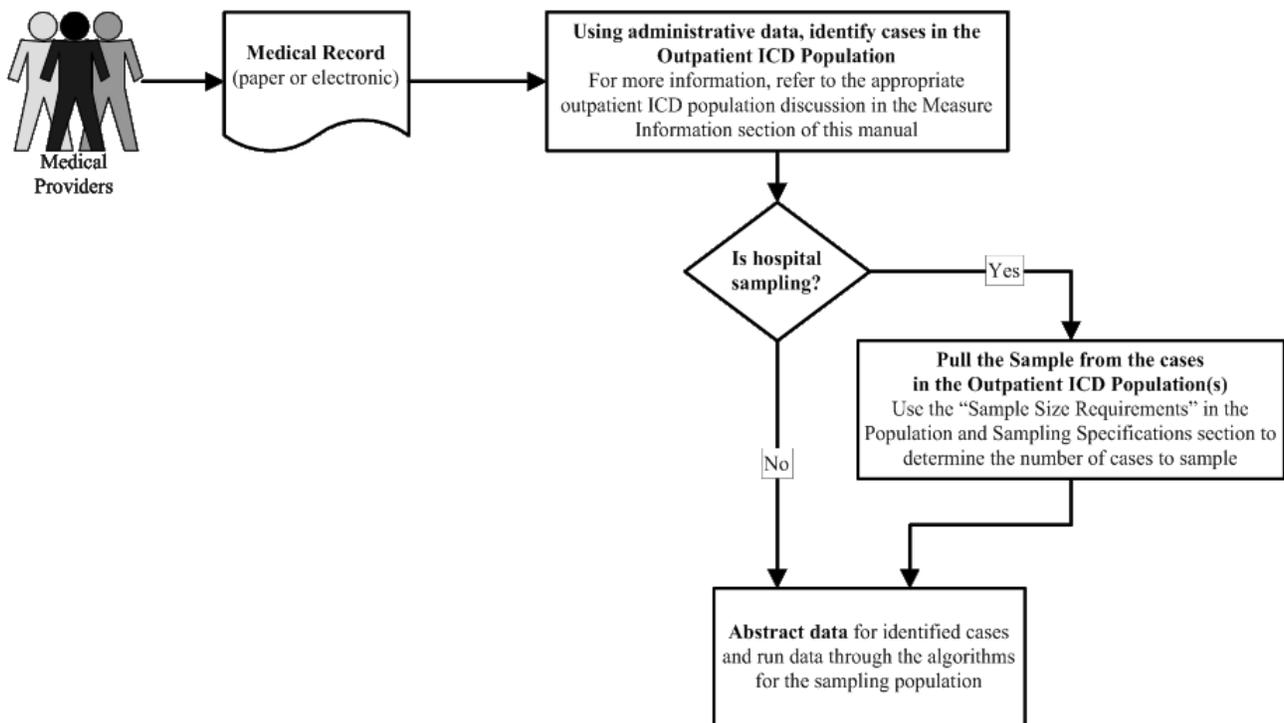
Each outpatient measure set has a unique definition of outpatient population. However, the same data flow or process steps can be used to identify the data that are transmitted to the CMS Clinical Data Warehouse.

These process steps are:

- First, identify the outpatient population for the outpatient measure set. An outpatient population is defined for each outpatient measure set, and the count is collected in the *Outpatient Population Size* data element. This data pull utilizes administrative data such as ICD-10-CM diagnosis codes, CPT® codes, outpatient encounter date, and birthdate.
- All ICD-10-CM diagnosis codes and CPT® codes included in the appropriate outpatient population definition must be applied. This identification process must be completed prior to application of the data integrity filter, outpatient measure set exclusions, and sampling methodology.
- For specific outpatient measure set definitions, refer to the appropriate outpatient population discussion in the Measure Information section of this manual.

- Second, if the hospital is sampling, use the outpatient population identified above and pull the sample of medical records for each outpatient measure set using the requirements identified in the Quarterly Sampling Requirements section.
- Third, collect or abstract from the identified medical records the general and outpatient measure set-specific data elements that are needed for the sampling population. The count of the number of cases used in this step is collected in the *Outpatient Sample Size* data elements (Note: If the hospital is not sampling, the *Outpatient Sample Size* will equal the *Outpatient Population Size*).
 - If the hospital is not sampling, use all medical records identified in the outpatient population.
 - If the hospital is sampling, use the medical records from the cases in the identified sample.

Order of Data Flow/Process Steps



Sample Size Requirements

Each hospital is ultimately responsible for meeting or exceeding the sample size requirements outlined below. Hospital samples must be monitored to ensure that sampling procedures consistently produce statistically valid and useful data. As a general rule and based on prior experience with CMS hospital inpatient measures, sample size requirements for this project are based on commonly accepted sampling criteria for surveys:

- A five percent margin of error is recommended. The margin of error is the extent of error the investigator is willing to tolerate. Lower margins of error (e.g., three percent) would require substantially larger sample sizes and generate more reliable results from the samples, but the burden of abstraction may not be acceptable for most providers. Inversely, higher margins of error would require relatively smaller sample sizes but less reliable results from those samples.
- For the OP-18, in order to reduce the burden of abstraction for smaller hospitals, a 10 percent margin of error was employed to limit the number of cases for the sample size requirements.
- The size of the population, also referred to as the universe population, is the volume of eligible patients from which the sample will be drawn. This number is obviously expected to vary widely among providers. Different sample size estimates are provided for various populations. See Tables 2, 3, and 4 for sample size requirements.
- Given that the number of cases in the sample could further be reduced during the analysis phase due to missing data in the medical records and additional outpatient measure set-specific exclusion criteria, hospitals are strongly advised to overestimate their sample sizes by 10 to 20 percent, or as much as possible.
- A hospital may choose to use a larger sample size than is required.
- Hospitals whose outpatient population size is less than the minimum number of cases for the sampling population must include all eligible cases in their data.
- As a quality check to ensure that sampling methodology was applied correctly, the provider must run a basic comparative analysis of common demographic variables including age distribution, gender ratio, race/ethnicity distribution, and the proportion of Medicare patients between the sampled set and the population of eligible patients. The relative frequencies or distribution of these common variables should be very close between the two data sets. Any significant discrepancy should trigger a review and a restart of the sampling process.
- As indicated earlier, the adequacy of the sample size will be monitored as the project progresses and revised, as needed. Providers that choose to sample are responsible for the sampling process. However, for each sampled case, providers are required to clearly indicate the sample size (n) to which the case belongs, the population size (N) from which the sample was drawn, and the proportion of Medicare and non-Medicare patients in the sample.

Sampling Requirements

A hospital may choose to use a larger sample size than is required. Hospitals whose population size is less than the minimum number of cases per quarter for the measure set cannot sample. Refer to **Table 2** to determine the minimum number of cases that need to be sampled for each population per quarter per hospital for all measure sets except OP-18, OP-29, OP-31, and OP-33. Refer to **Table 3** to determine the minimum number of cases that need to be sampled for each population per quarter per hospital for OP-18. Refer to **Table 4** to determine the annual sample size requirements for OP-29, and OP-31. Refer to **Table 5** to determine the annual sample size requirements for OP-33.

It is important to point out that if a hospital elects to use the monthly sampling guidelines, the hospital is still required to meet the minimum sampling requirements. Given the potential for substantial variation in monthly sampling population sizes, the monthly sample sizes should be based on the known or anticipated population size. When necessary, appropriate oversampling should be employed to ensure that the hospital meets the minimum sample size requirements.

**Table 2: Sample Size Requirements per Quarter per Hospital
for OP-2, OP-3, OP-5, and OP-23**

Population Per Quarter	≤ 80
Quarterly Sample Size	Use all cases
Monthly Sample Size	Use all cases
Population Per Quarter	81-100
Quarterly Sample Size	80
Monthly Sample Size	27
Population Per Quarter	101-125
Quarterly Sample Size	95
Monthly Sample Size	32
Population Per Quarter	126-150
Quarterly Sample Size	109
Monthly Sample Size	37
Population Per Quarter	151-175
Quarterly Sample Size	121
Monthly Sample Size	41
Population Per Quarter	176-200
Quarterly Sample Size	132
Monthly Sample Size	44
Population Per Quarter	201-225
Quarterly Sample Size	143
Monthly Sample Size	48
Population Per Quarter	226-250
Quarterly Sample Size	152
Monthly Sample Size	51
Population Per Quarter	251-275
Quarterly Sample Size	161
Monthly Sample Size	54
Population Per Quarter	276-300
Quarterly Sample Size	169
Monthly Sample Size	57
Population Per Quarter	301-325
Quarterly Sample Size	177
Monthly Sample Size	59
Population Per Quarter	326-350
Quarterly Sample Size	184
Monthly Sample Size	62
Population Per Quarter	351-375
Quarterly Sample Size	191
Monthly Sample Size	64
Population Per Quarter	376-400
Quarterly Sample Size	197
Monthly Sample Size	66

Population Per Quarter	401-425
Quarterly Sample Size	203
Monthly Sample Size	68
Population Per Quarter	426-450
Quarterly Sample Size	208
Monthly Sample Size	70
Population Per Quarter	451-500
Quarterly Sample Size	218
Monthly Sample Size	73
Population Per Quarter	501-600
Quarterly Sample Size	235
Monthly Sample Size	79
Population Per Quarter	601-700
Quarterly Sample Size	249
Monthly Sample Size	83
Population Per Quarter	701-800
Quarterly Sample Size	260
Monthly Sample Size	87
Population Per Quarter	801-900
Quarterly Sample Size	270
Monthly Sample Size	90
Population Per Quarter	901-1,000
Quarterly Sample Size	278
Monthly Sample Size	93
Population Per Quarter	1,001-2,000
Quarterly Sample Size	323
Monthly Sample Size	108
Population Per Quarter	2,001-3,000
Quarterly Sample Size	341
Monthly Sample Size	114
Population Per Quarter	3,001-4,000
Quarterly Sample Size	351
Monthly Sample Size	117
Population Per Quarter	4,001-5,000
Quarterly Sample Size	357
Monthly Sample Size	119
Population Per Quarter	5,001-10,000
Quarterly Sample Size	370
Monthly Sample Size	124
Population Per Quarter	≥ 10,001
Quarterly Sample Size	377
Monthly Sample Size	126

Table 3: Sample Size Requirements per Quarter per Hospital for OP-18

Population Per Quarter	0-900
Quarterly Sample Size	63
Monthly Sample Size	21
Population Per Quarter	≥ 901
Quarterly Sample Size	96
Monthly Sample Size	32

Table 4: *Sample Size Requirements per Year per Hospital for OP-29and OP-31

Population Per Year	0-900
Yearly Sample Size	63
Quarterly Sample Size	16
Monthly Sample Size	6
Population Per Year	≥ 901
Yearly Sample Size	96
Quarterly Sample Size	24
Monthly Sample Size	8

*If a hospital has 20 or fewer cases, it is not required to submit any data, but it may voluntarily submit these data.

Table 5: Sampling Size Requirements per Year per Hospital for OP-33

Population Per Year	Sampling Requirements
≤ 39	Include all cases
40-200	40
201-500	20% of cases
≥ 501	100
Population Per Quarter	Sampling Requirements
< 10	Include all cases
10-50	10
51-125	20% of cases
≥ 126	25
Population Per Month	Sampling Requirements
< 4	Include all cases
4-16	4
17-41	20% of cases
≥ 42	9

Sampling Approaches

OP-29and OP-31

Hospitals have the option to sample from their population or submit their entire population. Hospitals that choose to sample for these measures should use a simple sample approach, selecting the population from cases that meet requirements to be included in the denominator. Once the population has been determined, the sample size will be determined based on Table 4 and will either be 63 or 96 cases for the year. This will constitute an acceptable sample methodology and will meet the annual reporting size requirements. If

hospitals choose to select data monthly or quarterly, one option they can use is to select the first month of each quarter/year until they meet the annual reporting requirements.

OP-33

Hospitals have the option to sample from their population or submit their entire population. Hospitals that choose to sample for these measures should use a simple sample approach, selecting the population from cases that meet requirements to be included in the denominator. Once the population has been determined, the sample size will be determined based on Table 5 and will be between 0 and 100 cases for the year. This will constitute an acceptable sample methodology and will meet the annual reporting size requirements. Hospitals can choose to sample monthly, quarterly, or yearly.

Sample Size Examples

OP-2, OP-3, and OP-5

- A hospital's OP-5 outpatient population size is 100 patients during the second quarter. Using Table 2, the required sample size is seen to be a minimum of 80 for OP-5 patients for this quarter.
- A hospital's outpatient population for OP-2 through OP-5 is 10 patients during the quarter. According to Table 2, the required quarterly sample size would be 100 percent of the OP-2 through OP-5 patient population or 10 cases for the quarter.

OP-18

- A hospital's outpatient population size for OP-18 is 700 during the third quarter. According to Table 3, the required quarterly sample size would be 63 cases per quarter. The same hospital has an outpatient population size for OP-18 of 2,000 during the fourth quarter. The hospital had an increase in population size of 1,300 between quarters three and four; the required quarterly sample size would be 96 because the quarterly sample size has been capped at 96 for population sizes of equal to or greater than 901.

OP-29 and OP-31

- A hospital's outpatient population size for OP-29, OP-30, or OP-31 is 430 during the year. If a hospital elects to sample monthly based on Table 4, the monthly sample size would be a minimum of six patients per month. The hospital is ultimately responsible for meeting the yearly sample size requirement, which is a minimum of 63 patients for the year.
- A hospital's outpatient population size for OP-29, OP-30, or OP-31 is 950 during the year. According to Table 4, the required yearly sample size would be 96 cases.
- A hospital's outpatient center performs 950 cataract operations during the year; 800 patients complete a pre- and post-operative visual function survey. Select 96 patients out of the 800 patients that have completed both surveys to determine the denominator and meet the required annual sample size.

OP-33

- A hospital's outpatient population size for OP-33 is 300 during the year. If a hospital elects to sample monthly based on Table 5, the monthly sample size would be a minimum of five patients per month (20% of 300 cases is 60. 60 divided by 12 equals 5). The hospital is ultimately responsible for meeting the yearly sample size requirement, which is a minimum of 60 patients for the year.
- A hospital's outpatient population size for OP-33 is 750 during the year. According to Table 5, the required yearly sample size would be 100 cases.
- A hospital's outpatient center performs 35 OP-33 procedures during the year. The hospital is responsible for data submission on all 35 cases.

Sampling Approaches

As previously stated in this section, hospitals have the option to sample from their population or submit their entire population. Hospitals that choose to sample must ensure that the sampled data represent their

outpatient population by using either the simple random sampling or systematic random sampling method and that the sampling techniques are applied consistently within a quarter. For example, quarterly samples for a sampling population must use consistent sampling techniques across the quarterly submission period.

- Simple random sampling – Selecting a sample size (n) from the population of size (N) in such a way that every case has the same chance of being selected.
- Systematic random sampling – Selecting every k^{th} record from a population size (N) in such a way that a sample size of n is obtained, where $k = N/n$ rounded to the lower digit. The first sample record (i.e., the starting point) must be randomly selected before taking every k^{th} record. This is a two-step process:
 1. Randomly select the starting point by choosing a number between one and k using a table on random number or a computer-generated random number, then
 2. Select every k^{th} record thereafter until the selection of the sample size is completed.

Each hospital is ultimately responsible that the sampling techniques applied for their hospital adhere to the sampling requirements outlined in this manual. Performance measurement systems are responsible for ensuring that the sampling techniques are applied consistently across their client hospitals.

Transmission of Outpatient Population and Sample Data Elements

Refer to the QualityNet website or the Hospital Outpatient Quality Measure Data Transmission section of this manual for the most current CMS Hospital OQR Program submission requirements for transmission of outpatient population and sample count data elements to the CMS Clinical Data Warehouse. Transmission of outpatient population and sample count data elements are used to assist in evaluating completeness of submission in accordance with CMS sampling requirements.

All ICD-10-CM diagnosis codes and CPT[®] codes included in the appropriate outpatient population definition must be applied. This identification process must be completed prior to the application of a data integrity filter, outpatient measure set exclusions, and sampling methodology. For specific definitions, refer to the appropriate outpatient population in this manual.

The outpatient population and sample data elements are:

- *Outpatient Population Size – Medicare Only*
- *Outpatient Population Size – Non-Medicare Only*
- *Outpatient Sampling Frequency*
- *Outpatient Sample Size – Medicare Only*
- *Outpatient Sample Size – Non-Medicare Only*

Outpatient Sampling Frequency indicates whether the hospital sampled its original population, whether the entire population was used for the specific time period, or the hospital had five or fewer encounters for the encounter quarter and did not submit patient-level data.

Outpatient Population and Sample Size Examples

Example 1 – Hospital does not sample

A hospital uses the OP-5CPT[®] Codes (as listed in Appendix A, Table 1.1a) and patient age to identify 125 cases in the OP-5outpatient population during the second quarter. The hospital does not sample the OP-5 outpatient measure set, so data for all 125 cases are collected and used to calculate the hospital’s rate for the outpatient measure set. Forty of the 125 cases in the OP-5outpatient population are Medicare patients.

The breakdown of data by month and Medicare/Non-Medicare is:

	April	May	June	Total
<i>Outpatient Population – Medicare patients</i>	10	15	15	40
<i>Outpatient Population – Non-Medicare patients</i>	20	30	35	85
Total Outpatient Population Size	30	45	50	125

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<i>Outpatient Sample Size – Medicare patients</i>	10	15	15	40
<i>Outpatient Sample Size – Non-Medicare patients</i>	20	30	35	85
Total Sample Size	30	45	50	125

The following is transmitted for each month in the quarter:

	April	May	June
<i>Outpatient Population Size – Medicare only</i>	10	15	15
<i>Outpatient Population Size – Non-Medicare only</i>	20	30	35
<i>Outpatient Sampling Frequency (2 = not sampling)</i>	2	2	2
<i>Outpatient Sample Size – Medicare only</i>	10	15	15
<i>Outpatient Sample Size – Non-Medicare only</i>	20	30	35

Example 2 – Hospital samples

A hospital uses the OP-5 CPT® Codes (as listed in Appendix A, OP Table 1.1a) and patient age to identify 125 cases in the OP-5 outpatient population during the second quarter. From these 125 cases, the hospital randomly selects a sample of 95 cases. Data for these 95 cases are collected and are then used to calculate the hospital’s rate for each OP-5 outpatient measure. Forty of the 125 cases in the OP-5 outpatient population are Medicare patients, and 25 of these cases were included in the sample.

The breakdown of data by month and Medicare/Non-Medicare is:

	April	May	June	Total
<i>Outpatient Population – Medicare patients</i>	10	15	15	40
<i>Outpatient Population – Non-Medicare patients</i>	20	30	35	85
Total Outpatient Population Size	30	45	50	125
<i>Outpatient Sample Size – Medicare patients</i>	5	10	10	25
<i>Outpatient Sample Size – Non-Medicare patients</i>	15	25	30	70
Total Sample Size	20	35	40	95

The following is transmitted for each month in the quarter:

	April	May	June
<i>Outpatient Population Size – Medicare only</i>	10	15	15
<i>Outpatient Population Size – Non-Medicare only</i>	20	30	35
<i>Outpatient Sampling Frequency (1 = sampled data)</i>	1	1	1
<i>Outpatient Sample Size – Medicare only</i>	5	10	10
<i>Outpatient Same Size – Non-Medicare only</i>	15	25	30

Global National Hospital Inpatient Quality Measures Global Initial Patient Population

Global is an umbrella name for four measure sets, Emergency Department (ED), Immunization (IMM), Substance Use (SUB) and Tobacco Treatment (TOB). The purpose of defining an umbrella name was to apply one population flow and one sampling on the Global population and reduce the burden of sampling for four measure sets or any number of these four measure sets that are selected. Therefore, if only two of the Global measure sets are selected and reported, the process would only apply for those two measure sets.

The Global Initial Patient Population is defined by two data elements:

- *Admission Date*
- *Discharge Date*

All patients discharged from acute inpatient care with Length of Stay (Discharge Date minus Admission Date) less than or equal to 120 days are included in the Global Initial Population and are eligible for sampling.

The cases that are accepted into the Global Initial patient population and are sampled would be selected for the specific measure set and return to the **Transmission Data Processing Flow: Clinical** in the Data Transmission section.

For The Joint Commission, hospitals must submit the same case for all applicable measure sets elected by the hospital (i.e., ED, IMM, SUB and TOB) under the Global Initial Patient Population.

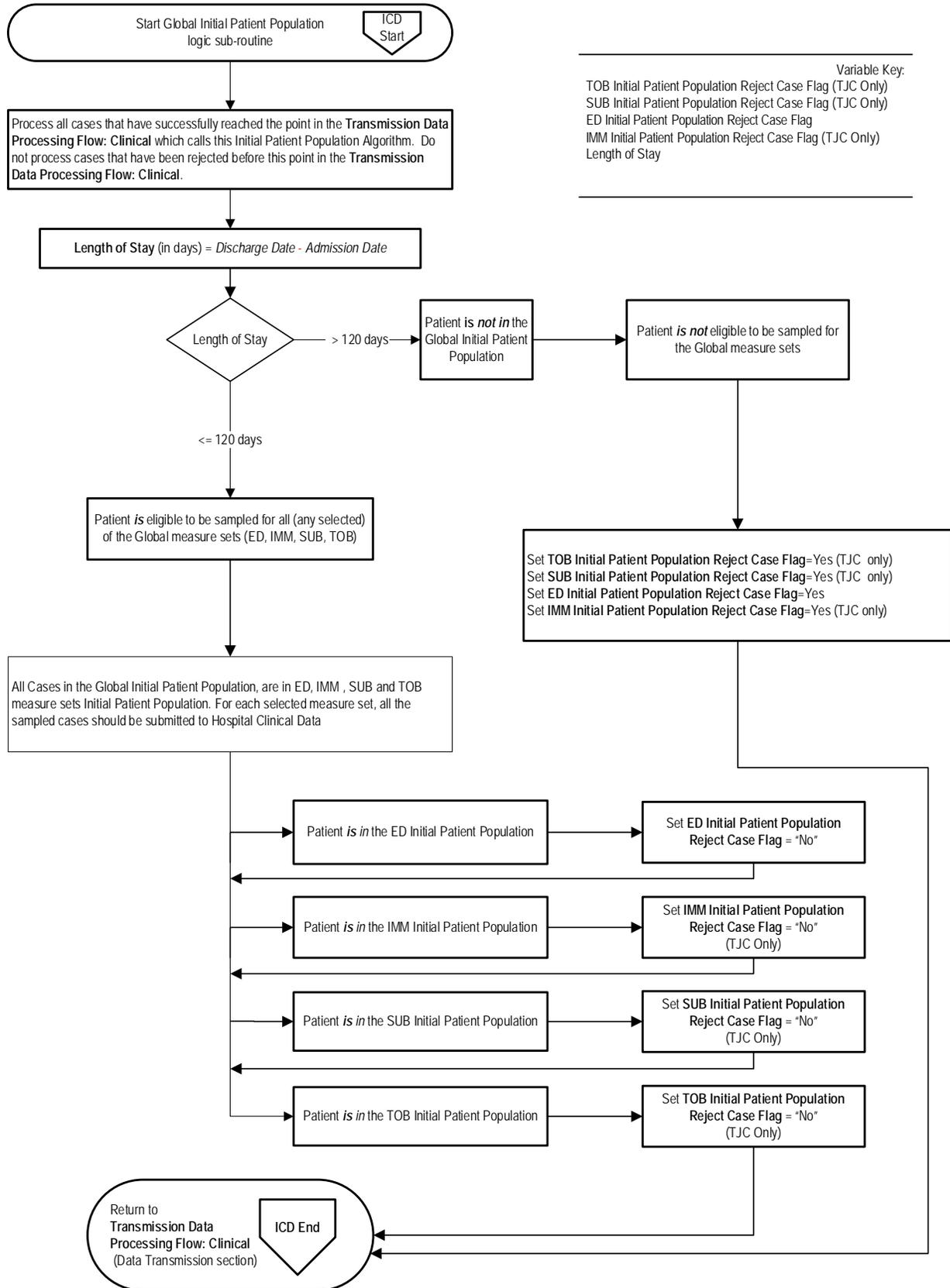
Example:

If a hospital has elected to submit ED, TOB and IMM to The Joint Commission, for every ED case that is submitted the same case must also be submitted as a TOB case and an IMM case to The Joint Commission's Data Warehouse. The same holds true regardless of the combination of measure sets (ED, IMM, SUB, TOB) the hospital has elected to submit to The Joint Commission.

The Global Initial Patient Population only contains the population information and flow. There is no measure associated to Global; therefore there is no measure flow or MIF for Global.

For Emergency Department (ED), Immunization (IMM), Substance Use (SUB) and Tobacco Treatment (TOB) Initial Patient Population definitions and algorithms, please refer to the Global Initial Patient Population.

Global Initial Patient Population Algorithm



Algorithm Narrative Global Initial Patient Population

Variable Key:

Length of Stay

TOB Initial Patient Population Reject Case Flag (TJC only)

SUB Initial Patient Population Reject Case Flag (TJC only)

ED Initial Patient Population Reject Case Flag

IMM Initial Patient Population Reject Case Flag (TJC only)

1. Start Global Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical, which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow: Clinical.
2. Calculate the Length of Stay, in days, which is equal to the Discharge Date minus the Admission Date.
3. Check Length of Stay
 - a. If the Length of Stay is greater than 120 days, the patient is not in the Global Initial Patient Population and is not eligible to be sampled for the Global measure sets. For CMS and The Joint Commission, set the ED Initial Patient Population Reject Case Flag to equal Yes. For The Joint Commission Only, set the IMM, TOB and SUB Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
 - b. If the Length of Stay is less than or equal to 120 days, the patient is eligible to be sampled for all (any selected) of the Global measure sets. All Cases in the Global Initial Patient Population are in ED, IMM, SUB, and TOB measure sets Initial Patient Population. For each selected measure set, all the sampled cases should be submitted to Hospital Clinical Data. Continue processing.
4. For CMS and The Joint Commission set the ED Initial Patient Population Reject Case Flag to equal No. For The Joint Commission Only set the IMM, TOB and SUB Initial Patient Population Reject Case Flag to equal No. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

Global Sample Size Requirements

Hospitals that choose to sample have the option of sampling quarterly or sampling monthly. A hospital may choose to use a larger sample size than is required. Hospitals whose Initial Patient Population size is less than the minimum number of cases per quarter for the measure set cannot sample.

Regardless of the option used, hospital samples must be monitored to ensure that sampling procedures consistently produce statistically valid and useful data. Due to exclusions, hospitals selecting sample cases **MUST** submit **AT LEAST** the minimum required sample size.

To reduce the burden of multiple sampling for different measure sets, those hospitals that are submitting any of the measure sets under the Global Initial Patient Population, the pulled sample must be used to identify the data for all measure sets or stratum that are transmitted to the CMS Clinical Warehouse and The Joint Commission's Data Warehouse. For more information concerning how to perform sampling and using the Global sample size for other measure sets, please refer to the Population and Sampling Specifications section in this manual.

The following sample size tables for each option automatically build in the number of cases needed to obtain the required sample sizes for the measure sets under the Global initial patient population.

Quarterly Sampling

Hospitals performing quarterly sampling for Global must ensure that its Initial Patient Population and sample size meet the following conditions:

Quarterly Sample Size Based on Hospital's Initial Patient Population Size for the Global Measures

Average Quarterly Initial Patient Population Size "N"	Minimum Required Sample Size "n"
≥ 1530	306
765 – 1529	20% of Initial Patient Population size
153 – 764	153
6 – 152	No sampling; 100% Initial Patient Population required
0 - 5	Submission of patient level data is encouraged but not required: <ul style="list-style-type: none">• CMS: if submission occurs, 1 – 5 cases of the Initial Patient Population may be submitted• The Joint Commission: if submission occurs, 100% Initial Patient Population required

Monthly Sampling

Hospitals performing monthly sampling for Global must ensure that its Initial Patient Population and sample size meet the following conditions:

Monthly Sample Size Based on Hospital's Global Initial Patient Population Size Measures

Average Monthly Initial Patient Population Size "N"	Minimum Required Sample Size "n"
≥ 510	102
255 – 509	20% of Initial Patient Population size
51 – 254	51
< 51	No sampling; 100% Initial Patient Population required

Sample Size Examples

- *Quarterly Sampling*
 - A hospital's Global Initial Patient Population size is 3000 patients during the fourth quarter. The required sample size is seen to be a minimum of 306 Global patients for this quarter.
 - A hospital's Global Initial Patient Population size 803 patients during the third quarter. The required sample size is 20% of the patient population or 161 cases for the quarter (twenty percent of 803 equals 160.6 rounded to the next highest whole number equals 161).
 - A hospital's Global Initial Patient Population size is 4 patients during the first quarter. Submission of patient level data is not required. If the hospital chooses to submit patient level data:
 - CMS: the quarterly sample size would be 1 – 4 cases for the quarter
 - The Joint Commission: the required quarterly sample size would be 100% of the patient population or 4 cases for the quarter.
- *Monthly Sampling*
 - A hospital's Global Initial Patient Population size is 600 patients during March. The required sample size is 102 cases from the patient population.
 - A hospital's Global Initial Patient Population size is 303 patients during July. The required sample size is 20% of the patient population or 61 cases for the month (twenty percent of 303 equals 60.6 rounded to the next highest whole number equals 61).



Appendix A

Influenza Vaccination Summary: List of Contracted Healthcare Personnel (HCP)

The list below includes contracted HCP who provide direct patient care and non-direct care. It is noted that HCP listed below can transmit influenza to patients, families, and other staff members. Agency and traveling nurses represent a substantial portion of contracted workers who provide direct patient care in organizations across the country.

Contracted HCP can include the following *direct* care providers:

- Chaplains
- Dieticians
- Dialysis technicians
- EKG technicians
- EMG technicians
- Home health aides
- Laboratory: Phlebotomists
- Nurses (through agency and travel employers)
- Nursing aides
- Occupational therapists
- Patient care technicians
- Pharmacists
- Pharmacy/medication technicians
- Physical therapists
- Psychologists
- Psych techs/Mental health workers
- Radiology – X-ray technicians
- Recreational therapists/Music therapists
- Respiratory therapists
- Speech therapists
- Social workers/Case managers
- Surgical technicians
- Ultrasound technicians

Contracted HCP can include the following *non-direct* providers:

- Admitting staff/clerical support/registrars
- Biomedical engineers
- Central supply staff
- Construction workers
- Dietary/food service
- IT staff



- Laboratory: technicians
- Landscapers
- Laundry staff
- Pharmacists
- Pharmacy/medication technicians
- Housekeeping (Please note many housekeeping staff are in patient rooms interacting with patients and visitors.)
- Maintenance staff/engineers
- Patient transporters
- Security staff
- Utilization review nurses