

COVID-19 Metric Specifications for Community Collaboration

As stakeholders work to address the COVID-19 outbreak, it's critical that they have accurate, complete data to make informed decisions. In collaboration with the healthcare organizations that use Epic software, we've created the following standard metrics to provide that data. These metrics were specifically designed to assist stakeholders in tracking the spread of the virus, better plan capacity, and monitor testing and screening. You can find [definitions of key terms](#) at the end of this document.

- COVID-19 Metric Specifications for Community Collaboration..... 1
 - COVID-19 Positive Tests 4
 - COVID-19 Encounters with a Positive Test..... 5
 - COVID-19 Total Tests..... 6
 - COVID-19 Pending Tests.....7
 - ICU Admissions Started..... 8
 - Open ICU Beds 9
 - Open Non-ICU Acute Beds 10
 - Occupied Beds11
 - ICU Active Ventilator Episodes..... 12
 - ICU Total Ventilators13
 - ICU Ventilators Available..... 14
 - ICU Ventilator Utilization15
 - COVID-19 Admissions 16
 - COVID-19 Occupied ICU Beds17
 - COVID-19 Average Length of Stay 18
 - COVID-19 Average Length of ICU Stay 19
 - Currently Admitted COVID-19 Patients..... 20
 - Currently Admitted COVID-19 Patients on Ventilators 21
 - COVID-19 Ventilator Hours 22
 - COVID-19 ICU Admissions..... 23
 - COVID-19 In-Hospital Mortality 24
 - ED and Overflow Average COVID-19-Suspected Patients Currently Waiting for Inpatient Bed 25
 - ED and Overflow Average COVID-19-Positive Patients Currently Waiting for Inpatient Bed 26
 - ED and Overflow Average COVID-19-Suspected Patients Currently Waiting for Inpatient Bed on a Ventilator.....27
 - ED and Overflow Average COVID-19-Positive Patients Currently Waiting for Inpatient Bed on a Ventilator 28
 - ED Average COVID-19-Suspected Patients..... 29

ED Average COVID-19-Positive Patients.....	30
Number of ED Visits	31
Percent of ED Visits Sent to Observation and Admitted	32
Median ED Board Time	33
ED Boarders with a Board Time Over Four Hours.....	34
ED Boarders with a Board Time Over Two Hours	35
ED Confirmed COVID-19 Mortality	36
ED Suspected COVID-19 Mortality.....	37
ED Suspected or Confirmed COVID-19 Mortality.....	38
Suspected COVID-19 In-Hospital Mortality	39
Suspected or Confirmed COVID-19 In-Hospital Mortality	40
Suspected COVID-19 ICU Stays.....	41
Suspected or Confirmed COVID-19 ICU Stays.....	42
Average Admitted COVID-19-Suspected Patients	43
ICU Ventilator Days.....	44
Average COVID-19-Suspected Patients on Ventilator.....	45
Confirmed COVID-19 Average Ventilator Occupancy Duration	46
Suspected COVID-19 Average Ventilator Occupancy Duration.....	47
Suspected or Confirmed COVID-19 Average Ventilator Occupancy Duration.....	48
Suspected COVID-19 Average Daily Ventilator Hours.....	49
Suspected or Confirmed COVID-19 Average Daily Ventilator Hours	50
Number of IP Admissions	51
Suspected COVID-19 IP Admissions.....	52
Suspected or Confirmed COVID-19 IP Admissions	53
Suspected COVID-19 Average Length of Stay	56
Suspected and Confirmed COVID-19 Average Length of Stay	57
Total ICU Beds.....	58
Total Physical ICU Beds.....	59
Total Non-Intensive Acute Beds.....	60
Occupied ICU Beds.....	61
Occupied Non-Intensive Acute Beds	62
Non-Intensive Acute Physical Beds	63
ICU and Non-Intensive Acute Physical Beds.....	64
ICU and Non-Intensive Acute Occupied Beds.....	65

Suspected COVID-19 Occupied ICU Beds.....	66
Suspected or Confirmed COVID-19 Occupied ICU Beds.....	67
Number of Occupied Beds	68
Percentage of Occupied Census Beds	69
Percentage of Occupied Beds	70
Percentage of Occupied Beds – Staffed or Licensed Beds.....	71
Total Beds	72
Licensed Beds	73
Key Terms.....	74

COVID-19 Positive Tests

Description

This metric counts the number of patients who were documented with a positive result for a COVID-19 test during the reporting period.

Age groups: The number of patients documented with a positive COVID-19 test can be stratified into the following age groups:

- 0-3 years
- 4-18 years
- 19-44 years
- 45-54 years
- 55-64 years
- 65-74 years
- 75-84 years
- 85+ years
- All ages

Example

Consider a patient with COVID-19 symptoms who has an office visit to be tested on March 23. The patient is seen in office, and the healthcare provider places an order for the COVID-19 test. Later, the test indicates a positive result, and the healthcare provider documents the result in the system. The patient is included in the metric because:

- The metric is showing data from a reporting period that includes March 23, which is the date the COVID-19 test was ordered.
- The healthcare provider enters positive as the patient's COVID-19 test result.

Definitions

Metric Result: Single number

Initial population: All patients who had any type of visit or were admitted during the reporting period.

Numerator: The number of COVID-19 patients during the reporting period with a positive COVID-19 test result in the given age group.

Denominator: N/A

Exclusions: A patient with only a home health visit is excluded.

Date: Tests are counted on the date they were ordered.

Attribution: Tests are attributed to the location of the site of the visit or admission they were ordered in.

COVID-19 Encounters with a Positive Test

Description

This metric calculates the percentage of all visits and admissions during the reporting period in which a patient was identified as a positive COVID-19 test. This metric is intended to track the trend in healthcare resources being dedicated to treating COVID-19.

Age groups: The number of patients documented with a positive COVID-19 test can be stratified into the following age groups:

- 0-3 years
- 4-18 years
- 19-44 years
- 45-54 years
- 55-64 years
- 65-74 years
- 75-84 years
- 85+ years
- All ages

Example

Consider a patient with COVID-19 symptoms who has an office visit to be tested on March 23. The patient is seen in office, and the healthcare provider places an order for the COVID-19 test. Later, the test indicates a positive result that's documented in the system. The patient is included in the metric because:

- The metric is showing data from a reporting period that includes March 23, which is the date the COVID-19 test was ordered.
- The healthcare provider enters positive as the patient's COVID-19 test result.

Definitions

Metric Result: Percentage

Initial population: All patients who had any type of visit, including telehealth, or were admitted during the reporting period.

Numerator: The number of patients with a positive COVID-19 test result during the reporting period in the given age group. Note that these patients do not need to have an encounter in the denominator to be included in the numerator—this metric is designed as an estimate for overall resource tracking.

Denominator: All visits and admissions during the reporting period.

Exclusions: Home health visits, visits that were canceled, and visits where the patient either did not show up or left without being seen are excluded.

Date: Tests are counted on the date they were ordered.

Attribution: Tests are attributed to the location of the site of the visit or admission they were ordered in.

COVID-19 Total Tests

Description

This metric counts the number of COVID-19 tests ordered during the reporting period. If an order consists of multiple samples or multiple results, it is counted as a single test. Multiple orders for the same patient on the same day are also counted as a single test.

Example

Consider a patient with COVID-19 symptoms who has an office visit to be tested on March 23. The patient is seen in office, and the healthcare provider places an order for the COVID-19 test. The test includes two samples from the patient, which are sent to the lab to be processed. Later, the results are returned and documented in the patient's chart as negative.

The test is included in the metric because:

- The metric is showing data from a reporting period that includes March 23, which is the date the COVID-19 test was ordered.
- The test is counted as a single test because the samples are for the same patient on the same day, even though two samples were taken.

Definitions

Metric Result: Single number

Initial population: All patients who had any type of visit, including telehealth, or were admitted during the reporting period.

Numerator: The number of COVID-19 tests during the reporting period.

Denominator: N/A

Exclusions: Subsequent tests for the same patient on the same day are not counted as additional tests.

Date: Tests are counted on the date they were ordered.

Attribution: Tests are attributed to the location of the site of the visit or admission they were ordered in.

COVID-19 Pending Tests

Description

This metric counts the number of COVID-19 tests ordered during the reporting period for which a final test result has not been recorded. If an order consists of multiple samples or multiple results, it is counted as a single test. Multiple orders for the same patient on the same day are also counted as a single test.

Example

Consider a patient with COVID-19 symptoms who has an office visit to be tested on March 23. The patient is seen in office, and the healthcare provider places an order for the COVID-19 test. The test includes two samples from the patient, which are sent to the lab to be processed. Lab staff have not yet entered a final result for these samples.

The test is included because:

- The metric is showing data from a reporting period that includes March 23, which is the date the COVID-19 test was ordered.
- The patient is counted as a single test because the samples are for the same patient on the same day, even though they had two samples taken.
- The patient's samples have not yet been resulted, so they are considered pending.

Definitions

Metric Result: Single number

Initial population: All patients who had any type of visit, including telehealth, or were admitted during the reporting period.

Numerator: The number of COVID-19 tests during the reporting period for which a final result has not been recorded.

Denominator: N/A

Exclusions: Subsequent tests for the same patient on the same day are not counted as additional tests.

Date: Tests are counted on the date they were ordered.

Attribution: Tests are attributed to the location of the site of the visit or admission they were ordered in.

ICU Admissions Started

Description

This metric counts the number of ICU admissions that started during the reporting period, regardless of whether the patient has a COVID-19 positive test.

Example

Consider a patient that is admitted to the ICU department on March 23. The patient is included in the metric because the admission date is within the reporting period and the department is defined as an ICU.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted during the reporting period.

Numerator: The number of ICU admissions that were started during the reporting period.

Denominator: N/A

Date: Admissions are counted on the date they were started.

Attribution: Admissions are attributed to the location of the site at which the patient was hospitalized.

Open ICU Beds

Description

This metric counts the number of open ICU beds at the point of reporting. Individual healthcare organizations define which departments are for intensive and non-intensive acute care.

Example

An organization has 100 beds in ICU departments. 25 patients are currently admitted to those departments. In addition, 10 beds in those departments are either unavailable or blocked. This metric shows 65 available beds.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The number of beds in ICU departments minus the number of unavailable or blocked beds, minus the number of patients in ICU beds.

Denominator: N/A

Exclusions: N/A

Attribution: Beds are attributed to the location of the site at which the patient was hospitalized.

Open Non-ICU Acute Beds

Description

This metric counts the number of open non-intensive, acute care beds at the point of reporting. Individual healthcare organizations define which departments are for intensive and non-intensive acute care.

Example

An organization has 100 beds in departments they've defined as providing non-intensive care. 25 patients are currently admitted to those departments. In addition, 10 beds in those departments are either unavailable or blocked. This metric shows 65 available beds.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The number of non-intensive, acute beds minus the number of unavailable or blocked beds, minus the number of patients in non-intensive, acute beds.

Denominator: N/A

Exclusions: N/A

Attribution: Beds are attributed to the location of the site at which the patient was hospitalized.

Occupied Beds

Description

This metric counts the number of occupied beds at a given location at the point of reporting. This includes beds that are held.

Example

An organization has 200 beds at a location. 50 patients are currently admitted, and 20 beds are held. This metric shows 70 occupied beds.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The number of patients in beds plus the number of held beds.

Denominator: N/A

Exclusions: N/A

Attribution: Beds are attributed to the location of the site at which the patient was hospitalized.

ICU Active Ventilator Episodes

Description

This metric counts the number of episodes (instances) of ventilator usage in ICUs during the reporting period.

Example

An admitted patient is placed on a ventilator, which is documented. The patient is still on the ventilator when the metric is calculated, so the episode is counted.

The patient is taken off the ventilator shortly after midnight the next day. The ventilator episode is also counted for that day regardless of the amount of time spent on the ventilator.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted during the reporting period.

Numerator: The number of episodes (instances) of ventilator usage patients in the ICU. Note that a single patient can have multiple episodes of ventilator usage over the course of an admission.

Denominator: N/A

Exclusions: Only active ventilators are counted, so a patient is no longer included in the metric after the patient is documented as no longer using the ventilator.

Attribution: Ventilator episodes are attributed to the location of the site at which the patient was hospitalized.

ICU Total Ventilators

Description

This metric counts the number of ventilators available for use in ICUs at the point of reporting. Individual healthcare organizations define how many devices they have that provide positive pressure ventilation through artificial airways.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The number of ventilators specified by the organization. Ventilator counts are supplied for each location.

Denominator: N/A

Exclusions: N/A

Attribution: Ventilators are attributed to the location of the site where they're manually specified as located.

ICU Ventilators Available

Description

This metric counts the number of ventilators not currently in use in ICUs at the point of reporting.

Example

An organization has specified they have 50 total ventilators in intensive care units, and nurses have documented ventilator use on 35 patients. This metric shows 15 available ventilators.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The difference between the ICU Total Ventilators and ICU Active Ventilator Episodes metrics.

Denominator: N/A

Exclusions: N/A

Attribution: Ventilators are attributed to the location of the site where they're manually specified as located.

ICU Ventilator Utilization

Description

This metric calculates the percentage of ventilators currently in use in intensive care units at the point of reporting. Individual healthcare organizations define how many devices they have that provide positive pressure ventilation through artificial airways.

Example

An organization has specified they have 50 total ventilators in intensive care units, and nurses have documented ventilator usage on 35 patients. This metric shows 70%.

Definitions

Metric Result: Percentage

Initial population: N/A

Numerator: The number of active ventilator episodes specified in the ICU Active Ventilator Episodes metric.

Denominator: The total number of ventilators specified in the ICU Total Ventilators metric.

Exclusions: N/A

Attribution: Ventilators are attributed to the location of the site where they're manually specified as located.

COVID-19 Admissions

Description

This metric counts the number of COVID-19-positive patients with admissions during the reporting period.

Example

Consider a patient that is admitted on March 23 and tested positive for a COVID-19 test that took place on March 20.

The patient is included in the metric because:

- The metric is showing data from a reporting period that includes March 23, which is the date the COVID-19 test was ordered.
- The patient has a documented positive COVID-19 test result from within the 14 days prior to admission.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted during the reporting period. Patients who are still in the hospital at the time the metric is calculated are included in this measure.

Numerator: The number of COVID-19-positive patient admissions during the reporting period.

Denominator: N/A

Exclusions: N/A

Date: Admissions are counted on the date the patient was admitted.

Attribution: Admissions are attributed to the location of the site at which the patient was hospitalized.

COVID-19 Occupied ICU Beds

Description

This metric counts the number of ICU beds occupied by COVID-19-positive patients at the point of reporting. Individual healthcare organizations define which beds are for intensive and non-intensive acute care.

Example

Consider a patient with a documented infection status of COVID-19 who occupies a bed in the ICU at a given time. The bed occupied by the patient is included in the metric because:

- The bed is occupied at the point of reporting and located in a department defined as an ICU.
- The healthcare provider of the patient occupying the bed has documented an infection status for the patient that indicates a COVID-19 infection.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted at the point of reporting.

Numerator: The number of beds in ICU departments occupied by a COVID-19-positive patient at the point of reporting.

Denominator: N/A

Exclusions: N/A

Attribution: Beds are attributed to the location of the site at which the patient was hospitalized.

COVID-19 Average Length of Stay

Description

This metric calculates the average number of days COVID-19-positive patients spent in an inpatient setting (including the ICU) before being discharged during the reporting period.

Example

Consider two patients with documented COVID-19 infections that are admitted to the hospital. One patient is admitted on March 23 and is discharged on March 27, and the other is admitted on March 23 and discharged on March 29. Since there are two stays—one which lasted 4 days and another that lasted 6 days—that ended during the reporting period, the average length of stay is 5 days.

Definitions

Metric Result: Single number

Initial population: All patients who were discharged during the reporting period.

Numerator: The number of days COVID-19-positive patients who were discharged during the reporting period spent in an inpatient setting (including the ICU).

Denominator: The number of ICU admissions for COVID-19-positive patients who were discharged during the reporting period.

Exclusions: Active admissions and time spent on leave of absence are excluded.

Date: Days are counted from the admission date to the discharge date, including same-day discharges.

Attribution: Admissions are attributed to the location of the site at which the patient was hospitalized.

COVID-19 Average Length of ICU Stay

Description

This metric calculates the average number of days that COVID-19-positive patients were admitted to the ICU during the reporting period.

Example

Consider two patients with positive tests for COVID-19 that are admitted to the ICU department. One patient is admitted on March 23 and is discharged on March 27, and the other is admitted on March 23 and discharged on March 29. Since there are two stays—one which lasted 4 days and another that lasted 6 days—that ended during the reporting period, the average length of stay is 5 days.

Definitions

Metric Result: Single number

Initial population: All patients who were discharged during the reporting period.

Numerator: The number of days COVID-19-positive patients who were discharged during the reporting period spent in the ICU.

Denominator: The number of ICU admissions for COVID-19-positive patients who were discharged during the reporting period.

Exclusions: Active admissions and time spent on leave of absence are excluded from this metric.

Date: Days are counted from the admission date to the discharge date, including same-day discharges.

Attribution: Admissions are attributed to the location of the site at which the patient was hospitalized.

Currently Admitted COVID-19 Patients

Description

This metric counts the number of COVID-19-positive patients currently admitted at the point of reporting.

Example

A patient with COVID-19 symptoms is admitted to the hospital. The patient's COVID-19 test result comes back positive, so the patient is included in this metric at the point of reporting.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted at the point of reporting.

Numerator: The number of currently admitted COVID-19-positive patients.

Denominator: N/A

Exclusions: Patients on leave of absence are excluded.

Attribution: Patients are attributed to the location of the site at which the patient was hospitalized.

Currently Admitted COVID-19 Patients on Ventilators

Description

This metric counts the number of COVID-19-positive patients who are currently admitted and on a ventilator at the point of reporting.

Example

A patient with a positive COVID-19 test is admitted to the ICU. It's documented that the patient is on a ventilator. The patient is still on the ventilator when the metric is calculated, so the patient is counted.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted at the point of reporting.

Numerator: The number of currently admitted COVID-19-positive patients who are also on a ventilator.

Denominator: N/A

Exclusions: Only active ventilators are counted, so a patient is no longer included in the metric after the patient is documented as no longer using the ventilator. Additionally, patients on leave of absence are excluded.

Attribution: Patients are attributed to the location of the site at which the patient was hospitalized.

COVID-19 Ventilator Hours

Description

This metric calculates the average time, in hours, to two decimal points, that admitted COVID-19-positive patients were on ventilators during the reporting period.

Example

Two patients with positive COVID-19 tests are admitted and on ventilators. It is documented when each patient is put on a ventilator and when each patient is taken off. One patient was on the ventilator for two hours, and the other for an hour and 45 minutes. When the report is run for that day, the daily average of hours is 1.88.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted during the reporting period.

Numerator: The total number of hours that patients in the denominator spent on a ventilator during the reporting period.

Denominator: All COVID-19-positive patients who were admitted and on a ventilator at some point during the reporting period.

Exclusions: N/A

Attribution: Patients are attributed to the location of the site at which the patient was hospitalized.

COVID-19 ICU Admissions

Description

This metric counts the number of ICU admissions for COVID-19-positive patients that started during the reporting period.

Example

Consider a patient with a positive test for COVID-19 that is admitted to the ICU department on March 23. The patient is included in the metric because:

- The admission date is within the reporting period.
- The patient has a positive COVID-19 test.
- The department is defined as an ICU.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted during the reporting period.

Numerator: The number of ICU admissions for COVID-19-positive patients that started during the reporting period.

Denominator: N/A

Date: Admissions are counted on the date they were started.

Attribution: Admissions are attributed to the location of the site at which the patient was hospitalized.

COVID-19 In-Hospital Mortality

Description

This metric counts the number of COVID-19-positive patients that were discharged as deceased during the reporting period.

Example

A patient with a documented COVID-19 infection is admitted to the hospital on March 23 and dies on March 30. The patient is included in the metric because:

- The patient died while admitted to the hospital.
- The patient was discharged as deceased within the reporting period.
- The patient had a documented COVID-19 infection.

Definitions

Metric Result: Single number

Initial population: All patients who were discharged as deceased during the reporting period.

Numerator: The number of COVID-19-positive patients that were discharged as deceased during the reporting period.

Denominator: N/A

Exclusions: N/A

Attribution: Deceased patients are attributed to the location of the site at which the patient was hospitalized.

ED and Overflow Average COVID-19-Suspected Patients Currently Waiting for Inpatient Bed

Description

This metric counts the number of COVID-19-suspected patients who are waiting to be admitted from either the ED or an overflow area and shows an average number based on the hourly census at the point of reporting.

Definitions

Metric Result: Single number

Initial population: All patients who are waiting to be admitted from either the ED or an overflow area.

Numerator: The average number of COVID-19-suspected patients.

Denominator: N/A

Attribution: Each patient is attributed to the location where they are waiting at the time of the hourly census.

ED and Overflow Average COVID-19-Positive Patients Currently Waiting for Inpatient Bed

Description

This metric counts the number of COVID-19-positive patients who are waiting to be admitted from either the ED or an overflow area and shows an average number based on the hourly census at the point of reporting.

Definitions

Metric Result: Single number

Initial population: All patients who are waiting to be admitted from either the ED or an overflow area.

Numerator: The average number of COVID-19-positive patients.

Denominator: N/A

Attribution: Each patient is attributed to the location where they are waiting at the time of the hourly census.

ED and Overflow Average COVID-19-Suspected Patients Currently Waiting for Inpatient Bed on a Ventilator

Description

This metric counts the number of COVID-19-suspected patients on ventilators who are waiting to be admitted from either the ED or an overflow area and shows an average number based on the hourly census at the point of reporting.

Definitions

Metric Result: Single number

Initial population: All patients who are waiting to be admitted from either the ED or an overflow area.

Numerator: The average number of COVID-19-suspected patients on ventilators.

Denominator: N/A

Attribution: Each patient is attributed to the location where they are waiting at the time of the hourly census.

ED and Overflow Average COVID-19-Positive Patients Currently Waiting for Inpatient Bed on a Ventilator

Description

This metric counts the number of COVID-19-positive patients on ventilators who are waiting to be admitted from either the ED or an overflow area and shows an average number based on the hourly census at the point of reporting.

Definitions

Metric Result: Single number

Initial population: All patients who are waiting to be admitted from either the ED or an overflow area.

Numerator: The average number of COVID-19-positive patients on ventilators.

Denominator: N/A

Attribution: Each patient is attributed to the location where they are waiting at the time of the hourly census.

ED Average COVID-19-Suspected Patients

Description

This metric counts the number of COVID-19-suspected patients in the ED and shows an average number based on the hourly census at the point of reporting.

Definitions

Metric Result: Single number

Initial population: All patients in the ED.

Numerator: The average number COVID-19-suspected patients.

Denominator: N/A

Attribution: Each patient is attributed to the location where they are in the ED at the time of the hourly census.

ED Average COVID-19-Positive Patients

Description

This metric counts the number of COVID-19-positive patients in the ED and shows an average number based on the hourly census at the point of reporting.

Definitions

Metric Result: Single number

Initial population: All patients in the ED.

Numerator: The average number COVID-19-positive patients.

Denominator: N/A

Attribution: Each patient is attributed to the location where they are in the ED at the time of the hourly census.

Number of ED Visits

Description

This metric counts the number of ED visits during the reporting period.

Definitions

Metric Result: Single number

Initial population: All ED visits.

Numerator: All ED visits during the reporting period.

Denominator: N/A

Attribution: Each visit is attributed to the location of the ED.

Percent of ED Visits Sent to Observation and Admitted

Description

This metric counts the average number of ED visits in which a patient was sent to an observation unit and then admitted to an inpatient unit during the reporting period.

Definitions

Metric Result: Single number

Initial population: All ED visits.

Numerator: ED visits where the patient was sent to an observation unit before being admitted as an inpatient.

Denominator: N/A

Attribution: Each visit is attributed to the location of the ED.

Median ED Board Time

Description

This metric calculates the median time that a patient was boarded in the ED while waiting to be moved to a bed in an inpatient unit during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were roomed in the ED during the reporting period.

Numerator: The median number of seconds that patients were boarded in the ED while waiting to be moved to an inpatient bed.

Denominator: N/A

Attribution: Patients are attributed to the location of the ED in which they were boarded.

ED Boarders with a Board Time Over Four Hours

Description

This metric calculates the percentage of patients who were boarded in the ED for more than four hours while waiting to be moved to an open bed in an inpatient unit during the reporting period.

Definitions

Metric Result: Percentage

Initial population: All patients who were roomed in the ED during the reporting period.

Numerator: The number of patients boarded in the ED for more than four hours while waiting for an open inpatient bed.

Denominator: The total number of patients boarded in the ED while waiting for an open inpatient bed.

Attribution: Patients are attributed to the location of the ED in which they were boarded.

ED Boarders with a Board Time Over Two Hours

Description

This metric calculates the percentage of patients who were boarded in the ED for more than two hours while waiting to be moved to an open bed in an inpatient unit during the reporting period.

Definitions

Metric Result: Percentage

Initial population: All patients who were roomed in the ED during the reporting period.

Numerator: The number of patients boarded in the ED for more than two hours while waiting for an open inpatient bed.

Denominator: The total number of patients boarded in the ED while waiting for an open inpatient bed.

Attribution: Patients are attributed to the location of the emergency department in which they were boarded.

ED Confirmed COVID-19 Mortality

Description

This metric counts the number of admitted COVID-19-positive patients who died in the ED at the point of reporting.

Definitions

Metric Result: Single number

Initial population: The number of COVID-19-positive patients in the ED.

Numerator: Patients who died in the ED.

Denominator: N/A

Attribution: Each patient is attributed to the location of the ED.

ED Suspected COVID-19 Mortality

Description

This metric counts the number of admitted COVID-19-suspected patients who died in the ED at the point of reporting.

Definitions

Metric Result: Single number

Initial population: The number of COVID-19-suspected patients in the ED.

Numerator: Patients who died in the ED.

Denominator: N/A

Attribution: Each patient is attributed to the location of the ED.

ED Suspected or Confirmed COVID-19 Mortality

Description

This metric counts the number of admitted COVID-19-suspected and COVID-19-positive patients who died in the ED at the point of reporting.

Definitions

Metric Result: Single number

Initial population: The number of COVID-19-suspected and COVID-19-positive patients in the ED.

Numerator: Patients who died in the ED.

Denominator: N/A

Attribution: Each patient is attributed to the location of the ED.

Suspected COVID-19 In-Hospital Mortality

Description

This metric counts the number of admitted COVID-19-suspected patients who were discharged as deceased at the point of reporting.

Definitions

Metric Result: Single number

Initial population: The number of COVID-19-suspected patients.

Numerator: Patients who are discharged as deceased.

Denominator: N/A

Attribution: Each patient is attributed to the location from which they were discharged.

Suspected or Confirmed COVID-19 In-Hospital Mortality

Description

This metric counts the number of admitted COVID-19-suspected and COVID-19-positive patients who were discharged as deceased at the point of reporting.

Definitions

Metric Result: Single number

Initial population: The number of COVID-19-suspected and COVID-19-positive patients.

Numerator: Patients who are discharged as deceased.

Denominator: N/A

Attribution: Each patient is attributed to the location from which they were discharged.

Suspected COVID-19 ICU Stays

Description

This metric counts the number of COVID-19-suspected patients who are admitted to an intensive care unit (ICU) during the reporting period.

Definitions

Metric Result: Single number

Initial population: The number of patients in the ICU.

Numerator: The number of COVID-19-suspected patients in the ICU.

Denominator: N/A

Attribution: Each patient is attributed to the location of the ICU.

Suspected or Confirmed COVID-19 ICU Stays

Description

This metric counts the number of COVID-19-suspected and COVID-19-positive patients who are admitted to an intensive care unit (ICU) during the reporting period.

Definitions

Metric Result: Single number

Initial population: The number of patients in the ICU.

Numerator: The number of COVID-19-suspected and COVID-19-positive patients in the ICU.

Denominator: N/A

Attribution: Each patient is attributed to the location of the ICU.

Average Admitted COVID-19-Suspected Patients

Description

This metric counts the number of COVID-19-suspected patients who are admitted and shows an average number based on the hourly census at the point of reporting.

Definitions

Metric Result: Single number

Initial population: The number of admitted patients.

Numerator: The average number of COVID-19-suspected patients admitted.

Denominator: N/A

Attribution: Each patient is attributed to the location where they are admitted at the time of the hourly census.

ICU Ventilator Days

Description

This metric calculates the average time, in days, that admitted patients were ventilated in the intensive care unit (ICU) during the reporting period. Individual healthcare organizations define which beds are for intensive and non-intensive acute care.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted during the reporting period.

Numerator: The total number of days that patients in the ICU spent on a ventilator during the reporting period.

Denominator: The total number of patients who were discharged from the ICU and on a ventilator at some point during the reporting period.

Attribution: Patients are attributed to the location of the site at which the patient was hospitalized.

Average COVID-19-Suspected Patients on Ventilator

Description

This metric calculates the average number of COVID-19-suspected patients who were on a ventilator during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted during the reporting period.

Numerator: The number of COVID-19-suspected patients on a ventilator, per hour, during the reporting period.

Denominator: The number of hours in the reporting period.

Attribution: Patients are attributed to the location of the site at which the patient was hospitalized.

Confirmed COVID-19 Average Ventilator Occupancy Duration

Description

This metric calculates the average time duration, in seconds, that discharged COVID-19-positive patients were on ventilators during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were discharged during the reporting period.

Numerator: The total number of seconds that patients in the denominator spent on a ventilator during the reporting period.

Denominator: All COVID-19-positive patients who were discharged and on a ventilator at some point during the reporting period.

Attribution: Patients are attributed to the location of the site at which the patient was hospitalized.

Suspected COVID-19 Average Ventilator Occupancy Duration

Description

This metric calculates the average time duration, in seconds, that discharged COVID-19-suspected patients were on ventilators during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were discharged during the reporting period.

Numerator: The total number of seconds that patients in the denominator spent on a ventilator during the reporting period.

Denominator: All COVID-19-suspected patients who were discharged and on a ventilator at some point during the reporting period.

Exclusions: N/A

Attribution: Patients are attributed to the location of the site at which the patient was hospitalized.

Suspected or Confirmed COVID-19 Average Ventilator Occupancy Duration

Description

This metric calculates the average time duration, in seconds, that discharged COVID-19-suspected and COVID-19-positive patients were on ventilators during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were discharged during the reporting period.

Numerator: The total number of seconds that patients in the denominator spent on a ventilator during the reporting period.

Denominator: All COVID-19-suspected patients and COVID-19-positive patients who were discharged and on a ventilator at some point during the reporting period.

Attribution: Patients are attributed to the location of the site at which the patient was hospitalized.

Suspected COVID-19 Average Daily Ventilator Hours

Description

This metric calculates the average length of time, in hours per day, that COVID-19-suspected patients were on ventilators during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted during the reporting period.

Numerator: The total number of hours that patients in the denominator spent on a ventilator on a given day during the reporting period.

Denominator: All COVID-19-suspected patients who were admitted and on a ventilator on a given day during the reporting period.

Exclusions: The current date is excluded if it's part of the reporting period.

Attribution: Patients are attributed to the location of the site at which the patient was hospitalized.

Suspected or Confirmed COVID-19 Average Daily Ventilator Hours

Description

This metric calculates the average length of time, in hours per day, that COVID-19-suspected patients and COVID-19-positive patients were on ventilators during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted during the reporting period.

Numerator: The total number of hours that patients in the denominator spent on a ventilator on a given day during the reporting period.

Denominator: All COVID-19-suspected patients and COVID-19-positive patients who were admitted and on a ventilator on a given day during the reporting period.

Attribution: Patients are attributed to the location of the site at which the patient was hospitalized.

Number of IP Admissions

Description

This metric counts the number of patients admitted in an inpatient setting (including the ICU) during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted during the reporting period. Patients who are still in the hospital at the time the metric is calculated are included in this measure.

Numerator: The number of inpatient admissions during the reporting period.

Denominator: N/A

Attribution: Admissions are attributed to the location of the site at which the patient was hospitalized.

Suspected COVID-19 IP Admissions

Description

This metric counts the number of COVID-19-suspected patients admitted in an inpatient setting (including the ICU) during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted during the reporting period. Patients who are still in the hospital at the time the metric is calculated are included in this measure.

Numerator: The number of COVID-19-suspected patient admissions during the reporting period.

Denominator: N/A

Attribution: Admissions are attributed to the location of the site at which the patient was hospitalized.

Suspected or Confirmed COVID-19 IP Admissions

Description

This metric counts the number of COVID-19-suspected and COVID-19-positive patients admitted in an inpatient setting (including the ICU) during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted during the reporting period. Patients who are still in the hospital at the time the metric is calculated are included in this measure.

Numerator: The number of COVID-19-suspected and COVID-19-positive patient admissions during the reporting period.

Denominator: N/A

Attribution: Admissions are attributed to the location of the site at which the patient was hospitalized.

Number of Suspected COVID-19 Discharge Days

Description

This metric counts the total number of days COVID-19-suspected patients spent in an inpatient setting (including the ICU) before being discharged during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were discharged during the reporting period.

Numerator: The number of days COVID-19-suspected patients who were discharged during the reporting period spent in an inpatient setting

Denominator: N/A

Exclusions: Active admissions and time spent on leave of absence are excluded.

Attribution: Discharges are attributed to the location of the site at which the patient was hospitalized.

Number of Suspected COVID-19 Discharges

Description

This metric counts the total number of inpatient admissions for COVID-19-suspected patients who were discharged during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were discharged during the reporting period.

Numerator: The number of inpatient admissions for COVID-19-suspected patients who were discharged during the reporting period.

Denominator: N/A

Attribution: Discharges are attributed to the location of the site at which the patient was hospitalized.

Suspected COVID-19 Average Length of Stay

Description

This metric calculates the average number of days COVID-19-suspected patients spent in an inpatient setting (including the ICU) before being discharged during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were discharged during the reporting period.

Numerator: The number of days COVID-19-suspected patients who were discharged during the reporting period spent in an inpatient setting.

Denominator: The number of inpatient admissions for COVID-19-suspected patients who were discharged during the reporting period.

Exclusions: Active admissions and time spent on leave of absence are excluded.

Attribution: Admissions are attributed to the location of the site at which the patient was hospitalized.

Suspected and Confirmed COVID-19 Average Length of Stay

Description

This metric calculates the average number of days both COVID-19-suspected patients and COVID-19-positive patients spent in an inpatient setting (including the ICU) before being discharged during the reporting period.

Definitions

Metric Result: Single number

Initial population: All patients who were discharged during the reporting period.

Numerator: The number of days both COVID-19-suspected patients and COVID-19-positive patients who were discharged during the reporting period spent in an inpatient setting.

Denominator: The number of inpatient admissions for COVID-19-suspected patients and COVID-19-positive patients who were discharged during the reporting period.

Exclusions: Active admissions and time spent on leave of absence are excluded.

Attribution: Admissions are attributed to the location of the site at which the patient was hospitalized.

Total ICU Beds

Description

This metric counts the total number of intensive care unit (ICU) beds at the point of reporting. Individual healthcare organizations define which departments are for intensive and non-intensive acute care. If an organization has defined which beds are staffed, this metric includes only staffed beds.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The total number of ICU beds at the point of reporting.

Denominator: N/A

Exclusions: If an individual healthcare organization has defined which beds are staffed, this metric excludes any non-staffed beds.

Attribution: Beds are attributed to the location of the site that the beds are in.

Total Physical ICU Beds

Description

This metric counts the total number of physical intensive care unit (ICU) beds at the point of reporting. Individual healthcare organizations define which departments are for intensive and non-intensive acute care. This metric does not consider whether an organization defined beds as staffed.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The total number of physical ICU beds at the point of reporting.

Denominator: N/A

Attribution: Beds are attributed to the location of the site that the beds are in.

Total Non-Intensive Acute Beds

Description

This metric counts the total number of non-intensive acute care beds at the point of reporting. Individual healthcare organizations define which departments are for intensive and non-intensive acute care. This metric does not consider whether an organization defined beds as staffed.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The total number of non-intensive acute care beds at the point of reporting.

Denominator: N/A

Attribution: Beds are attributed to the location of the site that the beds are in.

Occupied ICU Beds

Description

This metric counts the total number of occupied intensive care unit (ICU) beds at the point of reporting. Individual healthcare organizations define which departments are for intensive and non-intensive acute care.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The total number of occupied ICU beds at the point of reporting.

Denominator: N/A

Attribution: Beds are attributed to the location of the site at which the patient was hospitalized.

Occupied Non-Intensive Acute Beds

Description

This metric counts the total number of occupied non-intensive acute care beds at the point of reporting. Individual healthcare organizations define which departments are for intensive and non-intensive acute care.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The total number of occupied non-intensive acute care beds at the point of reporting.

Denominator: N/A

Attribution: Beds are attributed to the location of the site at which the patient was hospitalized.

Non-Intensive Acute Physical Beds

Description

This metric counts the number of non-intensive acute care beds at the point of reporting. Individual healthcare organizations define which departments are for intensive and non-intensive acute care.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The total number of beds in non-intensive acute care departments.

Denominator: N/A

Attribution: Beds are attributed to the location of the site that the beds are in.

ICU and Non-Intensive Acute Physical Beds

Description

This metric counts the number of intensive care unit (ICU) and non-intensive acute care beds at the point of reporting. Individual healthcare organizations define which departments are for intensive and non-intensive acute care.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The total number of beds in ICU and non-intensive acute care departments.

Denominator: N/A

Attribution: Beds are attributed to the location of the site that the beds are in.

ICU and Non-Intensive Acute Occupied Beds

Description

This metric counts the number of occupied intensive care unit (ICU) and non-intensive acute care beds at the point of reporting. This includes beds that are held. Individual healthcare organizations define which departments are for intensive and non-intensive acute care.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The number of patients in beds in ICU and non-intensive acute care departments, including the number of held beds.

Denominator: N/A

Attribution: Beds are attributed to the location of the site at which the patient was hospitalized.

Suspected COVID-19 Occupied ICU Beds

Description

This metric counts the number of ICU beds occupied by COVID-19-suspected patients at the point of reporting. Individual healthcare organizations define which beds are for intensive and non-intensive acute care.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted at the point of reporting.

Numerator: The number of beds in ICU departments occupied by a COVID-19-suspected patient.

Denominator: N/A

Attribution: Beds are attributed to the location of the site at which the patient was hospitalized.

Suspected or Confirmed COVID-19 Occupied ICU Beds

Description

This metric counts the number of intensive care unit (ICU) beds occupied by COVID-19-suspected patients and COVID-19-positive patients at the point of reporting. Individual healthcare organizations define which beds are for intensive and non-intensive acute care.

Definitions

Metric Result: Single number

Initial population: All patients who were admitted at the point of reporting.

Numerator: The number of beds in ICU departments occupied by a COVID-19-suspected patient or COVID-19-positive patient.

Denominator: N/A

Attribution: Beds are attributed to the location of the site at which the patient was hospitalized.

Number of Occupied Beds

Description

This metric counts the total number of beds, including ED beds, occupied by patients at the point of reporting.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The number of patients in beds.

Denominator: N/A

Attribution: Beds are attributed to the location of the site at which the patient was hospitalized.

Percentage of Occupied Census Beds

Description

This metric calculates the percentage of census beds that are occupied at the point of reporting. This includes held beds.

Definitions

Metric Result: Percentage

Initial population: N/A

Numerator: The number of occupied census beds plus the number of held census beds.

Denominator: The number of active census beds.

Attribution: Beds are attributed to the location of the site at which the patient was hospitalized.

Percentage of Occupied Beds

Description

This metric calculates the percentage of occupied, physical beds at a given location at the point of reporting. This includes held beds.

Definitions

Metric Result: Percentage

Initial population: N/A

Numerator: The number of patients in beds plus the number of held beds.

Denominator: The total number of physical beds at a given location.

Attribution: Beds are attributed to the location of the site at which the patient was hospitalized.

Percentage of Occupied Beds – Staffed or Licensed Beds

Description

This metric calculates the percentage of occupied beds at a given location at the point of reporting. This includes held beds. If an organization has defined which beds are staffed, this metric includes only staffed beds. If staffed beds aren't specified, the metric uses the number of licensed beds. Otherwise, it uses the number of physical beds.

Definitions

Metric Result: Percentage

Initial population: N/A

Numerator: The number of patients in beds plus the number of held beds.

Denominator: The total number of beds at a given location.

Attribution: Beds are attributed to the location of the site at which the patient was hospitalized.

Total Beds

Description

This metric counts the number of beds at a given location at the point of reporting. If an organization has defined which beds are staffed, this metric includes only staffed beds. If staffed beds aren't specified, the metric uses the number of licensed beds. Otherwise, it uses the number of physical beds.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The total number of beds at a given location.

Denominator: N/A

Attribution: Beds are attributed to the location of the site that the beds are in.

Licensed Beds

Description

This metric counts the number of licensed beds at a given location at the point of reporting.

Definitions

Metric Result: Single number

Initial population: N/A

Numerator: The number of licensed beds.

Denominator: N/A

Attribution: Licensed beds are attributed to the location of the site that the beds are in.

Key Terms

Census bed

Census beds are those beds that should be included in occupancy and bed volume reports. Individual healthcare organizations determine which beds to designate as census beds.

COVID-19-positive patient

This term represents a patient that has either or both of the following:

- A documented COVID-19 infection in the patient's chart. The infection can have been documented any time in the 14 days prior to the patient's admission and does not need to be active.
- A positive COVID-19 test (refer below for the definition of this term).
- Optionally, some organizations consider a COVID-19 diagnosis to indicate COVID-19-positive.

COVID-19-suspected patient

This term represents a patient that has any of the following:

- A documented infection status that indicates a COVID-19-suspected infection.
- A documented COVID-19 visit diagnosis without a documented positive COVID-19 test or confirmed COVID-19 infection status.
- A documented COVID-19 test with a status of pending.
- Optionally, some organizations consider additional criteria.

COVID-19 test

Individual healthcare organizations define what represents a COVID-19 test in their systems. This is typically a test mapped to LOINC code 94309-2 [SARS coronavirus 2 RNA [Presence] in Unspecified specimen by NAA with probe detection]. Healthcare providers then place orders for these tests in the system.

ED

Individual healthcare organizations indicate which departments are considered emergency departments.

ED boarder

Boarders are patients who have been roomed in the ED and have been given admission orders, but have not yet been admitted to the hospital.

ICU admissions

Individual healthcare organizations define what represents an ICU admission in their systems. Typically, this is an admission in a department defined as an ICU, or an admission in a bed defined as an ICU bed in a non-ICU department.

Licensed bed

Organizations can report on bed volume by counting the total number of beds they are licensed to operate. Individual healthcare organizations indicate the number of licensed beds that are available in a given unit.

Location

All data for these metrics is aggregated at the ZIP code level. The location is the ZIP code that corresponds to the physical location of the related healthcare site.

Open bed

An open bed is any unoccupied, unblocked, staffed, and available bed. Beds can be blocked or unavailable for many reasons, such as if a room has multiple beds and one of the beds is occupied by a patient who needs to be isolated or has another need for privacy. A bed might also be unavailable after a patient is discharged but the bed still needs to be cleaned.

Overflow

Overflow represents beds that are used only when the ED is at full capacity. Individual healthcare organizations indicate which beds are considered overflow.

Positive COVID-19 test

Individual healthcare organizations define what represents a COVID-19 test in their systems. A positive COVID-19 test is one where a healthcare provider entered the result as positive. Since tests and results aren't built uniformly across systems, organizations determine what lab result components and values constitute a positive test.

Reporting period

The reporting period is the timeframe for which the report containing the metrics is run.

Staffed bed

Organizations can report on bed volume by counting the number of beds that a hospital is staffed to support. Individual healthcare organizations indicate the number of staffed beds that are available in a given unit.