# CHICAGO DEPARTMENT OF PUBLIC HEALTH COVID-19 DATA SHARING OVERVIEW

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# Contents

# CDPH COVID-19 Data Sharing Initiative

## Executive Overview

This document is intended as a high-level overview and FAQ for Chicago Healthcare Institutions to review their options for complying with CDPH Public Health Order 2020-4. CDPH has partnered with Microsoft Azure Cloud to host Chicago COVID 19 data in a secure and dedicated environment. Data collected for this initiative will be solely used for the purpose of reporting Chicago COVID Public Health data in real-time.

## Data Submission Options for CCDA data:

In order to make the data submission process easy and inclusive, CDPH COVID Data Hub has the following technical options available to comply with CDPH Public Health Order 2020-4:

1. Epic Systems customers can submit their CCDA and capacity data directly to Epic via the Epic-Hosted Public Health Aggregate Repository. Each Epic customer should work directly with Epic to implement the changes necessary to send data to the Epic-Hosted Public Health Aggregate Repository, then Epic will send the data to the CDPH COVID Data Hub.
2. Epic and non-Epic systems can send CCDA data directly to the CDPH COVID Data Hub via an API. The API address is https://cdphservice.azurewebsites.net/api/ccd.
3. Participating Institutions that do not want Epic hosting their data, and/or do not have the capability to send direct to CDPH Data Repository via API, can submit CCD documents to CDPH Data Hub Developer (Rush University Medical Center) directly via Care Equality or Direct Message at CDPH_Data_Share@direct.rush.rush-health.com. See Appendix I for considerations on this option.

## Data Submission Options for NHSN Capacity Data:

CDPH Data Repository is using government adopted and approved schema to collect capacity level data. In order to make the data submission process easy and inclusive, following options are made available:

1. Epic Systems customers can submit their capacity data directly to an Epic-Owned Public Health Aggregate instance of Epic. Each Epic customer should work directly with Epic to implement the changes needed to send data to this Epic Aggregator, then Epic will send to CDPH COVID Data Hub.
2. Participating institutions can use the on-line NHSN survey form to submit capacity data manually. As a note, the goal is for real time data so submission should be as timely as possible. This form is available at this link - https://is.gd/covid19nhsn
3. For automation, participating institutions can submit capacity data using an API running on CDPH COVID Data Hub. The address will be made available soon. When submitting via HTTPS Post, institutions are required to use Schema.org representation of these data fields (See Appendix II).
4. For Participating institutions that can't access API, but still want to automate can submit using sFTP. sFTP will be available soon. When submitting via sFTP, institutions are required to use Schema.org representation of these data fields (See Appendix II).

## Frequently Asked Questions:

### Data Privacy and Data Sharing:

1. How will participating institutions' data be isolated from Rush's EMR and data?
    a. Data will not be hosted by Rush unless sending CCDA data via option 3 (Care Equality/Direct Message). Rush has taken safeguards to wall off data from normal EMR use. Please see appendix for details.
2. Who will have access to the data? Will participating institutions have access to data?
    a. CDPH and Rush University Medical Center (only for administrative purpose) will have access to the data in CDPH-COVID19-DataHub. CDPH may consider allowing participating institutions access to the data. This is up to CDPH's discretion. The architecture for access control Rush is using will support such functions.

### Data Governance:

3. Will there be a multidisciplinary team from all participating institutions running analytics?
    a. This is up to CDPH's discretion. CDPH will convene a governance committee consisting of Chief Medical Officers (CMO's) across the city. This committee will give direction for the development of data dashboards specific to the patient impact and hospital capacity data elements, provide consultation on processes for open access to the patient impact and hospital capacity elements, and identify appropriate coordination for bed management, if the need is identified.
4. How will the data be removed following the end of the crisis?
    a. Data received for this initiative is stored in a separate CDPH Azure subscription (CDPH-COVID19-DataHub) in partnership with Microsoft. This subscription will be governed and owned by CDPH. At the end of the crisis, CDPH may decide to close the subscription and purge the data or, in consent with participating institutions, may plan for its purpose and continued use. This is up to CDPH's discretion. The architecture Rush is using to for the CDPH-COVID19-DataHub will support and future decisions.
5. How was Rush University Medical Center chosen as the third-party to spearhead the data collection in Microsoft Azure?
    a. Rush University Medical Center was selected to lead the implementation of Epic for the McCormick Place Hospital. In addition, Rush University Medical has the prerequisites to support data interoperability using HL-7 and FHIR that are government and industry approved standards. They demonstrated the ability to create the infrastructure to support this initiative in a short timeframe and abbreviated timeline. Rush is closely partnering with Microsoft for creation and management of CDPH-COVID19-DataHub.

## Getting Help

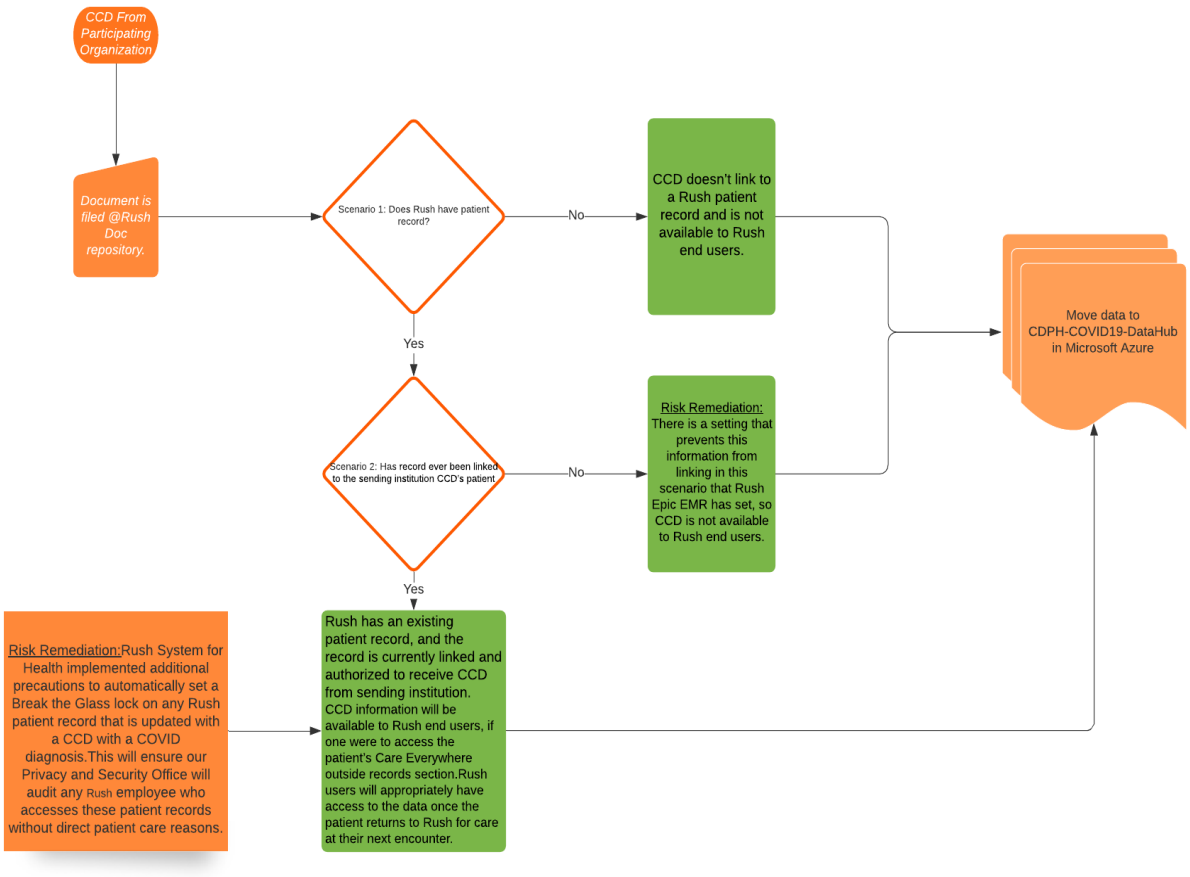
Please send email correspondence to CDPHCovidDataHub@rush.edu

## Appendix I:

### CCD Implementation Considerations for Option 3:

CDPH Data Repository does not desire to retain this information within Rush University EMR instance and wishes it be walled off from actionable patient data. Fortunately, after meeting with Epic experts extensively, we were able to provide remediation for all scenarios of concern. The following scenarios cover all possible patients:

| Scenario | Outcome |
|---|---|
| 1. Rush does not have an existing patient record in their system that matches CCD from sending organization. | ✓ CCD doesn't link to a Rush patient record and is not available to Rush end users. |
| 2. Rush has an existing patient record, but the record has never been linked to the sending institution CCD's patient in their EMR. | ✓ Risk Remediation: There is a setting that prevents this information from linking in this scenario that Rush Epic EMR has set, so CCD is not available to Rush end users. |
| 3. Rush has an existing patient record, and the record is currently linked and authorized to receive CCD from sending institution. | ✓ CCD information will be available to Rush end users, if one were to access the patient's Care Everywhere outside records section. Rush users will appropriately have access to the data once the patient returns to Rush for care at their next encounter.<br>Risk Remediation: Rush System for Health implemented additional precautions to automatically set a Break the Glass lock on any Rush patient record that is updated with a CCD with a COVID diagnosis. This will ensure our Privacy and Security Office will audit any Rush employee who accesses these patient records without direct patient care reasons. |




## Appendix II:

Schema.org representation of capacity data as defined by CDC.

| CDC name | Schema.org name | Expected Value | Notes | Definition |
|---|---|---|---|---|
| | | | | |
| | | | (see CDC for authoritative guidance) | |
| collectiondate | cvdCollectionDate | Text, mm/dd/yyyy | CDC required. | Date for which patient counts are reported. |
| | | | | |

| | | | | |
|---|---|---|---|---|
| | | [or ISO 8601 DateTime] | Original date format for collectionda te was mm/dd/yyy y, which can be ambiguous outside of a US context, so we provide the option of using ISO-8601 dates instead | |
| numbeds | cvdNumBeds | Number | CDC required.<br><br>0 to 10000<br><br>Must be a whole number<br><br>Must be <= numTotBed s | HOSPITAL INPATIENT BEDS: Inpatient beds, including all staffed, licensed, and overflow (surge) beds used for inpatients. |
| numtotbeds | cvdNumTotBeds | Number | Must be a whole number<br><br>0 to 10000 | ALL HOSPITAL BEDS: Total number of all Inpatient and outpatient beds, including all staffed,ICU, licensed, and overflow (surge) beds used for inpatients or outpatients. |

| | | | | |
|---|---|---|---|---|
| numbedsocc | cvdNumBedsOcc | Number | 0 to 10000<br><br>Must be a whole number<br><br>Must be <= numBeds | HOSPITAL INPATIENT BED OCCUPANCY: Total number of staffed inpatient beds that are occupied. |
| numicubeds | cvdNumICUBeds | Number | 0 to 10000<br><br>Must be a whole number<br><br>Must be <= numBeds | ICU BEDS: Total number of staffed inpatient intensive care unit (ICU) beds. |
| numicubedsocc | cvdNumICUBedsOcc | Number | 0 to 10000<br><br>Must be a whole number<br><br>Must be <= numICUBeds | ICU BED OCCUPANCY: Total number of staffed inpatient ICU beds that are occupied. |
| numvent | cvdNumVent | Number | 0 to 10000<br><br>Must be a whole number<br><br>Must be <= numTotBeds or <= 10,000 | MECHANICAL VENTILATORS: Total number of ventilators available. |
| numventuse | cvdNumVentUse | Number | 0 to 10000<br><br>Must be a whole number | MECHANICAL VENTILATORS IN USE: Total number of ventilators in use. |

| | | | | |
|---|---|---|---|---|
| | | | Must be <= numVent or <= 10,000 | |
| numc19hosppats | cvdNumC19HospPats | Number | 0 to 10000<br><br>Must be a whole number<br><br>Must be <= numBedsOcc | HOSPITALIZED: Patients currently hospitalized in an inpatient care location who have suspected or confirmed COVID-19. |
| numc19mechventpats | cvdNumC19MechVentPats | Number | 0 to 10000<br><br>Must be a whole number<br><br>Must be <= numVentUse | HOSPITALIZED and VENTILATED: Patients hospitalized in an NHSN inpatient care location who have suspected or confirmed COVID-19 and are on a mechanical ventilator. |
| numc19hopats | cvdNumC19HOPats | Number | 0 to 10000<br><br>Must be a whole number<br><br>Must be <= numBedsOcc | HOSPITAL ONSET: Patients hospitalized in an NHSN inpatient care location with onset of suspected or confirmed COVID-19 14 or more days after hospitalization. |

| | | | | |
|---|---|---|---|---|
| numc19overflowpats | cvdNumC19OverflowPats | Number | 0 to 2000<br><br>Must be a whole number<br><br>Must be <=2000 | ED/OVERFLOW: Patients with suspected or confirmed COVID-19 who are in the ED or any overflow location awaiting an inpatient bed. |
| numc19ofmechventpats | cvdNumC19OFMechVentPats | Number | 0 to 10000<br><br>Must be a whole number<br><br>Must be <= numVentUse | ED/OVERFLOW and VENTILATED: Patients with suspected or confirmed COVID-19 who are in the ED or any overflow location awaiting an inpatient bed and on a mechanical ventilator. |
| numc19died | cvdNumC19Died | Number | 0 to 1500<br><br>Must be a whole number<br><br>Must be <= 1500 | DEATHS: Patients with suspected or confirmed COVID-19 who died in the hospital, ED, or any overflow location. |