

Comprehensive Adult Data Dictionary Change Log

This document provides a comprehensive record of all changes made to the NYSDOH Adult Sepsis and COVID-19 Data Dictionaries Versions D2.1.1 – 4.0.1 and NYSDOH Adult Data Dictionary for Severe Sepsis or Septic Shock Version D5.0 – D5.0.2.

Data Dictionary Version D5.0.2

(Effective for Discharges beginning 10/1/2024)

Below is a comprehensive list of changes made to the Adult Data Dictionary Version D5.0.2.

1. Revised the name of all the CSV files to reflect the new data dictionary version: change from D5.0.1 to D5.0.2.
2. Revised the CSV files for the variables listed below to add ICD-10-CM codes that became effective on 10/1/2024. A summary of changes made to the ICD-10-CM codes can be found in the **Summary of ICD-10 Code Changes_VerD5.0.2** document. This document includes the codes that were added for this data dictionary version.
 - a. *Comorbidity/Risk Factor Variables*
 - i. Added **Lymphoma Leukemia Multiple Myeloma** ICD-10-CM codes on the csv file: lymphoma_leukemia_multi_myeloma_code_VerD5.0.2.csv.

Data Dictionary Version D5.0.1

(Effective for Discharges beginning 7/1/2024)

Below is a comprehensive list of changes made to the Adult Data Dictionary Version D5.0.1.

1. Updated the Notes of Abstraction for the following variable:
 - a. *Comorbidity/Risk Factor Variables*
 - i. **Pregnancy Status During Hospitalization**

Data Dictionary Version D5.0

(Effective for Discharges beginning 1/1/2024)

Please note that Severe COVID-19 is no longer in the Inclusion Definition for data collection. In addition, some COVID-19 and other variables have been removed from this Adult Data Dictionary Version D5.0.

Below is a comprehensive list of changes made to the Adult Data Dictionary Version D5.0.

1. Removed the severe COVID-19 reference in the 'Key points to remember during data extraction' section of the data dictionary.

2. Removed the content regarding the CSV Files for NDC codes of medications from the '*Key points to remember during data extraction*' section of the data dictionary.
3. Added information to the '*Key points to remember during data extraction*' section about two new columns that have been provided for optional use by hospitals in the CSV files.
4. Removed the Severe COVID-19 and Table B from the '*Inclusion Definition*' section of the data dictionary.
 - a. Removed all content referencing Severe COVID-19, COVID-19, and Table B.
5. Removed the following variables and any associated CSV files from the data dictionary:
 - a. *Demographic Variables*
 - i. *Inclusion Severe COVID-19*
 - b. *Comorbidity/Risk Factor Variables*
 - i. *History of COVID-19*
 - ii. *History of COVID-19 Datetime*
 - iii. *Medication Immune Modifying Pre-Hospital*
 - c. *Clinical Variables*
 - i. *COVID-19 Exposure*
 - ii. *Suspected Source of Infection*
 - d. *Treatment (in hospital) Variables*
 - i. *During Hospital Immune Modifying Medication*
 - ii. *Vasopressor Administration*
6. Removed the following code/value of the following variable:
 - a. *Demographic Variables*
 - i. *Discharge Status*
 1. 09 = Admitted as an Inpatient to this Hospital. Patient admitted to the same short-term medical or specialty hospital where the hospital-based ambulatory surgery service was performed (excluding chronic disease hospitals).
7. Added the following variable to the data dictionary:
 - a. *Comorbidity/Risk Factor Variables*
 - i. *Long-COVID Post-COVID Syndrome*
8. Updated the Notes of Abstraction for the following variables:
 - a. *Demographic Variables*
 - i. *Discharge Status*
 - ii. *Source of Admission*
 - iii. *Transferred In*
 - iv. *Transferred Out*
 - b. *Outcome (at discharge) Variables*
 - i. *Dialysis Outcome*
 - ii. *Mechanical Ventilation Outcome*
 - iii. *Tracheostomy at Discharge*
 - c. *Severity Variables*
 - i. *Lactate Level 1*
 - ii. *Lactate Level 2*
 - iii. *Lactate Level 3*
 - iv. *Lactate Level Max*

9. Revised the name of all the CSV files and the referenced CSV files in the Notes of Abstraction to reflect the new data dictionary version: change from D4.0.1 to D5.0.
10. A list of the codes that were added, removed, or revised for variables that remain in this data dictionary version can be found in the **Summary of ICD-10 Code Changes_VerD5.0** CSV file. Note this document does not contain the codes in the CSV files that were removed with this Data Dictionary update. CSV files that were removed are listed in #13.
11. Revised the CSV files for all variables to include two new columns for optional use by hospitals:
 - a. ICD-10-CM CODE DECIMAL This column was added so that all ICD-10 codes in the CSV files can be coded with or without a decimal point.
 - b. Subcategory Code – This column applies to all variables that have subcategories (e.g., History of Other Cardiovascular disease where 1 = Coronary heart disease [e.g. angina pectoris, coronary atherosclerosis]; 2 =Peripheral artery disease; etc.)
12. Revised the CSV files for the variables listed below:
 - a. *Treatment (in hospital) Variables*
 - i. Removed ICD-10-PCS codes from the **Mechanical Ventilation Treatment** CSV file: mechanical_vent_treatment_code_VerD5.0.csv
 - b. *Comorbidity/Risk Factor Variables*
 - i. Added new CSV file and ICD-10 code for **Long-COVID Post-COVID Syndrome**: long_covid_post_covid_syndrome_code_VerD5.0.csv
13. Removed all ICD-10 codes and CSV files for the following variables:
 - a. *Demographic Variables*
 - i. **Inclusion Severe COVID-19**
 - b. *Comorbidity/Risk Factor Variables*
 - i. **Medication Immune Modifying Pre-Hospital**
 - c. *Clinical Variables*
 - i. **COVID-19 Exposure**
 - ii. **Suspected Source of Infection**
 - d. *Treatment (in hospital) Variables*
 - i. **During Hospital Immune Modifying Medication**
 - ii. **Vasopressor Administration**

Data Dictionary Version D4.0.1

(Effective Dates: 10/1/2023 – 12/31/2023)

1. Revised the name of all the CSV files to reflect the new data dictionary version: change from D4.0 to D4.0.1.
2. Revised the CSV files for the variables listed below to add and/or revise ICD-10-CM and
3. ICD-10-PCS codes that became effective on 10/1/2023. A summary of changes made to the ICD-10-CM/PCS csv files can be found in the **Summary of ICD-10 Code Changes_VerD4.0.1** document. This document includes the codes that were added or revised for this data dictionary version.
 - a. *Comorbidity/Risk Factor Variables*
 - i. Added **Acute Cardiovascular Conditions (POA)** ICD-10-CM codes on the

- csv file: acute_cardiovascular_conditions_code_VerD4.0.1.csv
- ii. Added and revised **History of Other Cardiovascular Disease** ICD-10-CM codes on the csv file: history_of_other_cvd_code_VerD4.0.1.csv
- iii. Added **Hypertension** ICD-10-CM codes on the csv file: hypertension_code_VerD4.0.1.csv
- b. *Clinical Variables*
 - i. Added **Drug Resistant Pathogen** ICD-10-CM codes on the csv file: drug_resistant_pathogen_code_VerD4.0.1.csv
- c. *Treatment (in hospital) Variables*
 - i. Added **Mechanical Ventilation Treatment** ICD-10-PCS codes on the csv file: mechanical_vent_treatment_code_VerD4.0.1.csv

Data Dictionary Version D4.0

(Effective Dates: 1/1/2023 – 9/30/2023)

1. Updated information about CSV file format in *Key points to remember during data extraction*.
2. Added reminders to *Key points to remember during data extraction* about attesting to 0 and reporting all variables outlined in the Data Dictionary for all cases that meet inclusion criteria.
3. Added the following variables to *Demographic Variables* section of the data dictionary:
 - a. **Preferred Language**
 - b. **Type of Admission**
4. Changed name of Gender variable to **Sex** in *Demographic Variables*.
5. Updated codes and values for the following *Demographic Variables* to align with SPARCS data dictionaries:
 - a. **Ethnicity**
 - b. **Race**
6. Updated description of **Insurance Number** in *Demographic Variables* to request Medicare Beneficiary Information (MBI) number instead of Health Insurance Claim number (HICN).
7. Added, where applicable, a note to the Notes For Abstraction when a *Demographic Variable* is also collected in SPARCS and provided the SPARCS data element name and SPARCS Definition.
8. Removed **During Hospital Remdesivir** from *Treatment (in hospital) Variables*.
9. Revised the CSV files and the name of the referenced CSV files for the variables listed below. A summary of changes made to the ICD-10-CM and NDC csv files can be found in the **Summary of ICD-10-CM Code Changes_VerD4.0** and **Summary of NDC Code Changes_VerD4.0** documents, respectively. These documents include the codes that were added or removed for this data dictionary version.
 - a. *Comorbidity/Risk Factor Variables*
 - i. Added and removed **Medication Immune Modifying Pre-Hospital** NDC codes on the csv file: medication_immune_modifying_ndc_code_VerD4.0.csv

- ii. Added **Chronic Kidney Disease** ICD-10-CM codes on the csv file: chronic_kidney_disease_code_VerD4.0.csv
- iii. Added and removed **Chronic Liver Disease** ICD-10-CM codes on the csv file: chronic_liver_disease_code_VerD4.0.csv
- iv. Added **History of Other Cardiovascular Disease** ICD-10-CM codes on the csv file: history_of_other_cvd_code_VerD4.0.csv
- v. Added **Hypertension** ICD-10-CM codes on the csv file: hypertension_code_VerD4.0.csv
- vi. Added **Immunocompromising** ICD-10-CM codes on the csv file: immunocompromising_code_VerD4.0.csv
- vii. Added **Lymphoma Leukemia Multiple Myeloma** ICD-10-CM codes on the csv file: lymphoma_leukemia_multi_myeloma_code_VerD4.0.csv
- viii. Added **Metastatic Cancer** ICD-10-CM codes on the csv file:
- ix. metastatic_cancer_code_VerD4.0.csv
- b. *Clinical Variables*
 - i. Removed **COVID-19 Exposure** ICD-10-CM codes on the csv file: covid_exposure_code_VerD4.0.csv
 - ii. Added and removed **Suspected Source of Infection** ICD-10-CM codes on the csv file: suspected_source_of_infection_code_VerD4.0.csv
- c. *Treatment (in hospital) Variables*
 - i. Added and removed **During Hospital Immune Modifying Medication** NDC codes on the csv file: medication_immune_modifying_ndc_code_VerD4.0.csv
 - ii. Added and removed **Vasopressor Administration** NDC codes on the csv file: vasopressor_administration_ndc_code_VerD4.0.csv
- d. *Severity Variables*
 - i. Removed **Organ Dysfunction Respiratory** ICD-10-CM codes on the csv file: organ_dysfunc_respiratory_code_VerD4.0.csv
- 10. Modified the CSV files for **Vasopressor Administration**, **Medication Immune Modifying Pre-Hospital** and **During Hospital Immune Modifying Medication** to indicate whether an NDC code was added or revised and if the code was active at the time of data dictionary
- 11. (DV4.0) publication. Please see the **Summary of NDC Code Changes_VerD4.0** document for a comprehensive csv file of changes made to the NDC code csv files for this data dictionary version.
 - a. These CSV files now contain three additional columns: 'Add', 'Revise' and 'Active':
 - i. Add: 1 = newly added NDC code; 0 = not a new addition
 - ii. Revise: 1 = revised description for NDC code; 0 = no revisions
 - iii. Active: 1 = code is active NDC code; 0 = code is inactive NDC code

Data Dictionary Version D3.0.2

(Effective Dates: 10/1/2022 – 12/31/2022)

1. Revised the CSV files and the name of the referenced CSV files for the variables listed

below. Specifically, added ICD-10-CM codes or revised ICD-10-CM code descriptions to align with the ICD-10-CM FY 2023 October 1 release (effective 10/01/2022). Please refer to the Adult D3.0.2 Summary Change CSV file document to see the complete list of ICD-10-CM code changes and their respective variables.

- a. *Comorbidity Variables*
 - i. Added **Chronic Liver Disease** ICD-10-CM codes on the csv file: chronic_liver_disease_code_VerD3.0.2csv
 - ii. Added **Coagulopathy** ICD-10-CM codes on the csv file: coagulopathy_code_VerD3.0.2
 - iii. Added and Revised **Dementia ICD-10-CM Codes** ICD-10-CM codes on the CSV File: dementia_code_verD3.0.2
 - iv. Added **History of Other Cardiovascular Disease** ICD-10-CM codes on the CSV File: history_of_other_cvd_code_verD3.0.2
 - v. Added **Immunocompromising** ICD-10-CM codes on the CSV File: immunocompromising_code_verD3.0.2
 - vi. Revised **Lymphoma Leukemia Multiple Myeloma** ICD-10-CM codes on the CSV File: lymphoma_leukemia_multi_myeloma_code_verD3.0.2
- b. *Clinical Variables*
 - i. Revised **Suspected Source of Infection** ICD-10-CM codes on the CSV File: suspected_source_of_infection_code_verD3.0.2
2. Modified all CSV files to indicate whether a code has been added or whether the code description has been revised.
 - a. All CSV files now contain two columns: 'Add' and 'Revise'
 - i. These two columns are marked off as either: '0' or '1'
 1. '0' means 'No' change (either 'Add' or 'Revise') was made
 2. '1' means 'Yes' change (either 'Add' or 'Revise') was made

Data Dictionary Version D3.0.1

(Effective Dates: 4/1/2022 – 9/30/2022)

1. Modified the CSV files and the name of the referenced CSV files for the following variables of the *Demographic Variables* section of the data dictionary:
 - a. **Inclusion Septic Shock**
 - b. **Inclusion Severe COVID**
 - c. **Inclusion Severe Sepsis**

Data Dictionary Version D3.0

(Effective Dates: 1/1/2022 – 3/31/2022)

1. Added to the “Key points to remember during data extraction” of the data dictionary:
 - a. For patients who are not admitted to the hospital (i.e., ED/Observation only), the patient’s age at arrival should be used to determine reporting to the adult or the pediatric database.

- b. Appendices no longer available as of Data Dictionary Version D3.0.
- 2. Added eight (8) new variables to the *Demographic Variables* section of the data dictionary:
 - a. *Inclusion Septic Shock*
 - b. *Inclusion Severe COVID*
 - c. *Inclusion Severe Sepsis*
 - d. *Patient City*
 - e. *Patient County Code*
 - f. *Patient Street Address Line 1*
 - g. *Patient Street Address Line 2*
 - h. *Patient State*
- 3. Added *Skin Disorders/Burns (POA)* to the *Comorbidity/Risk Factor Variables*, and a corresponding appendix of ICD-10-CM codes to the csv file.
- 4. Added Notes of Abstraction to *Payer* in the *Demographic Variables* section of the data dictionary:
 - a. If the patient has no insurance prior to admission and is pending Medicaid approval during hospitalization, please report the payer as Medicaid.
- 5. Added Notes of Abstraction to clarify the role of POA indicator for these following
- 6. *Comorbidity/Risk Factor Variables*:
 - a. *Acute Cardiovascular Conditions (POA)*
 - b. *Coagulopathy (POA)*
 - c. *Dialysis Comorbidity (POA)*
 - d. *Mechanical Ventilation (POA)*
 - e. *Tracheostomy on Arrival (POA)*
- 7. Modified variable name and description to the following *Comorbidity/Risk Factor Variables*:
 - a. *AIDS/HIV Disease*
 - b. *Asthma*
 - c. *Chronic Liver Disease*
 - d. *Chronic Kidney Disease*
 - e. *Chronic Respiratory Failure*
 - f. *Congestive Heart Failure*
 - g. *COPD*
 - h. *Dementia*
 - i. *Diabetes*
 - j. *History of Other Cardiovascular Disease*
 - k. *Hypertension*
 - l. *Immunocompromising*
 - m. *Lymphoma/Leukemia/Multiple Myeloma*
 - n. *Medication Immune Modifying Pre-Hospital*
 - o. *Metastatic Cancer*
 - p. *Obesity*
 - q. *Pregnancy Comorbidity*
 - r. *Skin Disorders/Burns*
 - s. *Smoking Vaping*

8. Modified Notes of Abstraction of all variables with references to an appendix.
 - a. With the removal of the Appendix document, the applicable ICD-10/NDC codes are found in the csv file of the corresponding version of the data dictionary.
9. Modified the Codes and Values of **ICD-10-CM POA Indicator (n)** in the *Demographic Variables* section of the data dictionary:
 - a. Aligned the definition of the Codes and Values to the official indicator definitions (CMS).
 - b. Replaced “E = Exempt from POA reporting” to “1 = Unreported/Not used. Exempt from POA reporting”
10. Added Notes of Abstraction to **ICD-10-CM POA Indicator (n)** in the *Demographic Variables*
11. section of the data dictionary:
 - a. **ICD-10-CM POA Indicator (n)** is mandatory. In rare instances, when the values are truly unattainable from the EHR, report missing values as blank.
 - b. **ICD-10-CM POA Indicator (n)** is not applicable to emergency department (ED)/observation only cases. For ED/observation only cases, report as blank.
12. Modified variable name and the Description and the Notes of Abstraction of **History of COVID-19** in the *Comorbidity/Risk Factor Variables* section of the data dictionary to include “within 12 weeks” timeframe.
13. Modified variable name and added Notes of Abstraction to **History of COVID-19 Datetime** in the *Comorbidity/Risk Factor Variables* section of the data dictionary:
 - a. If the **History of COVID-19** is reported as “0 = No”, then **History of COVID-19 Datetime** should be reported as blank.
14. Modified variable name of **Chronic Renal Failure (POA)** in the *Comorbidity/Risk Factor Variables* section of the data dictionary to: **Chronic Kidney Disease**.
15. Removed the following *Comorbidity/Risk Factor Variables* from the data dictionary and the csv file:
 - a. **Altered Mental Status (POA)**
 - b. **Medication Anticoagulation (POA)**
16. Removed the following *Treatment Variables* from the data dictionary and the csv file:
 - a. **During Hospital Anticoagulation**
17. Removed the following *Outcome (at discharge) Variables* from the data dictionary and the csv file:
 - a. **Cardiovascular Outcomes at Discharge**
18. Removed the following *Outcome (in hospital) Variables* from the data dictionary and the csv file:
 - a. **PE/DVT**
19. Revised **Dialysis Treatment** ICD-10-PCS codes on the csv file: dialysis_treatment_code_VerD3.0.csv
 - a. Removed the following ICD-10-PCS codes:
 - i. 5A1D00Z – Performance of Urinary Filtration Single
 - ii. 5A1D60Z – Performance of Urinary Filtration Multiple
 - b. Added the following ICD-10-PCS code:
 - i. 3E1M39Z – Peritoneal Dialysis

Data Dictionary Version D2.1.2

(Effective Dates: 9/1/2021 – 12/31/2021)

1. For consistency reasons and alignment with the upcoming pediatric data dictionary all lab- based severity variables are named after the lab while all ICD-10-CM code-based severity variables are named organ dysfunction and organ name.
 - a. Specifically, the existing lab-based variables *Organ Dysfunction Hepatic* and *Datetime* was renamed *Bilirubin Arrival, Max*, and *Datetime*. A new ICD-10-CM code-based variable *Organ Dysfunction Hepatic* was added.
 - b. Specifically, the existing lab-based variable *Organ Dysfunction Renal* and *Datetime* was renamed *Creatinine Arrival, Max*, and *Datetime*. A new ICD-10-CM code-based variable *Organ Dysfunction Renal* was added.
2. New data elements were added:
 - a. *Organ Dysfunction Cardiovascular*
 - b. *Organ Dysfunction Hematologic*
 - c. *Organ Dysfunction Hepatic*
 - d. *Organ Dysfunction Renal*
 - e. *Cardiovascular Outcomes at Discharge*
3. Variable value was updated for the following variables:
 - a. *Patient Care Considerations*
 - b. *Cardiovascular Outcomes in Hospital*
 - c. *History of Cardiovascular Disease*
 - d. *Lactate Level 1*
 - e. *Lactate Level 2*
 - f. *Lactate Level 3*
 - g. *Lactate Level Max*
 - h. *Patient Care Considerations*
 - i. *Payer*
4. Data element name and template variable name were updated for the following variables:
 - a. *Bilirubin Arrival*
 - b. *Bilirubin Max*
 - c. *Bilirubin Arrival Datetime*
 - d. *Bilirubin Max Datetime*
 - e. *Cardiovascular Outcomes in Hospital*
 - f. *Creatinine Arrival*
 - g. *Creatinine Max*
 - h. *Creatinine Arrival Datetime*
 - i. *Creatinine Max Datetime*
5. Variable length was updated for the following variables:
 - a. *aPTT 1*
 - b. *aPTT 2*
 - c. *aPTT 3*

- d. *aPTT Max*
 - e. *Bilirubin Arrival*
 - f. *Bilirubin Max*
 - g. *Platelets 1*
 - h. *Platelets 2*
 - i. *Platelets 3*
 - j. *Platelets Min*
 - k. *SIRS Leukocyte Arrival*
 - l. *SIRS Leukocyte Min*
 - m. *SIRS Leukocyte Max*
6. Notes of abstraction were updated for the following variables
- a. *aPTT 1, 2, 3, MAX* and corresponding *Datetimes*
 - b. *Bilirubin Arrival and MAX* and corresponding *Datetimes*
 - c. *Cardiovascular Outcomes in Hospital*
 - d. *Creatinine Arrival, MAX* and corresponding *Datetimes*
 - e. *Diastolic First, Second, Third, MIN* and corresponding *Datetimes*
 - f. *INR 1, 2, 3, MAX* and corresponding *Datetimes*
 - g. *Lactate Level 1, 2, 3, MAX* and corresponding *Datetimes*
 - h. *Organ Dysfunction CNS*
 - i. *Organ Dysfunction Respiratory*
 - j. *Platelets 1, 2, 3, MIN* and corresponding *Datetimes*
 - k. *SIRS Heart Rate 1, 2, 3, Max* and corresponding *Datetimes*
 - l. *SIRS Leukocyte Arrival, MIN, MAX* and corresponding *Datetimes*
 - m. *SIRS Respiratory Rate 1, 2, 3, Max* and corresponding *Datetimes*
 - n. *SIRS Temperature 1, 2, 3, Max* and corresponding *Datetimes*
 - o. *Diastolic First, Second, Third, Min* and corresponding *Datetimes*
 - p. *Systolic First, Second, Third, Max* and corresponding *Datetimes*
7. Several appendices were added. Be sure to review Appendices D2.1.1 change log for the specific variables that were added. The following appendices were added:
- a. Appendix 4A: Cardiovascular Outcomes at Discharge ICD-10 CM Codes
 - b. Appendix 6A: Organ Dysfunction Cardiovascular ICD-10 CM Codes
 - c. Appendix 6C: Organ Dysfunction Hematologic ICD-10-CM Codes
 - d. Appendix 6D: Organ Dysfunction Hepatic ICD-10 CM Codes
 - e. Appendix 6E: Organ Dysfunction Renal ICD-10 CM Codes
8. The numbers of the following appendices were updated:
- a. Appendix 5A: Cardiovascular Outcomes in Hospital ICD-10-CM Codes
 - b. Appendix 5B: Pulmonary Embolism (PE) and/or Deep Venous Thrombosis (DVT)
 - i. Outcome ICD-10-CM Codes
 - c. Appendix 5C: Tracheostomy in Hospital ICD-10-PCS Codes
 - d. Appendix 6B: Organ Dysfunction CNS Severity ICD-10-CM Codes
 - e. Appendix 6F: Organ Dysfunction Respiratory Severity ICD-10-CM Codes
9. The following appendices were updated to include additional codes:
- a. Appendix 1A: Acute Cardiovascular Comorbidity / Risk Factor (POA) ICD-10 CM Codes

- b. Appendix 1N: History of Other Cardiovascular Comorbidity / Risk Factor (POA) ICD- 10-CM Codes
 - c. Appendix 4E: Cardiovascular Outcomes in Hospital ICD-10-CM Codes
10. The names of the following appendices were updated:
- a. Appendix 1A: Acute Cardiovascular Conditions Comorbidity / Risk Factor (POA) ICD- 10 CM Codes
 - b. Appendix 1N: History of Other Cardiovascular Disease Comorbidity / Risk Factor (POA) ICD-10-CM Codes
 - c. Appendix 1W: Pregnancy Comorbidity / Risk Factor (POA) ICD-10 CM Codes
 - d. Appendix 4E: Cardiovascular Outcomes in Hospital ICD-10-CM Codes

Data Dictionary Version D2.1.1

(Effective Dates: 12/1/2020 – 8/31/2021)

1. For consistency reasons and alignment with the upcoming pediatric data dictionary all lab-based severity variables are named after the lab while all ICD-10-CM code-based severity variables are named organ dysfunction and organ name.
 - a. Specifically, the existing lab-based variables *Organ Dysfunction Hepatic* and *Datetime* was renamed *Bilirubin Arrival, Max*, and *Datetime*. A new ICD-10-CM code-based variable *Organ Dysfunction Hepatic* was added.
 - b. Specifically, the existing lab-based variable *Organ Dysfunction Renal* and *Datetime* was renamed *Creatinine Arrival, Max*, and *Datetime*. A new ICD-10-CM code-based variable *Organ Dysfunction Renal* was added.
2. New data elements were added:
 - a. *Organ Dysfunction Cardiovascular*
 - b. *Organ Dysfunction Hematologic*
 - c. *Organ Dysfunction Hepatic*
 - d. *Organ Dysfunction Renal*
 - e. *Cardiovascular Outcomes at Discharge*
3. Variable value was updated for the following variables:
 - a. *Patient Care Considerations*
 - b. *Cardiovascular Outcomes in Hospital*
 - c. *History of Cardiovascular Disease*
 - d. *Lactate Level 1*
 - e. *Lactate Level 2*
 - f. *Lactate Level 3*
 - g. *Lactate Level Max*
 - h. *Patient Care Considerations*
 - i. *Payer*
4. Data element name and template variable name were updated for the following variables:
 - a. *Bilirubin Arrival*
 - b. *Bilirubin Max*
 - c. *Bilirubin Arrival Datetime*
 - d. *Bilirubin Max Datetime*
 - e. *Cardiovascular Outcomes in Hospital*
 - f. *Creatinine Arrival*
 - g. *Creatinine Max*

- h. *Creatinine Arrival Datetimes*
 - i. *Creatinine Max Datetimes*
5. Variable length was updated for the following variables:
- a. *aPTT 1*
 - b. *aPTT 2*
 - c. *aPTT 3*
 - d. *aPTT Max*
 - e. *Bilirubin Arrival*
 - f. *Bilirubin Max*
 - g. *Platelets 1*
 - h. *Platelets 2*
 - i. *Platelets 3*
 - j. *Platelets Min*
 - k. *SIRS Leukocyte Arrival*
 - l. *SIRS Leukocyte Min*
 - m. *SIRS Leukocyte Max*
6. Notes of abstraction were updated for the following variables
- a. *aPTT 1, 2, 3, MAX* and corresponding *Datetimes*
 - b. *Bilirubin Arrival and MAX* and corresponding *Datetimes*
 - c. *Cardiovascular Outcomes in Hospital*
 - d. *Creatinine Arrival, MAX* and corresponding *Datetimes*
 - e. *Diastolic First, Second, Third, MIN* and corresponding *Datetimes*
 - f. *INR 1, 2, 3, MAX* and corresponding *Datetimes*
 - g. *Lactate Level 1, 2, 3, MAX* and corresponding *Datetimes*
 - h. *Organ Dysfunction CNS*
 - i. *Organ Dysfunction Respiratory*
 - j. *Platelets 1, 2, 3, MIN* and corresponding *Datetimes*
 - k. *SIRS Heart Rate 1, 2, 3, Max* and corresponding *Datetimes*
 - l. *SIRS Leukocyte Arrival, MIN, MAX* and corresponding *Datetimes*
 - m. *SIRS Respiratory Rate 1, 2, 3, Max* and corresponding *Datetimes*
 - n. *SIRS Temperature 1, 2, 3, Max* and corresponding *Datetimes*
 - o. *Diastolic First, Second, Third, Min* and corresponding *Datetimes*
 - p. *Systolic First, Second, Third, Max* and corresponding *Datetimes*
7. Several appendices were added. Be sure to review Appendices D2.1.1 change log for the specific variables that were added. The following appendices were added:
- a. Appendix 4A: Cardiovascular Outcomes at Discharge ICD-10 CM Codes
 - b. Appendix 6A: Organ Dysfunction Cardiovascular ICD-10 CM Codes
 - c. Appendix 6C: Organ Dysfunction Hematologic ICD-10-CM Codes
 - d. Appendix 6D: Organ Dysfunction Hepatic ICD-10 CM Codes
 - e. Appendix 6E: Organ Dysfunction Renal ICD-10 CM Codes
8. The numbers of the following appendices were updated:
- a. Appendix 5A: Cardiovascular Outcomes in Hospital ICD-10-CM Codes
 - b. Appendix 5B: Pulmonary Embolism (PE) and/or Deep Venous Thrombosis (DVT)
 - i. Outcome ICD-10-CM Codes
 - c. Appendix 5C: Tracheostomy in Hospital ICD-10-PCS Codes
 - d. Appendix 6B: Organ Dysfunction CNS Severity ICD-10-CM Codes
 - e. Appendix 6F: Organ Dysfunction Respiratory Severity ICD-10-CM Codes

9. The following appendices were updated to include additional codes:
 - a. Appendix 1A: Acute Cardiovascular Comorbidity / Risk Factor (POA) ICD-10 CM Codes
 - b. Appendix 1N: History of Other Cardiovascular Comorbidity / Risk Factor (POA) ICD- 10-CM Codes
 - c. Appendix 4E: Cardiovascular Outcomes in Hospital ICD-10-CM Codes
10. The names of the following appendices were updated:
 - a. Appendix 1A: Acute Cardiovascular Conditions Comorbidity / Risk Factor (POA) ICD- 10 CM Codes
 - b. Appendix 1N: History of Other Cardiovascular Disease Comorbidity / Risk Factor (POA) ICD-10-CM Codes
 - c. Appendix 1W: Pregnancy Comorbidity / Risk Factor (POA) ICD-10 CM Codes
 - d. Appendix 4E: Cardiovascular Outcomes in Hospital ICD-10-CM Codes