Transfusion Recipient Database for the Recipient Epidemiology and Donor Evaluation Study-III (REDS-III)

Documentation for Public Use Data files

The objectives of the Recipient Epidemiology and Donor Evaluation Study-III (REDS-III) program are to ensure safe and effective blood banking and transfusion medicine practices through a comprehensive, multifaceted strategy involving basic, translational, and clinical research to improve the benefits of transfusion while reducing its risks. REDS-III was funded by the National Heart, Lung and Blood Institute of NIH.

To meet the objectives of REDS-III data were collected to produce three sets of core files. The donor/donation files contain information on attempted and successful donations of whole blood and blood products, as well as deferrals and the reasons for them. The component files contain information on processing of donated blood and blood products, such as separation of whole blood into red blood cells, platelets and plasma, as well as treatments, such as irradiation or leukocyte reduction. The transfusion recipient files contain information on both inpatient and outpatient transfusion recipients, such as type of product transfused, number of units transfused each day, and adverse outcomes for transfused patients. The three sets of files are being converted into three separate sets of public use files. One goal in REDS-III was to be able to link transfusion recipients to blood donations and blood processing records to permit studies of the effects of donor characteristics and component processing on transfusion outcomes. The ability to link the files has been preserved in the public use files. The remainder of this document is a discussion of the transfusion recipient files data and associated public use files.

Participants in the domestic component of the REDS-III program included:

- Four blood centers and 12 associated hospitals
    - Blood Center of Wisconsin
        - Froedtert Hospital, Milwaukee, WI
        - Marshfield Clinic
        - Saint Joseph's Ministry Hospital, Milwaukee, WI
        - Aurora Saint Luke's/Aurora Sinai Hospitals, Milwaukee, WI
    - Blood Centers of the Pacific
        - San Francisco General Hospital, San Francisco, CA
        - SF Veterans Administration Medical Center, San Francisco, CA
    - Institute for Transfusion Medicine
        - Presbyterian Hospital, Pittsburg, PA
        - Shadyside Hospital, Pittsburg, PA
        - St. Margaret's Hospital, Pittsburg, PA
    - American Red Cross Blood Services - New England Region
        - Yale-New Haven Hospital, New Haven, CN
        - Bridgeport Hospital, Bridgeport, CN
- A data coordinating center (DCC)
    - RTI International; and
- A central laboratory
    - Blood Systems Research Institute in San Francisco

The REDS program began in 1989 primarily in response to the HIV epidemic. The focus of REDS and its successor, REDS-II was on studies of blood donors and blood donation. With the advent of REDS-III, a strong focus on transfusion recipients was added to studies of blood donors and donations. The new focus has included studies of blood component utilization, the effect of transfusion strategies on clinical outcomes in transfusion recipients and adverse effects

of transfusion over and above transfusion-transmitted infections. One important goal of REDS-III was to develop a database in which transfusion recipients could be linked to blood donors to examine the effects of donor characteristics on transfusion outcome. To this end, the REDS-III team collected data from 120,290 transfusion recipients over 234,277 encounters, where an encounter can be either an episode of outpatient transfusion or a hospitalization during which transfusion was received. Some recipients contributed data from a single encounter while others contributed data from two or more encounters. Multiple encounters with the same recipient may have been entirely outpatient visits, entirely hospitalizations or a mix of the two. Data were also collected from the transfusion recipients during hospitalizations in which they were not transfused. Data collection from recipients began in January 2013 and continued through December 2016. Additional data were collected during 1,285,359 encounters with nontransfused patients to provide a comparison group. Four subgroups of patients were defined during design of the data collection system:

- TX (Transfused): all eligible patients (inpatients and outpatients) that received a transfusion during an encounter.
- TS (NonTransfused-Type and Screened ONLY): all eligible patients (inpatients and outpatients) that underwent an antibody ID (ABID) and/or a type and screen ONLY during the encounter but did not receive a crossmatch or a transfusion.
- TCM (NonTransfused-Type-and-CrossMatched): all eligible patients (inpatients and outpatients) that underwent a type-and -crossmatch during the encounter but did not receive a transfusion.
- NR (a Non-Recipient who is non-transfused, not TS, not TCM): all eligible inpatients that did not receive a transfusion, nor a type-and-screen, nor a type-and-crossmatch during the inpatient encounter and did not have an eligible limited outpatient encounter in which a TS or TCM occurred within 45 days prior to admission.

<u>The data collection process.</u>

Shortly after REDS-III began, a working group of REDS-III investigators, DCC staff and representatives from NHLBI was assembled to develop the specifications for the data to be collected from blood donors. The original version of the data dictionary included 21 tables. Four tables were dropped for a variety of reasons, such as inability to scrub PHI at some hospitals and inability to report the data at others. One table was added. The final dataset included the 18 tables listed below.

1. RC_BloodGas – Oxygen saturation, pH, CO_2 level, etc.
2. RC_ChestStudy – outcome of CT, X-ray and MRI
3. RC_CrossMatch – results of crossmatch, reported as compatible or incompatible
4. RC_Demographic – date of birth, sex, race, ethnicity
5. RC_DiagnosisCodes – ICD9 and ICD10 codes (both primary and secondary)
6. RC_Diagnostics – results from a variety of diagnostic tests, such as urinalysis, CBC, albumin, or INR,
7. RC_Encounters – encounter type (inpatient vs outpatient); for hospitalized patients, dates of admission and death or discharge with an indicator for outcome of the encounter, and length of ICU stay if placed in the ICU.
8. RC_Fluids – intake or output of fluids, such as IV blood products, blood loss and urine output.

9. RC_IssuedTXProducts – type of product issued for transfusion and patient location (emergency department, procedure suite, outpatient, etc.)
10. RC_Medications – type of medication, dose and route of administration
11. RC_MicrobialTests – type of specimen (blood, urine, etc.), type of culture (fungal, bacterial, other), results and identity of organisms if available
12. RC_PreLabs – type of test (hemoglobin, UNI, platelet count) and measurement.
13. RC_ProcedureCodes – ICD9 or ICD10
14. RC_RespiratorySupport – ICD9 or ICD10 code for type of support, flow rate, FiO_2.
15. RC_Transfers – direction of transfer; location from which or to which patient was transferred
16. RC_TxReactions – type of transfusion reaction (fever, edema, flush, hives, abdominal pain, etc).
17. RC_VentilatorDuration – length of time on ventilator support
18. RC_Vitals – vital signs (blood pressure, arterial pressure, pulse, respiration, temperature, etc.)

Tables 8, RC_Fluids, and 16, RC-TxReactions, are not included in the public use files because of problems with the reliability of the data at some sites. The other 16 tables are included in the public use files. Most of the tables included date and time, such as date and time or admission or discharge and date and time of blood draw. This is important information because some measurements or observations were recorded daily or repeatedly during a day in the hospital.

Data collection was more complete for transfused inpatients than for transfused outpatients or non-transfused inpatients. Data from NR patients was limited to blood gases if available, demographics, diagnosis codes, diagnostics, encounters, medications, pre-labs, procedure codes, respiratory support, transfers and vitals. A limited outpatient dataset (LOD) was defined to capture pre-admission testing of inpatients that occurred up to 45 days before an admission. The LOD included a subset of the variables from any outpatient visit where a type-and-screen, type-and-crossmatch and/or antibody ID testing occurred. The LOD included data from 7 tables: RC_CrossMatch, RC_Demographic, RC_DiagnosisCodes, RC_Diagnostics, RC_Encounters, RC_Medications, and RC_ProcedureCodes. In addition, data from outpatient transfusions will be missing for procedures that are not routinely used in the outpatient setting.

The specifications for the data to be extracted from blood center records were sent to programmers at the four hubs. The programmers then developed extraction programs to pull the required data from the data management systems at the hubs. Data from the first quarter of 2013 were extracted for submission to the DCC. The data were reviewed at the hospitals before submission as an initial check against the specifications for data extraction provided by the DCC. The files were transmitted to the DCC through a secure portal that the DCC provided for this purpose. Further validation took place at the DCC, such as checks for duplicate records, range checks and value checks to make sure the values matched those allowed in the data dictionary. A report of the results of the checks was produced and sent to each hub for review. The hub programmers made any necessary changes to the extraction programs and sent revised data tables to the DCC for inspection and validation. Once this process was complete, data from the second quarter of 2013 were extracted and submitted to the DCC. The data were compared against data from the first quarter to ensure consistent application of the extraction rules.

Subsequent data collection involved extracting data using the same extraction program; reviewing data at the hub; uploading the data through the secure portal; reviewing data at the

DCC as described above, with queries back to the hub if needed; and loading the approved data into the donor database. The process of comparing data from a given quarter against data from previous quarters to ensure consistency of extraction continued throughout the data collection period.

Some of the files contain the results of diagnostic tests and other laboratory procedures. Rather than a separate field for each test, the files include one record for each test that was performed, with test type, resulting value and unit listed in separate fields. Separate records are provided if the same test was performed two or more times on a subject. If some tests produce quantitative results and others produce qualitative results, then the two types of results are in separate fields. For some tests, the format of the unit of measure varied among sites, such as g/dl vs. g/dL or G/DL. The units themselves also varied among sites, such as height in inches vs cm or concentration in mmol vs grams. Many of these problems were eliminated during production of the public use files. However, the user is cautioned to review the data before proceeding with an analysis.

The public use files

Some recipient files contained information obtained once during an encounter while others contained information collected more than once, possibly daily, or even several times a day. A new record was generated each time data were collected, which means that the number of records per encounter varied quite widely recipients and files. Because of this variation in structure, the files were, for the most part, kept separate when the public use versions were produced. Only RC_Demographic and RC_Encounters were merged into a single file. The vital signs table is so large that it was split into two files, each with half the total observations.

Changes to the data

The process of anonymizing the files involved replacing some variables and deleting others, as described below. It also proved necessary to add some variables to preserve the longitudinal structure of the data.

The recipient data files included several identifiers: subjectID, hospitalcode, blood center, encounterID, donation identification number (DIN) and productkey. The first five were replaced with random numbers. The replacement variables are SubjectID_Random, HospitalCode_Random, CenterID_Random, EncounterID_Random, and DIN_Random respectively. To preserve the ability to link records and cluster encounters within subject, all occurrences of a given value for one of the identifiers were replaced with the same random number. To preserve the ability to link donation records to transfusion recipients, the random replacement for the DIN in the donor files was also used to replace the same DIN in the recipient files. Productkey contained both the DIN and the product code. The two components were separated into two variables. The DIN in the product key was replaced with DIN_PK_Random, which is included in REDS_III_RC_ISSUEDTXPRODUCTS_PUD.SAS7BDAT.

The user should be aware that the blood center that supplied a product to the hospital may not be the point of origin of that product. Some of the blood centers involved in REDS-III imported some blood products from other domestic blood centers. Imported products are identified in the imports table of the components database.

In the original files, all dates were stored as three separate fields - month, day, and year. Date of birth was replaced with integer age at the time of contact. For all other dates, day was deleted but month and year were retained in the files. Two variables were added to the files to preserve the longitudinal structure of the data. Days since the start of a given encounter was recorded as DaysSinceStartEncounter . This variable takes the value 0 on the day the encounter starts, 1 the next day and so on. DaysSinceStart1stEncounter represents days from the start of the first encounter for a recipient to the start of each subsequent encounter for the same recipient. All records in an encounter were assigned the same value. For example, if a second encounter started 14 days after the start of the first encounter and lasted 6 days with daily data collection, then DaysSinceStart1stEncounter took the value 14 for all records in the second encounter. Time since the start of the first encounter to any day within a second or subsequent encounter is the sum of DaysSinceStartEncounter and . DaysSinceStart1stEncounter. The duration of an encounter is recorded as DaysToEncounterEndDate

Many of the observations in the recipient database included the time as well as month, day and year. Examples include timing of blood draw, time of initiation of ventilator support and time of administration of a medication. In many cases, the same event occurred more than once on a given day. Time of day was preserved in the public use files to allow the user to properly order the events.

Storage duration prior to transfusion is an issue of potential interest in some analyses. Therefore, DaysDonationToIssue was added to REDS_III_RC_ISSUEDTXPRODUCTS_PUD.SAS7BDAT to represent days between donation and product issue for transfusion. This was calculated using date of donation from the REDS-III donation database and date of product issue form the issued products table of the recipient database.

In some cases, a transfusion involved pooled blood products, such as pooled platelets. A binary indicator, DINPooledLinkFlag, was added to the issued products table to identify these units. Further information on pooled products can be obtained from the components database.

Sixteen public use files were produced after these changes were implemented:

1. REDS_III_RC_BloodGas_PUD.SAS7BDAT – Oxygen saturation, pH, CO_2 level, etc.
2. REDS_III_RC_ChestStudy_PUD.SAS7BDAT – outcome of CT, X-ray and MRI
3. REDS_III_RC_CrossMatch_PUD.SAS7BDAT – results of crossmatch, reported as compatible or incompatible
4. REDS_III_RC_DiagnosisCodes_PUD.SAS7BDAT – ICD9 and ICD10 codes (both primary and secondary)
5. REDS_III_RC_Diagnostics_PUD.SAS7BDAT – results from a variety of diagnostic tests, such as urinalysis, CBC, albumin, or INR,
6. REDS_III_RC_Encounterdemographic.SAS7BDAT – encounter type (inpatient vs outpatient); for hospitalized patients, dates of admission and death or discharge with an indicator for outcome of the encounter, and length of ICU stay if placed in the ICU, etc. Also, – date of birth, sex, race, ethnicity, etc
7. REDS_III_RC_IssuedTXProducts_PUD.SAS7BDAT – type of product issued for transfusion and patient location (emergency department, procedure suite, outpatient, etc.)

8. REDS_III_RC_Medications_PUD.SAS7BDAT – type of medication, dose and route of administration
9. REDS_III_RC_MicrobialTests_PUD.SAS7BDAT – type of specimen (blood, urine, etc.), type of culture (fungal, bacterial, other), results and identity of organisms if available
10. REDS_III_RC_PreLabs_PUD.SAS7BDAT – type of test (hemoglobin, UNI, platelet count) and measurement.
11. REDS_III_RC_ProcedureCodes_PUD.SAS7BDAT – ICD9 or ICD10
12. REDS_III_RC_RespiratorySupport.SAS7BDAT – ICD9 or ICD10 code for type of support, flow rate, FiO_2.
13. REDS_III_RC_Transfers_PUD.SAS7BDAT – direction of transfer; location from which or to which patient was transferred
14. REDS_III_RC_VentilatorDuration.SAS7BDAT – length of time on ventilator support
15. RC_Vitals_PUD_1.SAS7BDAT and RC_Vitals_PUD_2.SAS7BDAT – vital signs (blood pressure, arterial pressure, pulse, respiration, temperature, etc.)

Further details on content are provided in the codebook and detailed data dictionary.

Merging the files

If two files contain one record per encounter, then they can be merged using SubjectID_Random and EncounterID_random. Additional information may be required if one or more files contain multiple records from the same encounter. In that case, the user should consider adding DaysSinceStartEncounter and time to the list of variables used to merge records.

The replacements for identifying variables were constructed to preserve the ability to link records in the recipient database to records in the donor/donation and components databases. Using the variables for this purpose is covered in another document.

Problems with the data

While extensive effort was made to collect complete data, some data are missing from the files. This does not include data missing by design; i.e. data on forms not used on some subgroups of subjects, as described earlier.

Users should also be aware that some fields contain small proportions of anomalous values. Examples include hemoglobin levels that are outside the range expected for blood donors and age at donation that is either too young for the donor to be eligible to donate or too old to be realistic. The problems are mainly the result of data entry errors at the participating hospitals or blood centers; i.e. the data were downloaded as is from the hospitals and blood center files. Users are strongly encouraged to run univariate statistics on all variable of interest to identify values that are likely erroneous before proceeding with data analysis.

APPENDIX

Specifications for the data collection tables for the REDS-III transfusion recipient database

Specifications for RC_BloodGas

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**		**Y**	**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**		**Y**		**Y**	**Y**
DateD		**Date of draw - Day**	Int	2	dd	**R**		**Y**	**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateM		**Date of draw - Month**	Int	2	mm	**R**		**Y**	**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateY		**Date of draw - Year**	Int	4	yyyy	**R**		**Y**	**Y**	**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
Time		**Time of draw**	Time	5	hh:mm	**R**		**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
SAO2	ABG: 75 - 100 VBG: 20 - 100	**Value - SAO2 / SvO2**	Int	3	%			**Y**	**Y**	**Y**	**Y**
pH	6.7 – 7.7	**Value - pH**	Single	3.2				**Y**	**Y**	**Y**	**Y**
PCO2	20-100	**Value - PCO2**	Int	3	mmHg			**Y**	**Y**	**Y**	**Y**

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
PO2	ABG: 40 - 500 VBG: 20 - 100	**Value - PO2 / PvO2**	Int	3	mmHg			**Y**	**Y**	**Y**	**Y**
HCO3	5-40	**Value - HCO3**	Int	2	mmol/L			**Y**	**Y**	**Y**	**Y**
ABE	-15 to 15	**Value - ABE**	Single	(+/-) 3.1	mmol/L			**Y**	**Y**	**Y**	**Y**
BGType		**Type of Blood Gas (Arterial/Venous)**	Int	2		**R**		**Y**	**Y**	**Y**	**Y**
	1	Arterial									
	2	Venous									
FlowRate	0.5 – 15.0	**FlowRate**	Single	3.1	L/min			**Y**	**Y**	**Y**	**Y**
FiO2	21 - 100	**Value - FiO2**	Int	3	%			**Y**	**Y**	**Y**	**Y**

Specifications for RC_ChestStudy

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**			**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**			**Y**	**Y**	**Y**
ChestStudyType		**Type of radiographic chest study**	Int	2		**R**			**Y**	**Y**	**Y**
	1	Chest X-Ray									
	2	Chest CT									
	3	Chest MRI									
Indication			Char	1500					**Y**	**Y**	**Y**
Interpretation		**Leave blank if PHI is present.**	Char	50000					**Y**	**Y**	**Y**
DateD		**Date radiographic chest study performed-Day**	Int	2	dd	**R**			**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateM		**Date radiographic chest study performed - Month**	Int	2	mm	**R**			**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateY		**Date radiographic chest study performed - Year**	Int	4	yyyy	**R**			**Y**	**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
Time		**Time radiographic chest study performed**	Time	5	hh:mm	**R**			**Y**	**Y**	**Y**

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									

Specifications for RC_CrossMatch

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**	**Y**			**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**	**Y**			**Y**	**Y**
ProductKey		**ID to uniquely identify Product crossmatched. (For ISBT and Codabar: DIN + Product Code)**	Char	21		**R**	**Y**			**Y**	**Y**
CMDateD		**Crossmatch Date - Day**	Int	2	dd	**R**	**Y**			**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
CMDateM		**Crossmatch Date - Month**	Int	2	mm	**R**	**Y**			**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
CMDateY		**Crossmatch Date - Year**	Int	4	yyyy	**R**	**Y**			**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
CMTime		**Crossmatch Time**	Time	5	hh:mm	**R**	**Y**			**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	-9	NOT COLLECTED at Hospital or Hub									
CMResult		**Results of crossmatch**	Int	2		**R**	**Y**			**Y**	**Y**
	1	Compatible									
	2	Incompatible									
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
CMType		**Type of crossmatch**	Int	2		**R**	**Y**			**Y**	**Y**
	1	Electronic									
	2	Immediate spin									
	3	Antihuman globulin (direct Coombs test (DCT))									
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									

Specifications for RC_Demographic

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
BirthDateD		**Birthdate of subject-Day**	Int	2	dd	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
BirthDateM		**Birthdate of subject-Month**	Int	2	mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
BirthDateY		**Birthdate of subject-Year**	Int	4	yyyy	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1900-2016										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
Gender		**Gender of subject**	Char	2		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	M	Male									
	F	Female									
	O	Other									
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	-9	NOT COLLECTED at Hospital or Hub									
Race		**Race of subject**	Char	2		R	Y	Y	Y	Y	Y
	H	Native Hawaiian or Other Pacific Islander									
	I	American Indian/Alaska Native									
	A	Asian									
	B	Black or African American									
	W	White									
	M	More than one race									
	-6	Other Notation (including "Hispanic")									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
Ethnicity		**Ethnicity of subject**	Char	2		R	Y	Y	Y	Y	Y
	Y	Hispanic or Latino									
	N	Not Hispanic or Latino									
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									

Specifications for RC_DiagnosisCodes

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
Code		**ICD9 or ICD10 code**	Char	8		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
CodeAttr		**ICD9 or ICD10 Indicator**	Int	2		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	9	ICD9 code reported									
	10	ICD10-CM code reported									
CodeType		**Type of Diagnosis Code**	Int	2		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1	Primary Code: primary diagnosis as defined by billing for the encounter									
	2	Secondary Code: all other diagnosis codes used for billing the encounter									
	3	CoMorbidity: any diagnosis documented for the patient at the time of the encounter, but not necessarily related to the encounter.									
	4	Unknown									
DateD		**Date of diagnosis - Day**	Int	2	dd	R	**Y**	**Y**	**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateM		**Date of diagnosis - Month**	Int	2	mm	R	**Y**	**Y**	**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateY		**Date of diagnosis- Year**	Int	4	yyyy	R	**Y**	**Y**	**Y**	**Y**	**Y**
	2012-2020										

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
Time		**Time of diagnosis**	Time	5	hh:mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									

Specifications for RC_Diagnostics

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
DiagnosticType		**Type of diagnostic lab test**	Int	2		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1	Patient ABO					**Y**	**Y**	**Y**	**Y**	**Y**
	2	Patient Rh					**Y**	**Y**	**Y**	**Y**	**Y**
	3	AbID-Screen					**Y**		**Y**	**Y**	**Y**
	4	AbID-RBC					**Y**		**Y**	**Y**	**Y**
	5	AbID-Eluate					**Y**		**Y**	**Y**	**Y**
	6	DATPolyspecific					**Y**		**Y**	**Y**	**Y**
	7	DATIGG					**Y**		**Y**	**Y**	**Y**
	8	DATComplement					**Y**		**Y**	**Y**	**Y**
	9	INR					**Y**	**Y**	**Y**	**Y**	**Y**
	10	aPTT							**Y**	**Y**	**Y**
	11	Hgb					**Y**	**Y**	**Y**	**Y**	**Y**
	12	Fibrinogen					**Y**	**Y**	**Y**	**Y**	**Y**
	13	White Blood Cells (WBC)					**Y**	**Y**	**Y**	**Y**	**Y**
	14	Platelet count					**Y**	**Y**	**Y**	**Y**	**Y**
	15	Creatinine					**Y**	**Y**	**Y**	**Y**	**Y**
	16	Total bilirubin					**Y**	**Y**	**Y**	**Y**	**Y**
	17	Direct bilirubin					**Y**	**Y**	**Y**	**Y**	**Y**
	18	Haptoglobin							**Y**	**Y**	**Y**
	19	LDH							**Y**	**Y**	**Y**

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	20	ALT							Y	Y	Y
	21	AST							Y	Y	Y
	22	Albumin					Y	Y	Y	Y	Y
	23	Lactate					Y	Y	Y	Y	Y
	24	BNP							Y	Y	Y
	25	pro-BNP							Y	Y	Y
	26	Sodium					Y	Y	Y	Y	Y
	27	Blood Urea Nitrogen (BUN)					Y	Y	Y	Y	Y
	28	Serum Glucose					Y	Y	Y	Y	Y
	29	Hematocrit					Y	Y	Y	Y	Y
	30	Troponin I					Y	Y	Y	Y	Y
	31	d-dimers							Y	Y	Y
	32	Urinalysis - Glucose							Y	Y	Y
	33	Urinalysis - Ketones							Y	Y	Y
	34	Urinalysis - Occult Blood							Y	Y	Y
	35	Urinalysis - Protein							Y	Y	Y
	36	Urinalysis - Nitrite							Y	Y	Y
	37	Urinalysis - Bilirubin							Y	Y	Y
	38	Urinalysis - Specific Gravity							Y	Y	Y
	39	Urinalysis - pH Urine							Y	Y	Y
	40	Urinalysis - Urobilinogen							Y	Y	Y
	41	Urinalysis - Urine Leukocyte Esterase							Y	Y	Y
	42	Urinalysis - Squamous Epithelial Cells							Y	Y	Y
	43	Urinalysis - Leukocyte							Y	Y	Y
	44	Urinalysis - Hyaline Casts							Y	Y	Y
	45	Urinalsyis - Erythrocytes							Y	Y	Y
	46	Urinalysis - Bacteria							Y	Y	Y
	47	Activated Protein C Resistance							Y	Y	Y

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	48	Factor V Leiden							Y	Y	Y
	49	Prothrombin Gene G20210A Mutation							Y	Y	Y
	50	Protein C Activity - amount							Y	Y	Y
	51	Protein C Activity - percent							Y	Y	Y
	52	Protein C Antigen - amount							Y	Y	Y
	53	Protein C Antigen - percent							Y	Y	Y
	54	Protein S Activity - amount							Y	Y	Y
	55	Protein S Activity - percent							Y	Y	Y
	56	Protein S Antigen (total) - amount							Y	Y	Y
	57	Protein S Antigen (total) - percent							Y	Y	Y
	58	Protein S Antigen (free) - amount							Y	Y	Y
	59	Protein S Antigen (free) - percent							Y	Y	Y
	60	Antithrombin III Activity - amount							Y	Y	Y
	61	Antithrombin III Activity - percent							Y	Y	Y
	62	Antithrombin III Antigen - amount							Y	Y	Y
	63	Antithrombin III Antigen - percent							Y	Y	Y
	64	Lupus Anticoagulant-DRVVT or DRVV (Quantitative)							Y	Y	Y
	65	Lupus Antigcoagulant-DRVVT Abnormal Flag (Qualitative)							Y	Y	Y
	66	Lupus Anticoagulant HPPN (Quantitative)							Y	Y	Y
	67	Lupus Anticoagulant HPPN Abnormal Flag (Qualitative)							Y	Y	Y
	68	Homocysteine							Y	Y	Y
	69	Thrombin Time							Y	Y	Y
	70	Cardiolipin antibodies - IgA							Y	Y	Y
	71	Cardiolipin antibodies - IgG							Y	Y	Y
	72	Cardiolipin antibodies - IgM							Y	Y	Y
	73	Beta 2 Microglobulin							Y	Y	Y

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	74	Anti-beta 2 glycoprotein - Total							**Y**	**Y**	**Y**
	75	Anti-beta 2 glycoprotein - IgA							**Y**	**Y**	**Y**
	76	Anti-beta 2 glycoprotein - IgG							**Y**	**Y**	**Y**
	77	Anti-beta 2 glycoprotein - IgM							**Y**	**Y**	**Y**
	78	Troponin T					**Y**	**Y**	**Y**	**Y**	**Y**
ResultedDateD		**Date Resulted (Validated, Entered) - Day**	Int	2	dd	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
ResultedDateM		**Date Resulted (Validated, Entered) - Month**	Int	2	mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
ResultedDateY		**Date Resulted (Validated, Entered) - Year**	Int	4	yyyy	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
ResultedTime		**Time Resulted (Validated, Entered)**	Time	5	hh:mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	-9	NOT COLLECTED at Hospital or Hub									
DrawDateD		**Date of Draw (Collection) - Day**	Int	2	dd	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DrawDateM		**Date of Draw (Collection) - Month**	Int	2	mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DrawDateY		**Date of Draw (Collection) - Year**	Int	4	yyyy	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DrawTime		**Time of Draw (Collection)**	Time	5	hh:mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
LabValue		**Quantitative value of lab test results**	Double	9.3			**Y**	**Y**	**Y**	**Y**	**Y**
LabUnit		**Unit of measure**	Char	9			**Y**	**Y**	**Y**	**Y**	**Y**

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	sec										
	g/dL										
	mg/dL										
	K/uL										
	U/L										
	mmol/L										
	pg/mL										
	Meq/L										
	/HPF										
	mg/L FEU										
	ug/mL DDU										
	pg/dL										
	umol/L										
	mg/L										
	IU/dL										
	U/dL										
	APL										
	GPL										
	MPL										
	%										
	U/mL										
	SAU										
	SGU										
	SGM										
	GPI IgA										
	GPI IgG										
	GPI IgM										
LabResults		**Qualitative value of lab test results (Record if applicable)**	Char	12	-	-	**Y**	**Y**	**Y**	**Y**	**Y**
	NORMAL										
	HETEROZYGOUS										
	HOMOZYGOUS										

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	NEG										
	POS										
	TRACE										
	NON-SPECIFIC										
	1+										
	2+										
	3+										
	4+										
	O										
	A										
	B										
	AB										
	UNT										
	antibody name from attached table of antibodies								**Y**	**Y**	**Y**
	-6	Other Notation							-	-	-

Specifications for RC_Encounters

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
PopCat		**Population category**	Char	3		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	TX	Transfused									
	TS	Not Transfused: Type and Screen ONLY									
	TCM	Not Transfused: Type and Crossmatch									
	NR	Non-Recipient (not transfused, not type and screened, and not type and crossmatched)									
EncounterType		**Inpatient / outpatient (Includes under observation, extended recovery, outpatient in a bed, etc)**	Char	2		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	I	Inpatient									
	O	Outpatient									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
HospitalCode		**Hospital identifier (01-12) where encounter occurred**	Int	2		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1	Froedtert Hospital									
	2	Marshfield Clinic/ Saint Joseph's Hospital									
	3	Aurora Saint Luke's Hospital									
	4	Aurora Sinai Hospitals									
	5	UCSF Medical Center									
	6	San Francisco General Hospital									
	7	San Francisco Veterans Administration									
	8	University of Pittsburgh Medical Center Presbyterian									
	9	University of Pittsburg Medical Center Shadyside									
	10	University of Pittsburg Medical Center St. Margaret's									
	11	Bridgeport Hospital									
	12	Yale-New Haven Hospital									
Age		**Calculated: Age at Admission**	Int	3			**Y**	**Y**	**Y**	**Y**	**Y**
AdmissionDateD		**Admission Date - Day**	Int	2	dd	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
AdmissionDateM		**Admission Date - Month**	Int	2	mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
AdmissionDateY		**Admission Date - Year**	Int	4	yyyy	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
AdmissionTime		**Admission Time**	Time	5	hh:mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DischargeDateD		**Discharge Date - Day**	Int	2	dd	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DischargeDateM		**Discharge Date - Month**	Int	2	mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DischargeDateY		**Discharge Date - Year**	Int	4	yyyy	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	-9	NOT COLLECTED at Hospital or Hub									
DischargeTime		**Discharge Time**	Time	5	hh:mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
VentilatorNeeded		**Derived: Invasive mechanical ventilation (y/n)**	Char	2			**Y**	**Y**	**Y**	**Y**	**Y**
	Y	Yes									
	N	No									
VentilatorDays		**Calculated: days of mechanical ventilation support**	Single	4.1	days				**Y**	**Y**	**Y**
VentilatorFreeDays		**Calculated: 28 - days of mechanical ventilation support**	Single	4.1	days				**Y**	**Y**	**Y**
ICU_LOS		**Calculated: Total amount of time the patient was in the ICU during the encounter (days).**	Single	4.1	days			**Y**	**Y**	**Y**	**Y**
ICUFreeDays		**Calculated: 28 days - ICU LOS**	Single	4.1	days			**Y**	**Y**	**Y**	**Y**
Mortality		**Hospital mortality at discharge**	Int	2		**R**		**Y**	**Y**	**Y**	**Y**
	1	Alive									
	2	Death									
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DeathDateD		**Death Date - Day**	Int	2	dd			**Y**	**Y**	**Y**	**Y**

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	1-31										
DeathDateM		**Death Date - Month**	Int	2	mm			**Y**	**Y**	**Y**	**Y**
	1-12										
DeathDateY		**Death Date - Year**	Int	4	yyyy			**Y**	**Y**	**Y**	**Y**
	2012-2020										

Specifications for RC_Fluids

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**			**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**			**Y**	**Y**	**Y**
FluidType		**Defines type of fluid measurement**	Int	2		**R**			**Y**	**Y**	**Y**
	1	Intake - Enteral									
	2	Intake - Intravenous: Crystalloids									
	3	Intake - Intravenous: Colloids									
	4	Intake - Intravenous: Blood products									
	5	Intake - Intravenous: Nutritional products									
	6	Intake - Intravenous: All medication infusions									
	7	Intake - Other									
	8	Intake - OR Total Fluid Intake									
	9	Output - Blood									
	10	Output - Urine									
	11	Output - Renal replacement therapy									
	12	Output - Other									
	13	Output - OR Total Fluid Out									
Value		**Value - intake/output volume**	Int	5	mL	**R**			**Y**	**Y**	**Y**
	0-10000										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateD		**Date of fluid measurement - Day**	Int	2	dd	**R**			**Y**	**Y**	**Y**

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateM		**Date of fluid measurement - Month**	Int	2	mm	**R**			**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateY		**Date of fluid measurement - Year**	Int	4	yyyy	**R**			**Y**	**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
Time		**Time of fluid measurement.**	Time	5	hh:mm				**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
Shift		**Shift description**	Int	2					**Y**	**Y**	**Y**
	1	7:01-15:00 (7:01am - 3:00pm)									
	2	15:01-23:00 (3:01pm - 11:00pm)									
	3	23:01-7:00 (11:01pm - 7:00am)									
	4	8:01-16:00 (8:01am - 4:00pm)									
	5	16:01-24:00 (4:01pm - 12:00pm)									
	6	00:01-8:00 (12:01pm - 8:00am)									
	7	7:01 - 19:00 (7:01am - 7:00pm)									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	8	19:01 - 7:00 (7:01pm - 7:00am)									

Specifications for RC_IssuedTXProducts

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**					**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**					**Y**
ProductKey		**ID to uniquely identify each Product in table. (For ISBT and Codabar: DIN + Product Code)**	Char	21		**R**					**Y**
IssueDateD		**Date product issued to patient - Day**	Int	2	dd	**R**					**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
IssueDateM		**Date product issued to patient - Month**	Int	2	mm	**R**					**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
IssueDateY		**Date product issued to patient - Year**	Int	4	yyyy	**R**					**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
IssueTime		**Time product issued to patient**	Time	5	hh:mm	**R**					**Y**

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
IssueLoc		**Location that patient will receive product, since the blood will usually be dispensed to the location where the patient is to receive product.**	Int	2		**R**					**Y**
	10	ED (Emergency Department)									
	20	General Ward(Medical / Surgical Floors)									
	30	Procedure Suite (Invasive Radiology, GI lab, Invasive Cardiology)									
	40	ICU (Intensive Care Unit)									
	50	OR (Operating Room)									
	60	Outpatient									
	70	Other									
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									

Specifications for RC_Medications

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
MedCode		**Record coded value if med is one of the primary meds of interest (see attached table of medication codes)**	Int	5		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
MedName		**Record all medications that were administered after hospital admission, during an outpatient encounter including when patient is under observation, and prior to and up to admission.**	Char	500		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
MedAdminType		**Medication Administration Type (Home/Administered)**	Char	1		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	H	Home (Medication that was administered prior to and up to hospital admission.)									
	A	Administered (Meds administed during health care encounter. Includes inpatient, outpatient, and other types such as under observation, extended recovery, etc.)									
MedAdminDateD		**Date of medication administration - Day**	Int	2	dd	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-31										
	-3	Not Applicable									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
MedAdminDateM		**Date of medication administration - Month**	Int	2	mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-12										
	-3	Not Applicable									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
MedAdminDateY		**Date of medication administration - Year**	Int	4	yyyy	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	2012-2020										
	-3	Not Applicable									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
MedAdminTime		**Time of medication administration**	Time	5	hh:mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	-3	Not Applicable									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
MedStopDateD		**Stop Date of medication administration - Day**	Int	2	dd	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-31										
	-3	Not Applicable									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
MedStopDateM		**Stop Date of medication administration - Month**	Int	2	mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-12										
	-3	Not Applicable									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
MedStopDateY		**Stop Date of medication administration - Year**	Int	4	yyyy	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	2012-2020										
	-3	Not Applicable									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
MedStopTime		**Stop Time of medication administration**	Time	5	hh:mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	-3	Not Applicable									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
MedRoute		**Route of medication administration**	Int	2		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1	Intramuscular									
	2	Inhalation									
	3	Ophthalamic									
	4	Intravenous									
	5	Oral									
	6	Subcutaneous									
	7	Topical									
	8	Nasogastric/G-tube/PEG tube									
	9	Nasojejunal/J-tube/PEJ tube									
	10	Epidural									
	11	Intrathecal									
	12	Nasal									
	13	Rectal									
	14	Sublingual									
	15	Transdermal									
	16	Mucous membranes									
	17	Catheter lock									
	98	Other									
	99	Unknown									
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
MedDose		**Amount of medication administration**	Double	**15,2**		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	-9	NOT COLLECTED at Hospital or Hub									
MedUnit		**Dose of medication administration**	Int	2		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1	Milliliter									
	2	Drop									
	3	Gram									
	4	Inch									
	5	International Units									
	6	Microgram									
	7	Milliequivalent									
	8	Milligram									
	9	Milligram per milliliter									
	10	Milligram per minute									
	11	Milligram per hour									
	12	Microgram per minute									
	13	Microgram per hour									
	14	Milligram per kilogram per minute									
	15	Microgram per kilogram per minute									
	16	Microgram per kilogram per hour									
	17	Milligram per kilogram per hour									
	18	Millimole per day									
	19	Grams per day									
	20	Milliequivalents per hour									
	21	Units per minute									
	22	Units per hour									
	23	Puff or spray									
	24	Unit									
	25	Tab									
	26	Application									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	27	Patch									
	98	Other									
	99	Unknown									
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
MedFormulation		**Formulation of medication**	Int	2		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1	Capsule/Tab/Pill									
	2	Spray/Aerosol									
	3	Cream/Lotion/Ointment/Other Topical									
	4	Enema									
	5	Injection									
	6	Extended release									
	7	Liquid									
	8	Paste									
	9	Patch									
	10	Powder									
	11	Solution									
	12	Suppository									
	13	Suspension									
	14	Syrup									
	15	Elixir									
	16	Emulsion									
	98	Other									
	99	Unknown									
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									

Specifications for RC_MicrobialTests

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**			**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**			**Y**	**Y**	**Y**
CollectionDateD		**Date of sample collection - Day**	Int	2	dd	**R**			**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
CollectionDateM		**Date of sample collection - Month**	Int	2	mm	**R**			**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
CollectionDateY		**Date of sample collection - Year**	Int	4	yyyy	**R**			**Y**	**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
CollectionTime		**Time of sample collection**	Time	5	hh:mm	**R**			**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
CultureType		**Culture Type (bacterial, fungal)**	Char	2		**R**			**Y**	**Y**	**Y**
	B	Bacterial									
	F	Fungal									
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	-9	NOT COLLECTED at Hospital or Hub									
CultureSource		**Specimen source**	Int	2		**R**			**Y**	**Y**	**Y**
	1	Blood									
	2	Urine									
	3	Wound									
	4	CSF (cerebrospinal fluid)									
	5	Sputum									
	6	Bronchoalveolar lavage									
	7	Sinus									
	8	Tissue/biopsy									
	9	Stool									
	10	Other									
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
CultureResults		**Culture Results**	Int	2		**R**			**Y**	**Y**	**Y**
	1	Growth									
	2	No Growth									
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
Organism1		**Record up to six organisms; see attached table of organism codes**	Int	3					**Y**	**Y**	**Y**
Organism2			Int	3					**Y**	**Y**	**Y**
Organism3			Int	3					**Y**	**Y**	**Y**
Organism4			Int	3					**Y**	**Y**	**Y**

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
Organism5			Int	3					**Y**	**Y**	**Y**
Organism6			Int	3					**Y**	**Y**	**Y**

Specifications for RC_PreLabs

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**		**Y**	**Y**	**Y**	**Y**
DiagnosticType		**Type of diagnostic lab test**	Int	2		**R**		**Y**	**Y**	**Y**	**Y**
	9	INR						**Y**	**Y**	**Y**	**Y**
	11	Hgb						**Y**	**Y**	**Y**	**Y**
	14	Platelet count						**Y**	**Y**	**Y**	**Y**
DrawDateD		**Date of Draw (Collection) - Day**	Int	2	dd	**R**		**Y**	**Y**	**Y**	**Y**
	1-31										
DrawDateM		**Date of Draw (Collection) - Month**	Int	2	mm	**R**		**Y**	**Y**	**Y**	**Y**
	1-12										
DrawDateY		**Date of Draw (Collection) - Year**	Int	4	yyyy	**R**		**Y**	**Y**	**Y**	**Y**
	2012-2020										
DrawTime		**Time of Draw (Collection)**	Time	5	hh:mm	**R**		**Y**	**Y**	**Y**	**Y**
LabValue		**Quantitative value of lab test results**	Double	9.3		**R**		**Y**	**Y**	**Y**	**Y**
LabUnit		**Unit of measure**	Char	9				**Y**	**Y**	**Y**	**Y**
	sec										
	g/dL										
	mg/dL										
	K/uL										
	U/L										
	mmol/L										
	pg/mL										
	Meq/L										
	/HPF										
	mg/L FEU										
	ug/mL DDU										

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	pg/dL										
	umol/L										
	mg/L										
	IU/dL										
	U/dL										
	APL										
	GPL										
	MPL										
	%										

Specifications for RC_ProcedureCodes

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
Code		**Procedure Code assigned during the encounter**	Char	7		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
CodeAttr		**ICD9 or CPT indicator**	int	1		**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1	ICD9 procedure code									
	2	CPT procedure code									
	3	ICD10-PCS procedure code									
DateD		**Date of procedure - Day**	Int	2	dd	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateM		**Date of procedure - Month**	Int	2	mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateY		**Date of procedure - Year**	Int	4	yyyy	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
Time		**Time of procedure**	Time	5	hh:mm	**R**	**Y**	**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									

Specifications for RC_RespiratorySupport

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**		**Y**	**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**		**Y**	**Y**	**Y**	**Y**
DateD		**Date of reading- Day**	Int	2	dd	**R**		**Y**	**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateM		**Date of reading - Month**	Int	2	mm	**R**		**Y**	**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateY		**Date of reading - Year**	Int	4	yyyy	**R**		**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
	2012-2020										
Time		**Time of reading**	Time	5	hh:mm	**R**		**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
Device		**Oxygen support device**	Int	2		**R**		**Y**	**Y**	**Y**	**Y**
	1	Nasal cannula or catheter									
	2	Oxygen Mask (e.g. simple face mask/ closed face mask)									
	3	Mask with reservoir bag (e.g Non-rebreather face mask)									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	4	Double Flow, Downs' Flow, and Optiflow									
	5	CPAP									
	6	BiPAP									
	7	Invasive mechanical									
	8	Room air									
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
FlowRate	0.5 – 15.0	**Flow Rate**	Single	4.1	L/min	**R**		**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
FiO2	21-100	**FiO2 value**	Single	4.1	%	**R**		**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									

Specifications for RC_Transfers

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**		**Y**	**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**		**Y**	**Y**	**Y**	**Y**
TransferFrom		**Location from which transfer occurred.**	Int	3		**R**		**Y**	**Y**	**Y**	**Y**
	10	ED(Emergency Department)									
	20	General Ward(Medical / Surgical Floors)									
	30	Procedure Suite(Invasive Radiology, GI lab, Invasive Cardiology)									
	40	ICU (Intensive Care Unit)									
	50	OR(Operating Room)									
	60	Outpatient(Outpatient)									
	70	Recovery Room									
	80	Home									
	90	Nursing Home									
	100	Another Hospital									
	110	Long Term Assisted Care (LTAC)									
	120	Hospice									
	130	Rehab									
	190	Unknown									
	200	Other (not one of the defined locations)									
TransferTo		**Location to which tranfer occurred.**	Int	3		**R**		**Y**	**Y**	**Y**	**Y**
	10	ED (Emergency Department)									
	20	General Ward (Medical / Surgical Floors)									
	30	Procedure Suite (Invasive Radiology, GI lab, Invasive Cardiology)									
	40	ICU (Intensive Care Unit)									
	50	OR (Operating Room)									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	60	Outpatient									
	70	Recovery Room									
	80	Home									
	90	Nursing Home									
	100	Another Hospital									
	110	Long Term Assisted Care (LTAC)									
	120	Hospice									
	130	Rehab									
	190	Unknown									
	200	Other (not one of the defined locations)									
DateD		**Date of transfer - Day**	Int	2	dd	**R**		**Y**	**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateM		**Date of transfer - Month**	Int	2	mm	**R**		**Y**	**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateY		**Date of transfer - Year**	Int	4	yyyy	**R**		**Y**	**Y**	**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
Time		**Time of transfer**	Time	5	hh:mm	**R**		**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									

Specifications for RC_TxReactions

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
HospCode		**REDS Hospital Code**	Int	2		**R**					**Y**
	1	Froedtert Hospital									
	2	Marshfield Clinic/ Saint Joseph's Hospital									
	3	Aurora Saint Luke's Hospital									
	4	Aurora Sinai Hospitals									
	5	UCSF Medical Center									
	6	San Francisco General Hospital									
	7	San Francisco Veterans Administration									
	8	University of Pittsburgh Medical Center Presbyterian									
	9	University of Pittsburg Medical Center Shadyside									
	10	University of Pittsburg Medical Center St. Margaret's									
	11	Bridgeport Hospital									
	12	Yale-New Haven Hospital									
OrgID		**Facility ID #**	Int	5		**R (AABB, BCW only)**					**Y**
hemoAdvRxnID		**NHSN Adverse Reaction #**	Int	5		**R (AABB, BCW only)**					**Y**
Gender		**Gender of subject**	Char	1		**R**					**Y**
	M	Male									
	F	Female									
	O	Other									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
DOB		**Birthdate of subject**	Date	10	mm/dd/yyyy	**R**					**Y**
	01-12	Month									
	01-31	Day									
	1900-2012	Year									
xfusReason		**Primary Reason for Transfusion**	Char	9		**R**					**Y**
	COAG	Coagulopathy									
	GENDISORD	Genetic Disorder									
	HEMDISORD	Hematology Disorder									
	HEMOLYSIS	Hemolysis									
	INTBLEED	Internal Bleeding									
	MALIG	Malignancy									
	MEDICAL	Medical									
	SURGERY	Surgery									
	UNKNOWN	Unknown									
	OTHER	Other reason for transfusion									
xfusReasonSfy		**Primary Reason for Transfusion - Specify Other**	Char	100							**Y**
AdvRxnDate		**Date of reaction**	Date	10	mm/dd/yyyy	**R**					**Y**
	01-12	Date of reaction - Month									
	01-31	Date of reaction - Day									
	2012-2020	Date of reaction - Year									
AdvRxnTime		**Time of reaction**	Time	5		**R**					**Y**
Advrxntimeunk	Y/N	**Time of reaction - Unknown**	Char	1							**Y**
ss_blprlow	Y/N	**Blood pressure decrease**	Char	1							**Y**
ss_shock	Y/N	**Shock**	Char	1							**Y**
ss_coag	Y/N	**Disseminated intravascular coagulation**	Char	1							**Y**

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
ss_hemoglob	Y/N	Hemoglobinemia	Char	1							Y
ss_screen	Y/N	Positive antibody screen	Char	1							Y
ss_chills	Y/N	Chills/rigor	Char	1							Y
ss_fever	Y/N	Fever	Char	1							Y
ss_edema	Y/N	Edema	Char	1							Y
ss_flush	Y/N	Flushing	Char	1							Y
ss_jaundc	Y/N	Jaundice	Char	1							Y
ss_othrashh	Y/N	Other rash	Char	1							Y
ss_itch	Y/N	Pruritis (itching)	Char	1							Y
ss_hives	Y/N	Urticaria (hives)	Char	1							Y
ss_hematuri	Y/N	Hematuria	Char	1							Y
ss_hemognur	Y/N	Hemoglobinuria	Char	1							Y
ss_oliguria	Y/N	Oliguria	Char	1							Y
ss_abdpain	Y/N	Abdominal pain	Char	1							Y
ss_backpain	Y/N	Back pain	Char	1							Y
ss_flnkpain	Y/N	Flank pain	Char	1							Y
ss_sitepain	Y/N	Infusion site pain	Char	1							Y
ss_infiltr	Y/N	Bilateral infiltrates on chest x-ray	Char	1							Y
ss_broncspas	Y/N	Bronchospasm	Char	1							Y
ss_cough	Y/N	Cough	Char	1							Y
ss_hypox	Y/N	Hypoxemia	Char	1							Y
ss_shortBr	Y/N	Shortness of breath	Char	1							Y
ss_othern	Y/N	Other signs/symptoms	Char	1							Y
otherSignSfy		Other signs/symptoms, specify	Char	100							Y
advRxn		Adverse Reaction	Char	6		R					Y

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	ALLERG	Allergic reaction, including anaphylaxis									
	AHTR	Acute hemolytic transfusion reaction (AHTR)									
	DHTR	Delayed hemolytic transfusion reaction (DHTR)									
	DSTR	Delayed serologic transfusion reaction (DSTR)									
	FNHTR	Febrile non-hemolytic transfusion reaction(FNHTR)									
	HTR	Hypotensive transfusion reaction									
	INF	Infection									
	PTP	Post tranfusion purpura									
	TACO	Transfusion associated circulatory overload (TACO)									
	TAD	Transfusion associated dyspnea (TAD0									
	TA-GVND	Transfusion aossociated graft vs. host disease (TA_GVHD)									
	TRALI	Transfusion related acute lung injury (TRALI) antibody studies									
	UNK	Unknown pathophysiology									
	OTHER	Other Adverse Reaction									
OtherAdvRxn		**Other Adverse Reaction, specify**	Char	100							**Y**
ImAHTR	Y/N	**AHTR Immune**	Char	1							**Y**
ImmuneABAHTR		**AHTR Antibody**	Char	12							**Y**
NonimAHTR	Y/N	**AHTR Non-Immune**	Char	1							**Y**
NonimAHTRSfy		**AHTR Non-Immune, Specify**	Char	50							**Y**
ImDHTR	Y/N	**DHTR Immune**	Char	1							**Y**
ImmuneABDHTR		**DHTR Antibody**	Char	12							**Y**

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
NonimDHTR	Y/N	**DHTR Non-Immune**	Char	1							**Y**
NonimDHTRSfy		**DHTR Non-Immune, Specify**	Char	50							**Y**
ImmuneABDSTR		**DSTR Antibody**	Char	12							**Y**
rcpntTestPerform	Y/N	**Infection:Test to detect specific pathogen on recipient post-Tx**	Char	1							**Y**
rcpntTestPositive	Y/N	**Infection:Recipient - Positive/Negative results**	Char	1							**Y**
rcpntPathDesc1		**Infection:Recipient Org1**	Char	7							**Y**
rcpntPathDesc2		**Infection:Recipient Org2**	Char	7							**Y**
rcpntPathDesc3		**Infection:Recipient Org3**	Char	7							**Y**
donorTestPerform	Y/N	**Infection:Test to detect specific pathogen on donor post-Tx**	Char	1							**Y**
donorTestPositive	Y/N	**Infection:Donor - Positive/Negative results**	Char	1							**Y**
donorPathDesc1		**Infection:Donor Org1**	Char	7							**Y**
donorPathDesc2		**Infection:Donor Org2**	Char	7							**Y**
donorPathDesc3		**Infection:Donor Org3**	Char	7							**Y**
unitTestPerform	Y/N	**Infection:Test to detect specific pathogen on unit post-Tx**	Char	1							**Y**
unitTestPositive	Y/N	**Infection:Unit - Positive/Negative results**	Char	1							**Y**
unitPathDesc1		**Infection:Unit Org1**	Char	7							**Y**
unitPathDesc2		**Infection:Unit Org2**	Char	7							**Y**
unitPathDesc3		**Infection:Unit Org3**	Char	7							**Y**
nonIrradBlood	Y/N	**TA-GVND: Pt receive non-irradiated celluar product x 2mon preceding**	Char	1							**Y**
unitHLA		**TRALI: Donor or unit HLA specificity**	Char	9							**Y**
	NOTEST	Not Done									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	NEG	Negative									
	POSANTI	Test postive - Cognate or cross reacting antigen present									
	POSNOANTI	Test postive -No cognate or cross reacting antigen present									
	POSNOTEST	Test positive -Not tested for cognate antigen									
unitHNA		**TRALI: Donor or unit HNA specificity**	Char	9							**Y**
	NOTEST	Not Done									
	NEG	Negative									
	POSANTI	Test postive - Cognate or cross reacting antigen present									
	POSNOANTI	Test postive -No cognate or cross reacting antigen present									
	POSNOTEST	Test positive -Not tested for cognate antigen									
rcpntHLA		**TRALI: Recipient HLA specificity**	Char	9							**Y**
	NOTEST	Not Done									
	NEG	Negative									
	POSANTI	Test postive - Cognate or cross reacting antigen present									
	POSNOANTI	Test postive -No cognate or cross reacting antigen present									
	POSNOTEST	Test positive -Not tested for cognate antigen									
rcpntHNA		**TRALI: Recipient HNA specificity**	Char	9							**Y**
	NOTEST	Not Done									
	NEG	Negative									
	POSANTI	Test postive - Cognate or cross reacting antigen present									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	POSNOANTI	Test postive -No cognate or cross reacting antigen present									
	POSNOTEST	Test positive -Not tested for cognate antigen									
protoCrit		**Case definition criteria**	Char	3		**R**					**Y**
	DEF	Definitive									
	PRO	Probable									
	POS	Possible									
	NA	N/A									
protoGrade		**Severity**	Char	2		**R**					**Y**
	NS	Non-severe									
	S	Severe									
	LT	Life-threatening									
	D	Death									
	ND	Not determined									
protoRelation		**Imputability**	Char	3		**R**					**Y**
	DEF	Definite									
	PRO	Probable									
	POS	Possible									
	DOU	Doubtful									
	RO	Ruled out									
	ND	Not determined									
advRxnOutcome		**Outcome**	Char	5		**R**					**Y**
	DEATH	Death									
	SEZ	Major or long-term sequelae									
	NOSEQ	Minor or no sequelae									
	ND	Not determined									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
deathdate		**Death of death**	Date	10	mm/dd/yyyy						**Y**
	01-12	Date of death -Month									
	01-31	Date of death-Day									
	2012-2020	Date of Death-Year									
xfusRelation		**Reationship to death**	Char	3							**Y**
	DEF	Definite									
	PRO	Probable									
	POS	Possible									
	DOU	Doubtful									
	RO	Ruled out									
	ND	Not determined									
unitImplicated		**Unit Implicated in adverse reaction**	Char	2		**R**					**Y**
	Y	Yes									
	N	No									
	NA	N/A									
numUnits		**Total number of units transfused**	Int	5		**R**					**Y**
compCode		**Product Code**	Char	5	Webform will allow 8-char Product Code.	**R**					**Y**
hemoCode		**Check system used**	Char	7		**R**					**Y**
	ISBT128	ISBT-128									
	CODABAR	Codabar									
unitNumber		**Donation Identification Number (DIN) / Blood Unit Number**	Char	16		**R**					**Y**
generalComment		**General Comment**	Char	3000							**Y**

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**EncounterID from Recipient database**	Int	10							**Y**
SubjectID		**SubjectID from Recipient database**	Int	13							**Y**
rcpntPathDesc1OtherSpecified		**Other organism entered (Y/N)**	Char	1							**Y**
rcpntPathDesc2OtherSpecified		**Other organism entered (Y/N)**	Char	1							**Y**
rcpntPathDesc3OtherSpecified		**Other organism entered (Y/N)**	Char	1							**Y**
donorPathDesc1OtherSpecified		**Other organism entered (Y/N)**	Char	1							**Y**
donorPathDesc2OtherSpecified		**Other organism entered (Y/N)**	Char	1							**Y**
donorPathDesc3OtherSpecified		**Other organism entered (Y/N)**	Char	1							**Y**
unitPathDesc1OtherSpecified		**Other organism entered (Y/N)**	Char	1							**Y**
unitPathDesc2OtherSpecified		**Other organism entered (Y/N)**	Char	1							**Y**
unitPathDesc3OtherSpecified		**Other organism entered (Y/N)**	Char	1							**Y**

Specifications for RC_VentilatorDuration

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**			**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**			**Y**	**Y**	**Y**
StartDateD		**Date ventilator started - Day**	Int	2	dd	**R**			**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
StartDateM		**Date ventilator started - Month**	Int	2	mm	**R**			**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
StartDateY		**Date ventilator started - Year**	Int	4	yyyy	**R**			**Y**	**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
StartTime		**Time ventilator started**	Time	5	hh:mm	**R**			**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
StopDateD		**Date ventilator stopped - Day**	Int	2	dd	**R**			**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
StopDateM		**Date ventilator stopped - Month**	Int	2	mm	**R**			**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
StopDateY		**Date ventilator stopped - Year**	Int	4	yyyy	**R**			**Y**	**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
StopTime		**Time ventilator stopped**	Time	5	hh:mm	**R**			**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
Duration		**Duration of ventilator support (days). Calculated from date/time ventilator started and stopped.**	Single	4.1	days				**Y**	**Y**	**Y**

Specifications for RC_Vitals

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
EncounterID		**ID for Encounter. Will appear on all records in all tables for a specific encounter.**	**Int**	**10**		**R**		**Y**	**Y**	**Y**	**Y**
SubjectID		**SubjectID will uniquely identify subject and will appear on all records in all tables.**	**Int**	**13**		**R**		**Y**	**Y**	**Y**	**Y**
VitalSignType		**Defines type of Vital sign.**	Int	2		**R**		**Y**	**Y**	**Y**	**Y**
	1	Height							**Y**	**Y**	**Y**
	2	Weight							**Y**	**Y**	**Y**
	3	Blood Pressure - Systolic						**Y**	**Y**	**Y**	**Y**
	4	Blood Pressure - Diastolic						**Y**	**Y**	**Y**	**Y**
	5	Mean Arterial Pressure							**Y**	**Y**	**Y**
	6	Pulse						**Y**	**Y**	**Y**	**Y**
	7	Respiration						**Y**	**Y**	**Y**	**Y**
	8	Body Temperature						**Y**	**Y**	**Y**	**Y**
	9	CVP (Central Venous Pressure)/Right Atrial Pressure							**Y**	**Y**	**Y**
	10	GCS (Glascow Coma Scale for neurologic score)						**Y**	**Y**	**Y**	**Y**
	11	PCWP (Pulmonary Capillary Wedge Pressure)							**Y**	**Y**	**Y**
	12	SpO2 (Pulse Oxygenation -O2 Saturation)							**Y**	**Y**	**Y**
Value		**Vital Sign Value**	Single	5.2		**R**		**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									

FieldName	Valid Values	Description	DataType	Length	Units	Required	LOD	Patient Subgroup (see text)			
								NR	TS	TCM	TX
	-9	NOT COLLECTED at Hospital or Hub									
Unit		**Record unit of measure. Depends on Vital Sign.**	Char	6				**Y**	**Y**	**Y**	**Y**
DateD		**Date of measurement - Day**	Int	2	dd	**R**		**Y**	**Y**	**Y**	**Y**
	1-31										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateM		**Date of measurement - Month**	Int	2	mm	**R**		**Y**	**Y**	**Y**	**Y**
	1-12										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
DateY		**Date of measurement - Year**	Int	4	yyyy	**R**		**Y**	**Y**	**Y**	**Y**
	2012-2020										
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									
Time		**Time of measurement**	Time	5	hh:mm	**R**		**Y**	**Y**	**Y**	**Y**
	-6	Other Notation									
	-8	NOT REPORTED or UNKNOWN for Participant									
	-9	NOT COLLECTED at Hospital or Hub									

Medication Codes for RC_Medications table

Medication Code	Medication Name	Notes
10	3 Factor PCCs (prothrobin complex concentrates)	**1/15/13, 7/31/13, 7/25/14**
20	4 Factor PCCs (prothrobin complex concentrates)	
22	Albumin concentrate	3/12/2013: Added
30	Amicar (Episilon amino caproic acid)	
40	Amiloride (Midamor)	
50	Apixaban	
60	Aspirin	
70	Bumetanide (Bumex)	corrected spelling 7/25/2014
80	Betrixaban	
90	Chlorothiazide (Diuril)	
100	Chlorthalidone (Hygroton)	
110	Coumadin	
120	Dabigatran	Corrected spelling 5/12/2015
130	Dalteparin	
140	Edoxaban	
150	Enoxaparin	
160	Eplerenone (Inspra)	
170	EPO (Erythropoietin)	
171	Darbepoetin	Addd 1/13/2015
180	Factor VIII	
190	Factor IX	
200	FEIBA	
210	Fondaparinux	
220	Furosemide (Lasix)	
230	Heparin	
240	Hydrochlorothiazide (Esidrix, Hydrodiuril)	

Medication Code	Medication Name	Notes
250	Humate-P	
260	Indapamide (Iozol)	
262	Intravenous immunoglobulin (IVIG)	Added 3/12/2013:
270	Metolazone (Zaroxolyn)	
280	Plavix	
~~282~~	~~Rh Immune Globin IM~~	Added 3/12/2013, Deleted 1/13/2015
~~283~~	~~Rh Immune Globin IV~~	Added 3/12/2013, Deleted 1/13/2015
284	Rh Immune Globin	Added 3/12/2013, Deleted 1/13/2015
290	Rivaroxaban	
300	Spironolactone (Aldactone)	
310	Torsemide (Demadex)	
320	Triamterene (Dyrenium)	
330	TXA (tranexamic acid)	12/21/2015: corrected spelling
340	Vitamin K	
350	VIIa (Factor VIIa)	
99999	Not a primary med of interest	

Organisms for RC_MicrobialTests

Organism Name	Organism Code	Notes
Acinetobacter species	10	
Aspergillus species	20	
Actinomyces species	30	
Aerococcus species	40	
Burkholderia species	50	
Candida species	60	
Citrobacter species	70	
Clostridia species	80	
Coagulase negative staphylococcus	90	
Corynebacterium species	100	
Eikenella species	110	
Enterobacter species	120	
Enterococcus species	130	
Escherichia coli	140	
Gram negative cocci	150	
Gram negative rods	160	
Gram positive cocci	170	
Gram positive rods	180	
Haemophilus species	190	
Klebsiella species	200	
Mucor species	210	
Mycobacterium species	220	
Neisseria species	230	
Normal Flora	240	
Peptostreptococcus species	250	
Proprionibacteria species	260	changed spelling from Proprionibacteria species to Propionibacteria species 4/1/2016
Propionibacteria species	260	

Organism Name	Organism Code	Notes
Proteus species	270	
Pseudomonas species	280	
Serratia species	290	
Staphylococcus aureus	300	
Staphylococcus epidermidis	310	
Stenotrophomonas maltophilia	320	
Streptococcus pneumiae	330	changed spelling from Streptococcus pneumiae to Streptococcus pneumoniae 7/25/14
Streptococcus pneumoniae	330	
Streptococcus species	340	
Streptococcus viridans	350	
Other	360	

Organisms for RC_TxReactions

Organism Name	Code
Actinomyces propionicus	PRPRO
Aerococcus christensenii	AECH
Aerococcus Genus	AEGU
Aerococcus sanguicola	AESG
Aerococcus sanguinicola	AESGN
Aerococcus spp.	AESP
Aerococcus urinae	AEUR
Aerococcus urinaeequi	AEURQ
Aerococcus urinaehominis	AEURH
Aerococcus viridans	AEVI
Arachnia propionica	PRPRO
Arthrobacter variabilis	CORVAR
Bacillus aeolius	BAEOL
Bacillus aerius	BAERI
Bacillus agaradhaerens	BAGAR
Bacillus alcalophilus	BALCA
Bacillus algicola	BALGI
Bacillus amyloliquefaciens	BAMYL
Bacillus aquimaris	BAQUI
Bacillus arseniciselenatis	BARSE

Organism Name	Code
Bacillus asahii	BASAH
Bacillus atrophaeus	BATRO
Bacillus azotoformans	BAZOT
Bacillus badius	BBADI
Bacillus barbaricus	BBARB
Bacillus bataviensis	BBATA
Bacillus benzoevorans	BBENZ
Bacillus boroniphilus	BBORO
Bacillus butanolivorans	BBUTA
Bacillus carboniphilus	BCARB
Bacillus cereus	BC
Bacillus cereus group	BCERG
Bacillus chittonlyticus	BCHIT
Bacillus circulans	BACCIR
Bacillus circulans group	BACCIRG
Bacillus clarkii	BCLARK
Bacillus clausii	BCLAUS
Bacillus coagulans	BACCOA
Bacillus cohnii	BCOHN
Bacillus decisifrondis	BDECI
Bacillus decolorationis	BDECO

Organism Name	Code
Bacillus dipsosauri	BDIPS
Bacillus drentensis	BDREN
Bacillus edaphicus	BEDAP
Bacillus ehimensis	BEHIM
Bacillus endophyticus	BENDO
Bacillus farraginis	BFARR
Bacillus fastidiosus	BFAST
Bacillus firmus	BACFIR
Bacillus flexus	BFLEX
Bacillus fordii	BFORD
Bacillus fortis	BFORT
Bacillus fumarioli	BFUMA
Bacillus funiculus	BFUNI
Bacillus galactosidilyticus	BGALA
Bacillus gelatini	BGELA
Bacillus genus	BAC
Bacillus gibsonii	BGIBS
Bacillus ginsengi	BGINS
Bacillus globisporus ss. Marinus	BMARN
Bacillus gornadae	BGORN
Bacillus halmapalus	BHALM

Organism Name	Code
Bacillus haloalkaliphilus	BHALA
Bacillus halodenitrificans	BHALDF
Bacillus halodurans	BHALDR
Bacillus halophilus	BHALP
Bacillus horikoshii	BHORI
Bacillus horti	BHORT
Bacillus humi	BHUMI
Bacillus hwajinpoensis	BHWAJ
Bacillus idriensis	BIDRI
Bacillus indicus	BINDI
Bacillus infantis	BINFA
Bacillus infernus	BINFE
Bacillus insolitus	BINSO
Bacillus jeotgali	BJEOT
Bacillus kaustophilus	BKAUS
Bacillus korlensis	BKORL
Bacillus krulwichiae	BKRUL
Bacillus laevolacticus	BLAEV
Bacillus lentus	BACLEN
Bacillus licheniformis	BACLIC
Bacillus luciferensis	BLUCI

Organism Name	Code
Bacillus macroides	BMACR
Bacillus macyae	BMACY
Bacillus marinus	BMARN
Bacillus marisflavi	BMARS
Bacillus massiliensis	BMASS
Bacillus megaterium	BACMEG
Bacillus methanolicus	BMETH
Bacillus mojavensis	BMOJA
Bacillus mucilaginosus	BMUCI
Bacillus muralis	BMURA
Bacillus mycoides	BMYCO
Bacillus naganoensis	BNAGA
Bacillus nealsonii	BNEAL
Bacillus niacini	BNIAC
Bacillus novalis	BNOVA
Bacillus odysseyi	BODYS
Bacillus okuhidensis	BOKUH
Bacillus oleronius	BOLER
Bacillus pallidus	BPALL
Bacillus pasteurii	BPAST
Bacillus patagoniensis	BPATA

Organism Name	Code
Bacillus pocheonensis	BPOCH
Bacillus pseudalcaliphilus	BPSDL
Bacillus pseudofirmus	BPSDF
Bacillus pseudomycoides	BPSMY
Bacillus psychrodurans	BPSYD
Bacillus psychrophilus	BPSYP
Bacillus psychrosaccharolyticus	BPSYS
Bacillus psychrotolerans	BPSYT
Bacillus pulvifaciens	BPULV
Bacillus pumilus	BACPUM
Bacillus pycnus	BPYCN
Bacillus salexigens	BSALE
Bacillus saliphilus	BSALI
Bacillus schlegelii	BSCHL
Bacillus selenitireducens	BSELE
Bacillus shackletonii	BSHAC
Bacillus silvestris	BSILV
Bacillus simplex	BSIMP
Bacillus siralis	BSIRA
Bacillus smithii	BACSM
Bacillus soli	BSOLI

Organism Name	Code
Bacillus sonorensis	BSONO
Bacillus species not Bacillus anthracis	BACNANT
Bacillus sphaericus	BACSPH
Bacillus sporothermodurans	BSPOR
Bacillus spp.	BSP
Bacillus stearothermophilus	BACSTE
Bacillus subterraneus	BSUBT
Bacillus subtilis	BSU
Bacillus subtilis group	BACSUG
Bacillus subtilis spizizenii	BSSP
Bacillus subtilis ss. Inaquosorum	BSIN
Bacillus subtilis subtilis	BSS
Bacillus tequilensis	BTEQU
Bacillus thermantarcticus	BTHMN
Bacillus thermoamylovorans	BTHMM
Bacillus thermocatenulatus	BTHMC
Bacillus thermocloacae	BTHMCL
Bacillus thermoglucosidasius	BTHMG
Bacillus thuringiensis	BACTHU
Bacillus tusciae	BTUSC
Bacillus vallismortis	BVALL

Organism Name	Code
Bacillus vedderi	BVEDD
Bacillus velezensis	BVELE
Bacillus vietnamensis	BVIET
Bacillus vireti	BVIRE
Bacillus weihenstephanensis	BWEIH
Bacterionema matruchotii	CORMA
Brevibacterium ammoniagenes	CORAMM
Brevibacterium vitarumen	CORVIT
Corynebacterium accolens	CORACC
Corynebacterium acnes	PRPAC
Corynebacterium afermentans	CORA
Corynebacterium afermentans ss. Afermentans	CORAA
Corynebacterium afermentans ss. Lipophilum	CORAL
Corynebacterium ammoniagenes	CORAMM
Corynebacterium amycolatum	CORAMY
Corynebacterium anaerobium	PRPAC
Corynebacterium appendicis	CORAPP
Corynebacterium aquaticum	CORAQ
Corynebacterium aquilae	CORAQL
Corynebacterium argentoratense	CORARG
Corynebacterium atypicum	CORATY

Organism Name	Code
Corynebacterium aurimucosum	CORAR
Corynebacterium auris	CORARS
Corynebacterium auriscanis	CORARSC
Corynebacterium beticola	CORBET
Corynebacterium bovis	CORBO
Corynebacterium callunae	CORCAL
Corynebacterium camporealensis	CORCAM
Corynebacterium capitovis	CORCAP
Corynebacterium casei	CORCAS
Corynebacterium caspium	CORCSP
Corynebacterium ciconiae	CORCIC
Corynebacterium confusum	CORCON
Corynebacterium coyleae	CORCOY
Corynebacterium cystidis	CORCY
Corynebacterium diphtheroides	PRPAC
Corynebacterium durum	CORDUR
Corynebacterium efficiens	COREFF
Corynebacterium falsenii	CORFAL
Corynebacterium felinum	CORFEL
Corynebacterium flavescens	CORFVS
Corynebacterium flavidum	CORST

Organism Name	Code
Corynebacterium freneyi	CORFRE
Corynebacterium genitalium	CORGEN
Corynebacterium Genus	CORGN
Corynebacterium glaucum	CORGLA
Corynebacterium glucuronolyticum	CORGLU
Corynebacterium glutamicum	CORGL
Corynebacterium group A-3, CDC	CORA3
Corynebacterium group A-4, CDC	CORA4
Corynebacterium group A-5, CDC	CORA5
Corynebacterium group ANF, CDC	CORA
Corynebacterium group B-1, CDC	CORB1
Corynebacterium group B-3, CDC	CORB3
Corynebacterium group C, CDC	CORC
Corynebacterium group D-1, CDC	CORD1
Corynebacterium group D-2, CDC	CORUR
Corynebacterium group E, CDC	CORE
Corynebacterium group F-1, CDC	CORF1
Corynebacterium group F-2, CDC	CORF2
Corynebacterium group G-1, CDC	CORACC
Corynebacterium group G-2	CORG2
Corynebacterium group I-1, CDC	CORI1

Organism Name	Code
Corynebacterium group I-2, CDC	CORI2
Corynebacterium group, CDC	CORGC
Corynebacterium halotolerans	CORHAL
Corynebacterium hoagii	CORHOA
Corynebacterium hofmannii	CORPD
Corynebacterium imitans	CORIMI
Corynebacterium jeikeium	CORJK
Corynebacterium kroppenstedtii	CORKRO
Corynebacterium kutscheri	CORKU
Corynebacterium lilium	CORGL
Corynebacterium lipophiloflavum	CORLIP
Corynebacterium liquifaciens	PRPAC
Corynebacterium macginleyi	CORMAC
Corynebacterium manihot	CORMAN
Corynebacterium massiliense	CORMSL
Corynebacterium mastitidis	CORMST
Corynebacterium matruchotii	CORMA
Corynebacterium mediolanum	CORMED
Corynebacterium minutissimum	CORMI
Corynebacterium mooreparkense	CORVAR
Corynebacterium mucifaciens	CORMUC

Organism Name	Code
Corynebacterium murisepticum	CORMRS
Corynebacterium murium	CORKU
Corynebacterium mycetoides	CORMY
Corynebacterium nephridii	CORNEP
Corynebacterium nigricans	CORAR
Corynebacterium ovis	CORPS
Corynebacterium parvum	PRPAC
Corynebacterium phocae	CORPHO
Corynebacterium pilosum	CORPI
Corynebacterium propinquum	CORPRO
Corynebacterium pseudodiphteriticum	CORPD
Corynebacterium pseudogenitalium	CORPST
Corynebacterium pseudotuberculosis	CORPS
Corynebacterium pseudotuberculostearicum	CORPSM
Corynebacterium renale	CORRE
Corynebacterium renale type 1	CORRE
Corynebacterium renale type II	CORPI
Corynebacterium renale type III	CORCY
Corynebacterium resistens	CORRES
Corynebacterium riegelii	CORRIE
Corynebacterium rubrum	CORRUB

Organism Name	Code
Corynebacterium seminale	CORGLU
Corynebacterium simulans	CORSIM
Corynebacterium singulare	CORSIN
Corynebacterium sphenisci	CORSPI
Corynebacterium spheniscorum	CORSPM
Corynebacterium spp.	COS
Corynebacterium spp. not Corynebacterium diphtheriae	CORNCD
Corynebacterium spp. not Corynebacterium jekeium	CORNCJ
Corynebacterium striatum	CORST
Corynebacterium suicordis	CORSUI
Corynebacterium sundsvallense	CORSUN
Corynebacterium tenuis	CORTEN
Corynebacterium terpenotabidum	CORTER
Corynebacterium testudinoris	CORTES
Corynebacterium thomssenii	CORTHO
Corynebacterium tuberculostearicum	CORTUB
Corynebacterium ulcerans	CORUL
Corynebacterium urealyticum	CORUR
Corynebacterium ureicelerivorans	CORURE
Corynebacterium variabile	CORVAR
Corynebacterium viscosum	CORVIS

Organism Name	Code
Corynebacterium vitaeruminis	CORVIT
Corynebacterium xerosis	CORXE
Corynebacterium, toxigenic	CORTOX
Diphtheroids	DIPTH
Diphtheroids, aerobic	DIPTHAE
Diphtheroids, anaerobic	DIPTHAN
Micrococcus antarcticus	MICANT
Micrococcus epidermidis	SE
Micrococcus flavus	MICLUT
Micrococcus Genus	MICG
Micrococcus glutamicus	CORGL
Micrococcus luteus	MICLUT
Micrococcus lylae	MICLYL
Micrococcus lysodeikticus	MICLUT
Micrococcus nishinomiyaensis	MICNIS
Micrococcus pyogenes var. albus	SE
Micrococcus spp.	MS
Micrococcus subgroup 3	STASA
Pediococcus urinaeequi	AEURQ
Peptococcus saccharolyticus	STASL
Propionibacterium acidipropionici	PRPA

Organism Name	Code
Propionibacterium acnes	PRPAC
Propionibacterium arabinosum	PRPA
Propionibacterium australiense	PRPAU
Propionibacterium avidum	PROAV
Propionibacterium cyclohexanicum	PRPCY
Propionibacterium freudenreichii	PRPF
Propionibacterium freudenreichii ss. Fredenreichii	PRPFF
Propionibacterium freudenreichii ss. Shermanii	PRPFS
Propionibacterium Genus	PRPG
Propionibacterium granulosum	PROGR
Propionibacterium granulosus	CORC
Propionibacterium innocuum	PFI
Propionibacterium jensenii	PRPJE
Propionibacterium lymphophilum	PRPLY
Propionibacterium microaerophilum	PRPMI
Propionibacterium pentosaceum	PRPA
Propionibacterium petersonii	PRPJE
Propionibacterium prionicus	PRPPR
Propionibacterium propionicum	PRPRO
Propionibacterium raffinosaceum	PRPJE
Propionibacterium rubrum	PRPTH

Organism Name	Code
Propionibacterium spp.	PRSU
Propionibacterium technicum	PRPJE
Propionibacterium thoenii	PRPTH
Propionibacterium zeae	PRPJE
Propioniferax innocus	PFI
Sarcina luteus	MICLUT
Staphylococcus albus	SE
Staphylococcus arlettae	STAARL
Staphylococcus auricularis	STAAR
Staphylococcus capitis	STACS
Staphylococcus capitis ss. Capitis	STACC
Staphylococcus capitis ss. Urealyticus	STACU
Staphylococcus caprae	STACAP
Staphylococcus carnosus	STACAR
Staphylococcus carnosus ss. Carnosus	STACRC
Staphylococcus carnosus ss. Utilis	STACUT
Staphylococcus chromogenes	STACHR
Staphylococcus coagulase negative	CNS
Staphylococcus cohnii	STACO
Staphylococcus cohnii ss. Cohnii	STASCO
Staphylococcus cohnii ss. Urealyticum	STASUR

Organism Name	Code
Staphylococcus condimenti	STACON
Staphylococcus epidermidis	SE
Staphylococcus epidermidis albus	SE
Staphylococcus epidermidis, elastase-producing strain	STAEES
Staphylococcus equorum	STAEQ
Staphylococcus equorum ss. Equorum	STAEE
Staphylococcus equorum ss. Linens	STAEL
Staphylococcus felis	STAFE
Staphylococcus fleurettii	STAFL
Staphylococcus gallinarum	STAGA
Staphylococcus hemolyticus	STAHA
Staphylococcus hominis	STAHO
Staphylococcus hominis ss. Hominis	STAHOM
Staphylococcus hominis ss. Novobiosepticus	STANOV
Staphylococcus hyicus ss. Chromogenes	STACHR
Staphylococcus kloosii	STAKLO
Staphylococcus lentus	STALE
Staphylococcus lugdunensis	STALU
Staphylococcus muscae	STAMUS
Staphylococcus nepalensis	STANEP
Staphylococcus pasteuri	STAPAS

Organism Name	Code
Staphylococcus piscifermentans	STAPIS
Staphylococcus pulvereri	STAVIT
Staphylococcus saccharolyticus	STASL
Staphylococcus saprophyticus	STASA
Staphylococcus saprophyticus ss. Bovis	STASB
Staphylococcus saprophyticus ss. Saprophyticus	STASAP
Staphylococcus schleiferi	STASH
Staphylococcus schleiferi ss. Schleiferi	STASCH
Staphylococcus sciuri	STASC
Staphylococcus sciuri ss. Carnaticus	STASCN
Staphylococcus sciuri ss. Lentus	STALE
Staphylococcus sciuri ss. Rodentium	STASRO
Staphylococcus scuiri ss. Scuiri	STASCU
Staphylococcus simulans	STASI
Staphylococcus simulans biovar staphylolyticus	STASBS
Staphylococcus succinus	STASU
Staphylococcus succinus ss. Casei	STASUC
Staphylococcus succinus ss. Succinus	STASUS
Staphylococcus vitulinus	STAVIT
Staphylococcus vitulus	STAVT
Staphylococcus warneri	STAWA

Organism Name	Code
Staphylococcus xylosus	STAXY
Streptococcus anginosis milleri group	STRANG
Streptococcus anginosus	STRVN
Streptococcus anginosus group	STRANG
Streptococcus anginosus-constellatus	STRAC
Streptococcus australis	STRAUS
Streptococcus constellatus	STRVC
Streptococcus constellatus ss. Constellatus	STRCC
Streptococcus constellatus ss. Pharyngis	STRCP
Streptococcus criceti	STRCRC
Streptococcus cristatus	STRCR
Streptococcus dolonei	STRD
Streptococcus downei	STRD
Streptococcus entericus	STRENT
Streptococcus ferus	STRF
Streptococcus gordonii	STRVG
Streptococcus group F	GFS
Streptococcus infantis	STRINF
Streptococcus intermedius	SVI
Streptococcus milleri group	STRANG
Streptococcus milleri group A	STRBA

Organism Name	Code
Streptococcus milleri group C	STRBC
Streptococcus milleri group F	GFS
Streptococcus milleri group G	STRBG
Streptococcus mitis	STRVM
Streptococcus mitis group	STRMIT
Streptococcus mutans	STRVT
Streptococcus mutans group	STRMUG
Streptococcus mutans serotype a	STRCRC
Streptococcus mutans serotype b	STRRT
Streptococcus mutans serotype h	STRD
Streptococcus mutans ss. Ferus	STRF
Streptococcus mutans ss. Sobrinus	STRSO
Streptococcus oralis	STROR
Streptococcus parasanguis	STRPA
Streptococcus peroris	STRPER
Streptococcus ratti	STRRT
Streptococcus salivarius	STRVS
Streptococcus salivarius group	STRSAG
Streptococcus salivarius ss. Salivarius	STRSLV
Streptococcus salivarius ss. Thermophilus	STRSAL
Streptococcus sanguis	SVS

Organism Name	Code
Streptococcus sanguis group	STRSG
Streptococcus sanguis II	STRSAN
Streptococcus sanguis type II	STRSAN
Streptococcus sobrinus	STRSO
Streptococcus thermophilus	STRSAL
Streptococcus vestibularis	STRVE
Streptococcus viridans group	SVU
Streptococcus, small-colony-forming beta-hemolytic group A	STRBA
Streptococcus, small-colony-forming beta-hemolytic group C	STRBC
Streptococcus, small-colony-forming beta-hemolytic group G	STRBG
Streptococcus, tufted fibril group	STRCR
Streptococcus, tufted mitior	STRSAN

Antibody List for RC_Diagnostics

Antibody Name	Description	Notes
Anti-A		
Anti-A,B		
Anti-A1		
Anti-AUB		
Anti-B		
Anti-Bga		
Anti-Bgb		
Anti-Bgc		
Anti-C		
Anti-c		
Anti-Ce		
Anti-CHa		
Anti-COa		
Anti-COb		
Anti-CSa		
Anti-Cw		
Anti-D		
Anti-Dia		
Anti-Dib		
Anti-DOa		
Anti-DOb		
Anti-E		
Anti-e		
Anti-f		
Anti-FYa		
Anti-FYb		
Anti-G		

Antibody Name	Description	Notes
Anti-Ge		
Anti-Gya		
Anti-H		
Anti-HRb		
Anti-HY		
Anti-I		
Anti-i		
Anti-Jka		
Anti-JKb		
Anti-JMH		
Anti-JOa		
Anti-JSa		
Anti-JSb		
Anti-K		
Anti-k		
Anti-KNa		
Anti-KPa		
Anti-KPb		
Anti-LEa		
Anti-LEb		
Anti-LUa		
Anti-LUb		
Anti-LWa		
Anti-LWb		
Anti-M		Added 5/12/2015
Anti-M (IgG)		
Anti-M (IgM)		
Anti-McC		
Anti-N		

Antibody Name	Description	Notes
Anti-P		
Anti-P1		
Anti-RGa		
Anti-S		
Anti-s		
Anti-Sc1		
Anti-Sc2		
Anti-SDa		
Anti-SLA		
Anti-U		
Anti-V		
Anti-VEL		
Anti-WRa		
Anti-Xga		
Anti-YKa		
Anti-YTa		
Anti-YTb		
Cold Ab		
Cold auto Ab		
Fy3		
Passive D		
WRM	Warm Autoantibodies	
Other	“Other” should be used for any true, specific antibody not specified in list, including "Other"	
Non-Specific	If “Non-specific” is reported, then code as “Non-specific”	
-6	Everything else, including free text, such as “Specimen Possibly Contaminated. Results May Be Adversely Affected.”	

Medications for medications table

Organisms for microbialtests

Organisms table from the txreactions spreadsheet for the txreactions table.

Antibody list for diagnostics table