PCORnet Data Checks, version 15

Introduction

These data checks are included in PCORnet's foundational data curation package. All network partners must pass the required data checks. Exceptions to investigative data checks are permitted but must be explained in an online annotated data dictionary.

Data Model Conformance Checks

Check	Description	Classification	Changes from v14
DC 1.01	Required tables are not present	Required	None
DC 1.02	Required tables are not populated	Required	None
DC 1.03	Required fields are not present	Required	None
DC 1.04	Required fields do not conform to data model specifications for data type, length, or name	Required	None
DC 1.05	Tables have primary key definition errors	Required	None
DC 1.06	Required fields contain values outside of data model specifications	Required	None
DC 1.07	Required fields have non-permissible missing values	Required	None
DC 1.08	Tables contain orphan PATIDs	Required	None
DC 1.09	Tables contain orphan ENCOUNTERIDs for more than 5% of records	Required	None
DC 1.10	Replication errors between the ENCOUNTER, PROCEDURES and DIAGNOSIS tables	Required	None
DC 1.11	More than 5% of encounters are assigned to more than one patient	Required	None
DC 1.12	Tables contain orphan PROVIDERIDs	Required	None
DC 1.13	More than 5% of CPT/HCPCS, CVX, ICD, NDC, LOINC or RXNORM codes do not conform to the expected length or content	Required	None
DC 1.14	Patients in the DEMOGRAPHIC table are not in the HASH_TOKEN table	Investigative	None
DC 1.15	Fields with undefined lengths that are present in more than one table do not have harmonized field lengths	Required	None
DC 1.16	Laboratory results or clinical observations are recorded in the wrong table	Investigative	None
DC 1.17	Zip codes in the ENCOUNTER or LDS_ADDRESS_HISTORY table do not conform to expected values	Required	None
DC 1.18	Table refresh dates are not documented	Required	None
DC 1.19	More than 10% of hash tokens are assigned to multiple patients	Investigative	None

Data Plausibility Checks

Check	Description	Classification	Changes from v14
DC 2.01	More than 5% of records have future dates	Investigative	None
DC 2.02	More than 10% of records fall into the lowest or highest categories of age, height, weight, diastolic blood pressure, systolic blood pressure, or dispensed days supply	Investigative	None
DC 2.03	More than 5% of patients have illogical date relationships	Investigative	None
DC 2.04	The average number of encounters per visit is > 2.0 for inpatient (IP), emergency department (ED), or ED to inpatient (EI) encounters	Investigative	None
DC 2.05	More than 5% of results for selected laboratory tests do not have the appropriate specimen source	Investigative	None
DC 2.06	The median lab result value for selected tests is an outlier	Investigative	None
DC 2.07	The average number of principal diagnoses per known DX_ORIGIN per encounter is above threshold [2.0 for inpatient (IP) and ED to inpatient (EI))	Investigative	None
DC 2.08	The monthly volume of encounter, diagnosis, procedure, vital, prescribing, or laboratory records is an outlier.	Investigative	None
DC 2.09	Less than 80% of patients with a face-to-face encounter during the past 5 years have at least 1 face-to-face diagnosis and 1 vital measurement.	Investigative	None

Data Completeness Checks

Check	Description	Classification	Changes from v14
DC 3.01	The average number of diagnoses records with known diagnosis types per encounter is below threshold [1.0 for ambulatory (AV), inpatient (IP), emergency department (ED), ED to inpatient (EI), or telehealth (TH) encounters].	Investigative	None
DC 3.02	The average number of procedure records with known procedure types per encounter is below threshold [0.75 for ambulatory (AV) encounters, 0.75 for emergency department (ED) encounters, 1.00 for ED to inpatient (EI) encounters, and 1.00 for inpatient (IP) encounters].	Investigative	None
DC 3.03	More than 10% of records have missing or unknown values for the following fields: ADDRESS_TYPE, ADDRESS_USE, DISCHARGE_DISPOSITION (IP/EI encounters only), DISPENSE_SUP, DX_SOURCE, SEX, code fields [DEATH_CAUSE_CODE, MEDADMIN_CODE, OBSCLIN_CODE, OBSGEN_CODE], code type fields [DX_TYPE, CONDITION_TYPE, MEDADMIN_TYPE, OBSCLIN_TYPE, OBSGEN_TYPE, PX_TYPE, VX_CODE_TYPE], date fields [BIRTH_DATE, DISCHARGE_DATE (IP/EI encounters only), RX_ORDER_DATE, PX_DATE, VX_RECORD_DATE], ENCOUNTERID fields in selected tables [DIAGNOSIS, LAB_RESULT_CM, PRESCRIBING, MED_ADMIN, OBS_CLIN, PROCEDURES, and VITAL], and provenance fields [CONDITION_SOURCE, DEATH_CAUSE_SOURCE, DEATH_SOURCE, DISPENSE_SOURCE, DX_ORIGIN, MEDADMIN_SOURCE, LAB_RESULT_SOURCE, PX_SOURCE, RX_SOURCE, VITAL_SOURCE, VX_SOURCE]	Investigative	None
DC 3.04	Less than 50% of patients with encounters have DIAGNOSIS records	Required	None
DC 3.05	Less than 50% of patients with encounters have PROCEDURES records	Required	None
DC 3.06	More than 10% of IP (inpatient) or ED to inpatient (EI) encounters with any diagnosis from a known DX_ORIGIN don't have a principal diagnosis from that source	Investigative	None
DC 3.07	Encounters, diagnoses, or procedures in an ambulatory (AV), telehealth (TH), emergency department (ED), ED to inpatient (EI), or inpatient (IP) setting are less than 75% complete three months prior to the current month	Investigative	None
DC 3.08	Less than 80% of prescribing orders are mapped to a RXNORM_CUI which fully specifies the ingredient, strength and dose form	Investigative	None
DC 3.09	Less than 80% of laboratory results are mapped to LAB_LOINC and have either a quantitative or qualitative result	Investigative	None
DC 3.10	Less than 80% of quantitative results for tests mapped to LAB_LOINC fully specify the normal range	Investigative	None
DC 3.11	Vital, prescribing, or laboratory records are less than 75% complete three months prior to the current month	Investigative	None

Data Completeness Checks, continued

Check	Description	Classification	Changes from v14
DC 3.12	Less than 80% of quantitative results for tests mapped to LAB_LOINC fully specify the RESULT_UNIT	Investigative	None
DC 3.13	The percentage of patients with selected lab tests is below threshold	Investigative	None
DC 3.14	Medication administration, dispensing, or clinical observation records are less than 75% complete three months prior to the current month	Investigative	None
DC 3.15	Less than 80% of medication administrations mapped to RXNORM are mapped to a RXNORM_CUI that fully specifies the ingredient, strength and dose form.	Investigative	None

Data Persistence Checks

Check	Description	Classification	Changes from v14
DC 4.01	More than a 5% decrease in the number of patients or records in a CDM table	Investigative	None
DC 4.02	More than a 5% decrease in the number of patients or records for diagnosis, procedures, labs or prescriptions during an ambulatory (AV), telehealth (TH), other ambulatory (OA), emergency department (ED), or inpatient (IP) encounter.	Investigative	None
DC 4.03	More than a 5% decrease in the number of records or distinct codes for CPT/HCPCS, CVX, ICD10, NDC, or RXNORM codes.	Investigative	None