Validation Checks Performed by WebSDM™ Version 2.6 on SDTM version 3.1.1 Datasets

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Validation Checks Performed by WebSDM™ Version 2.6 on SDTM version 3.1.1 Datasets

The WebSDM™ product, offered by Phase Forward's Lincoln Technologies safety division, is a software product that was developed for use by the FDA under a Cooperative Research and Development Agreement to validate and review data in CDISC SDTM format. The WebSDM™ product may also be licensed for use by pharmaceutical and biotechnology sponsors who are submitting data to the FDA in CDISC SDTM format to support product marketing applications.

The table below lists the current set of validation checks performed by WebSDM™ Version 2.6 on data provided as SAS Transport files or as Oracle tables or views according to version 3.1.1 of the <u>CDISC Study Data Tabulation Model Implementation Guide: Human Clinical Trials</u> (SDTMIG) and the <u>FDA's Study Data Specifications</u>. Additional errors may result from problems with a sponsor-created define.xml file that does not conform to the <u>CDISC Define.xml</u> schema or conflicts with the CDISC SDTMIG. Note that these rules have been updated and expanded from those used in previous versons of WebSDM™. Section I below is a complete listing of all rules implemented in WebSDM version 2.6.957for SDTM version 3.1.1; section II summarizes the new, changed, and deleted rules compared to those that were implemented in WebSDM version 1.5.733.

In the tables below, the "ID" column records the control number applied to each check.

The "APPLIES" column identifies which SDTM object may be affected by that particular check. A check may apply to all domains, a general class of domains (such as findings), an individual domain, or a set of variables in a given role (such as timing variables as indicated).

The "RULE DESCRIPTION" column explains in human readable form the general logic behind the check performed by the WebSDM™ product.

The "SEVERITY" column explains the relative significance of an anomaly detected by a check, rated LOW, MEDIUM or HIGH. Note there is no direct correlation between a severity value and a decision by FDA reviewers as to whether the data is acceptable for review or not. Instead, Severity is meant only as an indicator of potential problems or anomalies in the data and the error's potential to affect the interpretation or use of the data for specific purposes.

The "COMMENTS" column provides additional relevant information concerning a check. This may indicate whether a check is scheduled to be deprecated in the future, or special considerations about its implementation.

It is important to note that the actual list of checks used by the FDA will evolve over time to reflect input received from FDA reviewers as they gain more experience with SDTM and different sponsor submissions in this format. Therefore, sponsors should be cautioned that additional or modified checks may be implemented in the WebSDM product prior to release of a new published version of these checks.





Section I – all rules implemented in WebSDM version 2.6.957 for SDTM version 3.1.1:

| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|--------|----------|---|----------|---|
| IR4000 | All | Identifies domain table that has zero rows and therefore contains no data. | Medium | Null tables are normally not submitted |
| IR4001 | All | Identifies a null (empty) value found in a column where (Standard) Core attribute is 'Req' | High | Required variables may not be null |
| IR4002 | All | Identifies records where the value for a date doesn't conform to the ISO 8601 standard. | Medium | |
| IR4003 | All | Identifies records where the value in the Domain Abbreviation column doesn't match the name of Domain | Low | |
| IR4004 | All | Identifies records where non-unique values for Sequence Number variable exist within a subject | High | |
| IR4005 | Findings | Identifies subjects where there are no records with a value of 'Y' in the baseline flag variable (Baseline Flag), excluding Arm Code='SCRNFAIL' | Low | Check of Arm Code value is case- insensitive |
| IR4006 | LB | Identifies Short Name of Measurement, Test or Examination values where standard units value (Standard Units) is not consistent across all records | Medium | |
| IR4007 | AE | Identifies records where the value for the Preferred Term could not be found in the MedDRA dictionary | Medium | |
| IR4008 | AE | Identifies records where Serious Event='Y' but none of Involves Cancer, Congenital Anomaly or Birth Defect, Persist or Signif Disability/Incapacity, Results in Death, Requires or Prolongs Hospitalization, Is Life Threatening, Other Medically Important Serious Event, or Occurred with Overdose equals 'Y' | Medium | |
| IR4009 | All | Identifies records where Result or Finding in Original Units and Status both have a value, or where both are null and Derived Flag is not equal to 'Y' | Medium | |
| IR4010 | All | Identifies records where the value for Visit Number is formatted to more than three decimal places | Medium | |



| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|--------|--------------------------|---|----------|--|
| IR4011 | DM | Identifies records that violate the condition [If Arm Code='SCRNFAIL' then Description of Arm must equal 'Screen Failure', and vice versa] | Low | Checks of Arm Code and Arm values are case-insensitive |
| IR4012 | TA | Identifies records that violate the condition [If Arm Code='SCRNFAIL' then Description of Arm must equal 'Screen Failure', and vice versa] | Low | Checks of Arm Code and Arm values are case-insensitive |
| IR4100 | All (Timing) | Identifies records that violate the condition [(Study Day of Start of Observation less than or equal to Study Day of End of Observation)], limited to records where [Study Day of Start of Observation is not null and Study Day of End of Observation is not null] | High | |
| IR4101 | All (Timing) | Identifies records that violate the condition [(Start Date/Time of Observation less than or equal to End Date/Time of Observation)], limited to records where [Start Date/Time of Observation is not null and End Date/Time of Observation is not null] | High | |
| IR4102 | Findings | Identifies records that violate the condition [Baseline Flag either 'Y' or null] | Medium | |
| IR4103 | Findings | Identifies records that violate the condition [Derived Flag either 'Y' or null] | Medium | |
| IR4104 | Events, Interventions | Identifies records that violate the condition [End Relative to Reference Period in ('BEFORE','DURING','AFTER','DURING/AFTER','U')], limited to records where [End Relative to Reference Period is not null] | Medium | |
| IR4105 | Findings | Identifies records that violate the condition [Fasting Status in ('Y','N','U')], limited to records where [Fasting Status is not null] | Medium | |
| IR4106 | Events, Interventions | Identifies records that violate the condition [Occurrence in ('Y','N')], limited to records where [Occurrence is not null] | Medium | |
| IR4107 | All | Identifies records that violate the condition [Status='NOT DONE'], limited to records where [Status is not null] | Medium | |



| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|--------|--------------------------|--|----------|----------|
| IR4108 | Events, Interventions | Identifies records that violate the condition [Start Relative to Reference Period in ('BEFORE','DURING','AFTER','U')], limited to records where [Start Relative to Reference Period is not null] | Medium | |
| IR4109 | Interventions | Identifies records that violate the condition [Dose greater than or equal to 0], limited to records where [Dose is not null] | High | |
| IR4110 | All (Timing) | Identifies records that violate the condition [Duration greater than or equal to 0], limited to records where [Duration is not null] | High | |
| IR4112 | Findings | Identifies records that violate the condition [Result or Finding in Standard Format is not null], limited to records where [Derived Flag='Y'] | Medium | |
| IR4113 | Findings | Identifies records that violate the condition [LENGTH(Name of Measurement, Test or Examination) less than or equal to 40 characters] | Low | |
| IR4114 | Findings | Identifies records that violate the condition [LENGTH(Short Name of Measurement, Test or Examination) less than or equal to 8 chars, cannot start with a number or contain special chars] | Low | |
| IR4115 | TS | Identifies records that violate the condition [LENGTH(Trial Summary Parameter) less than or equal to 40 chars] | Low | |
| IR4116 | TS | Identifies records that violate the condition [LENGTH(Trial Summary Parameter Short Name) less than or equal to 8 chars, cannot start with a number or contain special chars] | Low | |
| IR4117 | All (Timing) | Identifies records that violate the condition [End Relative to Reference Period is not null], limited to records where [End Date/Time of Observation is null] and [Occurrence doesn't equal 'N'] | Low | |
| IR4118 | All (Timing) | Identifies records that violate the condition [Start Relative to Reference Period is not null], limited to records where [Start Date/Time of Observation is null] and [Occurrence doesn't equal 'N'] | Low | |



| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|--------|--------------|--|----------|----------|
| IR4119 | EX | Identifies records that violate the condition [Planned Elapsed Time from Reference Pt greater than or equal to 0], limited to records where [Planned Elapsed Time from Reference Pt is not null] | High | |
| IR4120 | All (Timing) | Identifies records that violate the condition [Evaluation Interval greater than or equal to 0], limited to records where [Evaluation Interval is not null] | High | |
| IR4121 | Events | Identifies records that violate the condition [Toxicity Grade is a valid number], limited to records where [Toxicity Grade is not null] | Medium | |
| IR4122 | All | Identifies records that violate the condition [Reason Not Done is null], limited to records where [Status is null] | Medium | |
| IR4123 | Findings | Identifies records that violate the condition [Date/Time of Collection is not null], limited to records where [End Date/Time of Observation is not null] | Low | |
| IR4124 | Findings | Identifies records that violate the condition [Date/Time of Collection less than or equal to End Date/Time of Observation], limited to records where [Date/Time of Collection is not null and End Date/Time of Observation exists] | High | |
| IR4125 | Findings | Identifies records that violate the condition [Original Units is not null], limited to records where [Result or Finding in Original Units is not null] | Low | |
| IR4126 | Findings | Identifies records that violate the condition [Original Units is null], limited to records where [Result or Finding in Original Units is null] | Low | |
| IR4127 | Findings | Identifies records that violate the condition [Normal Range Upper Limit-Standard Units greater than or equal to Normal Range Lower Limit-Standard Units], limited to records where [Normal Range Upper Limit-Standard Units is not null and Normal Range Lower Limit-Standard Units is not null] | High | |



| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|--------|---------------|---|----------|------------------|
| IR4128 | Findings | Identifies records that violate the condition [Standard Units is not null], limited to records where [Result or Finding in Standard Format is not null] | Low | |
| IR4129 | Findings | Identifies records that violate the condition [Standard Units is null], limited to records where [Result or Finding in Standard Format is null] | Low | |
| IR4130 | All (Timing) | Identifies records that violate the condition [Start Date/Time of Observation or Start Relative to Reference Period is not null], limited to records where [End Date/Time of Observation or End Relative to Reference Period is not null] | Low | |
| IR4131 | All (Timing) | Identifies records that violate the condition [Planned Time Point Name is not null], limited to records where [Planned Time Point Number is not null] | Low | |
| IR4132 | All (Timing) | Identifies records that violate the condition [Planned Time Point Number is not null], limited to records where [Planned Time Point Name is not null] | Low | |
| IR4133 | All (Timing) | Identifies records that violate the condition [Time Point Reference is not null], limited to records where [Elapsed Time from Reference Point is not null] | Medium | |
| IR4134 | Interventions | Identifies records that violate the condition [Dose Units is not null], limited to records where [Dose is not null] and (Standard) Core attribute is 'Perm' | Low | Analog to IR4138 |
| IR4135 | Findings | Identifies records that violate the condition [Result or Finding in Standard Format is not null], limited to records where [Result or Finding in Original Units is not null] | High | |
| IR4136 | All | Identifies records where values are not found in the study- specific codelist attached to a variable | Low | |
| IR4137 | All | Identifies records that violate the condition [Study Day of Visit/Collection/Exam doesn't equal 0] | Low | |
| IR4138 | Interventions | Identifies records that violate the condition [Dose Units is not null], limited to records where [Dose is not null] and (Standard) Core attribute is 'Exp' | Medium | Analog to IR4134 |





| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|--------|----------|--|----------|---|
| IR4139 | SUPPQUAL | Identifies records that violate the condition [Related Domain is not null] | Medium | |
| IR4140 | DV | Identifies cases where Protocol Deviation Term and Protocol Deviation Coded Term do not map 1:1 | Medium | Replacement for deleted rule (R4104) |
| IR4250 | All | Identifies a column that was described in the domain description but not included in the SAS dataset for that domain | Low | |
| IR4251 | All | Identifies a column where the expected datatype inferred from the description file does not match the actual datatype in the dataset | Medium | |
| IR4252 | All | Identifies a column listed in the domain description as Required ('Req') but not included in the SAS dataset for that domain | High | |
| IR4253 | All | Identifies a column listed in the domain description as Expected ('Exp') but not included in the SAS dataset for that domain | Medium | |
| IR4254 | All | Identifies a column that appears in the SAS dataset but is not listed in the domain description | Medium | |
| IR4255 | AE | Identifies a Sponsor-provided Flag Variable for 'Treatment emergent AE' where the derivation can't be executed | Medium | Relevant when using CTSD safety analysis tools only |
| IR4256 | LB | Identifies a Sponsor-provided Flag Variable for 'Clinically Significant Lab' where the derivation can't be executed | Medium | Relevant when using CTSD safety analysis tools only |
| IR4257 | VS | Identifies a Sponsor-provided Flag Variable for 'Clinically Significant Vital Sign' where the derivation can't be executed | Medium | Relevant when using CTSD safety analysis tools only |
| IR4258 | SUPPQUAL | Identifies a domain that appears to contain supplemental qualifier data but does not contain the Unique Subject Identifier variable | High | |
| IR4259 | All | Identifies a variable where datatype in (study specific) description is not consistent with datatype implicit in SAS dataset | Medium | |
| IR4260 | All | Identifies a variable present in SAS dataset but not present in (study specific) description file | Medium | |
| IR4261 | All | Identifies a domain that is referenced in a description file but for which there is no source data | Medium | |
| IR4262 | All | Identifies a domain whose source data failed to load | High | |
| IR4263 | All | Identifies a variable that uses an unsupported Event Dictionary | Low | |





| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|--------|----------|---|----------|--|
| IR4500 | All | Identifies non-Demographics domain subjects not found in the Demographics domain | High | |
| IR4501 | All | Identifies Unique Subject Identifier+Visit Name+Visit Number combinations not found in the SV domain | Medium | |
| IR4502 | DM | Identifies records where the value for Arm Code is not found in the TA domain, excluding 'SCRNFAIL' | Medium | Check of Arm Code value is case- insensitive |
| IR4503 | All | Identifies records where the value for Subject Element Code is not found in the TE domain | Medium | |
| IR4504 | IE | Identifies records where the value for Inclusion/Exclusion Criterion Short Name is not found in the TI domain | Medium | |
| IR4505 | DM | Identifies Demographics subjects where no record for the subject is found in the Disposition domain | Medium | |
| IR4506 | DM | Identifies Demographics subjects where no record for the subject is found in the Exposure domain | Medium | |
| IR4507 | DM | Identifies Demographics treatment arms (Description of Arm+Arm Code combination) not found in the TA domain, excluding 'Screen Failure', 'SCRNFAIL' | Medium | Checks of Arm and Arm Code values are case-insensitive |
| IR4508 | CO | Identifies CO domain reference to an unknown related domain | High | |
| IR4509 | RELREC | Identifies Related Records domain reference to an unknown related domain | High | |
| IR4510 | SUPPQUAL | Identifies Supplemental Qualifiers domain reference to an unknown related domain | High | |
| IR4511 | RELREC | Identifies Related Records domain reference to a key variable that isn't defined in the target domain | High | |
| IR4512 | SUPPQUAL | Identifies Supplemental Qualifiers domain reference to a key variable that isn't defined in the target domain | High | |
| IR4513 | RELREC | Identifies Related Records domain reference to a record that doesn't exist in the target domain | High | |
| IR4514 | SUPPQUAL | Identifies Supplemental Qualifiers domain reference to a record that doesn't exist in the target domain | High | |



| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|-------|---------|---|----------|----------|
| R4006 | DM | Identifies records that violate the condition [Age greater than or equal to 0], limited to records where [Age is not null] | High | |
| R4007 | DM | Identifies records where value for [Sex] is not found in Codelist [SEX] | Medium | |
| R4008 | DM | Identifies records where value for [Country] is not found in Codelist [COUNTRY] | Medium | |
| R4019 | AE | Identifies records where value for [Serious Event] is not found in Codelist [YESNO] | Medium | |
| R4023 | AE | Identifies records where value for [Congenital Anomaly or Birth Defect] is not found in Codelist [YESNO], limited to records where [Congenital Anomaly or Birth Defect is not null] | Medium | |
| R4024 | AE | Identifies records where value for [Persist or Signif Disability/Incapacity] is not found in Codelist [YESNO], limited to records where [Persist or Signif Disability/Incapacity is not null] | Medium | |
| R4025 | AE | Identifies records where value for [Results in Death] is not found in Codelist [YESNO], limited to records where [Results in Death is not null] | Medium | |
| R4026 | AE | Identifies records where value for [Requires or Prolongs Hospitalization] is not found in Codelist [YESNO], limited to records where [Requires or Prolongs Hospitalization is not null] | Medium | |
| R4027 | AE | Identifies records where value for [Is Life Threatening] is not found in Codelist [YESNO], limited to records where [Is Life Threatening is not null] | Medium | |
| R4031 | IE | Identifies records where value for [Inclusion/Exclusion Category] is not found in Codelist [INCEX], limited to records where [Inclusion/Exclusion Category is not null] | Medium | |
| R4043 | AE | Identifies records where value for [Concomitant or Additional Trtmnt Given] is not found in Codelist [YESNO] | Medium | |
| R4045 | AE | Identifies records where value for [Involves Cancer] is not found in Codelist [YESNO], limited to records where [Involves Cancer is not null] | Medium | |



| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|-------|----------|---|----------|---|
| R4046 | AE | Identifies records where value for [Other Medically Important Serious Event] is not found in Codelist [YESNO], limited to records where [Other Medically Important Serious Event is not null] | Medium | |
| R4047 | AE | Identifies records where value for [Occurred with Overdose] is not found in Codelist [YESNO], limited to records where [Occurred with Overdose is not null] | Medium | |
| R4062 | DM | Identifies records where value for [Age Units] is not found in Codelist [AGEUNITS2], limited to records where [Age Units is not null] | Medium | |
| R4071 | ΙE | Identifies records where value for [I/E Criterion Original Result] is not found in Codelist [YESNO], limited to records where [I/E Criterion Original Result is not null] | Medium | |
| R4072 | ΙE | Identifies records where value for [I/E Criterion Result in Std Format] is not found in Codelist [YESNO], limited to records where [I/E Criterion Result in Std Format is not null] | Medium | |
| R4073 | ΙE | Identifies records that violate the condition [I/E Criterion Original Result = I/E Criterion Result in Std Format] | Low | |
| R4083 | SUPPQUAL | Identifies records where values for [Study Identifier, Unique Subject Identifier, Identifying Variable, Identifying Variable Value, Qualifier Variable Name] variable(s) are not unique | Medium | |
| R4096 | DM | Identifies records that violate the condition [Subject Reference Start Date/Time is not null], limited to records where [upper(Arm Code) doesn't equal 'SCRNFAIL'] | Medium | Check of Arm Code value is case- insensitive |
| R4097 | DM | Identifies records that violate the condition [Subject Reference End Date/Time is not null], limited to records where [upper(Arm Code) doesn't equal 'SCRNFAIL'] | Medium | Check of Arm Code value is case- insensitive |
| R4101 | TE | Identifies records that violate the condition [Rule for End of Element is not null or Planned Duration of Element is not null] | Medium | |
| R4102 | AE | Identifies records that violate the condition [Results in Death='Y'], limited to records where [Outcome of Adverse Event='FATAL'] | Medium | |





| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|-------|---------|--|----------|----------|
| R4103 | AE | Identifies records that violate the condition [Outcome of Adverse Event='FATAL'], limited to records where [Results in Death='Y'] | Medium | |
| R4105 | SE | Identifies records that violate the condition [Description of Unplanned Element is not null], limited to records where [Subject Element Code='UNPLAN'] | Medium | |
| R4106 | DM | Identifies records that violate the condition [Age Units is not null], limited to records where [Age is not null] | Low | |





Section II

A. New rules (additions present in 2.6.957 that were not in 1.5.733):

| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|--------|---------------|--|----------|---|
| IR4138 | Interventions | Identifies records that violate the condition [Dose Units is not null], limited to records where [Dose is not null] and (Standard) Core attribute is 'Exp' | Medium | Analog to IR4134 for records where (Standard) Core attribute is 'Exp' |
| IR4139 | SUPPQUAL | Identifies records that violate the condition [Related Domain is not null] | Medium | |
| IR4140 | DV | Identifies cases where Protocol Deviation Term and Protocol Deviation Coded Term do not map 1:1 | Medium | Replaces deleted rule R4104 |
| IR4261 | All | Identifies a domain that is referenced in a description file but for which there is no source data | Medium | |
| IR4262 | All | Identifies a domain whose source data failed to load | High | |
| IR4263 | All | Identifies a variable that uses an unsupported Event Dictionary | Low | |





Section II - continued

B. Changed rules (rules in 2.6.957 that were changed relative to the same rule in 1.5.733)

| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|--------|--------------------------|--|-----------------------|---|
| IR4005 | Findings | Identifies subjects where there are no records with a value of 'Y' in the baseline flag variable (Baseline Flag), excluding Arm Code='SCRNFAIL' | Low | Added exclusion criterion for records where Arm Code = (case-insensitive) 'SCRNFAIL' |
| IR4009 | All | Identifies records where Result or Finding in Original Units and Status both have a value, or where both are null and Derived Flag is not equal to 'Y' | Medium | Added check of Derived Flag value where both variables of interest are null |
| IR4010 | All | Identifies records where the value for Visit Number is formatted to more than three decimal places | Medium | Changed text to match logic of check (threshold at three or more decimal places) |
| IR4011 | DM | Identifies records that violate the condition [If Arm Code='SCRNFAIL' then Description of Arm must equal 'Screen Failure', and vice versa] | was: High now: Low | Changed severity from High to Low; made check of literal values case- insensitive |
| IR4012 | TA | Identifies records that violate the condition [If Arm Code='SCRNFAIL' then Description of Arm must equal 'Screen Failure', and vice versa] | was: High now: Low | Changed severity from High to Low; made check of literal values case- insensitive |
| IR4108 | Events, Interventions | Identifies records that violate the condition [Start Relative to Reference Period in ('BEFORE','DURING','AFTER','U')], limited to records where [Start Relative to Reference Period is not null] | Medium | Added allowable value 'U' to list |
| IR4117 | All (Timing) | Identifies records that violate the condition [End Relative to Reference Period is not null], limited to records where [End Date/Time of Observation is null] and [Occurrence doesn't equal 'N'] | Low | Added condition to exclude records where Occurrence = 'N' |
| IR4118 | All (Timing) | Identifies records that violate the condition [Start Relative to Reference Period is not null], limited to records where [Start Date/Time of Observation is null] and [Occurrence doesn't equal 'N'] | Low | Added condition to exclude records where Occurrence = 'N' |
| IR4125 | Findings | Identifies records that violate the condition [Original Units is not null], limited to records where [Result or Finding in Original Units is not null] | Low | Changed condition to check Original Units rather than Result or Finding in Original Units |





| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|--------|---------------|--|--------------------------|--|
| IR4126 | Findings | Identifies records that violate the condition [Original Units is null], limited to records where [Result or Finding in Original Units is null] | Low | Changed condition to check Original Units rather than Result or Finding in Original Units |
| IR4127 | Findings | Identifies records that violate the condition [Normal Range Upper Limit-Standard Units greater than or equal to Normal Range Lower Limit-Standard Units], limited to records where [Normal Range Upper Limit-Standard Units is not null and Normal Range Lower Limit-Standard Units is not null] | High | Corrected lattermost comparand to Normal Range Lower Limit Standard Units rather than the previously referenced STNRHI |
| IR4130 | All (Timing) | Identifies records that violate the condition [Start Date/Time of Observation or Start Relative to Reference Period is not null], limited to records where [End Date/Time of Observation or End Relative to Reference Period is not null] | Low | Added checks of Start Relative to Reference Period and End Relative to Reference Period |
| IR4134 | Interventions | Identifies records that violate the condition [Dose Units is not null], limited to records where [Dose is not null] and (Standard) Core attribute is 'Perm' | Low | Added condition limiting check to records where (Standard) Core attribute is 'Perm' |
| IR4502 | DM | Identifies records where the value for Arm Code is not found in the TA domain, excluding 'SCRNFAIL' | Medium | Added exclusion criterion for records where Arm Code = (case-insensitive) 'SCRNFAIL' |
| IR4505 | DM | Identifies Demographics subjects where no record for the subject is found in the Disposition domain | was; High now: Medium | Changed severity from High to Medium; corrected description to refer to Demographics. |
| IR4506 | DM | Identifies Demographics subjects where no record for the subject is found in the Exposure domain | was; High now: Medium | Changed severity from High to Medium; corrected description to refer to Demographics. |
| IR4507 | DM | Identifies Demographics treatment arms (Description of Arm+Arm Code combination) not found in the TA domain, excluding 'Screen Failure', 'SCRNFAIL' | Medium | Added exclusion criterion for records where Arm Code = (case-insensitive) 'Screen Failure' and Arm Code = (case-insensitive) 'SCRNFAIL'; corrected description to refer to Demographics. |
| R4096 | DM | Identifies records that violate the condition [Subject Reference Start Date/Time is not null], limited to records where [upper(Arm Code) doesn't equal 'SCRNFAIL'] | was; High now: Medium | Changed severity from High to Medium; changed exclusion criterion to be case-insensitive on value of Arm Code |



| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|-------|---------|--|--------------------------|--|
| R4097 | DM | Identifies records that violate the condition [Subject Reference End Date/Time is not null], limited to records where [upper(Arm Code) doesn't equal 'SCRNFAIL'] | was; High now: Medium | Changed severity from High to Medium; changed exclusion criterion to be case-insensitive on value of Arm Code |

Section II - continued

C. Deleted rules (rules no longer present in 2.6.957 that were present in 1.5.733)

| ID | APPLIES | RULE DESCRIPTION | SEVERITY | COMMENTS |
|--------|----------|--|----------|--|
| IR4111 | Findings | Identifies records that violate the condition [Result or Finding in Original Units is null], limited to records where [Derived Flag='Y'] | Medium | Rule deprecated. The Implementation Guide allows sponsors to populate this variable. |
| R4005 | DM | Identifies records where values for Unique Subject ID variable(s) are not unique, limited to records where [Unique Subject ID is not null] | Medium | Rule deprecated. Rather than firing the rule, WebSDM 2.6 does not load the study if this situation is encountered. The study would be unusable with duplicate Subject IDs. |
| R4104 | DV | Identifies records that violate the condition [count (distinct Protocol Deviation Term) = count(distinct Protocol Deviation Coded Term)], limited to records where [Protocol Deviation Term is not null] | Medium | Rule replaced by IR4140 |



