

MY 2021 HEDIS® Validations

This document provides an overview of the HEDIS submission validations performed by NCQA's Interactive Data Submission System (IDSS) as part of the HEDIS submission process. It is accompanied by a validation metadata dictionary referenced by a subset of the validations. For cross reference, IDSS validation errors and warnings include the name of the applicable validation rules.

Validation Rules

The tables below specify the validations implemented for the MY2021 IDSS release. They use the common requirements verbiage where violation of a “must” will result in an error that needs to be corrected before submission; and violation of a “should” will result in a warning that should be reviewed before final submission.

Where the validation specifications refer to “reported”, these include any measure, indicator, or rate for which a plan provided data in the Submission XML file, even if the rate receives a Small Denominator (NA) audit designation or status.

Some validation specifications include: references to validation metadata provided in the accompanying dictionary and cross referenced in the appendix; references to specific measures by their MeasureCodes; and references to Variables and Metrics by their names as used in the Submission and Result XML files and Data Dictionaries.

Shared Data Element Validations

In the HEDIS Technical Specifications for Health Plans, the “Data Elements for Reporting” section in each measure specification indicates which data elements are shared across multiple rates and/or stratifications.

For shared data elements, plans must report the same value for each reported indicator. A different value will result in an IDSS Fatal validation error.

In addition, there are measures without shared data elements where the measure specification logic results in identical values. For example, if a plan uses the Administrative Method to report both indicators of the PPC measure, their Eligible Populations must be the same. A different value will result in an IDSS Error validation message. These types of “Shared” validations are specified in the rule tables below and in the validation metadata dictionary.

Also in addition with the shared validations, for SES stratifications. Some of the fields need to have the total of the SES stratification for certain data elements.

Using CDC—Eye Exam for Medicare as an example, these data elements are uniquely filled out:

- EligiblePopulation
- ExclusionAdminRequired
- Denominator
- NumeratorByAdmin
- NumeratorBySupplemental
- NumeratorByMedicalRecords

The other values in the XML for Eye Exam stratifications must be the total for all eye exam fields. If ExclusionsAdminOptional has a differing value anywhere in the SES stratification XML for CDC it will result in a shared element error. The values must match in SES for the measure:

- ExclusionAdminOptional
- NumeratorByAdminElig
- OversampleRate
- OversampleRecsAdded
- ExclusionEmployeeOrDep
- ExclusionMedRecsOptional
- ExclusionValidDataErrors
- MinReqSampleSize

Table 1: General Validations

Rule	Definition
ConformToSchema	The Submission XML file must conform to the Submission XSD schema.
ConformToDictionary	<p>The Submission XML must conform to the Submission Data Dictionary.</p> <p>Note: To limit complexity, the Submission XSD schema does not validate that all combinations of metrics and stratifications are valid and complete. All metrics and stratifications are defined in the product line specific Data Dictionaries and included in the Submission XML templates. There is no required order of metric sections within a measure, or of stratifications within a <Stratification> section.</p> <p>Only complete measures can be excluded from the Submission XML file to support single measure uploads, etc. See the IDSS documentation for details.</p>
NumericValues[†]	All plan reported values in the <Data></Data> sections must be numeric, except for CollectionMethod.
CollectionMethod	<p>The value of CollectionMethod must be 'A', 'H', or null (blank) [†].</p> <p>For reported indicators with CollectionMethodAllowed='Admin+Hybrid' the plan must report a CollectionMethod value of 'A' or 'H'.</p> <p>Note: For the Medicare-only TRC measure, indicators with metrics NotificationInpatientAdmission and ReceiptDischargeInformation only allow the Hybrid collection method. If reported, they must report CollectionMethod='H'.</p>
PositiveValues[†]	All plan reported values must be larger than or equal to zero.
Integers[†]	All plan reported numeric values must be Integers, except for OversampleRate, ExpectedCount and CountVariance.
Rounding[†]	OversampleRate, ExpectedCount and CountVariance must be rounded to 4 decimals.
PaddingZeroes[†]	OversampleRate, ExpectedCount and CountVariance must be padded with zeros to 4 decimals.
ScientificNotation[†]	Plan reported values must not use scientific notation (e.g., 1.234E+08).
CompleteDataSection	<p>For reported indicators with CollectionMethodAllowed='Admin+Hybrid' metadata, and CollectionMethod='H', all data elements in a <Data></Data> section must have a value.</p> <p>For reported indicators with CollectionMethodAllowed='Admin+Hybrid' metadata, and CollectionMethod='A', see the AdministrativeData rule below.</p> <p>For all other reported indicators, all data elements in a <Data></Data> section must have a value.</p> <p>For all unreported indicators, all data elements in a <Data></Data> section must be unreported (blank).</p>
AdministrativeData	<p>For reported indicators with CollectionMethodAllowed='Admin+Hybrid' metadata, and CollectionMethod='A', all Administrative data elements in the <Data></Data> section must have a value and all Hybrid-only variables must be blank.</p> <p>Administrative data elements (for indicators that allow the Administrative and Hybrid collection method) are: EligiblePopulation, NumeratorByAdmin, and where present: NumeratorBySupplemental and ExclusionAdminRequired.</p> <p>Hybrid-only(!) data elements are: Denominator, ExclusionEmployeeOrDep, ExclusionValidDataErrors, MinReqSampleSize, NumeratorByAdminElig, NumeratorByMedicalRecords, OversampleRate, OversampleRecsAdded, and where present: ExclusionAdminOptional, ExclusionMedRecsOptional</p>
IndicatorMetrics	Within a measure all data elements in all <Data></Data> sections that share the same MetricName must all be reported or must all be unreported (blank).
NoBenefitNoData	For measures that require a special benefit (e.g., Mental Health, Pharmacy), if a plan reports that they do not provide that benefit, all data elements in the <Data></Data> sections must be unreported (blank).
MeasurementYear[†]	For all reported measures that require it in their <Metadata></Metadata> section, MeasurementYear must be equal to the 4-digit measurement year.

Rule	Definition
MedicareStars	All Medicare Advantage submissions for reporting to CMS should report the measures required for the CMS Star Ratings program (see CMS publications). Note: the logic does not distinguish between “Section 1876 Cost” contracts and others.
Accreditation	All submissions to maintain or achieve HEDIS Health Plan Accreditation should report the measures required for accreditation.

† These rules are implemented in the submission XSD schema.

Table 2: Hybrid Measure Validations

Rule	Definition
CYAR	NumeratorByAdminElig must be less than or equal to EligiblePopulation. Note: this rule only applies to Indicators for which CYAR is calculated. NumeratorByAdminElig is also reported for stratifications (e.g. SES), where it may be larger than the EligiblePopulation.
HybridDenominator	Denominator must be less than or equal to EligiblePopulation.
MRSS	MinReqSampleSize should be less than or equal to EligiblePopulation. For the WCC, TRC and Medicare CDC-EyeExam and COL measures this validation only applies to the IDSS calculated total age and total SES stratifications, not to the plan-reported individual stratifications.
OversampleRecsAdded	If OversampleRate is zero then OversampleRecsAdded must be zero.
OversampleRate	If MinReqSampleSize is equal to EligiblePopulation then OversampleRate should be zero.
SharedDenominator¹	All reported CollectionMethodAllowed='Admin+Hybrid' indicators within the same measure that are reported with CollectionMethod='H' with the same SharedDenominator=# value must use the same Denominator.
NumeratorByAdminElig	NumeratorByAdminElig should be greater than or equal to NumeratorByAdmin.

Table 3: General Measure Validations

Rule	Definition
Proportions	All reported indicators with Proportion='Y' must have a Rate larger than or equal to 0.0 and less than or equal to 1.0 (100% or 1000‰) or blank if the denominator=0.
PseudoProportion	All reported indicators with PseudoProportion='Y' should have a Rate less than or equal to 1.0 (100%) or blank if the denominator=0. Note: Though the IAD and MPT measure rates are reported as proportions (percentages), because of the mix of MemberCount and MemberMonths it is possible to see rates larger than 100% for smaller MemberCounts.
BlankCombos	For all indicators with Combo=#, if any indicator within the same measure with a matching InCombo=# value is not reported, the Combo must be not reported.

¹ Note the same validation rule is used for ECDS measures.

Rule	Definition
SmallerCombos	For all reported indicators with Combo=#, the Rate must be smaller than or equal to the Rates of all indicators within the same measure with a matching InCombo=#.
StrictFollowUp	For all reported indicators with NumeratorIsEligiblePopulation=#, the Numerator must be equal to the EligiblePopulation of the indicator within the same measure with a matching EligiblePopulationIsNumerator=# value.
ScreeningFollowUp	For all reported indicators with Screening=#, the Numerator must be larger than or equal to the Denominator of the indicator within the same measure with a matching FollowUp=#.
EligiblePopulationSubset	For all reported indicators with EligiblePopulationLTE=#, the EligiblePopulation must be Less Than or Equal to the EligiblePopulation of the indicator(s) within the same measure with a matching EligiblePopulationGTE=#.
NumeratorSubset	For all reported indicators with NumeratorLTE=#, the Numerator must be Less Than or Equal to the Numerator of the indicator(s) within the same measure with a matching NumeratorGTE=#. Note: for Admin/Hybrid measures the Numerator is the sum of the NumeratorByAdmin, NumeratorBySupplemental and NumeratorByMedicalRecords, if present.
NumeratorSubsetWarning	For all reported indicators with NumeratorWarningLTE=#, the Numerator should be Less Than or Equal to the Numerator of the indicator(s) within the same measure with a matching NumeratorWarningGTE=#.
LdmCompleteness	For the LDM measure, the sum of MemberCounts reported for the <WrittenPreferred> metric must be equal to the sum of MemberCounts reported for the <SpokenPreferred> metric and the <OtherPreferred> metric.
RdmCompleteness	For the RDM measure, the sum of the MemberCounts reported for the <RaceEthnicity> metric must be equal to the sum of the MemberCounts reported for the <RaceSource> metric and for the <EthnicitySource> metric.
LdmRdmMatch	The sum of MemberCounts reported for any of the LDM <WrittenPreferred>, <SpokenPreferred> or <OtherPreferred> metrics should be equal to the sum of MemberCounts reported for any of the RDM metrics.
SharedCollectionMethod	All reported indicators within the same measure with the same SharedCollectionMethod=# must use the same CollectionMethod.
SharedEligiblePopulation	All reported indicators within the same measure, reported with CollectionMethod='A', with the same SharedEligiblePopulation=# value must use the same EligiblePopulation.
DdeTotalEligiblePopulation	For all reported DDE measures, the sum of the EligiblePopulation for the HistoryOfFalls, Dementia and ChronicKidneyDisease metrics must be equal to the EligiblePopulation for the Total metric.
DdeTotalExclusionAdminRequired	For all reported DDE measures, the sum of the ExclusionAdminRequired for the HistoryOfFalls, Dementia and ChronicKidneyDisease metrics must be equal to the ExclusionAdminRequired for the Total metric.

Rule	Definition
DdeTotalNumeratorByAdmin	For all reported DDE measures, the sum of the NumeratorByAdmin for the HistoryOfFalls, Dementia and ChronicKidneyDisease metrics must be equal to the NumeratorByAdmin for the Total metric.

Table 4: ECDS Specific Validation (ECDS measures are also included implicitly in other validation rules through their metadata). Note that ECDS indicators can be identified by their ECDS=Y metadata.

Rule	Definition
SharedInitialPopulation	All reported indicators within the same measure with the same SharedInitialPopulation=# value must use the same value for each InitialPopulation[By*].
SharedExclusions	All reported indicators within the same measure with the same SharedExclusions=# value must use the same value for each Exclusions[By*].
SharedDenominator²	All reported indicators within the same measure with the same SharedDenominator=# value must use the same Denominator.
InitialPopulationSubset	For all reported indicators with InitialPopulationLTE=#, the InitialPopulation[By*] must be less than or equal to the InitialPopulation[By*] of the indicator(s) within the same measure with a matching InitialPopulationGTE=#.
ExclusionsSubset	For all reported indicators with ExclusionsLTE=#, the Exclusions[By*] must be less than or equal to the Exclusions[By*] of the indicator(s) within the same measure with a matching ExclusionsGTE=#.
DenominatorSubset	For all reported indicators with DenominatorLTE=#, the Denominator[By*] must be less than or equal to the Denominator[By*] of the indicator(s) within the same measure with a matching DenominatorGTE=#.
DenomInitPopExclusions	For all reported indicators with DenomEqualsInitPopMinusExclusion='Y', the Denominator must equal the InitialPopulation minus Exclusions. Note: this validation does not apply at the source-system level, because exclusions may originate from a different source-system than the initial population.

Table 5: Risk-Adjusted Utilization (RAU) Measure Specific Validations

Rule	Definition
CompleteMeasures	RAU measures must be completely reported or completely unreported.
PcrOutlierRates	For the PCR measure, the OutlierRate must be larger than or equal to 0.0 and should be less than or equal to 1.0 (1000‰). Note: an inconsistency in the date specified to determine a member's age between the plan population and outlier logic may in rare cases result in outlier rates exceeding 1.0 (1000‰).

² Note the same validation rule is used for Hybrid measures.

RauProportions	For all reported PCR and HFS indicators, the ObservedRate and ExpectedRate must be less than or equal to 1.0 (100%).
RauMinimumExpectedRate	For all reported RAU indicators, the ExpectedRate must be null or must be larger than the value of MinimumExpectedRate. Note: ExpectedRate is null if it involves a division by zero.
RauMinimumCountVariance	For all reported RAU indicators with an ExpectedCount larger than 0, the CountVariance must be larger than the value of MinimumCountVariance.
RauZeroDenominator	For all reported PCR and HFS indicators with Denominator=0, the ObservedCount, ExpectedCount and CountVariance must be 0.
RauZeroMembers	For all reported AHU, EDU and HPC indicators with NonOutlierMemberCount=0, the ObservedCount, ExpectedCount and CountVariance must be 0.
RauNonZeroExpectedCount	For all reported AHU, EDU and HPC indicators with ExpectedCount>0, the NonOutlierMemberCount must be larger than 0.
PcrNonZeroExpectedCount	For all reported PCR indicators with ExpectedCount>0, (MemberCount – OutlierMemberCount) should be larger than 0. Note: an inconsistency in the date specified to determine a member's age between the plan population and outlier logic may in rare cases result in the violation of this rule.
PcrSesDenominators	For all reported Medicare PCR measures, the sum of the Denominators for the <SES> metric in the Age=18-64 stratification must be equal to the sum of the Denominators for the <PlanAllCauseReadmissions> metric in the Age=18-44,45-54 and 55-64 stratifications. And the sum of the Denominators for the <SES> metric in the Age=65+ stratification must be equal to the sum of the Denominators for the <PlanAllCauseReadmissions> metric in the Age=65-74,75-84 and 85+ stratifications.
PcrSesObservedCount	For all reported Medicare PCR measures, the sum of the ObservedCounts for the <SES> metric in the Age=18-64 stratification must be equal to the sum of the ObservedCounts for the <PlanAllCauseReadmissions> metric in the Age=18-44,45-54 and 55-64 stratifications. And the sum of the ObservedCounts for the <SES> metric in the Age=65+ stratification must be equal to the sum of the ObservedCounts for the <PlanAllCauseReadmissions> metric in the Age=65-74,75-84 and 85+ stratifications.
PcrSesExpectedCount	For all reported Medicare PCR measures, the sum of the ExpectedCounts for the <SES> metric in the Age=18-64 stratification must be within 0.001 (inclusive) of the sum of the ExpectedCounts for the <PlanAllCauseReadmissions> metric in the Age=18-44,45-54 and 55-64 stratifications. And the sum of the ExpectedCounts for the <SES> metric in the Age=65+ stratification must be within 0.001 (inclusive) of the sum of the ExpectedCounts for the <PlanAllCauseReadmissions> metric in the Age=65-74,75-84 and 85+ stratifications.
PcrSesCountVariance	For all reported Medicare PCR measures, the sum of the CountVariances for the <SES> metric in the Age=18-64 stratification must be within 0.001 (inclusive) of the sum of the CountVariances for the

	<p><PlanAllCauseReadmissions> metric in the Age=18-44,45-54 and 55-64 stratifications.</p> <p>And the sum of the CountVariances for the <SES> metric in the Age=65+ stratification must be within 0.001 (inclusive) of the sum of the CountVariances for the <PlanAllCauseReadmissions> metric in the Age=65-74,75-84 and 85+ stratifications.</p>
HpcMemberCount	For all reported HPC measures, the sum of NonOutlierMemberCount and OutlierMemberCount must be the same for matching Age/Gender stratifications across the <Acute>, <Chronic> and <Total> metrics.
SharedDenominator	<p>All HFS indicators with the same SharedDenominator=# value must use the same Denominator.</p> <p>Note: ensures matching Denominators for the 30-Day and 60-Day indicators at matching age stratifications.</p>
HfsObservedCountSubset	<p>For all HFS indicators with ObservedCountLTE=#, the ObservedCount must be Less Than or Equal to the ObservedCount of the indicator with a matching ObservedCountGTE=#.</p> <p>Note: ensures the 30-Day ObservedRate is less than or equal to the 60-Day ObservedRate.</p>
OutlierLimit	For all reported AHU and EDU indicators the ObservedRate must be less than or equal to the value of OutlierLimit.
LowerUpperLimit	<p>For all reported HPC indicators that are not small denominator (NA) indicators, the ObservedRate should be less than or equal to the value of ObservedRateUpperLimit.</p> <p>For all reported AHU, EDU and HPC indicators that are not small denominator (NA) indicators, the ExpectedRate should be less than or equal to the value of ExpectedRateUpperLimit.</p> <p>For all reported RAU indicators that include an OE and that are not small denominator (NA) indicators, the OE should be larger than or equal to the value of OELowerLimit and should be less than or equal to the value of OEUpperLimit.</p>

Table 6: Utilization Measure Specific Validations (not risk-adjusted)

Rule	Definition
TotalMemberMonths	For all reported ABXa, AMBa, IADa, IPUa and MPTa measures, the sum of the MemberMonths for any metric should be less than or equal to the total MemberMonths for the ENPa measure (if reported).
SharedMemberMonths	All reported indicators within the same measure with the same SharedMemberMonths=# value must use the same MemberMonths.
BeneficiaryCategories	<p>For all reported Medicaid ABXa/b/c/d, AMBa/b/c/d, ENPa/b/c/d, IADa/b/c/d, IPUa/b/c/d and MPTa/b/c/d measures, for all variables, for all metrics and at every stratification level, the sum of the values for the “b”, “c” and “d” categories must be less than or equal to the value for the “a” category.</p> <p>Note: to prevent hundreds of error messages, IDSS will first validate that the total number of MemberMonths for the “a” category is larger than or equal to the sum of the total number of MemberMonths for the “b”, “c” and “d” categories. Only after this validation is passed will it perform the more detailed validations.</p>

IpuTotalDischarges	For all reported IPUa/b/c/d measures, the sum of the Discharges for the Medicine, Maternity and Surgery metrics must be equal to the Discharges for the Total metric (at every stratification level).
IpuTotalDays	For all reported IPUa/b/c/d measures, the sum of the Days for the Medicine, Maternity and Surgery metrics must be equal to the Days for the Total metric (at every stratification level).
LowerUpperLimit	For all reported AMBa/b/c/d, FSP, IPUa/b/c/d indicators and for all ABXa/b/c/d indicators that are not simple proportions, and that are not small denominator (NA) rates, the Rate should be less than or equal to the value of UpperLimit.

Appendix: Validation Metadata

The table below provides a crosswalk between validation metadata provided in the accompanying validation dictionary and the validation rules that reference them.

Key	Value(s)	Table	Rule
CollectionMethodAllowed	Admin+Hybrid	1 3	CollectionMethod SharedDenominator
Combo	#	3	BlankCombos, SmallerCombos
DenomEqualsInitPopMinusExclusions	Y	4	DenomInitPopExclusions
DenominatorGTE	#	4	DenominatorSubset
DenominatorLTE	#	4	DenominatorSubset
ECDS	Y	4	Defines ECDS indicators
EligiblePopulationGTE	#	3	EligiblePopulationSubset
EligiblePopulationIsNumerator	#	3	StrictFollowUp
EligiblePopulationLTE	#	3	EligiblePopulationSubset
ExclusionsGTE	#	4	ExclusionsSubset
ExclusionsLTE	#	4	ExclusionsSubset
ExpectedRateUpperLimit	#	5	LowerUpperLimit
FollowUp	#	3	ScreeningFollowUp
InCombo	#[, #, #, ...]	3	BlankCombos, SmallerCombos
InitialPopulationGTE	#	4	InitialPopulationSubset
InitialPopulationLTE	#	4	InitialPopulationSubset
MinimumExpectedRate	#####	5	RauMinimumExpectedRate
MinimumCountVariance	#####	5	RauMinimumCountVariance
NumeratorGTE	#[, #, #, ...]	3	NumeratorSubset
NumeratorIsEligiblePopulation	#	3	StrictFollowUp
NumeratorLTE	#	3	NumeratorSubset
NumeratorWarningGTE	#	3	NumeratorSubsetWarning
NumeratorWarningLTE	#	3	NumeratorSubsetWarning
ObservedCountGTE	#	5	HfsObservedCountSubset
ObservedCountLTE	#	5	HfsObservedCountSubset
ObservedRateUpperLimit	#	5	LowerUpperLimit

Key	Value(s)	Table	Rule
OELowerLimit	#	5	LowerUpperLimit
OEUpperLimit	#	5	LowerUpperLimit
OutlierLimit	#	5	OutlierLimit
Proportion	Y	3	Proportions
PseudoProportion	Y	3	PseudoProportions
Screening	#	3	ScreeningFollowUp
SharedCollectionMethod	#	3	SharedCollectionMethod
SharedDenominator	#	3 4 5	SharedDenominator SharedDenominator SharedDenominator
SharedEligiblePopulation	#	3	SharedEligiblePopulation
SharedExclusions	#	4	SharedExclusions
SharedInitialPopulation	#	4	SharedInitialPopulation
SharedMemberMonths	#	6	SharedMemberMonths
UpperLimit	#	6	LowerUpperLimit

Changelog

- Replaced the section specific to MY2020 transition with a more general section on shared data elements.
- Removed section specific to enhanced validations for MY2020.
- Added OversampleRate to the PaddingZeroes rule in Table 1.
- Added new MedicareStars and Accreditation rules to Table 1.
- Updated the SharedEligiblePopulation rule in Table 3 to limit it to indicators reported using the administrative collection method.
- Added three new validation rules for the Total DDE indicator which will be plan-reported starting in MY2021 to Table 3.
- Removed the OutlierRates rule from Table 5: always true by definition.
- Added a new SharedMemberMonths rule specific to the AMBa/b/c/d measures to Table 6 and to the validation metadata dictionary.
- Added a "Type" column to the validation metadata dictionary to indicate if the metadata supports a validation Error or Warning. A value of "Info" is used for supporting metadata.
- Updated the validation metadata dictionary for HEDIS MY2021.