
Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)



Serving Sonoma, Napa, Marin & Yolo Counties

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Introduction

This set of 16 Relevant reports is useful for better understanding the Quality Measure (QM) Value Set codes, how those Value Sets overlap with the codes in NextGen, and for identifying individual patient records that may need additional attention.

The reports are organized into three groups. They are:

- A. **Record-Level Validation Reports.** These reports recognize individual records that might have incomplete or erroneous information and should be investigated further. There are five reports in this group.
- B. **Quality Measure (QM) Understanding Reports.** These reports display the codes that comprise the Value Sets for the QMs and how those codes intersect with what appears in the EHR. There are four reports in this group.
- C. **System Set-Up and Utilization Reports.** These reports reveal all of the codes in the system, regardless if they are Value Set codes or not. There are also reports that display lists of codes or mappings that are not related to Value Sets. There are seven reports in this group.

The table on the following page shows all of the report names, what version they have currently, and a brief comment on their history. This information also exists in the “Version” section of the description header of each report. As of the writing of these instructions, all reports are in the first version, although some of them were based on an incomplete draft set of reports designed (but not finished) in 2019.

As of the writing of these instructions, the 2020 Quality Measures have not yet been released. This means that the Value Sets used and displayed by the reports are from 2019. The new 2020 Value Sets will be uploaded to Relevant when the 2020 Quality Measures are released. The 2020 validation reports will still work with the 2019 value sets but note that the codes may be outdated. From one study that RCHC did comparing the 2018 to the 2019 Value Sets, the codes for at least one Value Set changed for seven of the thirteen UDS Quality Measures.

Also note in the table on the next page that five reports were updated in November 2020. Four of these had some Value Sets added and one (for Cancer Exclusions) was modified to enhance functionality. The changes are described in the “Report Description” section of each report below.

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Record-Level Validation Reports	Version	Comment
Problem List	1st	Based on 2019 draft
Persistent Asthma Diagnosis	1st	Based on 2019 draft
Incomplete Labs	1st	Based on 2019 draft
Cancer Exclusions	2nd	Report modified in November 2020
Incomplete or Non-Standard Demographic Data	1st	New report in 2020
Quality Measure (QM) Understanding Reports	Version	Comment
QM Value Set Codes	2nd	Value Sets were updated in November 2020
QM Lab Names and Attributes in EHR	1st	Based on 2019 draft
QM Medications in EHR	2nd	Value Sets were updated in November 2020
QM Vaccines in EHR	1st	Based on 2019 draft
System Set-Up and Utilization Reports	Version	Comment
All Diagnosis Codes	2nd	Value Sets were updated in November 2020
Diagnosis Location Report	1st	New report in 2020
All Lab Names and Attributes	1st	New report in 2020
All Medications and Rx Groups	2nd	Value Sets were updated in November 2020
All Vaccines	1st	New report in 2020
All Providers, Resources and Staff	1st	New report in 2020
All Insurance Names	1st	New report in 2020

In the instructions below, each report has its own section that includes a description of the report and what it can be used for. There are also details on how the data is pulled and what is displayed in the columns. Appendix D of these instructions contains the recommended frequency for running the validation reports in the set.

In general, the reports were designed to process data in a standard fashion and therefore follow recommendations from the RCHC Data Standards and Integrity Committee. This is especially apparent in the use of eCQM or HEDIS Value Sets to define standard sets of codes. There are reports that list these codes and the corresponding descriptions from your electronic health records software.

In general, there are small differences in some table and field names among the health center instances of Relevant. Therefore, it is recommended that someone with SQL experience and a familiarity with how data is managed within the Health Center instance of Relevant first copy and check the code before implementing its use. This activity can be done in a SQL editing software like DataGrip. Furthermore, health centers can customize their reports to add functionality or custom SQL that better matches their

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Transformers. The default version of the report does not consider Dentrix data or other sources of data besides NextGen.

The report SQL code must be accessed and copied from the RCHC instance of Relevant. Instructions on how to do this appear in Appendix B of these instructions. To some extent, the reports need to be configured to your system. The reports cannot be run in the RCHC Aggregate instance of Relevant. The normal process would be to copy the report from the RCHC instance to a new report in your instance of Relevant. Once saved, do not run, but rather copy the code to DataGrip and then run the routines and sub-routines individually in logical fashion and deal with any errors that come up.

Note that some reports have more defined and complex configuration issues. These are detailed under a heading called “Custom Set-up at Health Center” in the description of each report below. After understanding the intent of the report and the structure of certain Transformers in your instance of Relevant, follow the instructions to modify your report in a way that makes the most sense to you.

If you modify your report, it is a good idea to document what you did and why you did it. In the future, new versions of these validation reports might be released by RCHC. Therefore, you may need to make the same or similar changes to a new version. Furthermore, over time, your health center might have more than one programmer who does the coding, and so such documentation may be helpful to others as well.

The queries have been designed so that you can read and understand them quickly. Temporary Tables are used to break up the routines and notes have been added to describe the approach. Advanced programmers may perceive short-cuts or options for nesting queries or making them more efficient. The overriding goal of the code structure was to make it easy to read and use.

Lastly, be aware that some of the reports are evaluating data from the raw NextGen data tables in Relevant (i.e., not tables from Transformers). Therefore, some reports can take up to a minute or two to run. Also note that the first group of reports display patient personal health information. There is an option in Relevant to restrict those reports if that is the policy of your health center.

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Part A: Record-Level Validation Reports

This subset of reports provides lists of patient records that should be considered for updating because they may be missing data or have erroneous data. Unlike the next two groups of reports, these reports display patient-level records. Value Sets are used to identify items wherever possible.

Problem List

Report Name: RCHC Problem List Validation Report NG

Version: First version

Background and Context

The national stewards of the Quality Measures provide Value Sets that contain lists of diagnosis codes (commonly referred to as ICD codes) that officially define the chronic diseases. In electronic health records, diagnosis codes can appear in several places, like on encounter assessments, claims and the Problem List. The RCHC Data Standards and Integrity Committee approved an approach to defining a patient clinically diagnosed with a particular chronic disease. This validation report follows those recommendations.

For purposes of chronic disease diagnosis, we are only considering the Problem List as the location in the electronic health record (EHR) where an official clinical diagnosis of a chronic disease is placed. This was approved by the RCHC Data Standards and Integrity Committee. Authorized users of the EHR should be able to add diagnosis codes to the Problem List when a clinical diagnosis is made and also to remove the codes if the disease has somehow resolved or is no longer appropriate. NextGen allows users to associate additional information with the code that is helpful, such as the date of disease onset. Having a list of all clinically-diagnosed chronic diseases together in one place in the EHR also promotes proper workflow, clinical care, and meeting the objectives of Meaningful Use. Therefore, the Problem List should be used as the sole source of diagnosis “truth” for chronic diseases and should be maintained as such for individual patients.

It is advantageous to use the Problem List for this intended purpose and to not rely on diagnosis codes in other locations, such as encounter assessments or claims. Often, codes may appear in these locations that may be provisional or used for payment purposes. Furthermore, once a code is placed in one of

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these other locations, it cannot be modified or removed from that location (and therefore the patient cannot be removed from the QM denominator) even in the case when further clinical evidence shows that the patient does not actually have the disease.

This approach will improve the accuracy of reporting and also promote the appropriate treatment of patients because many Quality Measures, Care Gaps and Reports in Relevant rely on patient chronic disease diagnosis. By encouraging a single source of ‘truth’ about diagnosis, staff will consult the Problem List and add (or, more rarely, remove) codes to the Problem List as clinically appropriate and following the Health Center procedures for doing so. Relying on other configurations will introduce false positives and/or false negatives to the patient population for that chronic disease¹. The main value of this validation report is to display patients who may be false positives or false negatives based on the existence or absence of diagnosis codes on the Problem List and other evidence in the medical record. It is recommended that Health Centers regularly examine their lists of patients with particular chronic diseases to eliminate as many false negatives and false positives as possible.

Nonetheless, there remains a relationship between the codes on the Problem List and the encounter assessments and claims. In the majority of cases, the same codes appear in all three locations. For example, a patient with hypertension typically has a code for hypertension on the Problem List and when they are seen, a code for hypertension typically goes on their encounter assessment and on the claim.

Because of this strong association, the Problem List Validation Report is helpful for identifying patients who potentially have an issue with a code on their Problem List. This issue can take two forms:

1. There is NOT a code for a particular chronic disease on the Problem List but a code for that disease appeared on an encounter assessment or claim recently. As mentioned above, this could have occurred because the diagnosis was provisional or for billing purposes. However, it could also be the case that somebody forgot to legitimately add the code to the Problem List.
2. A code for a particular chronic disease appears on the Problem List but a code for that disease has NEVER appeared on an encounter assessment or claim in the past. In this case, the code on the Problem List might be there in error.

¹ A false positive is a patient who electronically in Relevant appears to have a particular chronic disease but actually does not have it (and is thus probably not being treated for it). A false negative is a patient who electronically in Relevant appears to not have a particular chronic disease but actually does (and is most likely being treated for it). Having an excessive number of either type of patients in your EHR will affect the accuracy of the denominators and numerators of your measures.

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Note that the validation report is merely suggesting patients for further review. To add a code to or remove a code from the Problem List is a clinical decision that should be made by an authorized provider. Follow your Health Center policy in this respect.

The Problem List Validation Report targets the major chronic diseases identified in the UDS and QIP Quality Measures. Value Sets are used to define the diagnosis codes that describe the chronic diseases. The exception is that the Value Set for persistent asthma is not included on this report because there is a special report for that diagnosis (see section “Persistent Asthma Validation Report” next). The Value Sets included in the RCHC Problem List Validation Report are:

Population category	Population criteria	Value Set
Diabetes	Diagnosis: Diabetes	Diabetes (2.16.840.1.113883.3.464.1003.103.12.1001)
Hypertension	Essential Hypertension Diagnosis	Essential Hypertension (2.16.840.1.113883.3.464.1003.104.12.1011)
Depression/ Bipolar	Diagnosis of Depression	Depression diagnosis (2.16.840.1.113883.3.600.145)
	Diagnosis of Bipolar	Bipolar Diagnosis (2.16.840.1.113883.3.600.450)
IVD	Ischemic Vascular Disease Diagnosis	Ischemic Vascular Disease (2.16.840.1.113883.3.464.1003.104.12.1003)
ASCVD	History of Clinical ASCVD Diagnoses	UNION OF
	["Diagnosis": "Myocardial Infarction"]	Myocardial Infarction (2.16.840.1.113883.3.526.3.403)
	["Diagnosis": "Cerebrovascular disease, Stroke, TIA"]	Cerebrovascular disease, Stroke, TIA (2.16.840.1.113762.1.4.1047.44)
	["Diagnosis": "Atherosclerosis and Peripheral Arterial Disease"]	Atherosclerosis and Peripheral Arterial Disease (2.16.840.1.113762.1.4.1047.21)
	["Diagnosis": "Ischemic heart disease or coronary occlusion, rupture, or thrombosis"]	Ischemic heart disease or coronary occlusion, rupture, or thrombosis (2.16.840.1.113762.1.4.1047.46)
	["Diagnosis": "Stable and Unstable Angina"]	Stable and Unstable Angina (2.16.840.1.113762.1.4.1047.47)

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Report Description

Denominator patients for the validation report must be active, not deceased, and had at least one UDS Medical Visit in the measurement period, which is defined as the time span between the Start Date in the parameters and the date that the report is run. There is no age range criterion for the report but the age (relative to when the report is run) is displayed in one of the columns in case the user wants to limit patient ages to those described by the respective QMs.

In addition to membership in the Value Set, diagnosis codes recognized by the report must have particular characteristics. These are built into the WHERE section of the SQL code. They are:

Problem List

- Code must not be deleted
- The code record must not have a resolved date
- Entry into the Problem List does not necessarily have to be tied to a visit
- The “Started on” column is the Onset Date (when entered properly as a date) or else the timestamp it was logged into the Problem List.

Assessments

- The assessment or encounter must not be deleted
- Tied to completed UDS Universe visits

Claims

- Tied to completed UDS Universe visits

When looking at the results, it is a good idea to prioritize those patients who have been seen many times in the measurement period. This is done by sorting the list by the columns `Diagnosis_Category` and `Count_UDS_Medical_Visits` in descending order. For example, if you have a patient with a diabetes diagnosis code on the problem list and 20 visits in the measurement period, but no diagnosis code on any assessment or claim, then that patient would be a priority for investigation over a patient who only had one visit but was otherwise similar.

Relevant Database: Staging

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Parameters: The only required parameter in the SQL code is named “startdate.” This date is used to define the measurement period, which is between the start date and the date the report is run. The measurement period is applied to the visit range for patients.

Column Definitions

Column Name	Column Description
Account no	The account number that appears in NextGen
Pat last name	Patient last name
Pat first name	Patient first name
Date of birth	Patient date of birth
Age now	Age as of the day the report is run
Last UDS medical visit	The date of the last UDS medical visit in the measurement period
Count UDS medical visits	The number of UDS medical visits in the measurement period
Diagnosis category	The Value Set diagnosis category referenced in the row
Problast exists	Displays “Yes” if a diagnosis code from the diagnosis category Value Set appears on the Problem List. Otherwise, will display “No”
Problast detail	Displays the first date that any diagnosis code from the diagnosis category Value Set appeared on the Problem List, along with the associated SNOMED code
Encounter Diagnosis Exists	Displays “Yes, in past one year” if a diagnosis code from the diagnosis category Value Set appeared on an assessment (Encounter Diagnosis) in the year prior to when the report was run. Otherwise, it will display “Yes, but more than a year ago” if it was only on an assessment before a year ago or “Never” if it never appeared
Encounter Diagnosis Detail	Displays the last date that any diagnosis code from the diagnosis category Value Set appeared on an Assessment, along with the code itself
Patient Diagnosis Exists	Displays “Yes, in past one year” if a diagnosis code from the diagnosis category Value Set appeared on an assessment (Patient Diagnosis) in the year prior to when the report was run. Otherwise, it will display “Yes, but more than a year ago” if it was only on an assessment before a year ago or “Never” if it never appeared
Patient Diagnosis Detail	Displays the last date that any diagnosis code from the diagnosis category Value Set appeared on an Assessment, along with the ICD code itself
Claim exists	Displays “Yes, in past one year” if a diagnosis code from the diagnosis category Value Set appeared on a Claim in the year prior to when the report was run. Otherwise, it will display “Yes, but more than a year ago” if it was only on a Claim before a year ago or “Never” if it never appeared

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Column Name	Column Description
Claim detail	Displays the last date that any diagnosis code from the diagnosis category Value Set appeared on a Claim, along with the ICD code itself. The ICD code could have appeared in any position on the claim.
Record summary	Summarizes the combination of codes present or missing from the Problem List, Assessments in past year or Claim in past year
Check action	Suggests adding a diagnosis code to the Problem List or verifying the code already on there, based on the findings in the row

Custom Set-up at Health Center: no additional set-up necessary. Note that in the Relevant report code, encounter diagnosis come from the tables encounter_diags and patient_diagnosis. The report has separate columns for these locations. There is an additional report named “RCHC Diagnosis Location Report NG” that calculates the number of unduplicated patients for each major diagnosis group that are obtained from these two tables as well as from the table patient_problems.

Persistent Asthma Diagnosis

Report Name: RCHC Persistent Asthma Diagnosis Validation Report NG

Version: First version

Background and Context

This validation report takes a similar approach as the previous report to identifying patients who may be false positives or false negatives in the denominator of the asthma quality measures. Please refer to the “Background and Context” section of the Problem List report in the last section for additional detail.

As mentioned in the Problem List section above, it is good clinical practice (and for achieving Meaningful Use objectives) to clearly identify patients with a persistent asthma diagnosis so that providers and their team members can follow clinical guidelines to treat these patients comprehensively. Furthermore, this report uses additional information on medications and also on conflicting codes to ensure that the number of false negatives and false positives are kept to a minimum.

The patients displayed by the report are candidates for further review and action. It is important to have a “clean” asthma Quality Measure denominator in order to more accurately report the Quality Measure.

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In general, adding or removing patients from the denominator using the list generated by the report and following the instructions will improve the numerator percentage of the measure. The candidate universe is composed of the following sub-populations (which may overlap):

Sub-population	Action
Diagnosis for persistent asthma on the Problem List but never had a persistent asthma medication or a claim or assessment with a persistent asthma code	Verify that a clinical diagnosis of persistent asthma is appropriate. If it is not, remove the code from the Problem List
No diagnosis for persistent asthma on the Problem List and a claim or assessment with a persistent asthma code in the past year	Consider a clinical diagnosis of persistent asthma and place an appropriate code on the Problem List
No diagnosis for persistent asthma on the Problem List and use of appropriate asthma medication in the past year	Consider a clinical diagnosis of persistent asthma and place an appropriate code on the Problem List
Patients with both persistent and intermittent asthma diagnosis codes on the Problem List	Consider removing one of the codes from the Problem List depending on the appropriate clinical diagnosis

As a side note, the official eCQM Value Set for this measure is named “Persistent Asthma” (OID = 2.16.840.1.113883.3.464.1003.102.12.1023). However, for this validation report only, the Value Set named “Asthma” (OID = '2.16.840.1.113883.3.117.1.7.1.271') is used to describe more broadly patients with asthma and then to separate out those with persistent asthma. This respect is unique among the chronic diseases tracked by QMs. The “Asthma” Value Set contains ICD-9 codes for general asthma and ICD-10 codes for intermittent and persistent asthma. The Relevant QM and associated Transformer should only use the ICD-10 codes in the Value Set “Persistent Asthma” to identify patients for the denominator. Therefore, you might find patients with old ICD-9 codes are being picked up by the validation report (these should always be updated to ICD-10 codes on the Problem List).

Report Description

Patients in the denominator must fall within the age range of the Quality Measure, which is between 6 and 64 years of age as of the date the report is run. Furthermore, denominator patients for the validation report must be active, not deceased, and have at least one UDS Medical Visit in the measurement period, which is defined as the time span between the Start Date in the parameters and the date that the report is run.

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Diagnosis codes from the Problem List recognized by the report must have particular characteristics. These are built into the WHERE section of the SQL code. They are:

Problem List

- Code must not be deleted
- The code record must not have a resolved date
- Entry into the Problem List does not necessarily have to be tied to a visit
- The “Started on” column is the Onset Date (when entered properly as a date) or else the timestamp it was logged into the Problem List

Assessments

- The assessment or encounter must not be deleted
- Tied to completed UDS Universe visits

Claims

- Tied to completed UDS Universe visits

When looking at the results, it is a good idea to prioritize those patients who have been seen many times in the measurement period. This is done by sorting the list by the column `Count_UDS_Medical_Visits` in descending order. For example, if you have a patient with a persistent asthma diagnosis code on the Problem List and 15 visits in the measurement period, but no diagnosis code on any assessment or claim and no long-term asthma medication, then that patient would be a priority for investigation over a patient who only had one visit. In other words, it could be assumed that a patient with a persistent asthma diagnosis on the Problem List and more than 15 visits should have had a diagnosis code for persistent asthma placed on at least one assessment or claim in that time, so that is sufficient cause for investigation.

Relevant Database: Staging

Parameters: The only required parameter in the SQL is named “startdate.” This date is used to define the measurement period, which is between the start date and the date the report is run. The measurement period is applied to the visit range for patients.

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Column Definitions

Column Name	Column Description
Account no	The account number that appears in the EHR
Pat last name	Patient last name
Pat first name	Patient first name
Date of birth	Patient date of birth
Age now	Age as of the day the report is run
Last UDS medical visit	The date of the last UDS medical visit in the measurement period
Count UDS medical visits	The number of UDS medical visits in the measurement period
Persist problist exists	Displays "Yes" if a diagnosis code for persistent asthma appears on the Problem List. Otherwise, will display "No"
Persist problist detail	Displays the first date that any persistent asthma diagnosis code appeared on the Problem List, along with the code itself
Intermit problist exists	Displays "Yes" if a diagnosis code for intermittent asthma appears on the Problem List. Otherwise, will display "No"
Intermit problist detail	Displays the first date that any intermittent asthma diagnosis code appeared on the Problem List, along with the code itself
Both persist intermit	Displays "Both Codes" if a diagnosis code for both persistent asthma and intermittent asthma appear on the Problem List
Encounter Diagnosis Exists	Displays "Yes, in past one year" if a persistent asthma diagnosis appeared on an Encounter Diagnosis in the past year. Otherwise, will display "Never" or "Yes, but more than a year ago."
Encounter Diagnosis Detail	Displays the last date and the last persistent asthma code that appeared on an Encounter Diagnosis within the past year
Patient Diagnosis Exists	Displays "Yes, in past one year" if a persistent asthma diagnosis appeared on a Patient Diagnosis in the past year. Otherwise, will display "Never" or "Yes, but more than a year ago."
Patient Diagnosis Detail	Displays the last date and the last persistent asthma code that appeared on a Patient Diagnosis within the past year
Claim exists	Displays "Yes, in past one year" if there was a persistent asthma diagnosis appears on a Claim in the past year. Otherwise, will display "Never" or "Yes, but more than a year ago."
Claim detail	Displays the last date and the last persistent asthma code that appeared on a Claim within the past year
Med exists	Displays "Yes, in past one year" if there was any action on persistent asthma medication within the past year.
Med detail	Displays the last date and the last persistent asthma medication name that had any medication action within the past year

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Column Name	Column Description
Check action	Suggests adding a diagnosis code to the Problem List or verifying the code already on there, based on the findings in the row

Custom Set-up at Health Center

In the normal configuration of Relevant, a Transformer contains the code to pull the raw medication data and the Importer standardizes the column names and output for use in the Quality Measure. For example, this can be seen at most health centers with ARB medications where the transformer most commonly named “relevant_arb_medications” pulls the original data and the Importer “ARB Medications” simply selects the columns needed for the Quality Measure.

However, at some health centers, this typical configuration is not followed for asthma medications. Some health centers have no Transformer and the code to pull the asthma medications exists in the Importer. This poses a problem for this validation report because it is built in the Relevant Staging Database and thus does not have access to the output from Importers. Note that this is the code for obtaining medications for the 2019 UDS Measure “Use of Appropriate Medications for Asthma”² not code for obtaining medications for the 2020 QIP measure “Asthma Medication Ratio.”

Therefore, depending on where the medication code exists (in the Transformer or the Importer) you will need to customize the code of this validation report. First, go to the TEMPORARY TABLE sub-routine in the code that begins with a note: “-- Persistent asthma medications Importer- HEALTH CENTERS: COPY HERE.”

- If your health center does NOT have an asthma medication Transformer, replace the code in this sub-routine with the code in your Importer “asthma_treatments” (on the Importer webpage, this may be titled “Asthma Treatments”).
- If your health center uses an asthma medication Transformer, delete the code in this sub-routine and go to the next sub-routine that begins with the note: “--Persistent asthma medications during the past year.” In this sub-routine, replace the statement “FROM asthma_treatments_temp” with “FROM {name of your asthma meds Transformer}” Then make sure that all the column names are appropriately aliased for later sub-routines.

In either case, note that in the Main Statement sub-routine³, the column “Med_Detail” displays the name of the last asthma medication. If you are adding code from your Importer, you can choose to also

² As of the writing of these instructions, the 2020 UDS QM versions have not been released.

³ Typically preceded by a note like “-- Main Statement”

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add the medication name (with alias “description”) so that it displays in the final output. If you are adding your Transformer directly (if it exists), you can choose to add the medication name to your Transformer if it is not already there.

Note that in the case of adding code from your Importer, running the validation report will take a long time because it has to process all the medication data. On the other hand, if you have an asthma medication Transformer, the data would be processed at night just like the other Transformers. Your health center might consider adding the asthma medication code to a new Transformer (for example, named “relevant_asthma_treatments”) and simply displaying the appropriate columns in the Importer instead. This would standardize the configuration in your system and make running the validation report more efficient.

Incomplete Labs

Report Name: RCHC Incomplete Lab Validation Report NG

Version: First version

Background and Context

This validation report displays individual records of labs that appear to have been done but are incomplete in some way. Missing data might result in the lab not being recognized by the Relevant Transformer and therefore not included in the Quality Measure.

Some health centers may have particular data entry standards for labs that are defined in a documented procedure and taught to staff involved with lab data entry. Even among the different lab Transformers, there may be differences in how lab records are distinguished as “completed”⁴. It has been observed that the manner in which labs are identified and evaluated as ‘complete’ vary between health centers, and furthermore, vary between Transformers within a single health center. This validation report attempts to “standardize” the way labs are pulled and evaluated. However, for any unique lab, the coding standards on the report might not be exactly the same as the coding standards for a particular

⁴ It is a good idea to examine and document the way that particular labs are recognized by the Relevant Transformers and how they are evaluated as being “complete.” As mentioned in this section, the default version of the report uses five criteria for completeness.

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Transformer at your health center. It is generally recommended that health centers align all of their Transformers with documented procedures for completing lab records.

The 17 labs in the table below are required by the UDS Quality Measures and displayed on the lab validation report. All labs on this report are defined by the associated Value Sets.

2020 Quality Measure	Value Set Description	Value Set OID
Cervical Cancer Screening	Pap Test	2.16.840.1.113883.3.464.1003.108.12.1017
Cervical Cancer Screening	HPV Test	2.16.840.1.113883.3.464.1003.110.12.1059
Colorectal Cancer Screening	Fecal Occult Blood Test (FOBT)	2.16.840.1.113883.3.464.1003.198.12.1011
Colorectal Cancer Screening	FIT DNA	2.16.840.1.113883.3.464.1003.108.12.1039
Diabetes: Hemoglobin A1c (HbA1c) Poor Control (> 9%)	HbA1c Laboratory Test	2.16.840.1.113883.3.464.1003.198.12.1013
Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	LDL-c	2.16.840.1.113883.3.117.1.7.1.215
HIV Screening	Human Immunodeficiency Virus (HIV) Laboratory Test Codes (Ab and Ag)	2.16.840.1.113762.1.4.1056.50
Childhood Immunization Status	Anti Hepatitis A IgG Antigen Test	2.16.840.1.113883.3.464.1003.198.12.1033
Childhood Immunization Status	Anti Hepatitis B Virus Surface Ab	2.16.840.1.113883.3.464.1003.198.12.1073
Childhood Immunization Status	Measles Antibody Test (IgG Antibody Titer)	2.16.840.1.113883.3.464.1003.198.12.1059
Childhood Immunization Status	Measles Antibody Test (IgG Antibody presence)	2.16.840.1.113883.3.464.1003.198.12.1060
Childhood Immunization Status	Mumps Antibody Test (IgG Antibody Titer)	2.16.840.1.113883.3.464.1003.198.12.1061
Childhood Immunization Status	Mumps Antibody Test (IgG Antibody presence)	2.16.840.1.113883.3.464.1003.198.12.1062
Childhood Immunization Status	Rubella Antibody Test (IgG Antibody Titer)	2.16.840.1.113883.3.464.1003.198.12.1063
Childhood Immunization Status	Rubella Antibody Test (IgG Antibody presence)	2.16.840.1.113883.3.464.1003.198.12.1064
Childhood Immunization Status	Varicella Zoster Antibody Test (IgG Antibody Titer)	2.16.840.1.113883.3.464.1003.198.12.1066
Childhood Immunization Status	Varicella Zoster Antibody Test (IgG Antibody Presence)	2.16.840.1.113883.3.464.1003.198.12.1067

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Report Description

The report displays records to consider for review. Since there are potentially many combinations of fields that the report considers incomplete or contradictory, the default version of the report may display records that actually appear complete in NextGen. In other words, not every possible logical combination of fields is coded in the default version of the report. Health centers are encouraged to modify the code to fit their unique and documented data entry procedures and workflow that define lab completeness. Below is a description of the approach used to create the default version of this report. More detail on coding exists in the section “Custom Set-up at Health Center” below.

This report defines a completed lab as having the following components:

1. A lab date is present, which is a Collected Date OR a Result Date
2. AND a lab result is present, which is any entry in the observed value field (the exception is for A1c and LDL labs, where the entry into this field must be a number⁵)
3. AND no lab results or lab comments that indicate the lab was not actually performed (e.g., “cancelled” or “not adequate” etc. See code for all options)
4. AND the observed result status is equal to F⁶
5. AND lab test status equal to “OrderCompleted” or “Final”
6. AND no delete flags on any of the associated lab tables

Note that criteria for lab completeness might differ among health centers. If your health center has a different standard and different data entry procedures, you might consider modifying the SQL code in the validation report. However, the usefulness of the report is in its ability to define a standard for lab data entry and then display labs that do not meet that standard so that they can be completed and appropriate feedback given to those staff members responsible for meeting that standard. If the completeness criteria are too “loose” in the Relevant Transformers and the validation report is modified accordingly, you risk accepting labs for the Quality Measure that were not actually done or are missing vital information necessary for the meaningful use of the electronic health record.

The objective of this report is to list lab records that are not “complete” (by the definition above) and therefore not likely to be recognized by the Transformer and included in the associated Quality Measure. At a minimum, the report will reveal records that may need to be “fixed” in order to meet the

⁵ The A1c and LDL labs must have a numerical Lab Value because that value is evaluated by the Quality Measure

⁶ In the code, this is the field (lab_results_obx.observ_result_stat = 'F')

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

completeness standard. This report can also be used for data-entry quality initiatives where feedback is given to data entry staff. This is usually more of an issue for in-house labs than labs sent out.

Typically, there may be many records in your EHR for labs that were ordered but never completed. Ideally, these labs should be cancelled or deleted in the system (according to your health center policy). The report does not display labs with any delete flag. If there is a way that cancelled labs can be distinguished from deleted labs, code should be added to the report to exclude these.

It has been observed that at some health centers, numerous labs that were not done were not marked as deleted, but rather had text entered into the value or comment fields indicating that the lab was not actually done⁷. Since this is entered as free text, there could be potentially dozens of words, phrases, abbreviations, etc. in the field. The validation report was designed to ignore the most common ones, but a health center may decide to modify the list if there are additional words frequently used for the same purpose.

Hence, the validation report will not display any records with the following words or phrases (used as wild cards) in the Result field: bad sample, bad specimen, cancel, cancelled, cx, deceased, decline, declined, did not bring, did not come, did not do, did not present, duplicate order, duplicate, error, expired, improper, inadequate, incomplete, inconclusive, insuf, invalid, never done, never got done, no cell, no data, no endo, no fit, no pap, no result, no sample, no show, no specimen, no suitable, no test, non adhere, non-satisfactory, not able, not adequate, not adhere, not collected, not complete, not done, not needed, not performed, not recorded, not run, not submitted, not suf, not suitable, obscure, redundant, refuse, TNP, too old, TPN, unable, unsat, and unsuitable.

In terms of lab records that appear on the validation report, there are two tests that a lab record must meet. The first test evaluates if *anything* was entered into a set of key fields. This would indicate, at a minimum, some data entry took place. The second test determines that there is also some missing data in any of the *key* fields. In combination, these two tests provide lab records where some data entry was done, but not all of the important fields were completed.

⁷ This is not the recommended practice, but the validation report recognizes its existence

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

More specifically, to be initially considered for the report (test #1), there must be data entry in at least one of the following key fields:

- Collected Date
- Result Date
- Order completed date
- Lab Observed Value
- Lab test status is equal to "OrderCompleted" or "Final"
- NextGen status is equal to "Signed-Off"
- Observed result status is equal to "F" or is null
- Order action status is equal to "Completed" or "Result received"

Then, to appear on final list of labs to be reviewed, at least one of the following conditions must be present (test #2):

- Missing both the Collected and Result Dates
- Missing Lab Observed Value
- Lab test status not equal to "OrderCompleted" or not equal to "Final"
- Observed result status not equal to "F"

In addition to columns identifying the patient and specific lab under review, the validation report displays the data from all of these key fields. Also, there is an informative column named "main_issue" that pronounces the problem with the record. Only one problem is expressed for one record and the problems are evaluated in the same order as mentioned above (test #2). Therefore, when working on the list and completing data entry in the EHR, consider the main issue first, but check all key fields to make sure the record is complete.

Relevant Database: Staging

Parameters: The only required parameter in the SQL code is named "startdate." This date is used to define the measurement period, which is between the start date and the date the report is run. All labs displayed by the report were ordered in the measurement period.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Column Definitions

Column Name	Column Description
Account No	The account number that appears in the EHR
Pat Last Name	Patient last name
Pat First Name	Patient first name
Date Of Birth	Patient date of birth
Value Set Name	The CMS name of the Value Set containing the lab LOINC code
Value Set Oid	The CMS Value Set identification number
Labtest Name	The Lab Test name
Result Name	The lab Attribute name
Loinc Code	The LOINC code that identifies the lab attribute
Observ Value	The result or value on the lab record
Units	The units associated with the lab result or value
Result Comment	The comment entered into the lab record
Ldl A1c Value Number	The numerical value recognized for LDL and A1c lab results
Order Date	The date the lab was ordered
Collected Date	The Collected Date on the lab record
Result Date	The Result Date on the lab record
Sign Off Date	The Sign-off Date on the lab record
Order Provider	The provider who ordered the lab
Test Status	The status of the lab test
Ngn Status	The NextGen status of the lab test
Observ Result Stat	The observed result status of the lab test
Order Completeddate	The order completed date on the lab record
Order Actstatus	The order active status of the lab record
Main Issue	Will display one of five potential problems with the lab record, evaluated in order

Custom Set-up at Health Center

The validation report defines a standard set of fields that must have proper data entry in order for a lab record to be considered “complete.” The specifications are described in the Report Description section above. If your health center has a different standard that is published in a policy or training materials, you may consider modifying the code in the WHERE statement of the TEMPORARY TABLE initial_lab_list. You may also have to modify the CASE WHEN statement of the field main_issue in the Main Statement in order to accommodate your custom specification.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

If staff at your health center are not deleting (or cancelling) labs that were never performed, but rather entering text explaining the situation into the Result field of the lab record, you may consider adding more key words to the list of words in the last WHEN statement of the TEMPORARY TABLE `initial_lab_list`.

Cancer Exclusions

Report Name: RCHC Cancer Exclusion Validation Report NG

Version: Second version. Report from 2019 modified in November 2020 to enhance functionality by adding patients with cancer exclusion diagnosis codes from Assessments.

Background and Context

There are three Quality Measures that focus on screening and detection of cervical, breast and colorectal cancers. Each of these measures have exclusion criteria for patients who have had surgeries to completely remove the organ that was the site or potential site of the cancer. These patients should therefore not be included in the denominator of the measure.

The RCHC Data Standards and Integrity Committee agreed on recommendations for the standard manner that patients with cancer exclusions should be documented in the health record. These standards as well as diagnosis codes and key text words appear in Appendix A at the end of these instructions. Relevant Transformers and Importers at the health center should follow these recommendations. If data entry at the health center does not follow these guidelines, then patients may potentially be included in the denominator who should actually be excluded. Since these patients are less likely to have the required screening, they frequently count against the health center in the measure numerator.

The approach adopted by the RCHC Data Standards and Integrity Committee assumes that a patient who meets the normal denominator criteria of a measure should be screened for cancer unless there is enough evidence in the medical record to exclude them. When a provider sees a patient who meets the criteria for cancer screening (i.e., generally the Quality Measure denominator criteria for that cancer), Care Gaps in Relevant Visit Planning should prompt the provider to initiate the cancer screening process. If the provider determines that, based on patient history, the patient should be excluded from this

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

screening, the correct diagnosis code should be placed on the Problem List, or the correct key text placed into Surgical History, so that the Care Gap will no longer be active. This action will also cause the Quality Measure to exclude the patient. Therefore, it is important that data entry practices are matched to the code that exists in the Transformers, Quality Measures and Care Gaps for the identification of patients who should be excluded from screening.

Report Description

Three data items are needed in order for the Quality Measure report to evaluate the screening exclusion:

1. Identification of the relevant organ associated with the Quality Measure
2. Indication that the entire organ was removed, not just a part of it (residual organs still need to be screened for cancer)
3. Date that the organ was removed

In most cases, the health centers using NextGen are using two locations to document cancer exclusions: Surgical History and Patient Diagnoses. Surgical History is dependent on key words entered into a text field, which is generally a less reliable method. Nonetheless, the RCHC standard allows this and the report recognizes combinations of key text words. The Surgical History screen has a date field associated with the surgery, which is needed to define when the patient should first be removed from the measure denominator. Diagnosis codes, on the other hand, are structured and indicate the entire organ was removed. Theoretically, the Problem List is the best location in NextGen for this kind of diagnosis code because there is a field for the surgery date (i.e., the Onset Date). However, the validation report targets Patient Diagnoses because that location seems to be where the codes are being entered and also where the Relevant Transformers point to.

Because Surgical History is not structured, it is the major source of the records that will appear in the validation report output. These records only partially meet the standard and are therefore not currently used to exclude the patient from the cancer report denominator. In other words, some text exists in the record that indicates the patient perhaps might have an exclusion, but the evidence does not meet the required three criteria of the standard.

For example, in some cases, there may be a description of the surgery, but not whether the entire organ was removed. In other cases, a surgery date is not present or not in a format that can be recognized as a date.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

There are three locations used by the validation report to obtain cancer exclusion diagnosis codes: Patient Diagnosis, Encounter Diagnosis and the Problem List. Because, in most cases, the Patient Diagnosis location is the standard for the cancer exclusion Transformers in Relevant, it is primarily used by the validation report⁸. Therefore, the report will display patients who have a cancer exclusion code in Encounter Diagnosis or the Problem List, but not in Patient Diagnosis. This is the general pattern used for this standard validation report, but health centers should customize the report depending on what approach their Transformers are actually using.

The records displayed by the report should be considered candidates for exclusions if additional evidence can be found in the medical record indicating the patient meets the normal exclusion requirements described by national cancer screening guidelines and the Quality Measure. The report displays the text containing the potential exclusion or the diagnosis code (column “Possible evidence”) and the cancer type (column “Cancer type”). The report user can evaluate the evidence and decide if additional investigation in the medical record itself is warranted. Sometimes, typed descriptions in Surgical History contain additional information not recognized by the report code. Patients on the list obviously not meeting the exclusion criteria can be ignored (they will remain in the denominator if they otherwise qualify for the measure). Other patients should be investigated further in NextGen. If they qualify for the exclusion, the health center should follow their own guidelines for data entry based on the recommendations of the RCHC Data Standards and Integrity Committee⁹.

The results displayed on the report are automatically narrowed for patient age ranges that correspond to the Quality Measure definitions. This means that patients outside of the age range are not displayed. To be sure, the ranges are: breast cancer (between 50 and 74 years), cervical cancer (between 23 and 64 years) and colorectal cancer (between 50 and 75 years). Furthermore, patients are excluded from the report if they already meet any exclusion criteria for the Quality Measure (including non-cancer related criteria).

On the report, each row corresponds to one patient with one potential exclusion for one cancer type. Therefore, some patients may appear duplicated if they have potential exclusions for more than one

⁸ As mentioned above, Patient Diagnosis may not be the “best” location from a data quality standpoint. In any case, health centers should ensure that all of their cancer exclusion Transformers identify the appropriate eCQM Value Set diagnosis codes from a standard location using a standard approach for all three types of cancer.

⁹ Also, review the Transformers to ensure that they accept the diagnosis codes and appropriate text recommended by the RCHC Data Standards and Integrity Committee. If they do not, then they are evaluating patients differently than the validation report.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

cancer. The last text or code entry, by source, is displayed on the report in the column “Possible evidence.” The results are ordered by cancer type and patient.

Relevant Database: Staging

Parameters: The only required parameter in the SQL code is named “startdate.” This date is used to define the measurement period, which is between the start date and the date the report is run. Patients displayed on the report must have had at least one UDS medical visit in the measurement period.

Column Definitions

Column Name	Column Description
Account no	The account number that appears in the EHR
Pat last name	Patient last name
Pat first name	Patient first name
Date of birth	Patient date of birth
Age now	Age as of the day the report is run
Last UDS medical visit	The date of the last UDS medical visit in the measurement period
Count UDS medical visits	The number of UDS medical visits in the measurement period
Cancer type	The type can be cervical, breast or colorectal cancer
Possible evidence	The last raw text entry containing the partial exclusion criteria
Entry encounter date	The last data entry date <ul style="list-style-type: none"> • For surgical history, this is the date of the last (most recent) text entry • For diagnosis codes, this is the last encounter date when code was entered
Raw performed on	The raw text date the surgery was performed <ul style="list-style-type: none"> • For surgical history, this is the date of the last (most recent) text entry of the ‘Performed On’ date, as entered into NextGen • For diagnosis codes, this is the last encounter date when code was entered (for Encounter Diagnosis) or the Onset Date (for Problem List)
Final performed on	The ‘performed on’ date, using code to transform the date to a standard date

Custom Set-up at Health Center

This report is built in the Relevant Staging Database. Not all instances of Relevant have Transformers that define the cancer exclusions, but these Transformers are assumed to exist and are used in the report. If your health center has the code for exclusions built only in the Importers, those outputs will not be available in the Staging Database.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Therefore, the first step to customizing this report is to determine if your instance of Relevant features Transformers for all of the necessary 2020 exclusions. Possible names for these Transformers are:

- relevant_hysterectomies
- relevant_mastectomies
- relevant_colon_cancer
- relevant_colectomies
- relevant_hospice_care
- relevant_long_term_care_stays
- relevant_frailty_cases
- relevant_advanced_illness_cases
- relevant_dementia_medications

If these Transformers exist, they should be used in the validation report code directly. If they do not exist, then the Importer Code copied to the sub-routine¹⁰.

The SQL code is broken down into seven parts, which are labelled in the notation heading of each TEMPORARY TABLE (read the text after the two dashes, or "--"). The cancer exclusions are combined in "Part 4" of the code which creates a Temporary Table "cncr_exclusions." If your instance of Relevant has Transformers for the cancer exclusions (i.e., hysterectomies through colectomies in the bulleted list above) then they should be all added to Part 4 of the code.

If any of the cancer exclusions exist only in an Importer, the Importer code must be copied to the report and run as a Temporary Table. The default version of the report uses copies of the Colectomies and Colorectal Cancer Cases Importers in parts 2 and 3 of the code. For example, a Temporary Table "colectomies_copy" was created in Part 2 of the code and then joined to the cancer exclusions Temporary Table in Part 4 of the code.

If your instance of Relevant has a Transformer for colectomies, you should delete Part 2 of the code and join your Transformer directly to Part 4 of the code (in place of the "colectomies_copy" in the default

¹⁰ Hospice care is also an exclusion for the Quality Measure and should, theoretically, be part of this list of Transformers. However, the Transformer relevant_hospice_care_interventions does not appear to be picking up data at any NextGen health center and so it is currently excluded from the code in this version of the report. If your health center establishes a routine for documenting hospice care using a Transformer, add it directly to the report. If the code is in an Importer only, copy the code to a Temporary Table and add to the report.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

code). Since the Temporary Table in Part 4 is a UNION query, make sure that the fields you display in the SELECT statement are aligned with the fields in the other SELECT statements there.

If your instance of Relevant is missing any other cancer exclusion Transformers, create as many Temporary Tables as necessary and copy the code in the Importer to them. It is suggested that you name the Temporary Tables in obvious fashion and notate what you did (you can even continue the notation using the existing scheme, like Part 3A, Part 3B, etc.).

All of these cancer exclusion Temporary Tables built from Importers should be joined into the cancer exclusion Temporary Table in Part 4 of the code. You can use the UNION, SELECT DISTINCT and FROM statements already present in that Temporary Table as guides for your customization. Again, the column names and intention of the Temporary Table in Part 4 must be preserved all the way through all the UNION sub-queries. The cncr_exclusions Temporary Table in Part 4 is joined to the Main Statement of the report in Part 7 of the code. No patient with an exclusion in cncr_exclusions should appear in the validation report (they are already excluded from the QM).

Likewise, End of life exclusions are combined together in Part 5 of the code using UNION commands. By default, it is assumed that these exclusions exist in Transformers. However, if the SQL code exists in Importers, this code must be copied to Part 5 using the appropriate alias names for fields so that the UNION will execute without an error. The endoflife_cases Temporary Table in Part 5 is joined to the Main Statement of the report in Part 7 of the code. No patient with an end of life exclusion should appear in the validation report (they are already excluded from the QM).

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Incomplete or Non-Standard Demographic Data

Report Name: RCHC Demographics Validation Report NG

Version: First version

Background and Context

The UDS and OSHPD reports feature tables that summarize various patient demographic characteristics. Identifying patients with missing or incomplete demographic fields and correcting them is an important step in ensuring the accuracy of reporting this data. It is sometimes necessary for the Relevant Transformers to place non-standard data into the standard categories. Because non-standard data can come in many forms, they might end up in a category like “unknown” or “unreported.” The health center should have an opportunity to identify these patients and make a correction so the patient can be counted appropriately.

The goal is to make reporting more accurate, which often means reducing the number of unknowns but can also mean ensuring that patients are reported in the correct summary category. To achieve this, patient records displayed by the report can be updated, but results can also lead to tweaking the Transformers, when appropriate. The report should be modified when changes are made to the Transformers, or when coding differences are detected between the report and the Transformers. In other words, the report should display data missed or not recognized by the Transformers, and so it might need to incorporate little extra custom coding.

One row of the report is one patient who has something in their record that needs attention. However, not only does the report show patient records that may need to be changed, but it also shows how some kinds of data are being summarized. Therefore, if you run the report and get a couple thousand patients, do not automatically think you have to make a couple of thousand changes! You may look at how the report is pulling patients and decide that those records do not need to be manually changed. For example, you may have many patients without a language entered in NextGen. The report will display these patients (the point is to reduce the number of unknowns so that the data can be reported more accurately). But if you are fine with all of those patients not having a language entered in NextGen, you can just ignore them or modify the report code to not display them anymore. In other words, the report can also help you understand your data and could lead you to make adjustments to the report or to the Transformers, if needed. The report intentionally displays many ID fields in Relevant to help you investigate unexpected data using DataGrip.

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Report Description

This report is intended to be exported to Excel and then sorted or filtered accordingly. Because of the potential backlog of missing or non-standard data, the first running of the report could reveal dozens, hundreds or thousands of records. The health center can prioritize these records based on the type of missing information. Some types of “problems” may have more records than others and may be more vital to review. It is a good idea to consider records together that have the same text in the column “Action Needed Agg.”

The report only displays patients who need to be reviewed and the type of review is displayed in the column “Action Needed Agg.” One patient may have more than one action needed. The following is a list of attributes that the report focuses on:

1. Zip code: missing or non-standard. A zip code should be 5 digits or 5 digits plus a dash and another 4 digits
2. Age: actions will display for age options under the following circumstances:
 - a. Missing date of birth,
 - b. Date of birth in the future
 - c. Age over 111 years
3. Race: actions will display for race options under the following circumstances:
 - a. The Transformer does not pick up any race for the patient
 - b. The race ID displayed by the Transformer is not mapped
 - c. The Transformer is saying that the race is unknown because the race entered into NextGen is non-standard
4. Ethnicity: actions will display for ethnicity options under the following circumstances:
 - a. The Transformer does not pick up any ethnicity for the patient
 - b. The ethnicity ID displayed by the Transformer is not mapped
 - c. The Transformer is saying that the ethnicity is unknown because the ethnicity entered into NextGen is non-standard.
5. Language: missing language entry
6. Gender: This category covers both the options for sex/gender assigned at birth sections (UDS table 3A and OSHPD report page 3) and the gender identity section (UDS table 3B). The point is not to force any particular patient into any particular category (there is always an “Other” option for gender identity) but rather to highlight patients who seem to have conflicting entries in different fields, or to simply display how certain data combinations are being summarized. Gender identity can come from several potential places in NextGen. A comparison between all places cannot be made because health centers enter it in different ways. Therefore, a

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

comparison is made between the final product of the Transformer “relevant_genders” and what exists in the “Hub” (i.e., the main patient information screen). The cases identified are:

- a. The Transformer does not pick up any gender identification
 - b. The report flags a patient if a binary gender option (male or female) is picked up by the Relevant Transformer which is opposite to the binary gender option chosen in the Hub.
 - c. The Transformer displays “Choose not to disclose” for gender identification but the patient has a binary gender option in the Hub
 - d. The patient has the Transgender option marked in the Hub but both the Transformer and the Hub show the same binary option
7. Sexual orientation: The sexual orientation ID displayed by the Transformer is not mapped
 8. Poverty: A fee schedule and poverty status has not been determined for an uninsured patient in the past two years
 9. Insurance: The insurance ID displayed by the Transformer is not mapped to a Relevant insurance group¹¹, or to a UDS or OSHPD category.

The areas in the patient’s record that need attention are aggregated in the report column “Action Needed Agg.” Lists of patients can be given to staff members who have authorization to make changes to the patient record in NextGen. Clear policies around standard and proper data entry should be developed and followed by the health center. Remove the columns intended for code developers (the ID columns) from the lists given to others for record modification. Alternately, make a second version of the report that is customized to display only the actions that a front desk person needs to “fix.”

Relevant Database: Staging

Parameters: The measurement period start and end dates define the range of UDS visits from which unduplicated patients displayed by the report are drawn. The end date also defines the last date that a sliding scale or insurance enrollment can be examined for the columns that look at those items.

¹¹ Note that at some health centers, when an insurance name does not display any corresponding payer groups on the relevant_payers table, this is interpreted as “Other public insurance” for the UDS report by default. This kind of insurance should be thoroughly investigated (it most likely belongs in another category). In this situation, the text 'UDS insurance id not mapped to a Relevant category' will appear in the column “Action needed agg”

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Column Definitions

Column Name	Column Description
Patient Id	Internal patient ID code
Mrn	The account number that appears in the EHR
Last Name	Patient last name
First Name	Patient first name
Date Of Birth Transf	Date of birth as displayed on the table relevant_patients created by a Transformer
Date Of Birth Raw	Date of birth as displayed on the raw NextGen table "person"
Age End Mp	Age of the patient at the end of the measurement period
Zip Code Transf	Zip code as displayed on the table relevant_patients created by a Transformer
Zip Code Raw	Zip code as displayed on the raw NextGen table "person"
Language Transf	Language as displayed on the table relevant_patients created by a Transformer
Language Raw	Language as displayed on the raw NextGen table "person"
Race Id	Race ID code as displayed on the table relevant_patients created by a Transformer
Race Text Transf	Race text that corresponds to the race ID code in Relevant
Race Raw	Race text as displayed on the raw NextGen table "person"
Ethnicity Id	Relevant ethnicity ID code as displayed on the table relevant_patients created by a Transformer
Ethnicity Text Transf	Ethnicity text that corresponds to the Relevant ethnicity ID code in Relevant
Ethnicity Raw	NextGen ethnicity ID code(s) as displayed on the raw NextGen table "person"
Gender Id	Gender ID code as displayed on the table relevant_patients created by a Transformer
Gender Text Transf	Gender text that corresponds to the gender ID code in Relevant
Assigned Female At Birth	Field for assigned female at birth as displayed on the table relevant_patients created by a Transformer
Sex Raw Hub	Sex as displayed on the raw NextGen table "person"
Gender Raw Sh	Gender as displayed on the alternate raw NextGen table for genders (this is different for different health centers, but might originally come from Social History)
Sexual Orientation Id	Sexual orientation ID code as displayed on the table relevant_patients created by a Transformer
Sexual Orientation Name	Sexual orientation text that corresponds to the sexual orientation ID code in Relevant

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Column Name	Column Description
Poverty Level Percent	Poverty level percentage that appeared on the last sliding scale assigned before the end of the measurement period
Pov Assigned Year	The year that the last poverty level was assigned before the end of the measurement period
Pov Refused To Report	Will display TRUE (i.e., a check mark) if the patient refused to report poverty
Ins Id Lastvisit	Insurance ID code (otherwise known as the payer ID code) that appeared on the last claim before the end of the measurement period, as displayed on the table relevant_insurance_enrollments created by a Transformer
Ins Name Lastvisit	The insurance name text that corresponds to the insurance/payer ID code in Relevant
Ins Group Lastvisit Uds	The insurance group name used for UDS reporting that corresponds to the insurance/payer ID code in Relevant
Ins Group Lastvisit Relevant	The insurance group name Relevant assigns to the insurance/payer ID code
Action Needed Agg	An aggregated list of recommended actions to investigate and possibly respond to in order to more accurately display data in this record

Custom Set-up at Health Center: Generally, no set-up is necessary for the report to work. However, as mentioned above, over time you may need to tweak the report so that it pulls and interprets the data similar to how your Transformers work. Alternately, you may want to eliminate groups of patients with certain characteristics because you have determined that those records do not need to be changed. The report identifies areas that need attention with code in the Temporary Table for “action_items_temp.”

It appears that NextGen health centers do not have a Transformer for Insurance Enrollments. Therefore, in the default version of the report, the code from the Importer “Insurance Enrollments” is copied to a temporary table named “relevant_insurance_enrollments_temp.” If the code from this Importer is different in your instance of Relevant, copy it to the report. Note that to reduce overall running time for the report, the initial list of patients from the first temporary table “pt_list_temp” is joined to this query.

If your health center combines demographic data from two or more databases (for example, NextGen plus Dentrix), you will need to modify the code to add the Dentrix demographics. The default report is for NextGen only. This might involve adding a UNION to the temporary tables for “pt_list_temp” and “main_statement_temp.”

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Different health centers obtain Gender identity from different locations. Look at your Transformer for “Build relevant_patients” to see how it is done. If your health center has a TEMPORARY TABLE statement for “temp_gender” then the default code is fine for you. If not, do the following:

1. Delete the section in the report code for the TEMPORARY TABLE for “temp_gender”
2. Go to the section “--Prepare data for Main Statement” (CREATE TEMPORARY TABLE main_statement_temp) and remove the join after the WHERE statement that says “LEFT JOIN temp_gender ON temp_gender.person_id = pt_list_temp.person_id” and “LEFT JOIN relevant_genders gender2 ON gender2.id = temp_gender.gender_id”
3. Then in the SELECT section of the Main Statement replace the line “gender2.name AS gender_raw_sh” with “person.current_gender AS gender_raw_sh”

By default, the report is taking race and ethnicity from the “persons” table (see temporary table “main_statement_temp”). You may adjust this if your instance of Relevant is using the table “person_race_xref” directly in the Transformer relevant_races. The idea is to display the most basic race and ethnicity data as it exists in NextGen so that it can be compared to what has been interpreted by the Transformer.

In the temporary table “main_statement_temp” there is a section ‘Gender actions.’ Have a look at how the data is displayed in the columns “sex_raw_hub” and “gender_raw_sh” in terms of single letters (M or F) or words (Male or Female). Adjust the CASE WHEN statement as necessary.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

B. Quality Measure (QM) Understanding Reports

The main purpose of this sub-set of reports is to describe the overlap between the Value Sets and the data that is in your EHR. The RCHC Data Standards and Integrity Committee recommended in 2019 that all health centers define labs, medications, vaccines, and diagnoses (especially for chronic diseases) using the Value Sets. This can be done with coding directly in the Relevant Transformer because these Value Sets are updated by Relevant every year when the new set of Quality Measures becomes available. Conversely, if a health center chooses to “hard-code” the definitions, the codes utilized must be synonymous with current Value Set, and then must be manually checked and updated every year because the Value Sets can change over time.

This sub-set of reports begins with “QM Value Set Codes” which simply displays all of the codes for all of the Value Sets used by the Quality Measures regardless of use or presence in the EHR. Appendix C lists the Value Sets themselves in a large table. Then there are reports for labs, medications and vaccines that show which of these items in your EHR intersect with the codes of the Value Sets. For example, there is a Value Set that defines cervical cancer screening labs, so one report displays all of the lab names and attributes that were used in the EHR in a defined period of time. The reports also display internal EHR ID codes (where available) for individual items so that developers can investigate things that do not look right.

QM Value Set Codes

Report Name: RCHC List of QM Value Set Codes NG

Version: Second version. Value Sets were updated in November 2020 (see end of Report Description section below).

Background and Context

The Quality Measure definitions from major reporting agencies depend on Value Sets to define essential components in a standard manner. In this way, all health centers reporting the measures distinguish these components in the same way and data can be considered “standardized” when it is aggregated on the RCHC Relevant Instance. The Value Sets are normally updated annually on a national level by an expert authority.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

The RCHC Data Standards and Integrity Committee decided to directly incorporate Value Sets into the Relevant Transformers so that the correct and most recent codes are consistently applied¹². When a new set of reports is released by Relevant (for example, the 2020 UDS Quality Measures), the Value Set will also be updated to the same version as described by the Quality Measure technical documents (otherwise known as the eCQMs).

Each Value Set contains a number (sometimes dozens) of codes, normally of one type. Depending on the needs of the measure, there may be different Value Sets defining code types such as diagnosis codes, labs, medications, procedures, and vaccines. Depending on the type, codes in a Value Set are matched to the same codes in a particular location in your EHR. For example, a patient with a diagnosis code on the Problem List that matches a diagnosis code belonging to the Value Set for diabetes can then be further considered for the diabetes Quality Measure.

Appendix C lists all of the Value Sets that should be associated with Transformers or Importers for each Quality Measure. The report QM Value Set Codes displays the individual codes that are contained within the Value Sets.

Report Description

This report is a reference report that is useful for understanding other validation reports or Quality Measures that rely on Value Set codes. The objective of the report is to display all Value Set codes associated with the UDS and QIP Quality Measures. Note that all codes are listed, whether or not they are associated with codes recently used in the EHR. The other reports in the Quality Measure Understanding group of reports (for labs, medications, and vaccines) display which codes are being used in a particular measurement period in your EHR, as well as some additional characteristics.

The QM Value Set Code report displays codes for diagnosis (ICD-9 and ICD-10), labs (LOINC), medications (RXNORM), procedures (CPT), and vaccines (CVX)¹³. Only codes from the most recent (i.e., current) Value Sets are displayed, not all historical codes. One row of the report represents one code from one Value Set. It is recommended that you export the results to Excel so you can filter and sort the list as needed. The results of this report should not change during the year unless the underlying Value Set file is changed.

¹² If a health center “hard-codes” the Value Set codes into Transformers, etc., it is very time-consuming and difficult to verify them each year when new sets are released. The Quality Measures that RCHC-affiliated health centers are monitoring in 2020 feature more than 100 Value Sets and thousands of codes.

¹³ The exception is that QIP asthma medications are defined by NDC codes.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Columns of the report describe the Quality Measure to which the Value Set applies (and if the Value Set applies to more than one Quality Measure), as well as certain details about the Value Set and the codes it contains. There is a column named “ehr_target” that displays where the codes are applied in the Electronic Health Record, for example, to labs or vaccines. Note that there are a number of potential places in the EHR that diagnosis codes can be applied, depending on the intention of the Quality Measure. Diagnosis codes used to define populations of patients with chronic diseases are applied to the Problem List. Some diagnosis codes are not for chronic diseases but are still applied to the Problem List. Yet other diagnosis codes describe conditions that are normally added to Assessments because they are time-limited conditions.

Note that the majority of Value Sets and codes are associated with the 2020 UDS report and defined by an eCQM. Any Value Set with a number in the column “Value set oid” comes from an eCQM (the quality measure name and CMS number/version are also displayed by the report for your reference). When a UDS measure is the same as a QIP measure, the eCQM Value Set is displayed by the report (and should be the one used by the Relevant Transformers). In 2020, two QIP measures are unique. The Value Sets for these measures can be distinguished because they have “QIP” in the column “Cms code” and the value set name in the column “Value set oid” instead of a number.

Update in November 2020: Four Value Sets were added for diagnosis groups and one Value Set added for medications. These were 2020 Value Sets used by the Quality Measures but left off the previous version of the report.

Relevant Database: Staging

Parameters: This report does not have any parameters. It does not display any data that comes from NextGen and therefore is not dependent on time periods present in the medical record. The Value Sets displayed are always the latest ones present in Relevant.

Column Definitions

Column Name	Column Description
Measure qm	The name of the Quality Measure to which the Value Set applies. Note that some Value Sets are used in more than one Quality Measure (see the column “More than one qm” below)
Cms code	The CMS (Centers for Medicare and Medicaid Services) reference number for the Quality Measure name

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Column Name	Column Description
Value set name	The CMS name of the Value Set
Value set oid	The CMS identification code of the Value Set
Ehr target	The location in the EHR to which the Value Set applies
Code system name	The type of code
Code value	The code itself
Code description	The CMS description of the code
Code system version	The CMS version of the code (the latest one that exists in Relevant)
More than one qm	Column will display "Yes" if the Value Set is used in more than one Quality Measure

Custom Set-up at Health Center: no additional set-up necessary

QM Lab Names and Attributes in EHR

Report Name: RCHC List of QM Lab Names and Attributes NG

Version: First version

Background and Context

In NextGen, labs are defined from Value Sets according to their association with standard LOINC codes. One lab can have several components, called lab attributes. In NextGen, each attribute normally has some kind of lab value along with a unit of measurement and a comment. It is the lab attribute that is actually linked to the LOINC code in the system, not the general lab name. In most cases, the correct LOINC code is already present in the lab compendium because the commercial laboratories contracted with your health center use the standard LOINC codes to identify labs for their own purposes. However, the correct LOINC codes should always be confirmed, and this is especially important for in-house or other custom labs added to your system. Refer to the report "RCHC List of QM Value Set Codes" to get a list of all LOINC codes that define a Value Set for a lab that is part of the Quality Measure you are

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

interested in regardless of what is being used in your system. An authorized EHR administrator may need to make changes to the lab attribute / LOINC code associations in your system¹⁴.

The report “RCHC List of QM Lab Names and Attributes NG” lists all of the lab names and attributes in the health center EHR that match the Value Set LOINC codes for labs among the various Quality Measures that incorporate labs. This list can be used to ensure that lab attributes have the correct LOINC codes assigned to them. First, check the list for a specific Value Set to see if any lab attributes do not belong. They probably have the wrong LOINC code. Then, using your knowledge of what labs are commonly used in the system, look to see if any labs on the list are missing. As mentioned previously, this is especially important for in-house labs, but can also apply to other labs and new labs. The RCHC validation report “All Lab Names and Attributes” can also help with this purpose (see a description of this report in a section below). Association with Value Sets can also be seen on that report, but the denominator is all labs (not just Value Set labs).

Report Description

In order for a lab to be counted and displayed, it must have been ordered in the measurement period defined in the report parameters. Labs must also have a Collected Date, a Lab Value or result comment, and not have been itself deleted or cancelled. Note that the criteria for inclusion in this report may be different than for inclusion in the Quality Measures. Therefore, the number of labs displayed on the report is not necessarily the same as those identified by any lab-related Transformer in Relevant.

This report does not contain any specific patient information. Instead, each row features one lab attribute associated with a Value Set belonging to a Quality Measure. The user can also see if the lab was used frequently (the column Number labs MP displays the number of labs in the measurement period) and used very recently (the column Last date MP displays the last date the lab was ordered in the measurement period). Note that the frequency and recent activity of labs are provided for comparison purposes only (for example, seeing that one lab was ordered relatively more or less frequently than another, or seeing which lab was ordered the most within one category). This information is not the number of labs or unduplicated patients that may be displayed in a Quality Measure, or billed in the measurement period, etc.

Relevant Database: Staging

¹⁴ Be sure to follow your health center policy in this respect and thoroughly research any potential consequence of the change.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Parameters: The only required parameter is the measurement period start date. Labs displayed by the report were ordered between the start date and the date the report was run.

Column Definitions

Column Name	Column Description
Qm name	The name of the Quality Measure to which the Value Set containing the code applies.
Valueset name	The CMS name of the Value Set
Valueset oid	The CMS identification code of the Value Set
Labtest name	The lab name in NextGen
Labattribute name	The lab attribute name in NextGen
Valueset loinc	The LOINC code itself in NextGen
Valueset loinc description	The CMS description of the LOINC code
Number labs mp	The number of times the attribute was associated with a “completed” lab in the measurement period
Last date mp	The last date the attribute was associated with a “completed” lab in the measurement period

Custom Set-up at Health Center: no additional set-up necessary

QM Medications in EHR

Report Name: RCHC List of QM Medications NG

Version: Second version. Value Sets were updated in November 2020 (see end of Report Description section below).

Background and Context

The eCQM Value Sets define medications according to a standard called RxNorm¹⁵. However, in NextGen, medications are identified with NDC Codes. This is important to note because you will not directly see any of the RxNorm codes from the report “QM Value Set Codes” in your EHR. A table in the

¹⁵ In contrast, the QIP asthma medications are defined by NDC codes.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Relevant Production Database named “rxnorm_crosswalk_ndc” is used to translate the RxNorm codes to NDC codes.

Report Description

The main idea behind this report is to display all of the medications that belong to the UDS QM Value Sets that were used in the measurement period. Therefore, this report is purposefully more inclusive than the Transformers for the Quality Measures in order to identify as many medications as possible.

In the report output, each row consists of one medication (defined by a unique med ID number) for one Quality Measure and one Value Set. Note that one medication can belong to more than one Quality Measure and more than one Value Set. Therefore, individual medications can be duplicated if they belong to more than one Quality Measure and Value Set. The purpose of this is to allow the user to obtain a list of medications for a Quality Measure and Value Set by exporting the list to Excel and filtering the results.

Users of the report should filter and/or sort the results in order to identify any medications that should not be in a particular Value Set. There is another RCHC validation report called “All Medications and Rx Groups” that displays all medications regardless of Value Set affiliation. This report can also be used to identify medications that do not belong to the Value Set but actually should be included. In NextGen, an appropriate NDC code would need to be added (or removed, as appropriate) to the medication administrative record in the EHR.

Medications on the report must have had an action in the measurement period. There are columns for Value Set id and name. Similar to other validation reports in this section, there are also columns for the number of encounters with a medication action and the last date when an action occurred. Note that these are helpful to understand the relative use of medications, but do not imply the number of medications or patients picked up by the Quality Measure Transformer.

Update in November 2020: One Value Set added for medications. This was a 2020 Value Set used by the Quality Measures but left off the previous version of the report.

Relevant Database: Staging

Parameters: The only required parameter is the measurement period start date. Medications displayed by the report had a medication action between the start date and the date the report was run.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Column Definitions

Column Name	Column Description
Qm name	The name of the Quality Measure to which the Value Set containing the code applies.
Valueset name	The CMS name of the Value Set
Valueset oid	The CMS identification code of the Value Set
Med id	The internal medication ID number in NextGen
Med name	The medication name in NextGen
Number meddates mp	The number of dates (encounters) with at least one action on the medication in the measurement period
Last date mp	The date of the last visit with at least one action on the medication in the measurement period

Custom Set-up at Health Center: no additional set-up necessary

QM Vaccines in EHR

Report Name: RCHC List of QM Vaccines NG

Version: First version

Background and Context: This report lists all vaccines in the health center EHR that match the Value Set CVX codes¹⁶ for vaccines featured by the Childhood Immunization Quality Measure. This list can be used to ensure that vaccines have the correct CVX codes assigned to them. First, check the list for a specific Value Set to see if any vaccines do not belong. They probably have the wrong CVX code. Then, using your knowledge of what vaccines are commonly used in the system, look to see if any vaccines on the list are missing. This step is important because, typically, the health center enters a number of customized vaccines into the system and might not have also associated a CVX code to those records. The RCHC validation report “All Vaccines” can also be sorted alphabetically by vaccine name to at least group some together that might have common names. Association with Value Sets can also be seen on that report, but the denominator is all vaccines (not just Value Set vaccines).

¹⁶ To define vaccines, the Value Sets contain both CVX codes and CPT codes. Vaccine data is taken from Immunization Orders in NextGen and not from claims. Therefore, CVX codes are used on this report.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Report Description

In order for a vaccine to be counted and displayed, it must have been given in the measurement period, and not have been deleted. Note that the criteria for inclusion in this report may be different than for inclusion in the Quality Measures. Therefore, the number of vaccines displayed on the report is not necessarily the same as those identified by any vaccine-related Transformer in Relevant.

This report does not contain any specific patient information. Instead, each row features one vaccine associated with a Value Set belonging to a Quality Measure. The user can also see if the vaccine was used frequently (column number_vacc_mp displays the number of vaccines in the measurement period) and used very recently (column last_date_mp displays the last vaccine date in the measurement period). Note that the frequency and recent activity of vaccines are provided for comparison purposes only (for example, seeing that one vaccine was ordered relatively more or less frequently than another, or seeing which vaccine was ordered the most within one category). This information is not the number of vaccines or unduplicated patients that may be displayed in a Quality Measure, billed in the measurement period, etc.

Relevant Database: Staging

Parameters: The only required parameter is the measurement period start date. Vaccines displayed by the report were given between the start date and the date the report was run.

Column Definitions

Column Name	Column Description
Qm name	The name of the Quality Measure to which the Value Set containing the code applies.
Valueset name	The CMS name of the Value Set
Valueset oid	The CMS identification code of the Value Set
Vaccine name	The vaccine name in NextGen
Valueset cvx	The CVX code itself
Valueset cvx description	The CMS description of the CVX code
Number vacc mp	The number of times the vaccine was given in the measurement period
Last date mp	The last date the vaccine was given in the measurement period

Custom Set-up at Health Center: no additional set-up necessary

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

C. System Set-Up and Utilization Reports

These reports basically display big list of items with associated details. They cover all of the major item groups. When displaying data from the EHR, the internal ID code is displayed by the report (when available). This can help a developer to more easily investigate unexpected data.

Whereas the reports in the previous section display only the items in your EHR that correspond to the Value Set, the reports in this section display all of the items. Therefore, these reports are more useful for purposes other than simply defining the Value Set, like identifying items that are currently not connected to the Value Set but should be. For example, there might be a vaccine that you recognize by name as something that “should” belong to a particular Value Set but is not currently connected to it because it does not have the appropriate CVX code. Therefore, it is recommended that you export the large list to Excel and then sort or filter the list by name to see groups of similar items. If one item appropriately belongs to a Value Set, it is likely that other items with the same or similar names also should belong to the same Value Set¹⁷.

All Diagnosis Codes

Report Name: RCHC List All Diagnosis Codes NG

Version: Second version. Value Sets were updated in November 2020 (see end of Report Description section below).

Background and Context

This report is useful to get an idea of which diagnosis codes are associated with the UDS and QIP Value Sets and which are most commonly being used during encounters. For example, which diabetes diagnosis code is the most common among all codes in the Value Set for the diabetes Quality Measure.

This report belongs to the System Set-Up and Utilization sub-set of validation reports, so the data displayed is for research and understanding purposes. There is not a specific validation routine suggested for this data. However, insight into the Value Set codes can be gained with this report. For example, you can see that the Value Set for the QIP measure Asthma Medication Ratio contains

¹⁷ In all cases, suspicions like this should be verified by a clinical expert.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

diagnosis codes for both persistent and intermittent asthma. This seems unusual since the measure description in the 2020 QIP manual states the denominator is for patients “...who were identified as having persistent asthma...” (page 25 of the manual, 2020 PCP QIP Measurement Specifications: FAMILY PRACTICE).

Report Description

The report lists all diagnosis codes that are associated with encounters in the measurement period. A count of visits and unduplicated patients are also displayed so the user can get an idea of how the codes are being used¹⁸. There are additional columns that describe the diagnosis code in terms of membership in a UDS or QIP Value Set, and from where the code is pulled for the Quality Measure (i.e., from the Problem List or from an Assessment).

This report shows one unique diagnosis code per row. If the code belongs to more than one Value Set, multiple sets will appear in the column for aggregated Value Sets (column name “Value set name agg”). Likewise, the Quality Measure name, Value Set description, Value Set OID and EHR target are also aggregated when more than one is associated with the code.

Diagnosis codes from UDS and QIP Value Sets are displayed, but in cases where a Quality Measure is the same between them, the UDS Value Set is displayed.

Lastly, note that when exporting the results to Excel, default formatting may eliminate some initial and trailing zeros in the Dxcode column.

Update in November 2020: Four Value Sets were added for diagnoses groups. These were 2020 Value Sets used by the Quality Measures but left off the previous version of the report.

Relevant Database: Staging

Parameters: The only required parameter in the SQL code is named “startdate.” This date is used to define the measurement period, which is between the start date and the date the report is run. Counts of patients displayed on the report must have had at least one encounter in the measurement period.

¹⁸ On UDS Table 6A, there is a section called “Visits and Patients by Selected Diagnoses, Lines 1–20d.” Patients in this section are identified by a diagnosis code on an Assessment in the measurement period. It is commonly agreed that defining patients with chronic diseases by diagnosis codes on Problem Lists is more precise than defining patients by diagnosis codes on Assessments, but you can examine your own data.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Note that this encounter criterion is intentionally broad so that visits other than UDS medical visits are captured (along with the diagnosis codes).

Column Definitions

Column Name	Column Description
Code System	Code system (ICD-9 or ICD-10)
Dxcode	The diagnosis code itself
Dxname Mostcommon	The most common name assigned to the diagnosis code by users
Ed Dx Apppearances	Number of times the code appeared as an encounter diagnosis
Ed Dx Undup Pts	Unduplicated patients with the code as an encounter diagnosis
Pd Dx Apppearances	Number of times the code appeared as a patient diagnosis
Pd Dx Undup Pts	Unduplicated patients with the code as patient diagnosis
Measure Qm Agg	The Quality Measure name associated with the diagnosis code (if applicable). Names aggregated if more than one is associated.
Value Set Name Agg	The Value Set name associated with the diagnosis code (if applicable). Names aggregated if more than one is associated.
Value Set Oid Agg	For UDS measures, the identification code of the CMS Value Set associated with the diagnosis code (if applicable). For QIP measures, the name of the Value Set associated with the diagnosis code (if applicable). Names aggregated if more than one is associated.
Value Set Code Description Agg	For UDS measures, the description of the code (if applicable). Descriptions aggregated if more than one is associated.
Dx Type Agg	The diagnosis type as it related to its use by the Quality Measure

Custom Set-up at Health Center: no further set-up is necessary for this report

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Diagnosis Location Report

Report Name: RCHC Diagnosis Location Report NG

Version: First version

Background and Context

There are three tables in NextGen that contain diagnosis codes attributed to a patient:

1. patient_problems
2. encounter_diags
3. patient_diagnosis

It appears that different health centers are pulling Quality Measure diagnosis codes from different tables in order to define patient populations. Furthermore, at any one health center, there is inconsistency with which table (or combination of tables) the diagnosis codes come from for different Quality Measures. These instructions are not going to propose a succinct method for entering data into NextGen. The health center will need to review its data entry workflow (or create a new one accordingly) based on directions from NextGen and their own experience. However, the Diagnosis Location Report can be used to investigate how many patients may be identified by the Value Sets from each location. Additionally, it is suggested that a consistent method of coding be used in all Transformers that identify patients of a particular diagnosis type (see below) and that those codes come from Value Sets.

Similar to the report “RCHC List All Diagnosis Codes” there is a column for diagnosis type (Dx Type). This can affect the location of where the codes should be stored and pulled. For example, the data model developed for eCW is that when a patient is diagnosed with a chronic disease (for example, diabetes) or a condition that effects care on an ongoing basis (for example, a mastectomy), the appropriate diagnosis code is placed on the Problem List. The Problem list is therefore the “source of truth” for these kinds of diagnoses and individual encounter diagnoses are not queried. However, other kinds of conditions are time-limited (for example, pregnancy) and so encounter diagnoses are used. Health centers using NextGen can also use a validation report (the RCHC Problem List Validation Report) to ensure that the Problem list is accurate for the major chronic diseases. When a Transformer identifies a “clean” list of patients with a particular chronic disease, this contributes to more accurate reporting of the QM but also confirms that Care Gaps, system alerts, reports, and case management activities (like reminder mailings) are targeted to suitable patients.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Report Description

This report simply displays the number of unduplicated patients belonging to a diagnosis-related Value Set who can be identified from the three NextGen tables containing diagnosis codes. As mentioned above, the model for eCW health centers assumes that codes for chronic diseases should be pulled from the Problem List and codes for more time-limited diseases or conditions come from Encounter Assessments. Therefore, this report features a suggested diagnosis type column (named “Dx Type”) to provide additional information to help with Transformer design and understanding.

The options for this column “Dx Type” are:

- Main chronic diseases – the main Quality Measure chronic diseases. Patients identified with these diseases should be clinically diagnosed by a professional who makes independent decisions. In the eCW model, these come from the Problem List.
- Other chronic diseases – other chronic diseases, normally used for exclusions in the Quality Measures. In the eCW model, these come from the Problem List.
- Cancer or surgery – these can come from the Problem List or the Encounter Assessment, depending on data-entry workflow. In the eCW model, these come from the Problem List.
- Encounter assessment. These time-limited diseases and conditions are normally noted during an encounter and not put on the Problem List
- Other. Depending on data-entry workflow, these can come from the Problem List or the Encounter Assessment.

This report is intended for informational and investigative purposes. It does not display patient-level information (see the report “RCHC Problem List Validation Report NG”) or detail on the individual diagnosis codes (see the report “RCHC List All Diagnosis Codes NG”). When you look at the Transformer that pulls patients for a particular Value Set (even if it does not currently use the Value Set directly), compare the number of patients identified on the tables for the Dx Type (where is possibly ‘should’ be pulling from) compared to the number of patients identified on the tables used by the Transformer.

Relevant Database: Staging Database

Parameters: The only required parameter in the SQL code is named “startdate.” This date is used to define the measurement period, which is between the start date and the date the report is run. Counts of patients displayed on the report must have had at least one encounter in the measurement period that was part of the UDS Universe. Note that this encounter criterion is intentionally broad so that visits other than UDS medical visits are captured (along with the diagnosis codes).

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Column Definitions

Column Name	Column Description
Measure Qm	The name of the Quality Measure
Value Set Name	The name of the Value Set
Dx Type	The diagnosis type (see list above)
Patient Problems Pt Count	The unduplicated count of patients who had one or more diagnosis codes belonging to the Value Set on the Problem List (Relevant table "patient_diagnosis")
Encounter Diags Pt Count	The unduplicated count of patients who had one or more diagnosis codes belonging to the Value Set on the Encounter Diagnosis (Relevant table "encounter_diags")
Patient Diagnosis Pt Count	The unduplicated count of patients who had one or more diagnosis codes belonging to the Value Set on the Patient Diagnosis (Relevant table "patient_diagnosis")

Custom Set-up at Health Center: no further set-up is necessary for this report

All Lab Names and Attributes

Report Name: RCHC List All Lab Names and Attributes NG

Version: First version

Background and Context

This report lists all of the lab names and attributes ordered during the measurement period. This is useful for checking groups of similar labs to make sure they are associated with a Value Set, where appropriate (i.e., through the LOINC code), and also to identify any labs associated with a Value Set but actually should not be associated with it. The LOINC code is connected to the lab attribute.

Note that a unique lab test name can have one or more lab attributes and that not all attributes must accompany the lab test name every time it is ordered. Furthermore, a unique lab attribute can be associated with one or more lab test names. For example, the "Basic Metabolic Panel" can have

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

attributes like Glucose, Serum Chloride, and Carbon Dioxide. But Carbon Dioxide (LOINC code = 2028-9) can appear in other labs too, like the Comprehensive Metabolic Panel and the Renal Function Panel.

Report Description

In order for a lab to be counted and displayed, it must have been ordered in the measurement period defined in the report parameters. Labs must also have a Collected Date, a Lab Value or result comment, and not have been itself deleted or cancelled. Note that the criteria for inclusion in this report may be different than for inclusion in the Quality Measures. Therefore, the number of labs displayed on the report is not necessarily the same as those identified by any lab-related Transformer in Relevant.

This report shows one unique lab test / lab attribute combination per row. If the LOINC code belongs to more than one Value Set, multiple sets will appear in the column for aggregated Value Sets (column name "Valueset name agg"). Likewise, the Quality Measure name, Value Set description, and Value Set OID are also aggregated when more than one is associated with the code.

Relevant Database: Staging Database

Parameters: The only required parameter in the SQL code is named "startdate." This date is used to define the measurement period, which is between the start date and the date the report is run. Labs displayed on the report must have been ordered in the measurement period.

Column Definitions

Column Name	Column Description
Labtest name	The lab test name that is associated with the lab attribute
Labattribute name	The lab attribute name
Lab loinc	The LOINC code associated with the lab attribute
Valueset loinc description agg	The Value Set LOINC description, if the code is part of one or more of the Value Sets (aggregated, if the attribute is in more than one Value Set)
Qm name agg	The Quality Measure name, if the associated LOINC code is part of one or more of Quality Measures (aggregated, if in more than one measure)
Valueset name agg	The Value Set name, if the associated LOINC code is part of one or more of the Value Sets (aggregated, if in more than one Value Set)
Valueset oid agg	The Value Set OID, if the associated LOINC code is part of one or more of the Value Sets (aggregated, if in more than one Value Set)
Number labs mp	The unduplicated number of labs in the Measurement Period

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Column Name	Column Description
Number attributes mp	The unduplicated number of lab attributes in the Measurement Period
Last order date mp	The last date in the Measurement Period the lab was ordered

Custom Set-up at Health Center: no further set-up is necessary for this report

All Medications

Report Name: RCHC List All Medications NG

Version: Second version. Value Sets were updated in November 2020 (see end of Report Description section below).

Background and Context

There may be situations where a Quality Manager would like to see a list of medications that have been used within a period of time. In other cases, a developer may want to gather a list of medications or medication ID numbers for adding into the SQL code of a report. This report lists all of the medications with an action in the measurement period as well as frequency of use. Similar to other reports in the System Set-Up and Utilization sub-set of validation reports, this information is displayed for research and understanding purposes.

Report Description

The report lists all medications documented in a measurement period, along with the number of unique patients and unique visits related to the medication. To be included on the report, a medication must have been used at least once in the measurement period.

This report displays unduplicated medications in rows where one medication has a unique medication ID number (column Med ID). Note that one medication can belong to more than one Quality Measure or more than one Value Set. In those cases, all of the measure names and Value Sets are aggregated into a single field as a list separated by semi-colons. This report displays medications from both UDS and QIP Quality Measures.

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Update in November 2020: One Value Set added for medications. This was a 2020 Value Set used by the Quality Measures but left off the previous version of the report.

Relevant Database: Staging

Parameters: The only required parameter in the SQL code is named “startdate.” This date is used to define the measurement period, which is between the start date and the date the report is run. Medications displayed on the report must be associated with an encounter in the measurement period. Note that visit criteria are intentionally broad so that visits other than UDS medical visits are captured and the greatest number of patients and medications appear on the report.

Column Definitions

Column Name	Column Description
Med Id	The internal medication ID number
Med Name	The medication name associated with the medication ID
Uds Value Set Oids	The identification code(s) of the CMS Value Set that the medication is associated with, if applicable
Uds Value Set Names	The name(s) of the CMS Value Set that the medication is associated with, if applicable
Uds Measure Qms	The UDS Quality Measure name(s) the medication is associated with, if applicable
Qip Value Set Names	The name(s) of the QIP Value Set that the medication is associated with, if applicable
Qip Measure Qms	The QIP Quality Measure name(s) the medication is associated with, if applicable
Unique Pts With Med Action	The number of unique patients with at least one action on the medication in the measurement period
Unique Visits With Med Action	The number of unique visits with at least one action on the medication in the measurement period
Last Visit With Med Action	The date of the last visit with at least one action on the medication in the measurement period

Custom Set-up at Health Center: no further set-up is necessary for this report

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

All Vaccines

Report Name: RCHC List All Vaccines NG

Version: First version

Background and Context: This report lists all vaccines and injections given during the measurement period. This is useful for checking groups of similar vaccines to make sure they are associated with a Value Set, where appropriate (i.e., through the CVX code), and also to identify any vaccines associated with a Value Set but actually should not be.

Report Description

The report shows a unique vaccine name on each row. The only 2020 Quality Measure using CVX codes is Childhood Immunization Status. If more than one Value Set is associated with the unique vaccine, the names are aggregated in the column “Valueset name agg” and the OID numbers are aggregated in the column “Valueset oid agg.”

In NextGen, vaccines can be associated with CVX or CPT codes, although we are normally using CVX codes from the Value Sets to identify them from immunization orders and not CPT codes from claims. Nonetheless, there is a column for each on the report. There are also columns that show the total number of times the vaccine was given in the measurement period.

Relevant Database: Staging

Parameters: The only required parameter in the SQL code is named “startdate.” This date is used to define the measurement period, which is between the start date and the date the report is run. The measurement period is applied to the given dates for the vaccines or injections.

Column Definitions

Column Name	Column Description
Vaccine Name	The vaccine or injection name associated with the ID number
Cvx Code	The CVX code(s) that appeared in NextGen during the measurement period
Cpt Code	The CPT code(s) that appeared in NextGen during the measurement period
Qm Name	The Quality Measure associated with the vaccine

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Column Name	Column Description
Valueset Name Agg	The Value Set name, if the associated CVX code is part of one or more of the Value Sets (aggregated, if in more than one Value Set)
Valueset Oid Agg	The Value Set OID, if the associated CVX code is part of one or more of the Value Sets (aggregated, if in more than one Value Set)
Number Vacc Mp	The total number of vaccines or injections documented during the Measurement Period
Last Date Mp	The last date in the measurement period when the vaccine or injection was given

Custom Set-up at Health Center: no further set-up is necessary for this report

All Providers, Resources and Staff

Report Name: RCHC List All Providers, Resources and Staff NG

Version: First version

Background and Context: The UDS and OSHPD reports summarize visits by providers and some kinds of Resources and Staff, organized by unique categories. These individuals must be mapped to the appropriate categories using the instructions provided by Relevant. This report provides a large list of all personnel by type and displays how they are currently mapped.

Report Description

This report displays all health center personnel who were attached to visits in the measurement period through the Provider ID (field name rendering_provider_id) on the raw NextGen table named "patient_encounter." The report displays a summary of visits from different perspectives so you can see how credit for visits is being distributed and to address any mapping issues.

One row of the report displays one Provider (although it could also be another kind of staff or resource, depending on who is credited for the visit). The report intentionally displays a wide variety of health center personnel but does not imply that all of them should have visits reported on the UDS and OSHPD reports. These reporting agencies provide specific instructions on which types of personnel are appropriate for which categories and those instructions should always be consulted when mapping is

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

concerned. Furthermore, the report does not suggest that visit counts in any column are counts that should be reported on the UDS or OSHPD reports. Again, the official instructions for those reports define the parameters for visits that are reportable. Note that the default version of the report does not include Dentrix providers or data from any other source of visits.

It is recommended that the user export the results to Excel where the data can be filtered or sorted easily. It is a good idea to involve somebody at your health center who is an expert on the job descriptions of staff members and familiar with the different definitions of staffing categories on the UDS and OSHPD reports.

Provider names, credentials and specialty are displayed by the report. Generally, providers with similar combinations of credentials and specialty belong to the same UDS or OSHPD categories. Therefore, sort the list by those fields and look to see if groups of providers or other staff are mapped in the same way. Also, look to see that there is consistency in the mapping between the UDS and OSHPD categories¹⁹. Lastly, ensure that the credentials and specialty fields are completed and consistent (at least) for all providers who make independent clinical decisions in the medical, dental and mental health departments. If you see providers or other staff members who are incorrectly mapped, investigate the logic by looking at how the staff member type (field `staff_member_type_id`) was assigned in the Importer “Visits”²⁰

Relevant Database: Staging

Parameters: The measurement period start date and end date define the visit range considered by the report.

Column Definitions

Column Name	Column Description
Provider Id	The internal Provider ID number
Last Name	Last name
First Name	First name

¹⁹ Even though there are differences in the staff categories between the two reports, there are areas of overlap where consistency can be observed. For example, one person should not be mapped as a nurse on one report and a doctor on the other.

²⁰ Alternately, trace how visits are summarized by UDS and OSHPD staff categories in the report that you use to obtain the data. Different health centers employ different methods.

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Column Name	Column Description
Credentials	Credentials
Specialty	Specialty
Is Resident	Is a resident (TRUE/FALSE)
Ftes	Full Time Equivalents
Uds Staff Member Type	Name of the UDS Table 5 staff member type
Uds Major Serv Categ	Name of the UDS major service category for that UDS Staff Member Type
Oshpd Provider Category	Name of the OSHPD Page 2 staff member type
Visit Count Raw	Raw count of visits directly from a combination of the patient_encounter and appointments tables
Rel Visit Count	Count of visits from the relevant_visits table
Rel Uds Count	Number of UDS visits from the relevant_visits table
Rel Non Uds Count	Number of non-UDS visits from the relevant_visits table
Rel Udsmed Count	Number of UDS medical visits from the relevant_visits table
Last Visit Date	Last visit date of any kind in the measurement period
Prim Care Patients	Number of unduplicated patients seen in the measurement period who are assigned to the provider as the Primary Care Giver

Custom Set-up at Health Center: The temporary tables “temp_staff_member_type_id,” “temp_uds_staff_member_types” and “temp_oshpd_staff_member_types” should contain copies of code from the Transformers, Importers, or Reports that are used to summarize data for the UDS and OSHPD reports. These temporary tables are used to map the specialty of the visit provider to the category of the UDS or OSHPD report. If your health center is not using Relevant to summarize UDS Table 5 or OSHPD Page 2, then you may not have done this kind of mapping²¹.

Note that if your health center does not have a table for provider FTE (table name “relevant_staff_member_ftes”) then delete the JOIN to that table in the Main Statement and delete the column “ftes” in the SELECT statement.

²¹ Nonetheless, you could create your own mapping by copying a list of provider specialty ID numbers and specialty name text to Excel and then adding columns for the UDS staff category (and UDS Table 5 line number) and the OSHPD staff category (and OSHPD Page 2 line number).

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

All Insurance Names

Report Name: RCHC List All Insurance NG

Version: First version

Background and Context: The UDS and OSHPD reports summarize patients by insurance categories. Therefore, individual insurance names must be mapped to the appropriate categories using the instructions provided by Relevant. This report provides a large list of all insurance names and displays how they are currently mapped.

Report Description

The most important function of this report is to show how all the insurance names are mapped. One row of the report displays one insurance name (identified by a unique ID in the column payer_key). There are columns for the current UDS and OSHPD mapping as well as the number of patients who have the insurance listed as their primary insurance, the number of claims in the measurement period with the insurance as the primary, secondary and tertiary insurance, and the last time the insurance was used. The report does not imply that the patient counts displayed are reportable to the UDS or OSHPD, or used for any other official purpose. The appropriate Relevant reports should be used for those summaries.

The default version 1 of the report does not display an OSHPD insurance category. For the reporting year 2019, it appears that the Relevant insurance group (column relevant_payer_groups_name) was displayed on the OSHPD demographics report instead of some kind of mapped OSHPD insurance group. Therefore, the column oshpd_insurance_category displays 'Not yet mapped.' However, if the health center decides to adopt a procedure for mapping insurance names to OSHPD insurance groups, that column can be used to display the OSHPD insurance group. In eCW, insurance names are placed into OSHPD groups using a dummy field. There is no such standard procedure among health centers using NextGen.

The first version of this report does not include insurance that comes out of Dentrrix. Note that for UDS purposes, only medical insurance should be reported on Table 4.

It is recommended that the output be exported to Excel so that it can be sorted and filtered more easily. It is a good idea to involve somebody at your health center who is an expert on the different kinds of

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

insurance and familiar with the different definitions of insurance categories on the UDS and OSHPD reports.

The insurance name and the insurance group assigned by the health center are displayed by the report. Generally, insurance names with the same insurance group belong to the same UDS or OSHPD categories, but there may be exceptions depending on how your health center chose to assign the groups. Therefore, sort the list by insurance group (column “Healthcenter ins group name”) to see if the insurance names in the same insurance groups are mapped in the same way. Also, look to see that there is consistency in the mapping between the UDS and OSHPD categories²² (that is, if you decide to add OSHPD insurance categories). Lastly, ensure that each insurance is assigned to an insurance group in NextGen and that the assignment is consistent. If you see insurance names incorrectly mapped, investigate the logic and change the code in the following standard Transformers:

- UDS mapping is done in the Transformer “relevant_payers”
- OSHPD mapping is not currently done but may be added

Relevant Database: Staging

Parameters: The measurement period start date and end date define the service date range on claims considered by the report.

Column Definitions

Column Name	Column Description
Payer Key	The internal insurance ID number (the Payer ID)
Insurance name	The insurance name corresponding to the insurance ID number
Healthcenter ins group name	The insurance group name assigned by the health center to the insurance name
Relevant payer groups name	The Payer Group Name assigned by Relevant
UDS insurance category	The UDS insurance category
Oshpd insurance category	The OSHPD insurance category (not currently mapped)
Undup pts primaryins	The number of unduplicated patients who had the insurance as their primary insurance (currently, regardless of measurement period)

²² Even though there are differences in the insurance categories between the two reports, there are areas of overlap where consistency can be observed, For example, one insurance should not be mapped as private on one report and Medi-Cal on the other.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Column Name	Column Description
Primary on claim	The number of unduplicated claims that had the insurance in the primary position (in the measurement period)
Secondary on claim	The number of unduplicated claims that had the insurance in the secondary position (in the measurement period)
Tertiary on claim	The number of unduplicated claims that had the insurance in the tertiary position (in the measurement period)
Last service date	The last service date (in the measurement period) for the insurance (in any position) from the claim

Custom Set-up at Health Center: no further set-up is necessary for this report

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Appendix A: Standards for Cancer Exclusions

The Standards for Cancer Exclusions displayed below were copied from the RCHC Data Standards and Integrity Committee Recommendations, approved May 7, 2018.

Exclusions for the Cervical Cancer Screening and Colorectal Cancer Screening reports are defined as follows:

Measure	Exclusion Description	Text in Surgical or Medical History	Diagnosis Code on Problem List
Cervical Cancer Screening	Women who had a hysterectomy with no residual cervix	<ul style="list-style-type: none"> Hysterectomy PLUS Total, complete or radical (but not 'subtotal') <p>Absence of cervix</p>	Q51.5, Z90.710, or Z90.712
Colorectal Cancer Screening	Total colectomy or colorectal cancer	<ul style="list-style-type: none"> Colorectal cancer Malignant neoplasm of the <ul style="list-style-type: none"> ➤ colon ➤ cecum ➤ appendix ➤ hepatic flexure ➤ rectosigmoid junction ➤ rectum ➤ anus ➤ anal canal ➤ cloacogenic zone ➤ large intestine Colectomy, PLUS Total, complete or radical (but not partial, hemi, or sub) 	C18.0, C18.1, C18.2, C18.3, C18.4, C18.5, C18.6, C18.7, C18.8, C18.9, C19, C20, C21.2, C21.8, C78.5, C7A.021, C7A.022, C7A.023, C7A.024, C7A.025, C7A.026, Z85.038, or Z85.048

The exclusion for the Breast Cancer Screening Quality Measure is a little more complicated because patients must have a complete bilateral mastectomy to be excluded. It is not unusual that a patient has a partial mastectomy or only a unilateral mastectomy. By themselves, these do not qualify for the exclusion. Therefore, the Quality Measure report defines the exclusion as follows on the table beginning on the next page.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Mastectomy	Text in Surgical or Medical History	Diagnosis Code on Problem List
Bilateral	<ul style="list-style-type: none"> • Mastectomy, PLUS • Bilateral, double, or (left and right) PLUS • Total, complete or radical 	<ul style="list-style-type: none"> • Z90.13: Acquired absence of bilateral breasts and nipples
Two Unilaterals (Specific)	Two records of: <ul style="list-style-type: none"> • Mastectomy, PLUS • Unilateral and left, or unilateral and right (but not both left and right in same record), PLUS • Total, complete or radical 	Both codes of: <ul style="list-style-type: none"> • Z90.11: Acquired absence of right breast and nipple • Z90.12: Acquired absence of left breast and nipple
Two Unilaterals (General or Mix of General/Specific)	Two records in Surgical History with different surgery dates: <ul style="list-style-type: none"> • Mastectomy, PLUS • Unilateral PLUS • Total, complete or radical 	Two of the following codes with different Onset dates: <ul style="list-style-type: none"> • Z90.11: Acquired absence of right breast and nipple • Z90.12: Acquired absence of left breast and nipple • Z90.13: Acquired absence of bilateral breasts and nipples

The cancer screening exclusion validation report therefore looks for patient records with only partial or non-specific text in Surgical or Medical History. The criteria built into the report therefore looks for the following text combinations:

Measure	Text in Surgical or Medical History
Cervical Cancer Screening	<ul style="list-style-type: none"> • Hysterectomy, by itself, OR • Missing total, complete and radical
Colorectal Cancer Screening	<ul style="list-style-type: none"> • Colectomy, by itself, OR • Missing total, complete and radical
Breast Cancer Screening	<ul style="list-style-type: none"> • Mastectomy, by itself, OR • Missing total, complete and radical OR • Missing bilateral, double, unilateral, left and right

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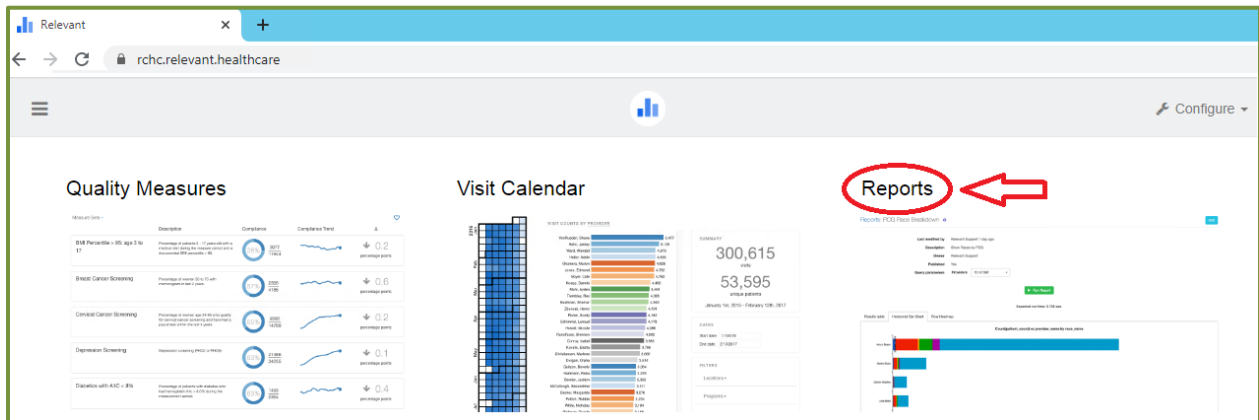
Appendix B: Obtaining and Configuring the Validation Report Set

You can access the SQL code for the report set from the RCHC Aggregate instance of Relevant. Before actually running the report in your instance, it is recommended that you first copy the code to DataGrip so you can test it. Note that you cannot run the validation reports in the RCHC instance. They exist there only for you to COPY.

To obtain a report, get into the RCHC Aggregate, find the report(s) you are interested in, and copy the code to a new report in your health center instance. It is recommended that you document any changes to your report so that if a new version becomes available, you can recreate the changes.

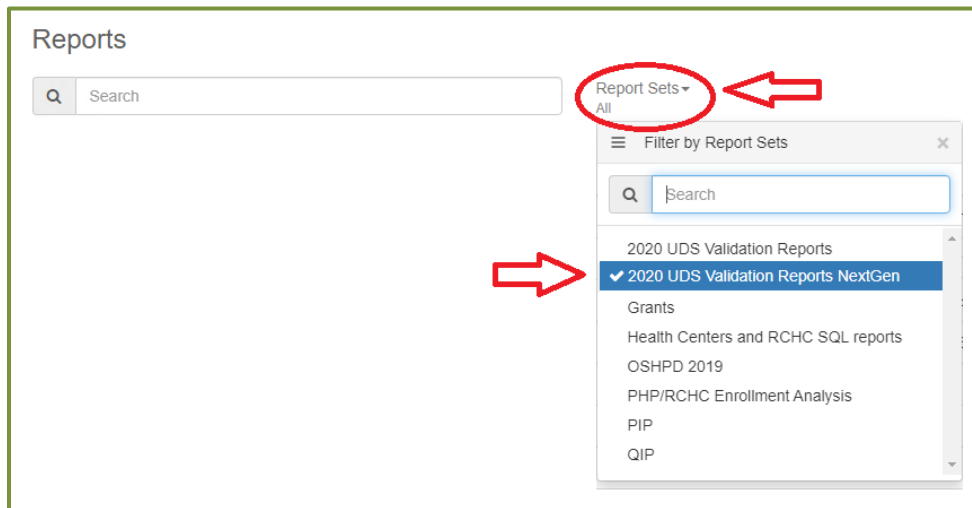
To get to the reports, first click on the Reports section on the splash page of RCHC Aggregate instance. If you do not already have a user name and password, may have to find out who in your organization is authorized to access this instance.

Step 1: Go to the RCHC Instance (you need a user account) and click on Reports



Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Step 2: Filter the report list on the Reports page by clicking Report Sets and checking the option “2020 UDS Validation Reports NextGen”

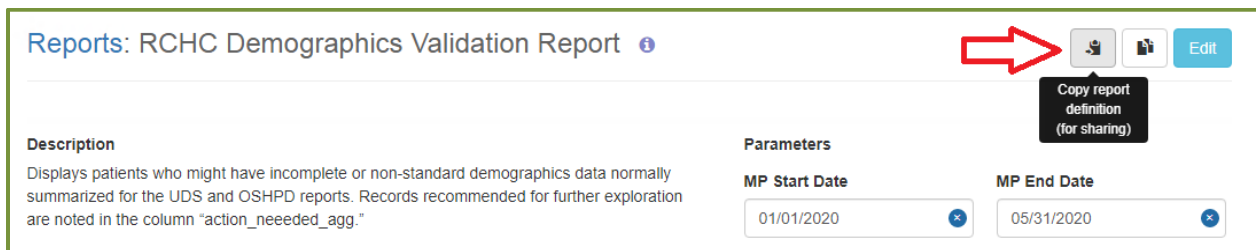


Step 3: Click on the name of a report you want to copy (reports for NextGen users end in “NG”)

Name	Owner	Last Edited	Published	Execution Count
RCHC Demographics Validation Report	Ben Fouts	a day ago	yes	0

A red arrow points to the 'RCHC Demographics Validation Report' row.

Step 4: Click on the button for “Copy report definition”

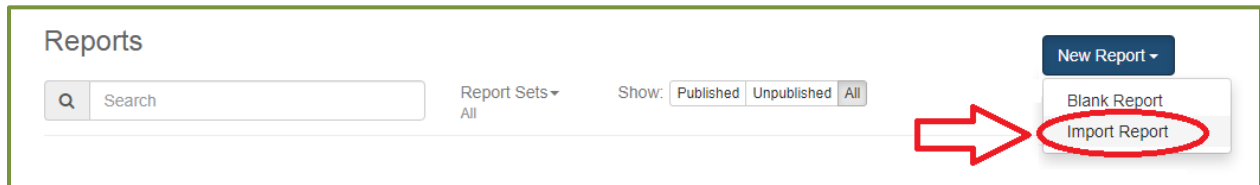


The screenshot shows the report details page for 'RCHC Demographics Validation Report'. The 'Copy report definition (for sharing)' button is highlighted with a red arrow. The page also displays a description, parameters, and a table for 'MP Start Date' and 'MP End Date'.

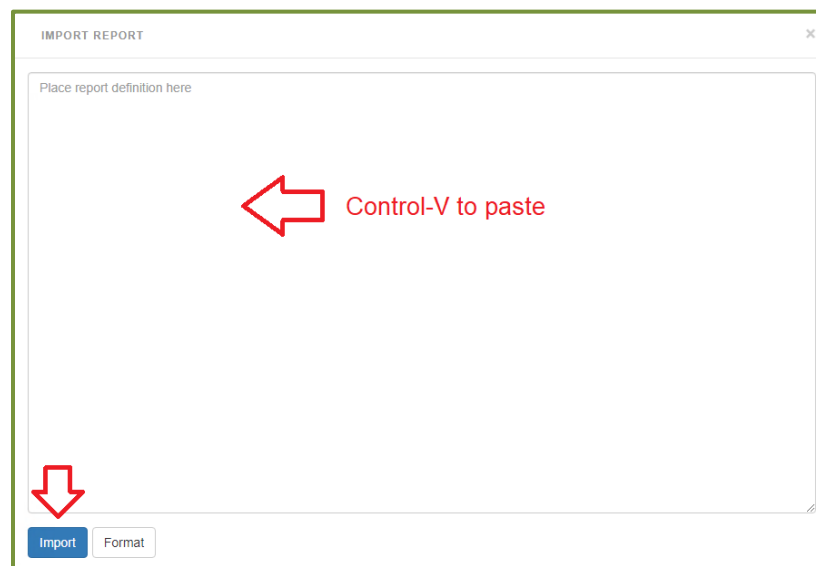
MP Start Date	MP End Date
01/01/2020	05/31/2020

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Step 5: Go to your own instance of Relevant and click on New Report, then Import Report



Step 6: Click in the blank area and press Control-V to paste the report definition code. Click the Import button. Save the report on the next screen



Step 7: Save the report. Do not run it at this point. Instead, open it again for editing. Copy the code to DataGrip and look for tables or fields that are highlighted in red. This indicates that the table or field name does not exist (and therefore needs to be modified slightly). Then run each temporary table in sequence to see if it works. Make adjustments to the code as necessary. If you get stuck, contact Ben Fouts at RCHC.

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Appendix C: List of Value Sets Used in Quality Measures

Value Sets define the diagnosis codes, lab codes, vaccine codes, medication codes, and procedures codes used by the Quality Measures. The sets are updated by the measure authority every year. The RCHC Data Standards and Integrity Committee recommends that health centers use the Value Sets directly to define these items in their system²³. The table below shows the Value Sets for the Quality Measures that are tracked for the 2020 UDS and QIP reports.

The report “QM Value Set Codes” will display all of the codes that compose each Value Set in this table.

2020 Quality Measure	Value Set Description	OID or Unique Name	Value Set Type
Breast Cancer Screening	History of bilateral mastectomy	2.16.840.1.113883.3.464.1003.198.12.1068	Diagnosis
	Status Post Left Mastectomy	2.16.840.1.113883.3.464.1003.198.12.1069	Diagnosis
	Status Post Right Mastectomy	2.16.840.1.113883.3.464.1003.198.12.1070	Diagnosis
	Unilateral Mastectomy, Unspecified Laterality	2.16.840.1.113883.3.464.1003.198.12.1071	Diagnosis
Cervical Cancer Screening	HPV Test	2.16.840.1.113883.3.464.1003.110.12.1059	Labs
	Pap Test	2.16.840.1.113883.3.464.1003.108.12.1017	Labs
	Hysterectomy with No Residual Cervix	2.16.840.1.113883.3.464.1003.198.12.1014	Diagnosis
Colorectal Cancer Screening	Malignant Neoplasm of Colon	2.16.840.1.113883.3.464.1003.108.12.1001	Diagnosis
	Fecal Occult Blood Test (FOBT)	2.16.840.1.113883.3.464.1003.198.12.1011	Labs
	FIT DNA	2.16.840.1.113883.3.464.1003.108.12.1039	Labs
Childhood Immunization Status	Disorders of the Immune System	2.16.840.1.113883.3.464.1003.120.12.1001	Diagnosis
	Encephalopathy due to Childhood Vaccination	2.16.840.1.113883.3.464.1003.114.12.1007	Diagnosis
	Hepatitis A	2.16.840.1.113883.3.464.1003.110.12.1024	Diagnosis
	Hepatitis B	2.16.840.1.113883.3.464.1003.110.12.1025	Diagnosis
	HIV	2.16.840.1.113883.3.464.1003.120.12.1003	Diagnosis
	Intussusception	2.16.840.1.113883.3.464.1003.199.12.1056	Diagnosis
	Malignant Neoplasm of Lymphatic and Hematopoietic Tissue	2.16.840.1.113883.3.464.1003.108.12.1009	Diagnosis
	Measles	2.16.840.1.113883.3.464.1003.110.12.1053	Diagnosis
	Mumps	2.16.840.1.113883.3.464.1003.110.12.1032	Diagnosis
	Rubella	2.16.840.1.113883.3.464.1003.110.12.1037	Diagnosis
	Severe Combined Immunodeficiency	2.16.840.1.113883.3.464.1003.120.12.1007	Diagnosis

²³ The table “cqm_value_set_codes” in the Staging Database is updated with the latest codes every year

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

2020 Quality Measure	Value Set Description	OID or Unique Name	Value Set Type
	Varicella Zoster	2.16.840.1.113883.3.464.1003.110.12.1039	Diagnosis
	Anti Hepatitis A IgG Antigen Test	2.16.840.1.113883.3.464.1003.198.12.1033	Labs
	Anti Hepatitis B Virus Surface Ab	2.16.840.1.113883.3.464.1003.198.12.1073	Labs
	Measles Antibody Test (IgG Antibody presence)	2.16.840.1.113883.3.464.1003.198.12.1060	Labs
	Measles Antibody Test (IgG Antibody Titer)	2.16.840.1.113883.3.464.1003.198.12.1059	Labs
	Mumps Antibody Test (IgG Antibody presence)	2.16.840.1.113883.3.464.1003.198.12.1062	Labs
	Mumps Antibody Test (IgG Antibody Titer)	2.16.840.1.113883.3.464.1003.198.12.1061	Labs
	Rubella Antibody Test (IgG Antibody presence)	2.16.840.1.113883.3.464.1003.198.12.1064	Labs
	Rubella Antibody Test (IgG Antibody Titer)	2.16.840.1.113883.3.464.1003.198.12.1063	Labs
	Varicella Zoster Antibody Test (IgG Antibody Presence)	2.16.840.1.113883.3.464.1003.198.12.1067	Labs
	Varicella Zoster Antibody Test (IgG Antibody Titer)	2.16.840.1.113883.3.464.1003.198.12.1066	Labs
	DTaP Vaccine	2.16.840.1.113883.3.464.1003.196.12.1214	Vaccines
	Hepatitis A Vaccine	2.16.840.1.113883.3.464.1003.196.12.1215	Vaccines
	Hepatitis B Vaccine	2.16.840.1.113883.3.464.1003.196.12.1216	Vaccines
	HiB Vaccine (3 dose schedule)	2.16.840.1.113883.3.464.1003.110.12.1083	Vaccines
	HiB Vaccine (4 dose schedule)	2.16.840.1.113883.3.464.1003.110.12.1085	Vaccines
	Inactivated Polio Vaccine (IPV)	2.16.840.1.113883.3.464.1003.196.12.1219	Vaccines
	Influenza Vaccine	2.16.840.1.113883.3.464.1003.196.12.1218	Vaccines
	Measles, Mumps and Rubella (MMR) Vaccine	2.16.840.1.113883.3.464.1003.196.12.1224	Vaccines
	Pneumococcal Conjugate Vaccine	2.16.840.1.113883.3.464.1003.196.12.1221	Vaccines
Rotavirus Vaccine (2 dose schedule)	2.16.840.1.113883.3.464.1003.196.12.1222	Vaccines	
Rotavirus Vaccine (3 dose schedule)	2.16.840.1.113883.3.464.1003.196.12.1223	Vaccines	
Varicella Zoster Vaccine (VZV)	2.16.840.1.113883.3.464.1003.196.12.1170	Vaccines	
Controlling High Blood Pressure	Essential Hypertension	2.16.840.1.113883.3.464.1003.104.12.1011	Diagnosis (main chronic diseases)
	Chronic Kidney Disease, Stage 5	2.16.840.1.113883.3.526.3.1002	Diagnosis
	End Stage Renal Disease	2.16.840.1.113883.3.526.3.353	Diagnosis
	Kidney Transplant Recipient	2.16.840.1.113883.3.464.1003.109.12.1029	Diagnosis
Depression Remission at Twelve Months	Major Depression Including Remission	2.16.840.113883.3.67.1.101.3.2444	Diagnosis (main chronic diseases)
	Bipolar Disorder	2.16.840.1.113883.3.67.1.101.1.128	Diagnosis

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2020 Quality Measure	Value Set Description	OID or Unique Name	Value Set Type
	Dysthymia	2.16.840.1.113883.3.67.1.101.1.254	Diagnosis
	Personality Disorder	2.16.840.1.113883.3.67.1.101.1.246	Diagnosis
	Pervasive Developmental Disorder	2.16.840.1.113883.3.464.1003.105.12.1152	Diagnosis
	Schizophrenia or Psychotic Disorder	2.16.840.1.113883.3.464.1003.105.12.1104	Diagnosis
Hemoglobin A1c (HbA1c) Poor Control (> 9%)	Diabetes	2.16.840.1.113883.3.464.1003.103.12.1001	Diagnosis (main chronic diseases)
	HbA1c Laboratory Test	2.16.840.1.113883.3.464.1003.198.12.1013	Labs
HIV Linkage to Care	HIV	2.16.840.1.113883.3.464.1003.120.12.1003	Diagnosis (main chronic diseases)
HIV Screening	Conditions Due To Human Immunodeficiency Virus (HIV)	2.16.840.1.113762.1.4.1056.54	Diagnosis (main chronic diseases)
	Human Immunodeficiency Virus (HIV) Laboratory Test Codes (Ab and Ag)	2.16.840.1.113762.1.4.1056.50	Labs
Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet	Acute Myocardial Infarction	2.16.840.1.113883.3.464.1003.104.12.1001	Diagnosis (main chronic diseases)
	Ischemic Vascular Disease	2.16.840.1.113883.3.464.1003.104.12.1003	Diagnosis (main chronic diseases)
	Anticoagulant Medications	2.16.840.1.113883.3.464.1003.196.12.1283	Medications
	Aspirin and Other Antiplatelets	2.16.840.1.113883.3.464.1003.196.12.1211	Medications
Body Mass Index (BMI) Screening and Follow-Up Plan	Above Normal Follow-up	2.16.840.1.113883.3.600.1.1525	Diagnosis
	Below Normal Follow up	2.16.840.1.113883.3.600.1.1528	Diagnosis
Screening for Depression and Follow-Up Plan	Depression diagnosis	2.16.840.1.113883.3.600.145	Diagnosis (main chronic diseases)
	Bipolar Diagnosis	2.16.840.1.113883.3.600.450	Diagnosis
	Depression medications - adolescent	2.16.840.1.113883.3.600.469	Medications
	Depression medications - adult	2.16.840.1.113883.3.600.470	Medications
Tobacco Use: Screening and Cessation Intervention	Tobacco Use Cessation Pharmacotherapy	2.16.840.1.113883.3.526.3.1190	Medications
	Tobacco Use Cessation Counseling	2.16.840.1.113883.3.526.3.509	Procedures
Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	Atherosclerosis and Peripheral Arterial Disease	2.16.840.1.113762.1.4.1047.21	Diagnosis (main chronic diseases)
	Cerebrovascular disease, Stroke, TIA	2.16.840.1.113762.1.4.1047.44	Diagnosis (main chronic diseases)
	Diabetes	2.16.840.1.113883.3.464.1003.103.12.1001	Diagnosis (main chronic diseases)
	Ischemic heart disease or coronary occlusion, rupture, or thrombosis	2.16.840.1.113762.1.4.1047.46	Diagnosis (main chronic diseases)
	Myocardial Infarction	2.16.840.1.113883.3.526.3.403	Diagnosis (main chronic diseases)
	Stable and Unstable Angina	2.16.840.1.113762.1.4.1047.47	Diagnosis (main chronic diseases)
	Breastfeeding	2.16.840.1.113762.1.4.1047.73	Diagnosis
	End Stage Renal Disease	2.16.840.1.113883.3.526.3.353	Diagnosis

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2020 Quality Measure	Value Set Description	OID or Unique Name	Value Set Type
	Hepatitis A	2.16.840.1.113883.3.464.1003.110.12.1024	Diagnosis
	Hepatitis B	2.16.840.1.113883.3.67.1.101.1.269	Diagnosis
	Hypercholesterolemia	2.16.840.1.113762.1.4.1047.100	Diagnosis
	Liver Disease	2.16.840.1.113762.1.4.1047.42	Diagnosis
	Rhabdomyolysis	2.16.840.1.113762.1.4.1047.102	Diagnosis
	LDL-c	2.16.840.1.113883.3.117.1.7.1.215	Labs
	High intensity statin therapy	2.16.840.1.113762.1.4.1047.97	Medications
	Low intensity statin therapy	2.16.840.1.113762.1.4.1047.107	Medications
	Moderate intensity statin therapy	2.16.840.1.113762.1.4.1047.98	Medications
Weight Assessment and Counseling for Nutrition and Physical Activity for Children and Adolescents	Counseling for Nutrition	2.16.840.1.113883.3.464.1003.195.12.1003	Procedures
	Counseling for Physical Activity	2.16.840.1.113883.3.464.1003.118.12.1035	Procedures
Multiple Quality Measures	Frailty (Diagnosis, Symptoms and Encounters)	2.16.840.1.113883.3.464.1003.113.12.1074 2.16.840.1.113883.3.464.1003.113.12.1075 2.16.840.1.113883.3.464.1003.101.12.1088	Diagnosis
	Palliative care encounter	2.16.840.1.113883.3.600.1.1575	Diagnosis
	Advanced Illness	2.16.840.1.113883.3.464.1003.110.12.1082	Diagnosis
	Care Services in Long-Term Residential Facility	2.16.840.1.113883.3.464.1003.101.12.1014	Diagnosis
	Dementia Medications	2.16.840.1.113883.3.464.1003.196.12.1510	Medications
	Pregnancy or Other Related Diagnoses	2.16.840.1.113883.3.600.1.1623	Diagnosis
Well-Child Visits in the First 15 Months of Life	Well-Care Visits	Well-Care Value Set	Diagnosis and Procedures
Asthma Medication Ratio	Asthma	Asthma Value Set	Diagnosis (main chronic diseases)
	Acute Respiratory Failure	Acute Respiratory Failure Value Set	Diagnosis
	Chronic Respiratory Conditions Due To Fumes/Vapors	Chronic Respiratory Conditions Due To Fumes/Vapors Value Set	Diagnosis
	COPD	COPD Value Set	Diagnosis
	Cystic Fibrosis	Cystic Fibrosis Value Set	Diagnosis
	Emphysema	Emphysema Value Set	Diagnosis
	Obstructive Chronic Bronchitis	Obstructive Chronic Bronchitis Value Set	Diagnosis
	Other Emphysema	Other Emphysema Value Set	Diagnosis
	Asthma Controller Medications	Asthma Controller Medication List	Medications
	Asthma Reliever Medications	Asthma Reliever Medication List	Medications

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Appendix D: Recommended Frequency for Running the Validation Reports

Suggested Frequency	Report General Name	Report Relevant Name
Monthly (run mid-month for the Measurement Period of the previous month)	Incomplete Labs	RCHC Incomplete Labs Validation Report NG
	Incomplete or Non-Standard Demographic Data	RCHC Demographics Validation Report NG
Quarterly (run mid-month for the Measurement Period of the previous quarter)	Persistent Asthma Diagnosis	RCHC Persistent Asthma Diagnosis Validation Report NG
Semi-annually (run mid-month for the Measurement Period of the previous six months)	Problem List	RCHC Problem List Validation Report NG
	Cancer Exclusions	RCHC Cancer Exclusion Validation Report NG
	All Providers, Resources and Staff	RCHC List All Providers, Resources and Staff NG
	All Insurance Names	RCHC List All Insurance NG
Annually (run in December for the Measurement Period of year-to-date)	QM Lab Names and Attributes in EHR	RCHC List of QM Lab Names and Attributes NG
	All Lab Names and Attributes	RCHC List All Lab Names and Attributes NG
	QM Medications in EHR	RCHC List of QM Medications NG
	All Medications and Rx Groups	RCHC List All Medications and Rx Groups NG
	QM Vaccines in EHR	RCHC List of QM Vaccines NG
	All Vaccines	RCHC List All Vaccines NG
As needed (reference only)	QM Value Set Codes	RCHC List of QM Value Set Codes NG
	All Diagnosis Codes	RCHC List All Diagnosis Codes NG
	Diagnosis Location Report	RCHC Diagnosis Location Report NG

Additional notes about this table appear on the following page

Instructions for Using the Relevant Validation Report Set (NextGen Edition, Version 3)

Notes on the Suggested Frequency

All reports should be run with a little lag-time (for example, two-weeks) to give an opportunity for results to be entered and the record closed.

Monthly (run mid-month for the Measurement Period of the previous month). These reports feature record-level data. When you first run them, there may be a back-log of records. In some cases, it might be dozens (or more) of records. Decide how far back in history you want to go. Normally, you will want to “clean” the records depending on the schedule for reporting. For example, clean records from the current year by the end of the year for UDS reporting. Once the back-log is dealt with, you can resume a monthly review, depending on how many records the report uncovers. Some reports might show fewer records than others and so could be run less frequently. Note that if you give feedback to people doing the data entry, you are less likely to see the same mistakes repeated and so, over time, a report run with the same measurement period length with display fewer records.

Quarterly (run mid-month for the Measurement Period of the previous quarter). These can also be run more frequently if they tend to display many records.

Semi-annually (run mid-month for the Measurement Period of the previous six months). The Problem List and Cancer Exclusion reports can be run more frequently if you want to ensure your monthly Quality Measure denominators are very precise. The other reports for provider names and insurance names should be checked mid-year, usually for new providers or insurance not categorized. The name reports also should be reviewed and documented before the end of the year (November or December) and then again just before pulling the UDS and OSHPD data to ensure that everything is in the right and expected summary categories.

Annually (run in December for the Measurement Period of year-to-date). Ensure that everything is in the right and expected summary categories

As needed (reference only). Run these when you need to (for example, to obtain information useful for coding)