Instructions for Using the Relevant Validation Report Set
(eCW Edition, Version 1)

Serving Sonoma, Napa, Marin & Yolo Counties

Author: Ben Fouts, Informatics
Redwood Community Health Coalition
1310 Redwood Way, Petaluma, California 94954
support@rchc.net
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Introduction

This set of 13 Relevant reports is useful for better understanding the Quality Measure (QM) Value Set codes, how those Value Sets overlap with the codes in eCW, and identifying individual patient records that may need additional attention.

The reports are organized into three groups.

A. **Record-Level Validation Reports.** These reports recognize individual records that might have incomplete information and should be investigated further.
   1. Problem List
   2. Persistent Asthma Diagnosis
   3. Incomplete Labs
   4. Incomplete Images
   5. Cancer Exclusions

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.
   1. QM Value Set Codes
   2. QM Lab Names and Attributes in EHR
   3. QM Medications in EHR
   4. QM Vaccines in EHR

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.
   1. All Diagnosis Codes
   2. All Medications and Rx Groups
   3. All Medication Flags
   4. All Structured Data Items

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.

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 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 in the Health Center instance of Relevant first copy and check the code before placing it in the Report section. This activity can be done in a SQL editing software like Data Grip. Furthermore, health centers can customize their reports to add functionality or custom SQL that better matches their Transformers.

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. The reports were originally designed and tested in the Santa Rosa instance of Relevant. Therefore, to some extent, they need to be configured to your system. The normal process would be to copy the code from the RCHC instance directly to Data Grip and then run the routines and sub-routines 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 section of an individual report. 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.

Lastly, a couple of notes. Because some of the reports are evaluating data from the raw data tables (and not only Transformers), they can take 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

Problem List

Report Name: RCHC Problem List Validation Report

Background and Context

The stewards of the Quality Measures provide Value Sets that contain the lists of diagnosis codes (commonly referred to as ICD codes) that officially define the chronic diseases. However, 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 the clinical diagnosis is made and also to remove the codes if the disease is somehow resolved or no longer appropriate. Some EHRs also allow 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" 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 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.

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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 disease[1]. The main value of this validation report is to display patients who may be false positives or a 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.

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.

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[1] A false positive is a patient who electronically 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 appears to not have a particular chronic disease but actually does (and is hopefully 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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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" below). 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)

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
- The diagnosis code must have the status "confirmed"
- Code must not be deleted or resolved
- 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 date it was first logged into the Problem List.

Assessments
- The assessment or encounter must not be deleted
- Tied to office visits with CHK status

Claims
- The claim or encounter must not be deleted
- Tied to office visits with CHK status

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 probably be a priority for investigation over a patient who only had one visit but was otherwise similar.

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 visit range for patients.

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Column Definitions

Column Name	Column Description
Account no	The account number that appears in 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
Diagnosis category	The Value Set diagnosis category referenced in the row
Problist exists	Displays "Yes" if a diagnosis code from the diagnosis category Value Set appears on the Problem List. Otherwise, will display "No"
Problist detail	Displays the first date that any diagnosis code from the diagnosis category Value Set appeared on the Problem List, along with the code itself
Assessm exists	Displays "Yes, in past one year" if a diagnosis code from the diagnosis category Value Set appeared on an Assessment 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" it if never appeared
Assessm detail	Displays the last date that any diagnosis code from the diagnosis category Value Set appeared on an Assessment, along with the 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" it if never appeared
Claim detail	Displays the last date that any diagnosis code from the diagnosis category Value Set appeared on a Claim, along with the code itself
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

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Persistent Asthma Diagnosis

<u>Report Name</u>: RCHC Persistent Asthma Diagnosis Validation Report

<u>Background and Context</u>

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. 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

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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).

<u>Report Description</u>

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.

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
- The diagnosis code must have the status "confirmed"
- Code must not be deleted or resolved
- 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 date it was first logged into the Problem List.

Assessments
- The assessment or encounter must not be deleted
- Tied to office visits with CHK status

Claims
- The claim or encounter must not be deleted
- Tied to office visits with CHK status

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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 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 probably be a priority for investigation over a patient who only had one visit. In other words, over 15 visits, it may be assumed that the patient's persistent asthma diagnosis had been recognized and treated appropriately, yet missing codes on assessments or claims do not support that assumption.

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.

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

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Column Name	Column Description
Assessm exists	Displays "Yes, in past one year" if there was a persistent asthma diagnosis appears on an Assessment in the past year. Otherwise, will display "Never" or "Yes, but more than a year ago."
Assessm detail	Displays the last date and the last persistent asthma code that appeared on an Assessment 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
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 the tobacco cessation medications where the transformer most commonly named "relevant_tobacco_cessation" pulls the original data and the Importer "tobacco_use_cessation_treatments" simply selects the columns needed for the Quality Measure.

However, at some health centers, this typical configuration is not currently followed for asthma medications. Some health centers have no Transformer and the code to pull the asthma medications is in the Importer. This poses a problem for the validation report because it is built in the Relevant Staging Database and thus does not have access to the output from Importers.

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 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 "tobacco_use_cessation_treatments" (on the Importer webpage, this may be called "Tobacco Use Cessation Treatments"). NOTE that the sub-

routine that is there by default is from Santa Rosa and your health center might pull the data differently.

- 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-routine[2], 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 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 had 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 Transformer (named "relevant_tobacco_cessation") and displaying the appropriate columns in the Importer instead. This would standardize the configuration in your system and make running the validation report more efficient.

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[2] Typically preceded by a note like "-- Main Statement"

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Incomplete Labs

Report Name: RCHC Incomplete Labs Validation Report

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 policy 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" [3].

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

Lab category	eCQM Name/QIP Name	Value Set
A1c	Laboratory Test, Performed: HbA1c Laboratory Test	HbA1c Laboratory Test (2.16.840.1.113883.3.464.1003.198.12.1013)
LDL	Laboratory Test, Performed: LDL Test	LDL Test (2.16.840.1.113883.3.464.1003.198.11.1029)
Pap	Laboratory Test, Performed: Pap Test	Pap Test (2.16.840.1.113883.3.464.1003.108.12.1017)
HPV	Laboratory Test, Performed: HPV Test	HPV Test (2.16.840.1.113883.3.464.1003.110.12.1059)
FIT	Laboratory Test, Performed: FIT DNA	FIT DNA (2.16.840.1.113883.3.464.1003.108.12.1039)
FOBT	Laboratory Test, Performed: Fecal Occult Blood Test (FOBT)	Fecal Occult Blood Test (FOBT) (2.16.840.1.113883.3.464.1003.198.12.1011)
Nephropathy	Urine Protein Tests Value Set	Urine Protein Tests (HEDIS)

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[3] 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." The standard approved by the RCHC Data Standards and Integrity Committee and used in this validation report uses Value Sets to define labs. As mentioned in this section, there are also five criteria for completeness.

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<u>Report Description</u>

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 outcome is present, which is a Lab Value OR a Lab Result (the exception is for A1c and LDL labs, where a Lab Value is required[4])
3. AND the Received Checkbox is marked
4. AND Lab Status is equal to Reviewed
5. AND no associated flags are present, which are the Lab Delete Flag OR the Lab Cancelled Flag OR the Encounter Delete Flag

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 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.

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 cancelled flag or delete flag (where either the lab or the encounter was deleted). However, it has been observed that at some health centers, numerous labs that were not done were not cancelled or deleted, but rather had text entered into the Result field indicating that the lab was not actually done[5]. 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

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[4] The A1c and LDL labs must have a numerical Lab Value because that value is evaluated by the Quality Measure
[5] This is generally not the guideline, but the validation report recognizes its existence

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, obscur, 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.

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
- Lab Value
- Lab Result
- Received Checkbox was marked
- Lab Status equal to Reviewed
- A document was attached to the lab order

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

- Missing both the Collected and Result Dates
- Missing both the Lab Value and Lab Result (OR in the case of A1c or LDL labs, missing the Lab Value)
- Received Checkbox is not marked
- Lab Status not equal to Reviewed

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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, the main issue suggests the first problem found, but keep in-mind that data in other fields might also be missing.

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.

Column Definitions

Column Name	Column Description
Account no	The account number that appears in the EHR
Pat first name	Patient last name
Pat last name	Patient first name
Date of birth	Patient date of birth
Visit type code	Visit type for the encounter when the lab was ordered
Enc status	Status of the encounter when the lab was ordered
Lab value set name	The CMS or QIP name of the Value Set containing the lab LOINC code
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
Received checkbox	Will display 'Checked' if the Received checkbox was marked on the lab record
Lab status	Will display 'Reviewed' if the Lab Status is marked Reviewed, otherwise it will display 'Open'
Test name	The Lab Test name
Attribute name	The lab Attribute name
Lab result	The Result on the lab record
Lab value	The Value on the lab record
Attached document	If a document is attached to the lab, the document name is displayed
Main issue	Will display one of five potential problems with the lab record, evaluated in order

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<u>Custom Set-up at Health Center</u>: 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 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.

If staff at your health center are not 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.

Incomplete Images

<u>Report Name</u>: RCHC Incomplete Images Validation Report

<u>Background and Context</u>

This report was designed with the same general approach as the incomplete lab validation report (see last section). However, there are a couple of differences between them. First, images only have a Result and no Value (most labs have a Result and a Value). Therefore, the image outcome is based only on the Result field. Second, images are identified by their name, not by a Value Set. Thus, double-check the code used to identify the images on this report against what exists in your image Transformers.

The images targeted by this report are necessary for certain Quality Measures. These are:

Image Name	Quality Measure	Key Words in Name of Image Record or Document
Mammogram	Breast Cancer Screening	ILIKE '%mammo%'
Colonoscopy	Colorectal Cancer Screening	ILIKE '%colono%'
Sigmoidoscopy	Colorectal Cancer Screening	ILIKE '%sigmoid%')

Instructions for Using the Relevant Validation Report Set (eCW Edition, Version 1)

<u>Report Description</u>

Images are identified using the key words in the table above (the ones after the ILIKE statements). These words can be found in the Image Name field or the Custom Name field of the attached document (if one exists).

The validation report defines a completed image as having the following components:

1. An image date is present, which is a Collected Date OR a Result Date
2. AND an image outcome is present, which is the Image Result
3. AND the Received Checkbox is marked
4. AND Image Status is equal to Reviewed
5. AND no associated flags are present, which are the Image Delete Flag OR the Image Cancelled Flag OR the Encounter Delete Flag

Note that criteria for image 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 image data entry and then display images 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 images for the Quality Measure that were not actually done or are missing vital information.

The objective of this report is to list image 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 completeness standard. This report can also be used for data-entry quality initiatives where feedback is given to data entry staff.

Typically, there may be many records in your EHR for images that were ordered but the patient did not complete the referral or the image was never sent to the health center. Ideally, follow-up should be done according to normal health center procedure in these cases. Some of these images may eventually be cancelled or deleted in the system. The report does not display images with a cancelled flag or a deleted flag (where either the image or the encounter was deleted). However, it has been noted at some health centers numerous image records like these were not cancelled or deleted, but rather had

text entered into the Result field indicating that the image was not actually done[6]. Since this is entered as free text, there could be potentially dozens of words, phrases, abbreviations, etc. in the field. The report was designed to ignore the most common ones, but the 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, obscur, redundant, refuse, TNP, too old, TPN, unable, unsat, and unsuitable.

In terms of image records that appear on the validation report, there are two tests that an image 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 image records where some data entry was done, but not all of the important fields were completed.

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
- Image Result
- Received Checkbox was marked
- Image Status equal to Reviewed
- A document was attached to the image order

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

- Missing both the Collected and Result Dates
- Missing the Image Result
- Received Checkbox is not marked

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[6] This is generally not the recommended standard, but the validation report recognizes its existence

- Image Status not equal to Reviewed

In addition to columns identifying the patient and specific image under review, the validation report displays 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, the main issue suggests the first problem found, but be aware that data in other fields might also be missing.

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 images displayed by the report were ordered in the measurement period.

Column Definitions

Column Name	Column Description
Account no	The account number that appears in the EHR
Pat first name	Patient last name
Pat last name	Patient first name
Date of birth	Patient date of birth
Visit type code	Visit type for the encounter when the image was ordered
Enc status	Status of the encounter when the image was ordered
Image category	The image category (Mammogram, Colonoscopy, or Sigmoidoscopy)
Order date	The date the image was ordered
Collected date	The Collected Date on the image record
Result date	The Result Date on the image record
Received checkbox	Will display 'Checked' if the Received checkbox was marked on the image record
Image status	Will display 'Reviewed' if the Image Status is marked Reviewed, otherwise it will display 'Open'
Test name	The image name
Image result	The image result
Attached document	If a document is attached to the image record, the document name is displayed
Document date	If a document is attached to the image record, the document date is displayed
Main issue	Will display one of four potential problems with the image record, evaluated in order

Instructions for Using the Relevant Validation
Report Set (eCW Edition, Version 1)

<u>Custom Set-up at Health Center</u>: The validation report defines a standard set of fields that must have proper data entry in order for an image record to be considered "complete." The specifications are described in the Report Description section above. If your health center has a different standard published in a policy or training materials, you may consider modifying the code[7]. For example, have a look at the WHERE statement of the TEMPORARY TABLE initial_image_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.

If staff at your health center are not cancelling images that were not actually performed, but rather entering text explaining the situation into the Result field of the image, you may consider adding more key words to the list of words in the last WHEN statement of the TEMPORARY TABLE initial_image_list.

Cancer Exclusions

<u>Report Name:</u> RCHC Cancer Exclusion Validation Report

<u>Background and Context</u>

There are three Quality Measures that focus on cancer screening and detection. These measures are for 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

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[7] If your health center has a different standard for image completion and lab completion, note that both images and labs come from the same table in the Relevant Staging Database ("labdata"). Therefore, you can use similar coding ideas to modify both reports.

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 <u>should</u> be screened for cancer <u>unless</u> 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 screening, the correct diagnosis code should be placed on the Problem List, or the 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.

<u>Report Description</u>

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

There are three locations in the medical record where cancer exclusions can be added: Problem List, Surgical History and Medical History. Generally, the Problem List is the best location for this information because a standard diagnosis code is used and there is a field for the surgery date (i.e., the Onset Date). Surgical History and Medical History rely on key words entered into a text field, which is less reliable. Nonetheless, the RCHC standard allows this and the report recognizes combinations of key text words. However, only Surgical History has a date field associated with the surgery (Medical History does not have a separate field for the surgery date).

Given that Medical and Surgical History locations in the health record are not structured, they are the source of the records that will appear on the validation report. 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, there is some text 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.

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 (column "text_entry") and the location in the record (Surgical or Medical History). The report user can read the description and decide if additional investigation in the medical record itself is warranted. Sometimes, typed descriptions contain additional information not recognized by the report code. Patients on the list obviously <u>not</u> meeting the exclusion criteria can be ignored (they will remain in the denominator if they otherwise quality for the measure). Patients who appear to qualify for the exclusion or who do not have other useful information in the "text_entry" column, should be investigated further. If they qualify for the exclusion, it is recommended that the appropriate diagnosis code be placed on the Problem List along with the date surgery in the Onset Date field, although the health center may follow their own guidelines based on the recommendations of the RCHC Data Standards and Integrity Committee.

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 <u>any</u> 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 and from one source. Therefore, some patients may appear duplicated if they have potential exclusions for more than one cancer or have potential exclusions for one cancer from two sources[8]. The last text entry by source is displayed on the report in the column "Text entry." The results are ordered by cancer type and source in the medical record.

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[8] For example, you may see a patient with a row with text from Medical History and another row with text from Surgical History.

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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. If the patient had hospice care, the patient will not be displayed on the validation report if the hospice care dates overlap 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	Text entry refers to cervical, breast or colorectal cancer
Source	Text entry taken from Surgical History or Medical History
Text entry	The last raw text entry containing the partial exclusion criteria
Text entry date	The date of the last (most recent) text entry
Raw performed on	For Source = Surgical History, the raw date text that was entered into the surgery date field This is not applicable for Source = Medical History because there is no separate date field. Therefore, the Text entry date is displayed by default.
Calc performed on	For Source = Surgical History, the calculated Performed On date is the date that the report interprets the surgery occurred, based on the Raw performed on date[9]. This is not applicable for Source = Medical History because there is no separate date field. Therefore, the Text entry date is displayed by default.

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[9] Note that this is calculated on the report using code that appears in the Transformer for the performed_on date. The code in the Transformer may periodically be updated by Relevant Support or otherwise by the Health Center, so the code in the report should always match the code in the Transformer. The code for the performed_on field should be the same for all three cancer exclusion Transformers.

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Custom Set-up at Health Center: This report is built in the Relevant Staging Database. Most instances of Relevant have Transformers that define the cancer exclusions, and these Transformers are used in the report. However, some health centers have the code for exclusions built only in their Importers, which are not available in the Staging Database.

The first step to customizing this report is to determine if your instance of Relevant features Transformers for all of the necessary exclusions. Possible names for these Transformers are:
- relevant_hysterectomies
- relevant_mastectomies
- relevant_colon_cancer
- relevant_colectomies
- relevant_hospice_care

If these Transformers exist, they should be used in the validation report directly. If they do not exist, then a sub-routine for a Temporary Table must be made and the Importer Code copied to it.

The SQL code is broken down into six 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. An example of this is in "Part 3" of the code for this report because at Santa Rosa[10], the code for Colectomies exists only in an Importer, not a Transformer. Therefore, a Temporary Table "colectomies_copy" was created in Part 3 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 3 of the code and join your Transformer directly to Part 4 of the code. If your instance of Relevant also has the code for colectomies in an Importer, replace the existing code in Part 3 with the code from your Importer.
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

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[10] The code you are copying and modifying was optimized in the Santa Rosa instance of Relevant

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.

The cncr_exclusions Temporary Table in Part 4 is eventually joined to the Main Statement of the report in Part 6 of the code. Therefore, the column names and intention of the Temporary Table in Part 4 must be preserved.

There is an additional exclusion in this report for hospice care which is not attached to the Temporary Table in Part 4 because it is not a cancer exclusion. Hospice care is joined directly to the Main Statement of the report in Part 6 of the code. In the Santa Rosa instance of Relevant, the code for hospice care resides in an Importer, therefore a Temporary Table called hospice_copy is created in Part 5 of the code. If your instance of Relevant also has the code for hospice care in an Importer, replace the existing code in Part 5 with the code from your Importer. If your instance of Relevant has a Transformer for hospice care, you should delete Part 5 of the code and join your Transformer directly to the Main Statement in Part 6 of the code[11].

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[11] Note that the join for hospice care is done in a sub-routine that assumes particular field names in the WHERE statement of the sub-routine.

B. Quality Measure (QM) Understanding Reports

QM Value Set Codes

Report Name: RCHC List of QM Value Set Codes

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. The Value Sets are normally updated annually on a national level by an expert authority.

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 applied[12]. When a new set of reports is released by Relevant (for example, the 2019 UDS Reports), the Value Set will also be updated to the same version as described by the Quality Measures.

One Quality Measure is associated with one or more Value Sets. Each Value Set contains a number (sometimes dozens) of codes 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. So, 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.

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 Quality Measures. Note that all codes are listed, whether or not they are associated with codes recently used in the EHR. There are other reports (for labs, medications, vaccines

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[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. For the Quality Measures that RCHC-affiliated health centers are monitoring in 2019, there are more than six dozen Value Sets and thousands of codes.

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and problem lists) in this validation report set that give information on 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 codes (ICD-9 and ICD-10), labs (LOINC), medications (RXNORM), procedures (CPT), and vaccines (CVX). Only codes from the most recent (i.e., current) Value Sets are displayed, not all historical codes. On one row of the report is 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.

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.

Relevant Database: Staging

Parameters: This report does not have any parameters. It displays data that is not dependent on time periods in the medical record.

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
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

Column Name	Column Description
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

Background and Context

In eCW, labs are defined from Value Sets according to their association with standard LOINC codes. One lab can have several components, called lab attributes. In eCW, these are displayed on the Lab Results window in the section called Results and each attribute normally has some kind of lab value in the yellow row of that section. 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 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 system[13].

The report "RCHC List of QM Lab Names and Attributes" 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.

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

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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.

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 or a Result Date, a Lab Result or Lab Value, be associated with an encounter that was not deleted, 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. For reference purposes, the internal eCW ID numbers are displayed for the lab category, lab test and lab attribute. The user can also see if the lab was used frequently (column number_labs_mp displays the number of labs in the measurement period) and used very recently (column last_date_mp displays the last lab date 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, billed in the measurement period, etc.

Relevant Database: Staging

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.

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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
Lab category id	The internal lab category ID number is displayed if the lab name (column labtest_name) was associated with a lab category
Lab category name	The lab category name is displayed if the lab name (column labtest_name) was associated with a lab category
Labtest id	The internal lab name ID number
Labtest name	The lab name
Labattribute id	The internal lab attribute name ID number
Labattribute name	The lab attribute name
Valueset loinc	The LOINC code itself
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

Instructions for Using the Relevant Validation Report Set (eCW Edition, Version 1)

QM Medications in EHR

Report Name: RCHC List of QM Medications

Background and Context

The eCQM Value Sets define medications according to a standard called RxNorm. However, in eCW, 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.

Therefore, a Transformer (named relevant_medications) has been developed to bridge the two code sets. This Transformer is used in the validation report "QM Medications in EHR" and should also be used as the standard method for identifying medications in the QM Transformers[14].

Note that that this report and the associated bridge Transformer focus on medications from the UDS Quality Measures that have a corresponding eCQM Value Set. It does not yet incorporate the medications that come from the QIP Quality Measures (like asthma medications, ACE inhibitors and ARB). The QIP Value Sets, based on HEDIS standards, feature NDC codes. At this early stage (i.e., the time when these instructions were written), the Relevant medications Transformer does not apply the QIP medication Value Sets. If this changes in the future, a new version of this validation report will be issued.

Report Description

The main idea behind this report is to display all of the medications that belong to the UDS QM Value Sets. These medications had an action in the measurement period, which any of the Medication Flags listed on the report "RCHC List All Medication Flags" such as, start, stop, taking/brought forward, etc. Therefore, this report is purposefully more inclusive than the Transformers for the Quality Measures in order to obtain as many medications as possible. To appear on the report, the medication action had to occur during a completed visit (in this case, the visit is defined on the relevant_visits table, which at most health centers include visits with the status 'CHK' in any location with any provider).

In the report output, each row consists of one medication (defined by a unique med item ID) for one Quality Measure and one Value Set. Note that one medication can belong to more than one Quality

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[14] As of the writing of these instructions, this Transformer is new and being validated

Instructions for Using the Relevant Validation Report Set (eCW Edition, Version 1)

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. On the other hand, medication groups are combined into a single field in the columns Rx group ids and Rx group names. Therefore, if a single medication belongs to more than one group, the groups (ID numbers and names) will be listed in the respective columns without duplication.

Medications on the report must have had an action in the measurement period. There are columns for group id and name, and 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.

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.

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
Rx group ids	The internal medication group ID number(s)
Rx group names	The medication group name(s)
Med itemid	The internal medication ID number
Med name	The medication name
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

Background and Context

This report lists all vaccines in the health center EHR that match the Value Set CVX codes[15] for vaccines among the Quality Measures that are focused on vaccines. 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.

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. For reference purposes, the internal eCW ID number is are displayed for the vaccine name. 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.

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[15] To define vaccines, the Value Sets contain both CVX codes and CPT codes. Vaccine data is taken from the Immunization Detail Window in eCW and not from claims. Therefore, CVX codes only should be used by the Relevant Transformers. You should confirm that if CPT codes appear on the "Immunizations" table in Relevant, they only correspond to very old records (most likely old historical records).

Instructions for Using the Relevant Validation
Report Set (eCW Edition, Version 1)

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 id	The internal vaccine name ID number
Vaccine name	The vaccine name
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

C. System Set-Up and Utilization Reports

All Diagnosis Codes

Report Name: RCHC List All Diagnosis Codes

Background and Context

Relevant Transformers and other reports in this validation report set obtain diagnosis codes from the Problem List or from Assessments, depending on the code and its intended purpose within the logic of the Quality Measure. There is a report (RCHC Problem List Validation Report) that compares diagnosis codes on the Problem List to codes that appear on Assessments or Claims. There is also a report (RCHC List of QM Value Set Codes) that displays all of the diagnosis codes that appear in the Value Sets. The report RCHC List All Diagnosis Codes presents all diagnosis codes that appear on the Problem List or Assessments for patients seen in a measurement period.

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. For example, the report will show which cancer exclusion codes are being entered into the Problem List, or which diabetes diagnosis code is the most common among all codes in the Value Set for the 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.

Report Description

The report lists all diagnosis codes that appear on the Problem List of patients seen in the measurement period, or that appear on Assessments in the measurement period. An unduplicated patient count for each group is displayed. It is not implied that the number of patients who have a code on the Problem List and on an Assessment should be equal, but at least the user can get an idea of how the codes are

being used[16]. 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).

For a code to be counted on the Problem List, it must meet the following criteria:
- The diagnosis code must be present on the Problem List on the day the report is run with a "Confirmed" status and not be resolved or deleted.
- The patient must have had at least one office visit with CHK status in the Measurement Period.

For a code to be counted on an Assessment, it must meet the following criterion:
- The diagnosis code be added to an Assessment during an office visit with CHK status in the Measurement Period.

Note that individual diagnosis codes on the list may be duplicated if they appear in more than one UDS Value Set or on more than one QIP Value Set. In this case, the diagnosis code will appear in two or more rows with separate UDS or QIP Value Set descriptions. Therefore, if the list is exported to Excel and then filtered for a particular Value Set, all the codes will be listed (regardless of whether they appear on more than one Value Set). On the other hand, if you are not looking at particular Value Sets and just want a list of unduplicated codes, you would need to copy the first four columns of the report and unduplicate those in Excel.

In some cases, a UDS or QIP Value Set is associated with two or more Quality Measures. If the entire Value Set was repeated for each measure, that would introduce too much duplication into the results. Therefore, the report only displays one measure name for a Value Set and these are listed below. The first measure name (italicized) is the one displayed on the report.
- UDS. End Stage Renal Disease (OID = 2.16.840.1.113883.3.526.3.353): *Statin Therapy for the Prevention and Treatment of Cardiovascular Disease*, Controlling High Blood Pressure
- UDS. Hepatitis A (OID = 2.16.840.1.113883.3.464.1003.110.12.1024): *Statin Therapy for the Prevention and Treatment of Cardiovascular Disease,* Childhood Immunization Status
- QIP. Diabetes: *Diabetes - HbA1C Good Control,* Diabetes – Retinal Eye exam
- UDS. Pregnancy (OID = 2.16.840.1.113883.3.600.1.1623): *Controlling High Blood Pressure*, Body Mass Index (BMI) Screening and Follow-Up Plan, Weight Assessment and Counseling for Nutrition and Physical Activity for Children and Adolescents

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[16] 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 could be argued that this method is not very precise, but you can examine your own data.

Instructions for Using the Relevant Validation
Report Set (eCW Edition, Version 1)

- QIP. Diabetes Exclusions: *Diabetes - HbA1C Good Control,* Diabetes – Retinal Eye exam
- QIP. Pregnancy: *Controlling High Blood Pressure,* Nutrition Counseling, Physical Activity Counseling

There are some additional unique properties of the data that you should be aware of when using this report. These are described in the rest of this section below.

Both measures "Statin Therapy for the Prevention and Treatment of Cardiovascular Disease" and "Childhood Immunization Status" use a Value Set named "Hepatitis B" but the Value Set OID codes are different. There is a difference of one diagnosis code between the Hepatitis B Value Set for the Statins measure (OID = 2.16.840.1.113883.3.67.1.101.1.269) versus the Immunizations measure (OID = 2.16.840.1.113883.3.464.1003.110.12.1025). Therefore, both Value Sets are displayed on the report.

The UDS "Childhood Immunization Status" measure uses a Value Set called "HIV." The UDS quality measure "HIV Linkage to Care" does not have an eCQM so no Value Set is linked to it on the report[17]. Therefore, the only reference to an HIV Value Set on the report is for the Childhood Immunization Status measure. To be consistent with the other diagnosis value sets of this measure, the EHR Target is described as "Assessments."

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

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 encounter with CHK status in the measurement period. 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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[17] There are three Value Sets with "…HIV…" in the name, but since there is no eCQM for the measure, it is unknown which one should be officially used.

Instructions for Using the Relevant Validation
Report Set (eCW Edition, Version 1)

<u>Column Definitions</u>

Column Name	Column Description
Dxcode	The diagnosis code itself
Dxname mostcommon	The most common name assigned to the diagnosis code by users entering codes on the Problem List or Assessments
Problist pts	The number of unduplicated patients seen in the measurement period with the diagnosis code on their Problem List
Assessm pts	The number of unduplicated patients with the diagnosis code entered into an Assessment in the measurement period
UDS measure qm	The UDS Quality Measure name the diagnosis code is associated with (if applicable)
UDS value set name	The name of the CMS Value Set that the diagnosis code is associated with (if applicable)
UDS value set oid	The identification code of the CMS Value Set that the diagnosis code is associated with (if applicable)
UDS code description	The CMS description of the code (if applicable)
UDS ehr target	The location in the EHR to which the Value Set applies (if applicable)
Qip measure qm	The QIP Quality Measure name the diagnosis code is associated with (if applicable)
Qip value set name	The name of the QIP Value Set that the diagnosis code is associated with (if applicable)
Qip ehr target	The location in the EHR to which the Value Set applies (if applicable)

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

Instructions for Using the Relevant Validation Report Set (eCW Edition, Version 1)

All Medications and Rx Groups

<u>Report Name</u>: RCHC List All Medications and Rx Groups

<u>Background and Context</u>

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 Relevant report writer may want to gather a list of medication or medication group ID numbers for adding into the SQL code. 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. If a health center has updated the membership of medications in eCW medication groups, the grouping can be verified with this report by comparing the groups (column Rx group names) to the Value Sets (column Uds value set names).

<u>Report Description</u>

The report lists all medications 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 at least one medication action in the measurement period. An action is any of the Medication Flags listed on the report "RCHC List All Medication Flags" for example, start, stop, taking/brought forward, etc.

Note that all Medication Flags are considered, so this report is much more inclusive than other validation reports or Quality Measures. Therefore, columns that show the number of visits or unique patients with the medication are really referring to medications with any action taken on them. This is not the number of prescriptions or the number of patients verified to be using the medication in the measurement period. Basically, it is saying that the medication was verified in some way (as using, not using, brought forward, etc.) during a number of visits for a number of unique patients within the measurement period. In other words, these medications existed on the medication list of these patients in some capacity during the measurement period.

This report displays unduplicated medications in rows where one medication has a unique medication ID number (column Med itemid). Note that one medication can belong to more than one Quality Measure, more than one Value Set and more than one medication group. In those cases, all of the measure names, Value Sets, and groups are aggregated into a single field as a list separated by commas.

Instructions for Using the Relevant Validation Report Set (eCW Edition, Version 1)

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 have had at least one action in the measurement period. An action is defined as any Medication Flag entered during the visit, and visits must have CHK status[18]. 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 itemid	The internal medication ID number
Med name	The medication name itself
Rx group ids	The internal medication group ID number(s), if applicable
Rx group names	The medication group name(s), if applicable
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
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

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[18] Medications included in the report are tied to the table relevant_visits, so refer to that Transformer to understand the criteria for visits that appear there. At most health centers, at least CHK status is necessary.

All Medication Flags

Report Name: RCHC List All Medication Flags

Background and Context

The use of Medication Flags (otherwise known as Doctor's Flags) is important to understand because they are normally entered by a provider to document the status of medications being used or not used during the visit. Each visit can have one or more flags for each medication.

Report Description

This report simply displays the names and ID numbers of the Medication Flags used during the measurement period. It is good to keep track of which flags are active and being used in the system. At some health centers, EHR users have created their own custom flags that may confuse the understanding of medication use and data analysis. The health center's EHR management team may choose to inactivate these kinds of flags and only utilize the standard flags so that Relevant Transformers and Care Gaps work as expected. The validation report displays a column indicating if the flag is active or not.

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 visit dates where actions occur on medications. An action is defined as any Medication Flag entered during the visit, and visits must have CHK status[19].

Column Definitions

Column Name	Column Description
Medication flag id	The internal medication flag ID number
Medication flag name	The medication flag name
Flag status	Active or inactive status

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[19] Medication flags included in the report are tied to the table relevant_visits, so refer to that Transformer to understand the criteria for visits that appear there. At most health centers, at least CHK status is necessary.

Column Name	Column Description
Number med records	The number of medication records where the flag was entered during a visit

Custom Set-up at Health Center: no further set-up is necessary for this report. However, note that medication flags are commonly used in Relevant Transformers. Since these Transformers identify patients who are "using" the medication, the medication flag ID numbers in the Transformer should match the flags that have a description indicating the medication is being used (and *visa versa*, if a NOT statement is used in the Transformer instead).

All Structured Data Items

Report Name: RCHC List All Structured Data Items

Background and Context

The term "data items" refers to the individual questions or fields that appear in the Social History, HPI, Preventive Medicine, and Examination structured data windows of eCW. Each question or field is identified by a sequence consisting of a Category, Symptom and Detail. This sequence organizes the items in groups, similar to how it is displayed in eCW. There may be different labels for these groups in the different sections of eCW, but on the underlying data table in Relevant, the organization is the same. Therefore, Category, Symptom and Detail is the name of the sequence used on the validation report.

It may be useful for Quality Managers or SQL report writers to see all of the structured data items (and ID numbers) used in a measurement period. For example, you may want to pull specific items for a report or a Care Gap. Or, you may want to see if data entry is occurring as expected for a new question.

Report Description

The report simply lists all items (defined as Category, Symptom and Detail) from structured data (defined as data from the Social History, HPI, Preventive Medicine, and Examination sections of eCW). To appear on the report, the value for the item (in other words, the answer chosen by the person entering the data) must not be null (missing) or a single space character (" "). Data must also have been

entered during an office visit with CHK status during the measurement period. Neither deleted encounters nor deleted items are counted on the report.

Note that this report is focused on structured data items. In eCW, these are labeled on the "Structured" tab, not the "Free-form" tab of the respective section.

The report contains columns that show the number of records entered for the item, as well as the last entry date. There is also a column for the number of unique values entered for the item. The Values for items sometimes have a structure to them (e.g., Yes or No answers). However, many of them allow free text or dates. The report counts the unique values entered but does not display them individually. So, an item with a choice of only a "Yes" or "No" answer would have a count of two unique values on the report. Alternately, an item with a date field might have a count of dozens or hundreds of unique values.

Commonly, questions that appear on Smart Forms are mapped to their structured counterpart. Check community mapping in eCW to confirm mapping between forms and structured data elements. There may be items with similar names in the system, but only particular ones are mapped to a Smart Form.

On the default version of the report, there is no name displayed for the Symptom (but Symptom ID is displayed). See the information in Custom Set-up at Health Center (below) to correct this in your instance.

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 visit dates where structured data elements are utilized.

Column Definitions

Column Name	Column Description
Structured data type	Displays the source of the structured data item: Social History, HPI, Preventive Medicine, or Examination sections of eCW
Category id	The internal category ID number
Category name	The category name
Symptom id	The internal symptom ID number
Symptom name	The symptom name (currently not identified)

Instructions for Using the Relevant Validation Report Set (eCW Edition, Version 1)

Column Name	Column Description
Detail id	The internal detail ID number
Detail name	The detail name
Number unique values	The number of unique values entered by the user in the measurement period
Total records	The number of times a value was entered into the item in the measurement period
Last record date	The last date in the measurement period a value was entered into the item

Custom Set-up at Health Center: By default, the column Symptom name displays the text 'Symptom name not available.' Health centers can display the symptom name with one additional step. Symptom names are present on a table called "properties" in the Relevant Staging Database. However, not all health centers have this table available in their current configuration. If you want to display the symptom name you will need to have this table added to your Staging Database.

In the SQL code for the report, there are Temporary Tables for each type of structured data (Examination, HPI, etc.). For each Temporary Table, there is a note (preceded by two dashes so it is not read by the processor) in the JOIN statement and a note containing the field for the column Symptom name in the SELECT DISTINCT sub-routine. If the "properties" table has been added to Relevant, you can remove the two dashes ("--") on each of these rows. Then delete the original symptom name row ('Symptom name not available' AS symptom_name) or place two dashed in front of it. Lastly, the new field (properties.name) must be added to the GROUP BY statement of the sub-routine because that sub-routine is aggregating COUNT and MAX statements.

If you do not want the symptom name, just run the default code.

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	• Hysterectomy PLUS • Total, complete or radical (but not 'subtotal') Absence of cervix	Q51.5, Z90.710, or Z90.712

Colorectal Cancer Screening	Total colectomy or colorectal cancer	• Colorectal cancer
		
		• Malignant neoplasm of the
		  ➢ 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 (eCW Edition, Version 1)

Mastectomy	Text in Surgical or Medical History	Diagnosis Code on Problem List
Bilateral	• Mastectomy, PLUS • Bilateral, double, or (left and right) PLUS • Total, complete or radical	• Z90.13: Acquired absence of bilateral breasts and nipples
Two Unilaterals (Specific)	Two records of: • 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: • 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: • Mastectomy, PLUS • Unilateral PLUS • Total, complete or radical	Two of the following codes with different Onset dates: • 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:
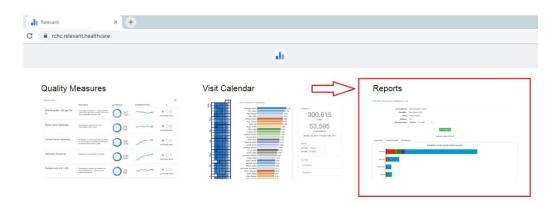
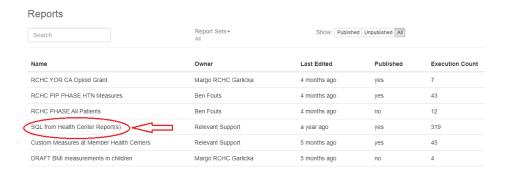| Measure	Text in Surgical or Medical History
Cervical Cancer Screening	• Hysterectomy, by itself, OR • Missing total, complete and radical
Colorectal Cancer Screening	• Colectomy, by itself, OR • Missing total, complete and radical
Breast Cancer Screening	• Mastectomy, by itself, OR • Missing total, complete and radical OR • Missing bilateral, double, unilateral, left and right

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. It is recommended that you first copy the code to Data Grip so you can test it. Therefore, get into the RCHC Aggregate, find the reports, and copy the code to your own file. For example, you may want to keep all of the code in a Word document as an archive. Then, you can also archive a second file with all of your 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.

On the Reports webpage, browse or search for a report named "SQL from Health Center Report(s)" and click on it.

Instructions for Using the Relevant Validation Report Set (eCW Edition, Version 1)

It is easier to search for the validation reports than it is to browse down the list because there are hundreds of reports. Enter "RCHC" into the search field near the top of the page. All of the validation reports (plus some others) begin with RCHC, so choose one or more reports from the search list, highlighting them as you go down the list in the search box. Then click on the green button, "Run."

Once the report has run, you should get a list of reports you selected in the first tab ("Results Table"). Click the second tab to go to the SQL Results table ("SQL (copy and paste"). You can copy the code from either tab.

Instructions for Using the Relevant Validation Report Set (eCW Edition, Version 1)

The screenshot above shows the text to copy on the tab "Results table." Copy the text in the columns with the red arrows directly to your reference file. Alternately, you can click the "Export" button to get an Excel file with all the column data. To test and re-create the Reports in your instance of Relevant, you will need the report name, report description, data source and SQL code. Note that some reports have SQL code in the Temporary Tables and the Results. On the "Results table" tab, these are in listed in the columns "Temp Tables Sql" and "Results Sql" (If you are copying from the web-page, you may need to scroll all the way to the right to see all columns).

Note that when you are ready to add the report to your own instance of Relevant, you will need to also copy the report name and description. Some reports have a parameter called startdate. In Data Grip, you will need to replace this parameter with a date (for example, '2019-01-01') and in Relevant you will need to add a Parameter with its name and label. An example is displayed below. For consistency, it is recommended that you use the same report name, parameter name, and report description as it appears in the original version.

Parameters

Name	Label	Type	Default	
startdate	MP Start Date	Date ▾	01/01/2019	🗑

Add parameter +

Note that some fields and tables have slightly different names in the different instances of Relevant. You will need to test the SQL before copying it to a Relevant report. It is recommended that you test each component separately. In other words, start with the first Temporary Table in the report code. If that works, go to the next Temporary Table, etc. Note that in each part of the report instructions, there is a heading for "Custom Set-up at Health Center" which can give you some direction on what to do for more complicated set-up issues.