

Introduction to the 2020 RCHC Validation Report Set (eCW Version)

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RCHC Data Peer Workgroup, June 9, 2020

Agenda

1. Description of the new instruction manual
2. How to obtain the reports
3. Recommended use of the reports
4. Narrative of the individual reports in the set and how to customize them for your health center

Distribution Dates

- The reports and the instructions should be ready by Friday, June 12, 2020
- Look for an e-mail from Colleen with the announcement
- Some new reports are being tested in the RCHC Instance of Relevant. Do not copy them until the announcement because they are still being tweaked

Instruction Manual (2020 Version)

Second Version for eCW Health Centers

Instructions

The instruction document will be posted to rchc.net in the Peer Collaboration section, Data Peer Workgroup sub-section

Instructions for Using the Relevant Validation Report Set (eCW Edition, Version 2)



Serving Sonoma, Napa, Marin & Yolo Counties

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Section Headings For Each Report

- Report Name
- Background and Context
- Report Description
- Parameters
- Relevant Database
- Column Definitions
- Custom Set-up at Health Center

Basic Information

- Report Name – what you will see in Relevant
- Parameters – define the Measurement Period. In most cases, this is the period from which records are drawn based on when they were entered (for example, patients based on visit dates)
- Relevant Database – most are based on the Staging Database

Specific Report Information

- Background and Context – why was the report made and what can you use it for?
- Report Description – characteristics of the report, universe definitions, column definitions, etc. Can be more technical so you can understand how the report was designed

List of Columns and Definitions



Instructions for Using the Relevant Validation Report Set (eCW Edition, Version 2)

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

Custom Set-up

- Custom Set-up at Health Center – how to set-up the report in your instance of Relevant
- In some cases, there are significant differences among the health centers in the way that data is pulled. Therefore, this section describes what you must do to get the report to work at your health center

Report Modification

- Health centers are encouraged to further modify and customize the report to make it most useful for their own needs
- For example, to pull the data more precisely based on existing code in Transformers, Importers, etc., or to display additional columns
- The report is just a general template with a purpose described in the section “Background and Context”

Appendix A

- Standards for Cancer Exclusions
- Applicable to the report “RCHC Cancer Exclusion Validation Report”
- This is a description of the standards for entering cancer screening exclusions adopted by the RCHC Data Standards and Integrity Committee

Appendix B

- Obtaining and Configuring the Validation Report Set
- Describes how to copy the reports to your instance of Relevant (this will be discussed in this presentation as well)

Appendix C

- List of Value Sets Used in Quality Measures
- The recommended list of Value Sets for each Quality Measure that can be used in Relevant
- The components of each Value Set can be viewed using the validation report “RCHC List of QM Value Set Codes”

Appendix D

- Recommended Frequency for Running the Validation Reports
- Just take this as a suggestion
- The actual frequency will depend on factors such as the rate (or absolute number) of records being entered into eCW that are missing data or have non-standard data
- Other reports are more for your reference. Check them now and again near the end of the year

Obtaining and Configuring the Reports

Copy the reports to your instance of Relevant and make any initial changes so they work

Report Categories (#1)

Record-Level Validation Reports. These reports recognize individual records that might have incomplete information and should be investigated further.

- Problem List
- Persistent Asthma
Diagnosis
- Incomplete Labs
- Unattached Labs and
Images
- Incomplete Images
- Incomplete OB Records
- Cancer Exclusions
- Incomplete or Non-
Standard Demographic
Data

**NEW
REPORTS**

Report Categories (#2)

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.

- QM Value Set Codes
- QM Lab Names and Attributes in EHR
- QM Medications in EHR
- QM Vaccines in EHR

Report Categories (#3)

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.

- All Diagnosis Codes
- All Lab Names and Attributes
- All Images
- All Medications and Rx Groups
- All Medication Flags
- All Vaccines
- All Structured Data Items
- All Providers, Resources and Staff
- All Insurance Names
- All OB Items

Copy Reports To Your Instance

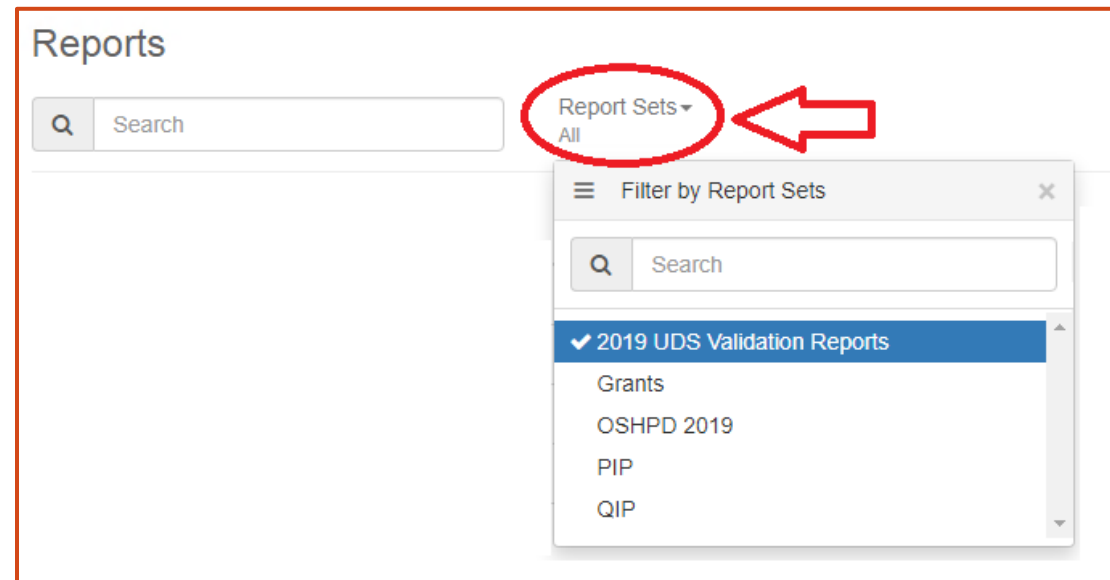
- Go to the RCHC Instance (you need a user account)
- Click on Reports

The screenshot displays the RCHC Reports dashboard. The browser address bar shows 'rhc.relevant.healthcare'. The dashboard is divided into several sections:

- Quality Measures:** A table with 5 rows showing compliance percentages and trends for various metrics like BMI, Breast Cancer Screening, Cervical Cancer Screening, Depression Screening, and Diabetes with A1C.
- Visit Calendar:** A grid showing visit counts by date and provider.
- Visit Counts by Provider:** A horizontal bar chart listing providers and their respective visit counts.
- Summary:** A box displaying total visit counts: 300,615 visits and 53,595 unique patients for the period January 1st, 2015 - February 10th, 2017.
- Reports:** A section titled 'Reports: PCU Rice breakdown' with a red circle and arrow pointing to it. It includes filters for 'Last modified by', 'Description', 'Owner', 'Published', and 'Query parameters'. Below the filters is a bar chart showing 'Equipment count by provider, sorted by case ratio'.


Copy Reports (Step 2)

- Filter the report list
- On the Reports page, click Report Sets and check “2019 UDS Validation Reports”



Copy Reports (Step 3)



Click on the name of a report you want to copy

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

Copy Reports (Step 4)

Click on the button for “Copy report definition”

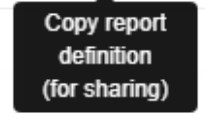

Reports: RCHC Demographics Validation Report ⓘ

  [Edit](#)

Description
Displays patients who might have incomplete or non-standard demographics data normally summarized for the UDS and OSHPD reports. Records recommended for further exploration are noted in the column “action_needed_agg.”

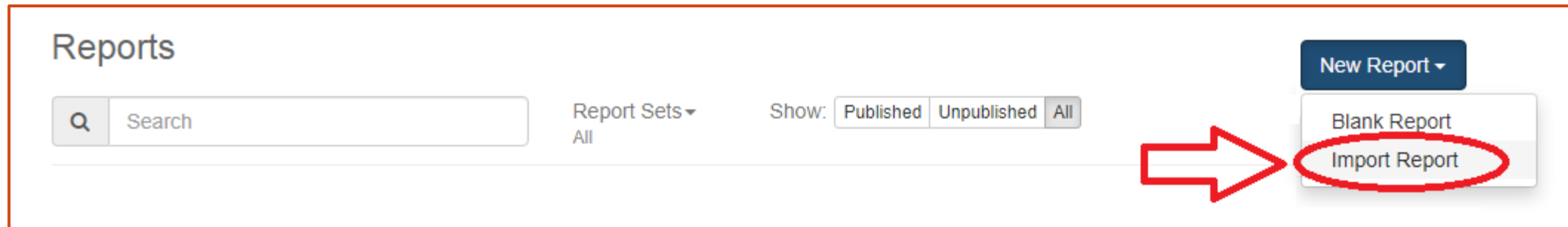
Parameters

MP Start Date	MP End Date
<input type="text" value="01/01/2020"/> ×	<input type="text" value="05/31/2020"/> ×



Copy Reports (Step 5)

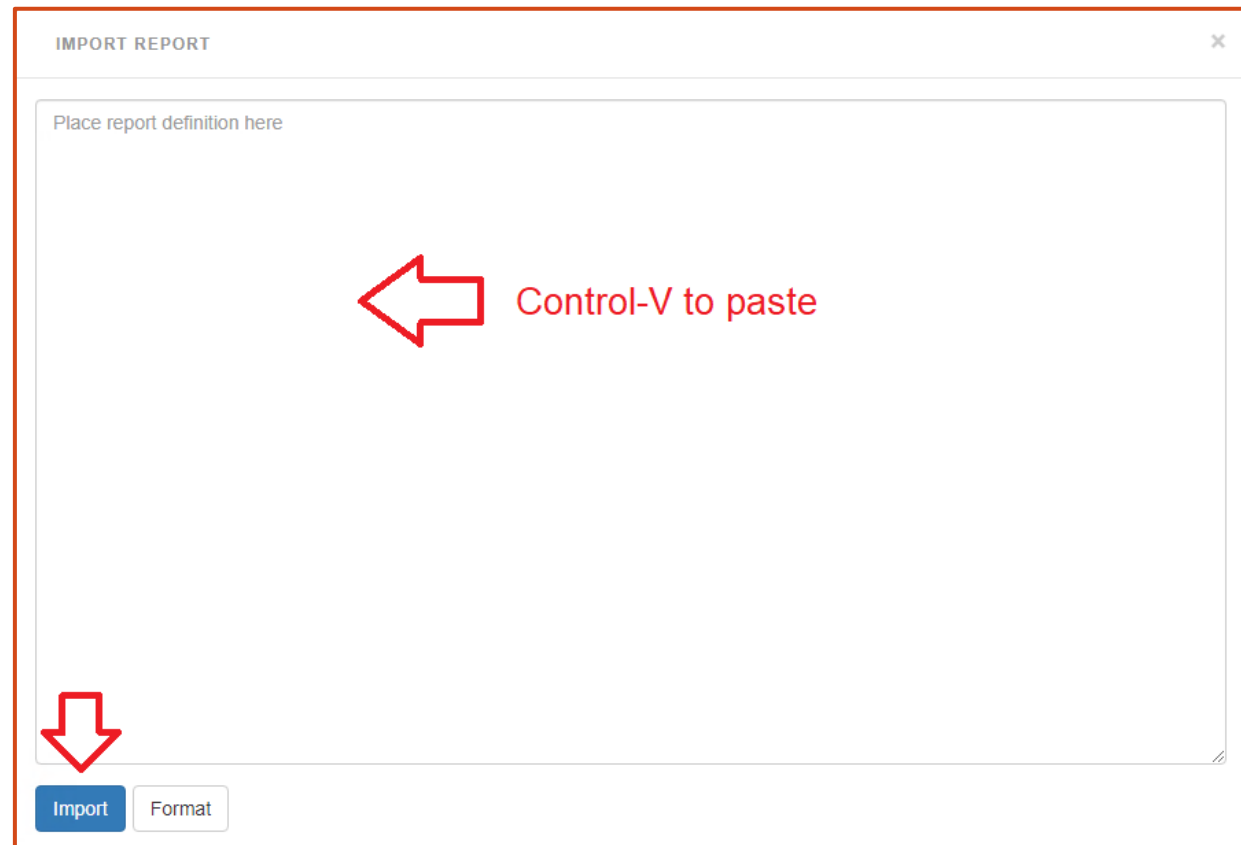
Go to your own instance of Relevant and click on New Report, then Import Report



The screenshot shows the 'Reports' section of a software interface. It includes a search bar with a magnifying glass icon and the word 'Search'. To the right of the search bar is a 'Report Sets' dropdown menu currently set to 'All'. Further right is a 'Show:' filter with three buttons: 'Published', 'Unpublished', and 'All'. On the far right, there is a dark blue button labeled 'New Report' with a downward arrow. A dropdown menu is open below it, showing two options: 'Blank Report' and 'Import Report'. A red arrow points from the 'New Report' button to the 'Import Report' option, which is also circled in red.

Copy Reports (Step 7)

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



Check the Code in DataGrip

- It is recommended that you then copy the code to DataGrip and edit, as appropriate.
- Look for tables and fields not recognized (you may have to modify some of the names in yellow)

```
SELECT DISTINCT
  i2.itemname AS attribute_name,
  labloincodes.code,
  COUNT(enc.encounter_id),
  MAX(date)
FROM enc
  INNER JOIN labdata ON labdata.encounterid = enc.encounter_id
  INNER JOIN labdatadetail ON labdatadetail.reportid = labdata.reportid
  LEFT JOIN labloincodes ON labloincodes.itemID = labdatadetail.propID
  INNER JOIN items ON items.itemid = labdata.itemid
  INNER JOIN items i2 ON i2.itemid = labdatadetail.propid
WHERE COALESCE(NULLIF(labdata.colldate :: DATE, '1901-01-01'), labdata.resultdate :: DATE, enc.date :: DATE)
      BETWEEN '2014-01-01' AND '2020-05-31'
GROUP BY i2.itemname, labloincodes.code;
```

Other Tips

- Most of the validation reports are built on the Relevant Staging Database. Therefore, do not attempt to run a report in the RCHC Aggregate Instance of Relevant. They are in the Aggregate Instance simply so you can access them.
- Check the “Custom Set-up at Health Center” section for each report for ideas about configuring the report


Viewing the Results

- Note that some of the reports might take a minute or two to complete!
- Not all columns may be displayed on the screen. So, **EXPORT** the data in Excel, where you can also sort and filter the data how you prefer

Results table **+**

Query Time: 57.453 sec.

Displaying 30 of 747 results

 [Export ▾](#)

Patient Id	Account No	Pat Last Name	Pat First Name	Date Of Birth	Age Now	Last Uds Medical Visit	Count Uds Medical Visits	Diagnosis Category	Problast Exists	Check Action
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Recommended Use of the Reports

Including the Frequency of Running the Reports

Record-Level Validation Reports

- Use these to identify records that need to be investigated further. The records might contain missing or non-standard data.
- Look for patterns described by the report. Do they describe opportunities for training staff?
- Do the reports need to be adjusted so they fit the data entry guidelines present at your health center, or so they align with how your Transformers were designed?

Recommended Frequency to Run the Record-Level Validation Reports

- The frequency depends on how many records are appearing on your report, and the rate of errors and omissions being entered into the system
- Adjust the frequency depending on the volume of records brought up by the report
- The initial batch of records might be high because of a backlog (unless you have been using other means to “clean” your data).

Recommended Frequency to Run the Record-Level Validation Reports

Suggested Frequency	Report General Name
Monthly (run mid-month for the Measurement Period of the previous month)	Incomplete Labs
	Unattached Labs and Images
	Incomplete Images
	Incomplete or Non-Standard Demographic Data
Quarterly (run mid-month for the Measurement Period of the previous quarter)	Incomplete OB Records
	Persistent Asthma Diagnosis
Semi-annually (run mid-month for the Measurement Period of the previous six months)	Problem List
	Cancer Exclusions

System Set-Up and Utilization Reports

- Use these to check the system set-up and mapping of important items
- Good idea to run it and make sure the set-up is what you expect “now” and then run it at regular times later to look for new items

Suggested Frequency	Report General Name
Semi-annually (run mid-month for the Measurement Period of the previous six months)	All Providers, Resources and Staff
	All Insurance Names

Quality Measure (QM) Understanding Reports

- These reports show items in your system related to the Value Sets of the Quality Measures
- Refer to Appendix C of the instructions to see the list of Value Sets by Quality Measure
- These can be used along with the system set-up reports that list “all” items
- Applicable items need to be associated with codes so they can be recognized as belonging to the Value Set

Using System Set-up and QM Value Set Reports

- Check labs, images, medications and vaccines
- Are all the items you expect to be members of a Value Set actually picked up by the report as such?

Suggested Frequency	Report General Name
Annually (run in December for the Measurement Period of year-to-date)	QM Lab Names and Attributes in EHR
	All Lab Names and Attributes
	All Images
	QM Medications in EHR
	All Medications and Rx Groups
	QM Vaccines in EHR
	All Vaccines

System Set-Up That are Used on an As-Needed Basis

Use these report when you need to reference codes in your SQL or for other investigative purposes

Suggested Frequency	Report General Name
As needed (reference only)	QM Value Set Codes
	All Diagnosis Codes
	All Medication Flags
	All Structured Data Items
	All OB Items

Description of the Reports in the Set

With an emphasis on the new reports

Record-Level Validation Reports

1. Incomplete Labs
2. Incomplete Images
3. Unattached Labs and Images
4. Incomplete or Non-Standard Demographic Data
5. Incomplete OB Records
6. Problem List
7. Persistent Asthma Diagnosis
8. Cancer Exclusions

**NEW
REPORTS**

Labs and Images

Two kinds of reports look for two kinds of problems:

1. Incomplete: the record did not have all fields necessary to demonstrate the lab/image was actually done. These fields (like dates and results) are needed for data analysis and summary
2. Unattached: a document not present in the correct lab or x-ray folder and not attached to the original order

Incomplete Labs and Images

- See November 2019 Data Workgroup Presentation for more detail
- Labs for QMs: A1c, LDL, Pap, HPV, FIT, FOBT, Nephropathy (urine protein) pulled by Value Set code
- Images for QMs: Mammogram, Colonoscopy, and Sigmoidoscopy pulled by name
- These two validation reports display labs and images that do not meet a set of criteria for completion

Incomplete Labs

Criteria for a completed lab record

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 (exception is for A1c and LDL labs, where a Lab Value is required)
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

Incomplete Diagnostic Images

Criteria for a completed image

1. An image date is present, which is a Collected Date OR a Result Date
2. AND an 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

Incomplete Labs and Images

- Both reports have a column “Main Issue” that describes the missing data in the record (one issue displayed, by priority)
- When checking the record, all fields should be reviewed
- Still treat the report results with a “grain of salt.” Know your data entry practices and understand what is being pulled by the Transformers.

Unattached Labs and Images

- Mostly scanned documents associated with the Quality Measures: mammograms, colonoscopies, sigmoidoscopies and pap tests
- These must be moved to the appropriate folder, attached to the order, reviewed, and dates and results added to the order
- Incomplete orders displayed on the other two reports just described. The unattached report only focuses on the documents (the order may or may not be complete).

Unattached Labs and Images

- Two fields on the report summarize what the user needs to do (or, at least, investigate)
- Can be used to prioritize or group records

Associated id in	Category	Customname	Scanneddate	Scannedby	Description	Reviewed Doc Record	Reviewername Doc Record	Attached Order Record	Received Order Record	Folder Status	Action Needed
	Mammogram	2020-21-01 CDP Mammogram	2020-01-21			true		false	false	Move to Xray or Lab folder and attach to an order	Last mammogram within 3 months: 2020-01-06
	Mammogram	2020-05-04 Mammogram - Sutter	2020-05-14			true		false	false	In Xray Folder, needs to be attached to order	Needs mammogram



Unattached Labs and Images

- **Folder status:** directs the user to move the document into the correct folder if not already there. Also directs the user to attach the document to an order if not done already.
- **Action needed:** if there was an order for the particular kind of test, it will display the order date. Otherwise, the report will indicate that the test is needed (an order might need to be made so you can attach the document and complete the appropriate structured data fields)

Incomplete or Non-Standard Demographic Data

- Checks the demographic fields summarized by the UDS and OSHPD reports
- Looks for missing data and unmapped data. The objective is to reduce the number of records in any “unknown” category
- Pairs of columns: the raw data compared to the transformed data
- Displays the ID codes (eg, raceid) where appropriate to help investigation in DataGrip

Demographic Data: Fields

- Missing or non-standard zip code
- Missing birth date, future birth date, age over 111 years
- Gender identification missing, not mapped, or contradictory
- Race missing, not standard, or labeled as “More than one race” because of multiple race entries in the past
- Ethnicity missing or not standard

Demographic Data: Fields

- Language missing
- Sexual orientation option not mapped
- A fee schedule and poverty status has not been determined for uninsured patients in the past two years
- Insurance name not mapped to UDS or OSHPD categories

Incomplete OB Records

- Obstetric records should have all important (i.e., reportable) information entered before they are closed
- The column “action_needed” lists all fields missing data or with non-standard data
- Report shows all prenatal patients seen within the measurement period along with key data fields. This list may be useful for other purposes as well. Once exported, the “action_needed” column can be filtered or sorted to show the records that need to be reviewed.

Incomplete OB Records

- Since some items on the OB Flowsheet are added by the health center, some internal Item ID numbers are different between health centers
- Therefore the set-up of this report is a little more complicated than other reports. See the “Custom Set-up at Health Center” section of the instructions for this report
- Use the report “RCHC List All OB Items” to get a list of Item ID numbers for all of the items described by the report

Problem List

- Patients diagnosed with a chronic disease should have a diagnosis for the disease on the Problem List
- In other words, the Problem List is the source of truth for chronic disease diagnosis
- Diagnosis Code Value Sets: Diabetes, Hypertension, IVD, Depression/Bipolar, and ASCVD (persistent asthma has a separate report).

Problem List

Report identifies patients who should be investigated further because:

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 in the past year.
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 ever in the past.

Persistent Asthma Diagnosis

- Similar to the Problem List Validation report, but has additional features
- Picks up two other sub-populations of patients, depending on persistent asthma medication status and the presence of both persistent and intermittent asthma diagnosis codes on the Problem List

Cancer Exclusions

- 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
- If your health center is not using these standards for data entry, then you may have an increased number of false negatives or false positives in your cancer screening denominator (depending on your Transformers)

Cancer Exclusions

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

Quality Measure (QM) Understanding Reports

1. List of QM Value Set Codes
2. List of QM Lab Names and Attributes
3. List of QM Medications
4. List of QM Vaccines

These reports list items in your system that are associated with the Value Sets that define standard elements needed for the Quality Measures

Quality Measure (QM) Understanding Reports

- The report “List of QM Value Set Codes” just lists all of the Value Sets and associated codes. Also see “Appendix C: List of Value Sets Used in Quality Measures” in the instructions.
- The other three reports list labs, medications and vaccines in your system that match the codes in the Value Sets
- See the November 2019 Data Workgroup presentation for more detail

How to Use The Understanding Reports

- Use these reports to list the data in eCW that is being pulled by the Value Sets
- Are the records of labs, medications and vaccines what you expect?
- Are any displayed that should not be there? For example, an in-house lab may have the wrong LOINC code
- Are any missing? For example, a vaccine in your system may not have an associated CVX code. Also look at the “List All” reports to find unassociated items with similar names to associated items

System Set-Up Reports

See the November 2019 presentation for a description

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

These reports list all items in your system, regardless of association with Value Sets, Quality Measures, etc.

System Set-Up Reports

New validation reports with the same approach:

5. All Lab Names and Attributes
6. All Images
7. All Vaccines
8. All OB Items

Basically display all items active in the Measurement Period. If a lab attribute or vaccine is associated with a Value Set, it will display the QM name

System Set-Up Reports

These reports display the UDS and OSHPD mapping that exists in your system

9. All Providers, Resources and Staff
10. All Insurance Names

The mapping should be examined now and also in November / December before the reporting season starts

List All Providers, Resources and Staff

- The universe is anybody in the system who was linked to a resource ID or a doctor ID on a visit in the measurement period
- Displays number of UDS visits, UDS medical visits, and UDS and OSHPD mapping

Prov Type	Provider Id	Last Name	First Name	Credentials	Specialty	Is Resident	Primary Facility	Fte	Uds Line Number	Oshpd Line Number	Uds Visits	Non Uds Visits	Uds Med Visits	Last Visit Date	Rendering Pt Count	Raw Visits Resourceid	Raw Visits Doctorid
Provider				PsyD	Mental Health	false		0.70	21	83	290			2020-05-28		292	292
Provider				MD	Pediatrics	false		0.10	5	75	168		168	2020-05-15		168	168

List All Providers, Resources and Staff

- Many resources and staff members will not be mapped and that is okay. Check the UDS and OSHPD instruction manuals for definitions of those who need to be reported and also for the definitions of the line numbers
- You may need to have someone in human resources or operations check over the list to make sure everybody is in the right category
- There should be some degree of agreement (where appropriate) between UDS and OSHPD

List All Insurance Names

- The universe is any insurance name that was in any position on any claim in the measurement period
- Displays number of claims (by position) as well as UDS and OSHPD mapping

Insid	Insurance Name	Relevant Payer Groups Name	Uds Insurance Category	Oshpd Insurance Category	Undup Pts Primaryins	Primary On Claim	Secondary On Claim	Tertiary On Claim	Last Service Date
1079		CHDP	Medicaid	CHDP	10	90			2020-05-29
1760		OTHER INSURANCE	Private insurance	Private	1	1			2020-02-10
1473		OTHER INSURANCE	Private insurance	Covered California	1	1	2		2020-05-18

List All Insurance Names

- All insurance that was the primary insurance on at least one visit should be mapped. Check the UDS and OSHPD instruction manuals for definitions of insurance categories
- You may need to have someone in billing or finance check over the list to make sure all names are in the right category
- There should be some degree of agreement (where appropriate) between the UDS and OSHPD categories

Additional Ideas

- You may need to customize the reports to the way that your health center manages data in the Transformers.
- Please send me an e-mail if you see anything in the code that does not make sense, or you feel is not processing the data like it is intended

Additional Ideas

- The code is intentionally broken down into logical steps and Temporary Tables (with notation) to help you understand what it is doing
- If you make changes to the report, document those changes. Therefore, if a new RCHC version comes out, you can unite the new code with your changed code

Questions?