HEALTH INFORMATION TECHNOLOGY,
HITEQ
EVALUATION, AND QUALITY CENTER

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EHR Data Hygiene Tools: Methods for Finding and Fixing Issues that could be Hindering Your Progress on Quality

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Agenda

- Introduction
- Review of national data and trends
- Data validation priorities/ strategies
- Explore results of validation
- Optimizing EHR and Workflows
- Sustaining improvement

Intro to HITEQ

The HITEQ Center is a HRSA-funded National Cooperative Agreement that collaborates with HRSA partners including Health Center Controlled Networks, Primary Care Associations and other National Cooperative Agreements to support health centers in full optimization of their EHR/Health IT systems.

HITEQ identifies and disseminates resources for using health information technology (IT) to improve quality and health outcomes. HITEQ includes:

- A searchable **web-based health IT knowledgebase** with resources, toolkits, training, and a calendar of related events
- **Workshops and webinars** on health IT and QI topics
- **Technical assistance** and responsive teams of experts to work with health centers on specific challenges or needs

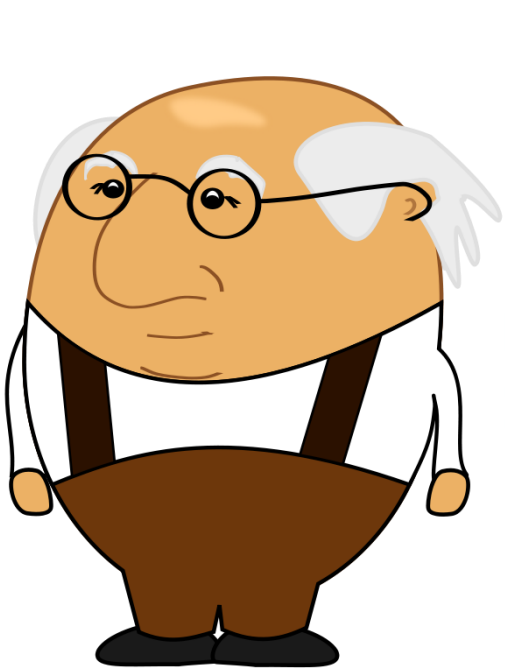
Contact HITEQ for training or technical assistance

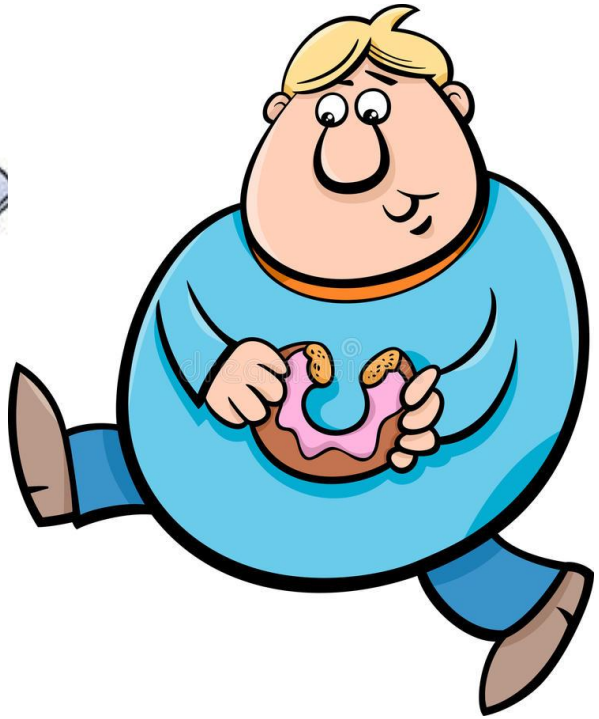
HITEQ SERVICES SUPPORT:

- Health IT Enabled Quality Improvement
- EHR Selection & Implementation
- Health Information Exchange
- Health IT/QI Workforce Development
- Value-Based Payment
- Privacy & Security
- Electronic Patient Engagement
- Population Health Management & Social Determinants of Health
- Achieving Meaningful Use
- Telehealth & Telemedicine

email us at hiteqinfo@jsi.com!

Why are our diabetes control rates not where we want them?



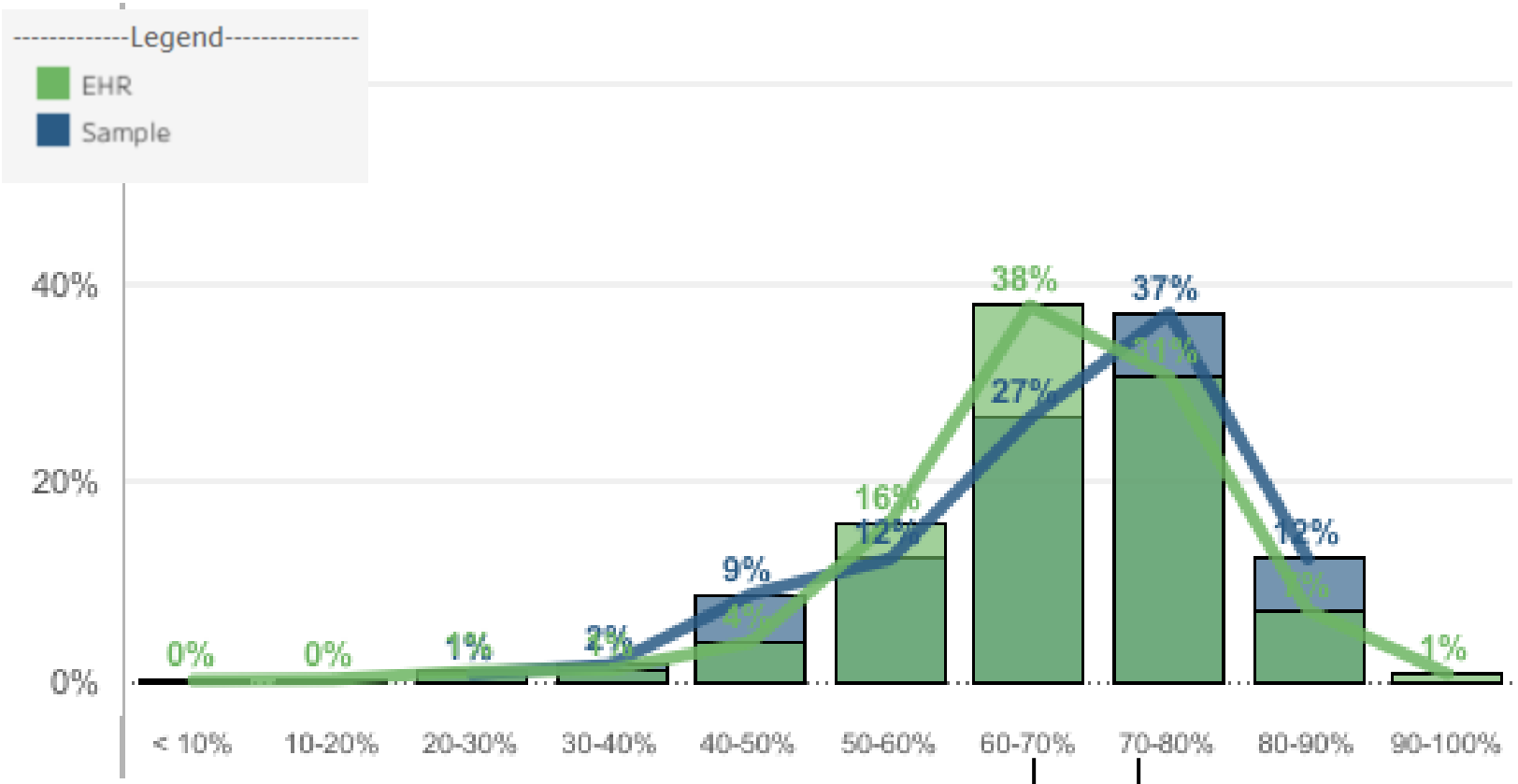


How do we know?

- That is what the report says, so it must be right.
- Can't find a recent HBA1c, so they must not have come back.
- Our population is older/ more sick/ more minority/ homeless, and those groups have worse health outcomes, so it makes sense.

But wait…..

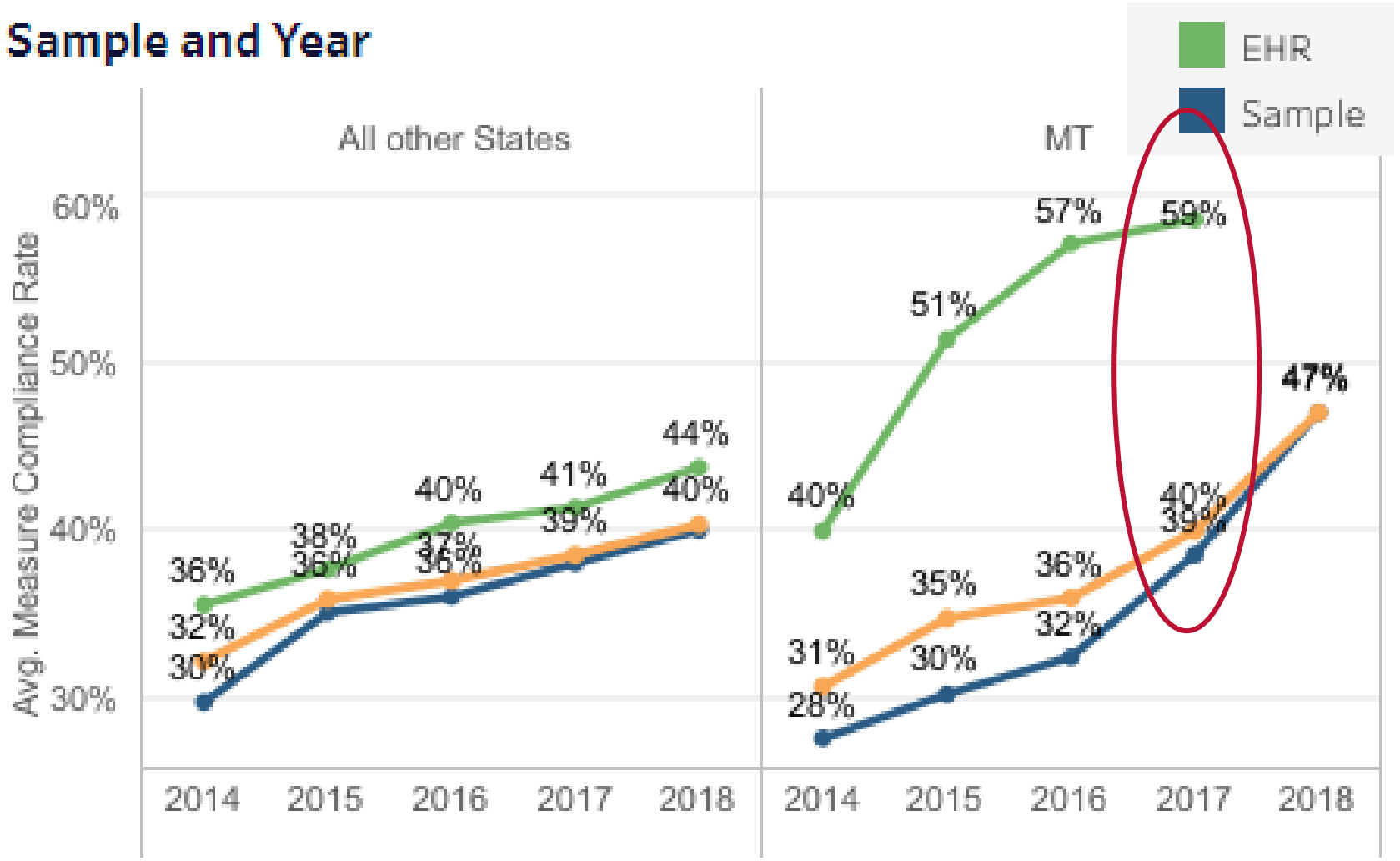
National Diabetes UDS Reporting



Most health centers reporting from an **EHR** report diabetes control in the range of 60-70%.

Most health centers reporting from a **Sample** report diabetes control in the range of 70-80%.

Colorectal Cancer Screening UDS Reporting



Note

We have unique dashboards for your state and health center!

Updates to 2018 UDS Dashboards

- Addition of **Data Comparison Splits** or "Data Slicers" by various characteristics:
  - **Urban/ Rural** (defined by BPHC)
  - **Large/small** (you select the split, generally 10,000)
  - Measure reported by EHR/ Sample

Updates to 2018 UDS Dashboards

- Addition of **Data Comparison Splits** or "Data Slicers" by various characteristics:

Yes/ No Data Slicers:

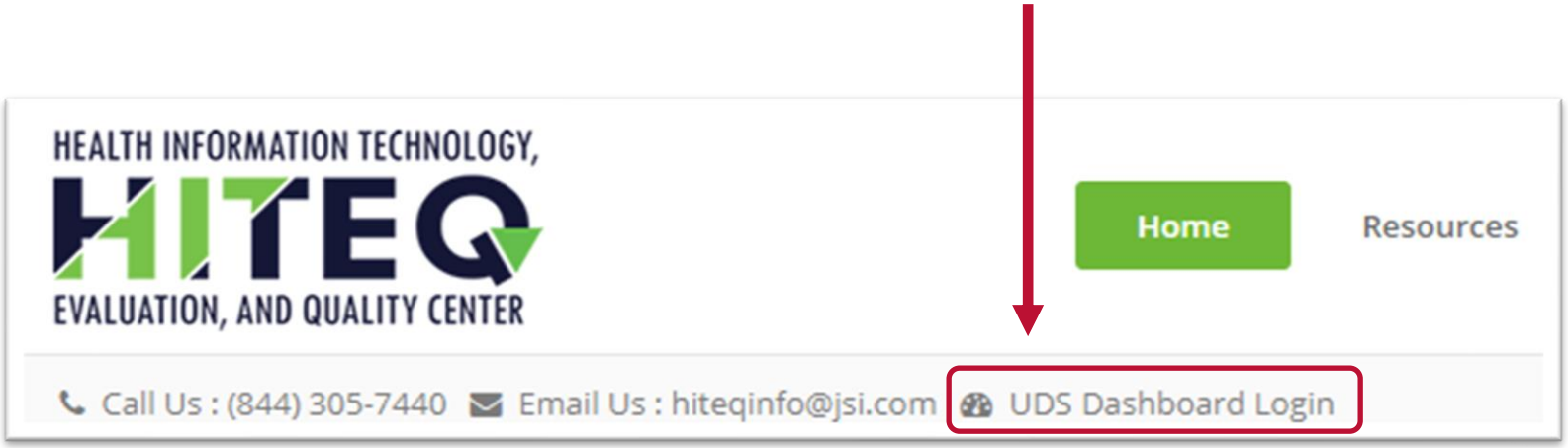
- Telehealth Use
- HCCN Participation
- EHR Patient Portal Use
- EHR Decision Support
- EHR Data Exchange
- Special Population fund recipient (330h, 330g, 330i)

Select % or # Break Slicers:

- % Medical of total patients
- % Pediatric patients
- % Elderly patients
- % Non-English language
- % Revenue from patient services
- QI staff as % of admin staff
- IT Staff as a % of admin staff

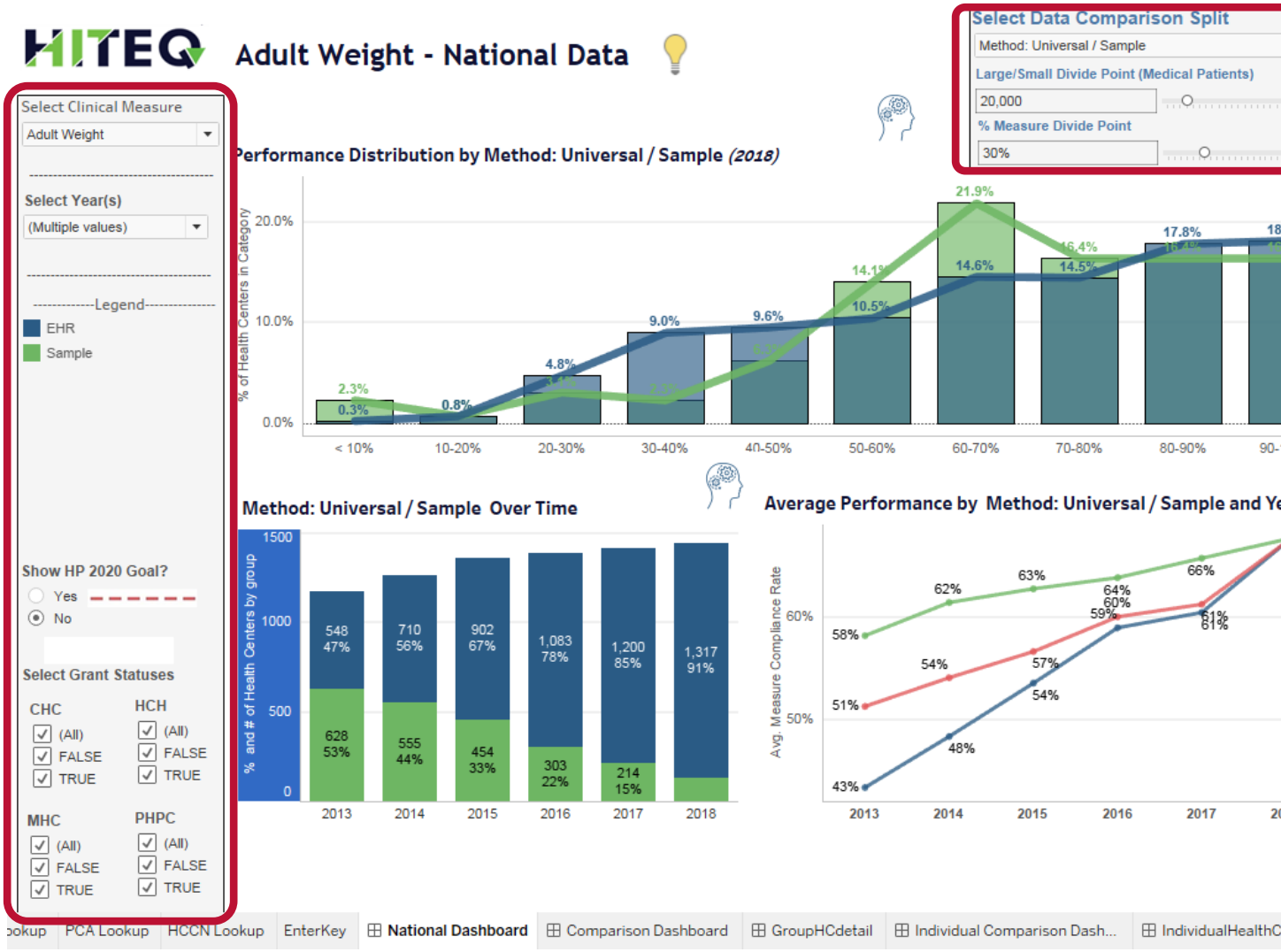
To Access and Use Your Own Dashboards

- If you don't have your login, email **hiteqinfo@jsi.com** with your **grant number,** and we will send it to you.
- Go to **HITEQcenter.org,** and click on UDS Dashboard Login in the navigation bar:



To Access and Use Your Own Dashboards

- You'll then be taken to a Welcome page, with tabs along the top. **Select the appropriate tab.**
- Then you'll be taken to the dashboard where you make a number of selections:



Optimizing Your EHR

Data → EHR → Reporting

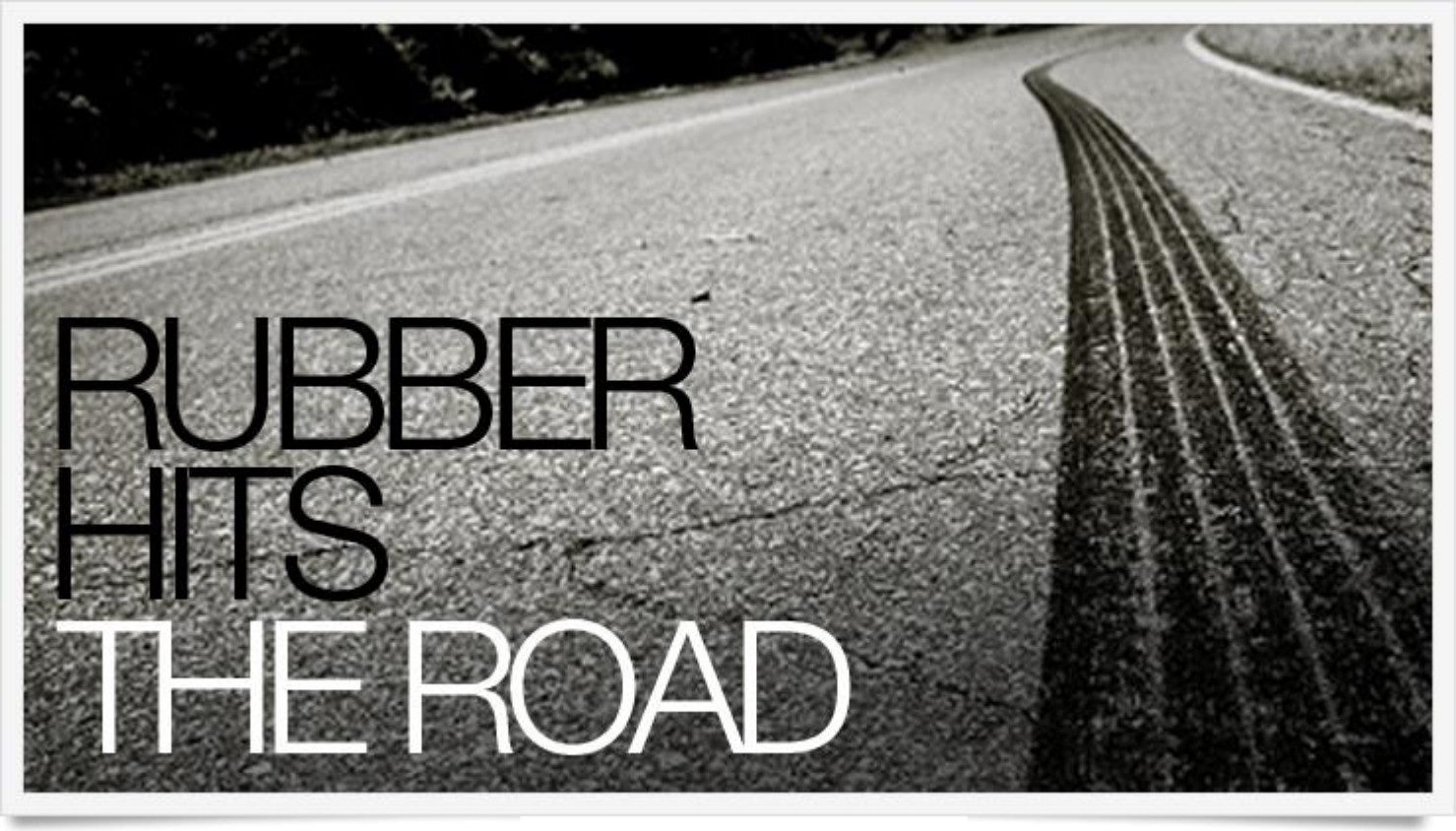
An EHR is a TOOL to record and report health data to support the achievement of optimal health outcomes for patients.

Optimization is the process of refining an EHR software to maximize the effectiveness of the tool in achieving optimal outcomes.

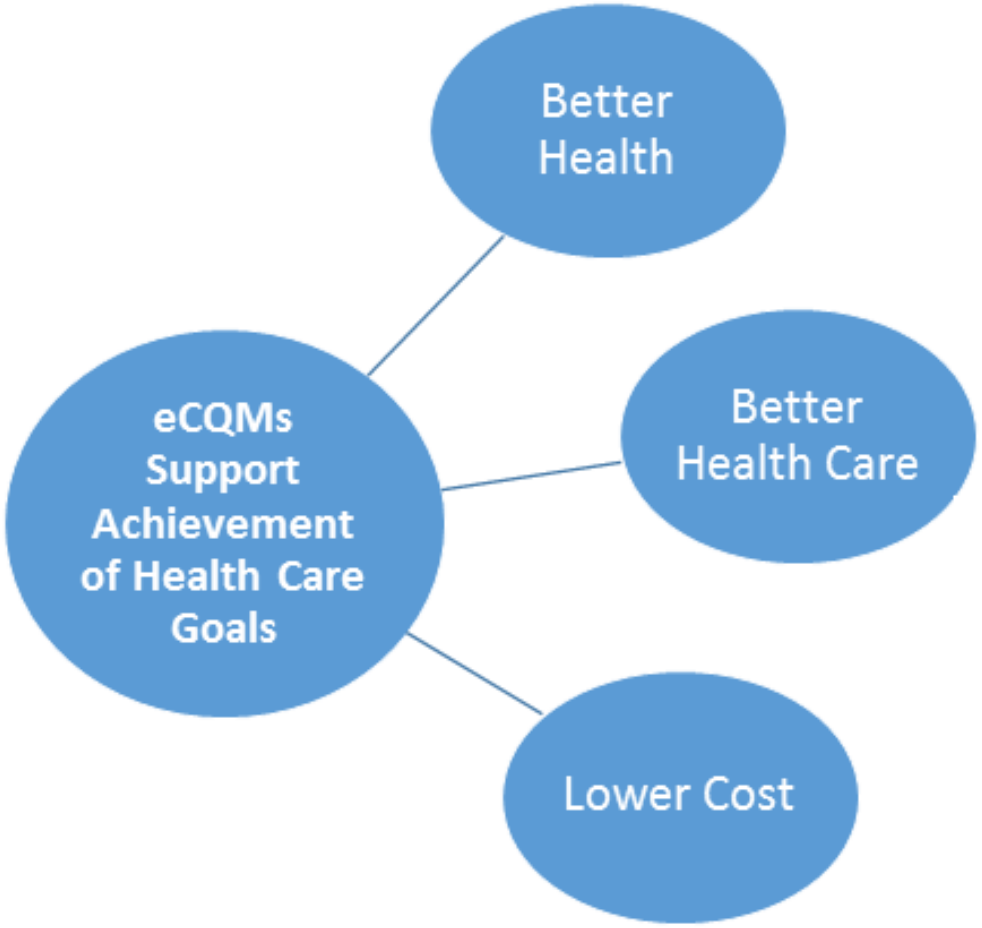
Approach to Optimization

One e-CQM at a time…

Why? Because e-CQMs are where the…



E-CQMs as Proxy for Quality

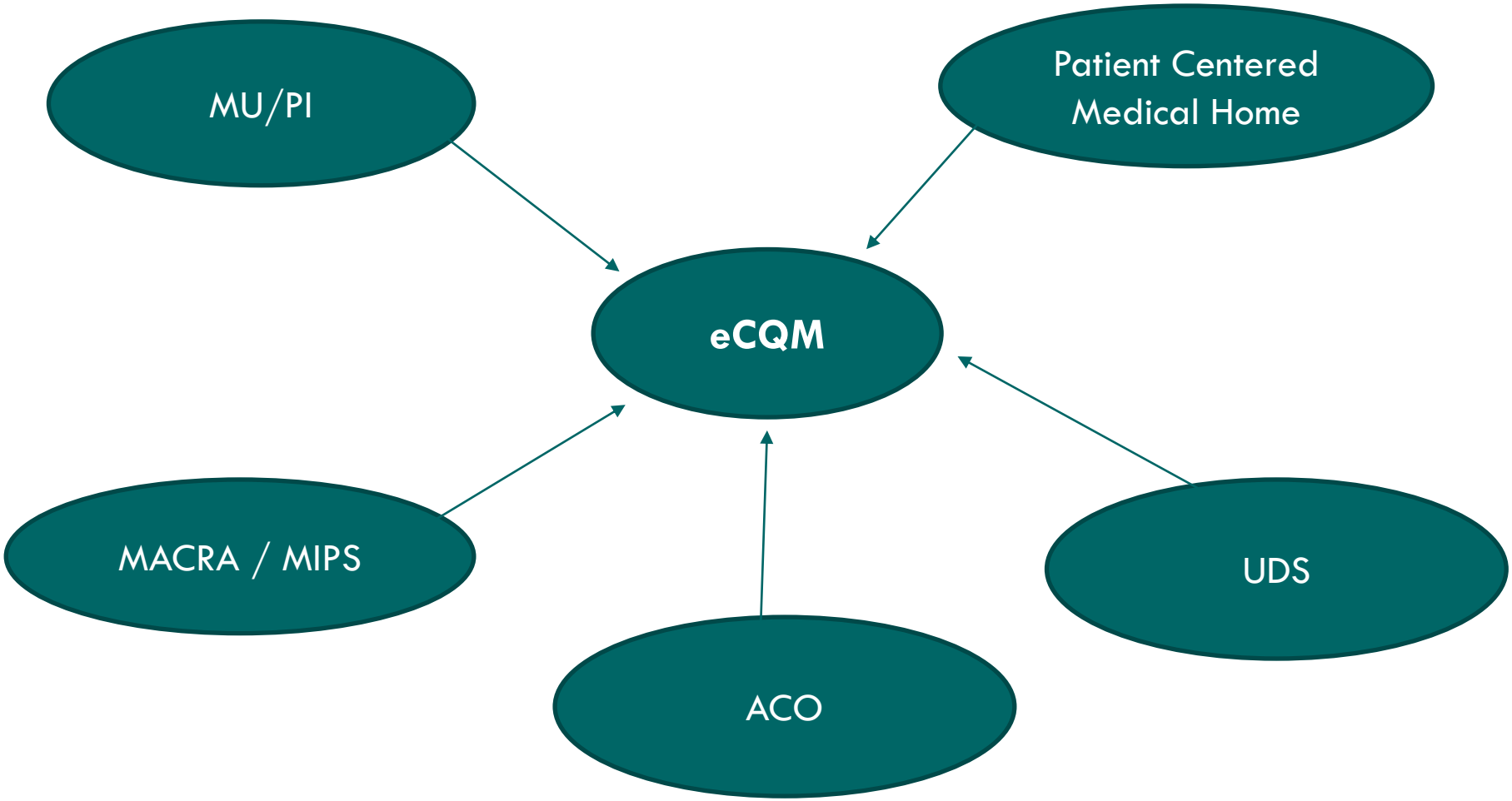


- Promote evidence-based clinical processes
- Measure preventing and treating priority conditions
- Improve outcomes by identifying deficiencies in safety and accessibility

- Reduce provider burden (e.g., administrative time by streamlining measurement)
- Improve functional assessment of chronic conditions
- Facilitate care coordination across settings

- Reduce preventable hospital readmissions
- Decrease medication errors
- Promote appropriate usage of diagnostic testing and screening

eCQMs as Common Denominator



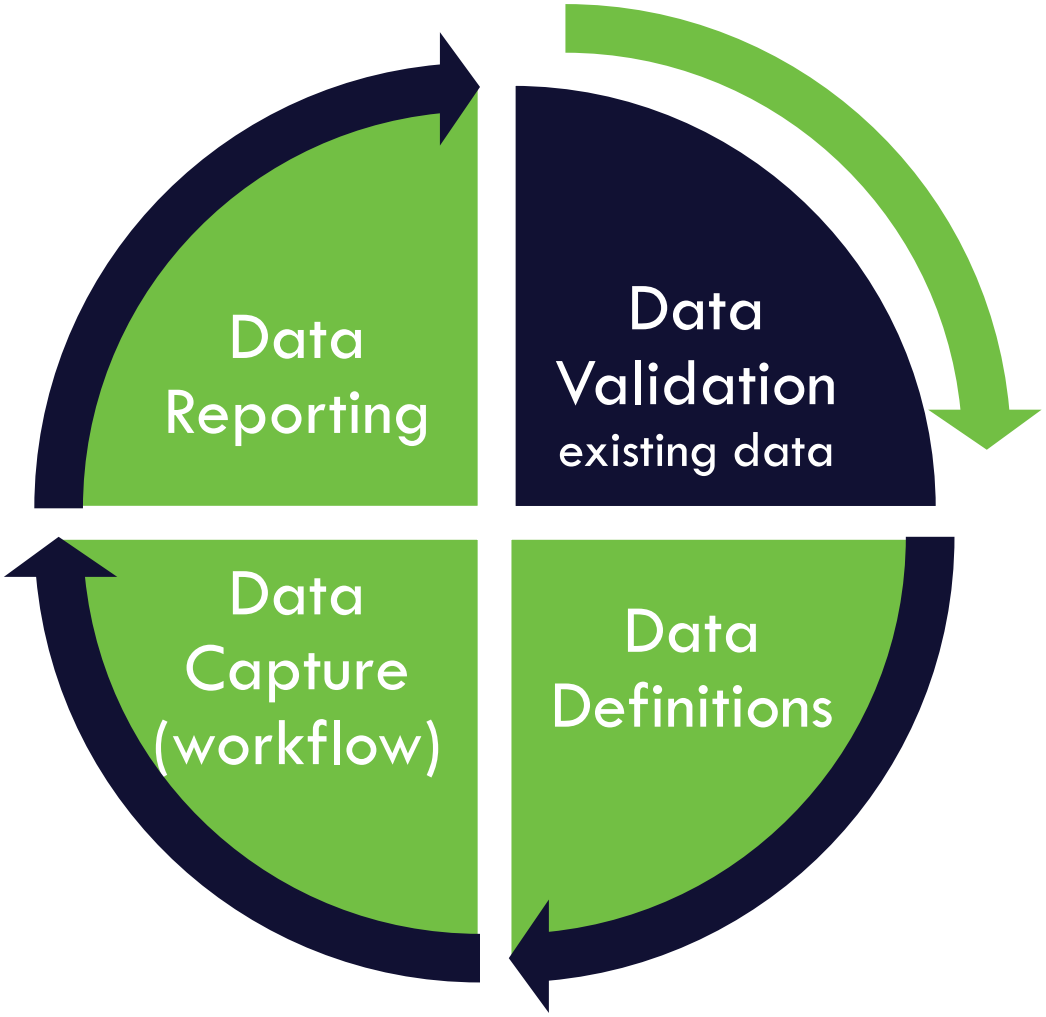
2020 Update of eCQM Crosswalk

Clinical Quality Measures and their electronic specifications as defined in the 2020 update for Eligible Professionals (Clinicians): Crosswalk Comparison from The HITEQ Center

Measure Name (link to website)	CMS ID	Domain	NQF ID	MIPS Quality ID (link to website)	UDS 2020 (link to website)	Medicaid (link to website)	Promoting Interoperability	Million Hearts (link to website)	NCQA e-measure (link to website)	CMS Adult / Child Medicaid Core Measures Set (link to website)	CPC+ eCQM 2020 Reporting (link to website)
						Measure Type	High Priority				
Preventive Care and Screening: Screening for Depression and Follow-Up Plan	CMS2v9	Community/ Population Health	0418e	134	**Yes**	**Process**	**Yes**		**Yes**	**Adult and Child**	
Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented	CMS22v8	Community/ Population Health	Not Applicable	317		**Process**	**No**				
Closing the Referral Loop: Receipt of Specialist Report	CMS50v8	Communication and Care Coordination	Not Applicable	374		**Process**	**Yes**		**Yes**		

Download this and worksheet mentioned later: https://tinyurl.com/HITEQtools

Step 1


Data Validation
existing data
Data Definitions
Data Capture (workflow)
Data Reporting

Understanding the Black Box

Data

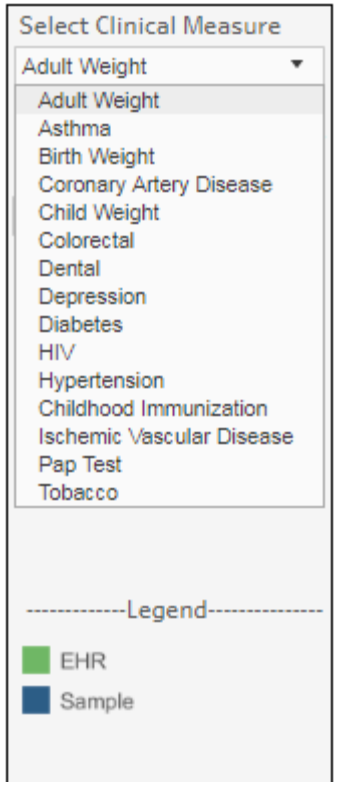
Reporting

HITEQ UDS Data Analysis

- 8 Years of clinical data history (2011-2018)
- Sample size used to determine data source per measure per year
  - < 70 Charts → Indeterminate
  - 70 Charts → Sample
  - Equals to Universe → EHR

Note: Prenatal data source cannot be assessed

- Results averaged with all Health Centers equally weighted
- Aggregated for different groups of heath centers
  - Individual organizations
  - HCCNs/PCAs (State)
  - Grant funding, PCMH, meaningful use, vendor, etc.



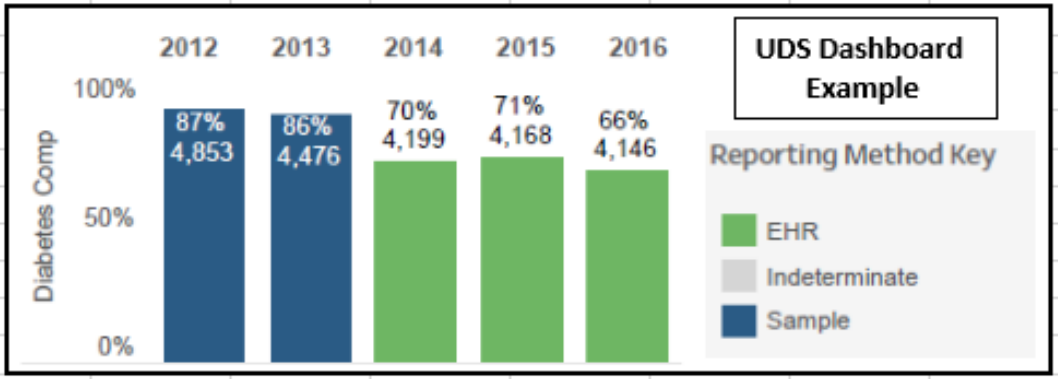
Data Validation Tool

- Excel-based resource to work through the data validation issues and identify underlying causes
  - Diabetes, Adult Weight, Child & Adolescent BMI and Counselling
- Assists in:
  - Determining if data hygiene problem exists for given measure
  - Drawing a random sample of charts
  - Abstracting 'observable' data without bias
  - Calculating measure requirements and results
  - Identifying discrepancies that point to underlying issues
  - Directing the discussion around needed changes

Data Validation Tool

Statistical Difference Analysis	
First year EHR Used	2014
Charts in Universe (per EHR) in 2014	4199
2014 Compliance Rate	70%
Sample Size in 2013	4476
Compliance Rate in 2013	86%
Confidence Interval (95% CI) (+/-)	1%
Upper CI	87%
Lower CI	85%
2014 is Statistically Different from 2013?	**Yes**

Validation Sample Selection	
Compliance Rate - Most Recent Year:	66%
Charts to be Sampled for Data Validation:	20
Approx. Confidence Interval (+/-)	20.8%



Click here to
DRAW A RANDOM SAMPLE
WITH THIS NUMBER OF CHARTS

When Data Entry is Complete
Click here to
REVEAL SAMPLE ABSTRACT
RESULTS DETAIL

If you are interested, email us at HITEQinfo@jsi.com and we can set up a TA session for you!

Why data validation?

- Examining evidence of a problem
  - Drop when moving to EHR reporting or switching EHRs?
    - Pattern; Recovery
    - Statistical significance
  - Below average overall performance or adverse trend

Statistical Difference Analysis	
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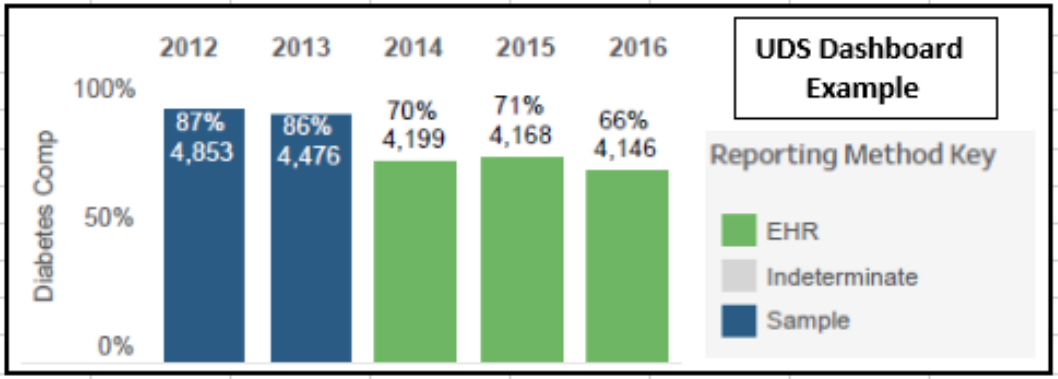


Data Validation Tool Process

1. Examine evidence of a problem
2. Extract EHR report universe & assessment of compliance
3. Determine sample size and strategy
4. Gather blinded chart data by audit
   - Parameters and qualitative parameters
5. Reveal audit results
   - Aggregate compliance
   - Record level Universe and Compliance discrepancies in results
   - Patterns indicative of underlying causes

Data Validation Tool

- Obtain EHR chart-level universe and compliance assessment list
  - Data must come from EHR system and match UDS report & time period (i.e., CY2019)
  - Chart # & EHR Compliance assessment required
  - Name used to validate correct chart abstraction
- Strategies for sampling based on goal
  - From full universe
  - From non-compliant only
  - Equal samples of compliant/non-compliant
- Selecting sample size
  - Confidence/detail vs effort
  - Random sample of ## charts automatically selected from EHR derived chart list

Validation Sample Selection	
Compliance Rate - Most Recent Year:	66%
Charts to be Sampled for Data Validation:	20
Approx. Confidence Interval (+/-)	20.8%

Data Validation Tool

- Conducting chart audit sample
  - QI Manager prepares the sample but does not conduct the abstract
    - Abstracting ideally done by staff not be briefed on, or familiar with, measure requirements to avoid bias
    - Only factual data collection, no judgement applied
  - Qualitative data collected
    - Provider documenting each data component
    - Location where evidence of each component found
  - Results of chart evaluation blinded during data collection
    - Key calculated values and required service parameters
    - Aggregate compliance results
    - Universe eligibility assessment
    - EHR-derived and Validation tool-derived compliance assessment
    - Mismatches between EHR and chart abstracted results
    - Assessment of individual measure components
    - Password to unlock/reveal results

Conducting Chart Audit

Click here to
DRAW A RANDOM SAMPLE
WITH THIS NUMBER OF CHARTS

Input during Chart Audit

Medical Record # and/or Nam	Patient Nam	DOB	Date of Last Medical Visit in 2016 or before (or '0' if none	Provider at Last Visit in 2016	Date Height & Weight Last Documented (or '0' if none	Height (in inches	Weight (in lbs.)	BMI noted in chart or part of EHR standard template	Site where Height/Weight Documented	Provider Documenting Last Height/ Weigh	Height/Weight info found where?	Pregnant when Height/Weight Documente
1386724896	CHIN	3/11/1997	11/16/2016	Hess PA	11/16/2016	62.5	117	Yes	Main St. Clinic	Travis	EHR Input Fields	No
1356347405	ERSING	3/21/1981	10/11/2016	Justina CHA	10/11/2016	60	128	Yes	Southside Clinic	Justina CHA	Notes/Text Entry	No
1316236300	ROBERTS	10/17/1990	8/15/2016	Janelle CHA	8/15/2016	67	175	No	Southside Clinic	Janelle CHA	Notes/Text Entry	No
1609856038	GOLTRA	8/15/1969	11/28/2016	Melody CHA	11/28/2016	63	218	No	Main St. Clinic	Melody CHA	Notes/Text Entry	No
1255321923	WEINSTEIN	1/20/1944	12/27/2016	Matthew PA	12/27/2016	63	226	No	Main St. Clinic	Jefferson	Notes/Text Entry	No
1134255540	CARBAJAL	4/29/1950	8/26/2016	Connie CHP	8/26/2016	68	185	Yes	Mountain Rd. Clinic	Connie CHP	Notes/Text Entry	No
1861408452	MEHTA	10/25/1989	12/21/2016	Rachel CHP	5/20/2016	62	152	Yes	Mountain Rd. Clinic	Rachel CHP	Notes/Text Entry	Yes
1366575771	HUNT	3/14/1953	10/31/2016	Rachel CHP	10/10/2016	66	251	Yes	Mountain Rd. Clinic	Rachel CHP	Notes/Text Entry	No
1962443523	POLLAK	10/24/1985	12/6/2016	Melody CHA	12/6/2016	0	233	No	Mountain Rd. Clinic	Melody CHA	EHR Input Fields	No
1407820855	LEE	12/23/1971	11/28/2016	Hess PA	11/28/2016	67	149	Yes	Main St. Clinic	Laurentia CHA	Notes/Text Entry	No
1629362983	OLIVER	7/20/1952	11/14/2016	Hess PA	11/14/2016	65	199	Yes	Main St. Clinic	Norma Shorty	Notes/Text Entry	No
1801868781	CAMPBELL	3/17/1969	1/26/2016	Sandra PA	1/26/2016	63	179	Yes	Mountain Rd. Clinic	Shannon CHA	Notes/Text Entry	No
1518069988	PHILLIPS	12/25/1993	9/30/2016	Mattie CHP	9/30/2016	64	161	No	Mountain Rd. Clinic	Mattie CHP	Notes/Text Entry	No
1184915407	POULIN	3/6/1984	6/23/2016	Angela PA	6/23/2016	66.5	179	Yes	Mountain Rd. Clinic	Angela PA	Notes/Text Entry	No
1548230766	PRYOR	5/30/1952	12/6/2016	Jeanne PA	12/6/2016	61	187	Yes	Mountain Rd. Clinic	Jeanne PA	Notes/Text Entry	No
1295825495	HONIG	5/25/1956	12/7/2016	Pauline CHA	12/7/2016	61	98	No	Mountain Rd. Clinic	Pauline CHA	Notes/Text Entry	No
1669448650	MARKS	12/11/1989	8/25/2016	Sandra PA	8/25/2016	63	0	No	Mountain Rd. Clinic	Shannon CHA	Notes/Text Entry	No
1043366214	PERENCEVICH	1/20/1996	10/28/2016	Vicki PA	10/28/2016	66	116	Yes	Mountain Rd. Clinic	Emily CHP	Notes/Text Entry	No
											Notes/Text Entry	

Data Validation Tool

- Examining the results
  - Compliance rate of sample
    - Statistical comparison to most recent EHR result
  - Universe or compliance discrepancies with the EHR flagged
    - Any differences with EHR are important
    - Counts of discrepancies
    - Individual chart findings by measure component
    - Patterns in qualitative values for discrepancy charts
    - If causes not obvious, issue may be in report logic

Examining Results

When Data Entry is Complete
Click here to
REVEAL SAMPLE ABSTRACT
RESULTS DETAIL

Results Analysis	
Sample Pulled	30
Sample Charts Abstracted	28
Sample Charts Not Abstracted/Complete	2
Abstracted Charts Compliant	12
Compliant %	42.9%
Compliant % Confidence Interval (+/-)	18.3%
Compliance Rate - Upper CI	100.0%
Compliance Rate - Lower CI	24.5%
Sampled Rate Statistically Different from Most Recent Year?	No
Universe Discrepancies Identified	6
Compliance Discrepancies Identified	17

Examining Results

When Data Entry is Complete Click here to REVEAL SAMPLE ABSTRACT RESULTS DETAIL

A	C	D	V	W	X	Y	Z	AA	AB	AC	AD
Measure: Adult Weight Screening											
#	Medical Record # and/or Nan	Patient Name	Notes	Key Fields Completed	EHR Derived Compliance Result	Universe Eligibility Ca	Compliant based on data entered?	Determination Difference for Universe	Determination Difference for Compliance	18y during 2016	Visit During 2016
1	1386724896	CHIN	H/W found in results review tab	TRUE	No	Eligible	Compliant	OK	Disagree	Yes	Yes
2	1356347405	ERSING	Hep B found in "diagnosis" tab	TRUE	No	Ineligible	Compliant	Disagree	Disagree	Yes	Yes
3	1316236300	ROBERTS		TRUE	No	Eligible	Non-Compliant	OK	OK	Yes	Yes
4	1609856038	GOLTRA	Plan found in a pt letter written by Galloway for abnormal cholesterol result.	TRUE	Yes	Eligible	Non-Compliant	OK	Disagree	Yes	Yes
5	1255321923	WEINSTEIN	COPD dx found in "diagnosis" tab. BMI not noted for last visit, but can be found for previous encounter on	TRUE	No	Ineligible	Non-Compliant	Disagree	OK	Yes	Yes
6	1134255540	CARBAJAL	It is noted in chart that pt refused further education regarding DM2	TRUE	No	Eligible	Compliant	OK	Disagree	Yes	Yes
7	1861408452	MEHTA	Last 2016 visit did not have vitals or weight taken, states that pt "deferred"	TRUE	No	Ineligible	Non-Compliant	Disagree	OK	Yes	Yes
8	1366575771	HUNT	Last BMI recorded 6/23/16	TRUE	No	Eligible	Non-Compliant	OK	OK	Yes	Yes
9	1962443523	POLLAK	Height not documented during this visit, weight only	FALSE	No	Eligible	#DIV/0!			Yes	Yes
10	1407820855	LEE	Found in discharge instructions from visit on same date.	TRUE	No	Eligible	Compliant	OK	Disagree	Yes	Yes
11	1629362983	OLIVER	Review of diet/nutrition plan found in DC summary for this date. Pt has multiple diet plans and follow up over last 3 years.	TRUE	No	Eligible	Non-Compliant	OK	OK	Yes	Yes
12	1801868781	CAMPBELL		TRUE	Yes	Eligible	Non-Compliant	OK	Disagree	Yes	Yes
13	1518069988	PHILLIPS	Dicharge instructions following HA visit	TRUE	No	Eligible	Non-Compliant	OK	OK	Yes	Yes
14	1184915407	POULIN	Dicharge instructions contain exercise information	TRUE	No	Eligible	Compliant	OK	Disagree	Yes	Yes
15	1548230766	PRYOR	Pt has dx of obesity, was counseled on "healthy diet" by provider	TRUE	Yes	Eligible	Compliant	OK	OK	Yes	Yes
16	1295825495	HONIG		TRUE	Yes	Eligible	Non-Compliant	OK	Disagree	Yes	Yes
17	1669448650	MARKS	No weight entered during visit, height only	FALSE	No	Eligible	Non-Compliant			Yes	Yes
18	1043366214	PERENCEVICH	Diet instructions in discharge papers for diet relating to ab pain complaint. Temp diet	TRUE	No	Eligible	Compliant	OK	Disagree	Yes	Yes
19	1912012329	ZIDE	Pt had BMI taken at previous visit 3/16, there was a "nutrition risk assessment done at this visit, CHA charted no risk	TRUE	No	Eligible	Non-Compliant	OK	OK	Yes	Yes

IssueAssessment | Chart Abstract Input | EHR Universe Chart List

What should we be looking for?

- **Numerator issues**
  - Report not finding evidence of compliance in chart
  - *DM examples: Scanned lab results or results documented in text not 'counting', report only pulling results from preventative visits, Chart has a recent A1c, but no result*

- **Denominator issues**
  - Report not looking at the correct cohort of patients.
  - *DM examples: wrong timeframe, missing exclusions, only including established patients*

- **Clinical issues**
  - Indicated service not being provided or outcome not being achieved
  - *DM example: HbA1c is in fact 9.5%*

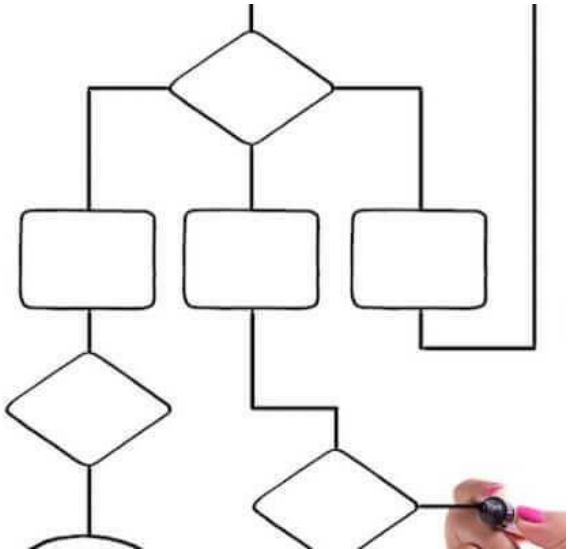
Why does type of issue matter?

What do you think?

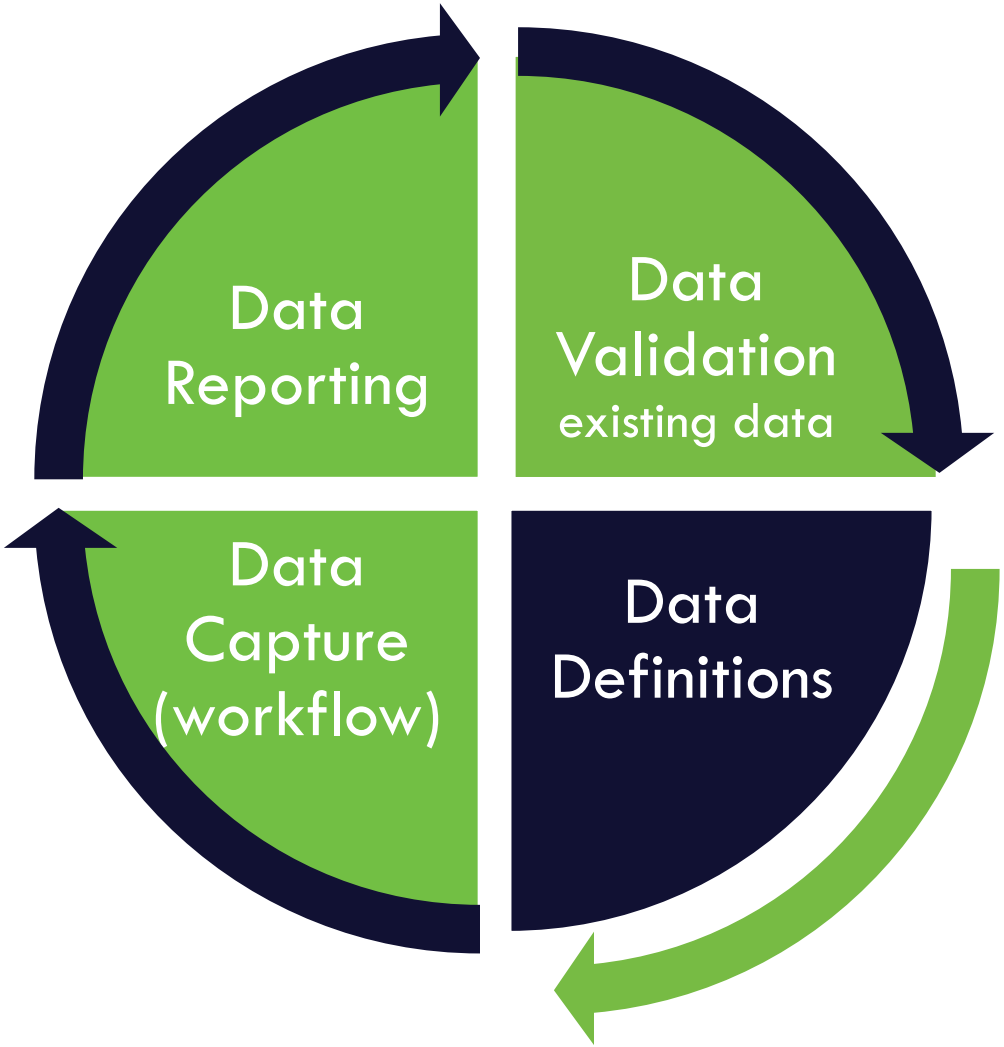
- Resources are limited, so targeting specific gaps is key for efficiency and best care.
- Gaps in data vs. gaps in services or outcome issues require different approaches to address.
- Illustrating specific knowledge of existing gaps to stakeholders builds credibility.
- Change fatigue is real!

Data-Driven Benefits

- Identifies specific examples or use cases to show:
  - Where **EHR/ Report is not appropriately identifying patients/ compliance** based on agreed-upon (or required) specs
  - Where **care team processes are not aligned** with data capture requirements or report mapping
- **So, targeted, not one size fits all!**



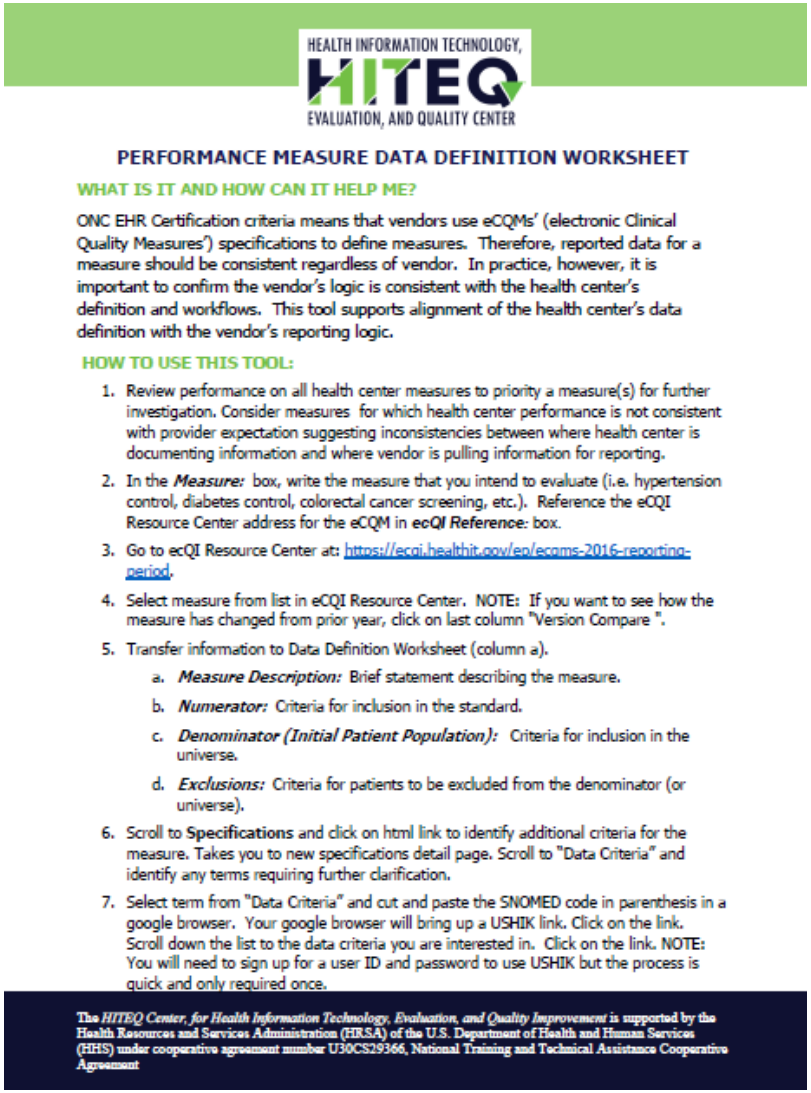
Step 2


Data Reporting
Data Validation
existing data
Data Definitions
Data Capture (workflow)

Data Definitions

Know what is required for reporting in order to address issues identified in validation.

TOOL: Data Definition Worksheet



HEALTH INFORMATION TECHNOLOGY, HITEQ EVALUATION, AND QUALITY CENTER

PERFORMANCE MEASURE DATA DEFINITION WORKSHEET

WHAT IS IT AND HOW CAN IT HELP ME?

ONC EHR Certification criteria means that vendors use eCQMs' (electronic Clinical Quality Measures') specifications to define measures. Therefore, reported data for a measure should be consistent regardless of vendor. In practice, however, it is important to confirm the vendor's logic is consistent with the health center's definition and workflows. This tool supports alignment of the health center's data definition with the vendor's reporting logic.

HOW TO USE THIS TOOL:

1. Review performance on all health center measures to priority a measure(s) for further investigation. Consider measures for which health center performance is not consistent with provider expectation suggesting inconsistencies between where health center is documenting information and where vendor is pulling information for reporting.
2. In the ***Measure:*** box, write the measure that you intend to evaluate (i.e. hypertension control, diabetes control, colorectal cancer screening, etc.). Reference the eCQI Resource Center address for the eCQM in ***ecQI Reference:*** box.
3. Go to ecQI Resource Center at: https://ecqi.healthit.gov/ep/ecqms-2016-reporting-period.
4. Select measure from list in eCQI Resource Center. NOTE: If you want to see how the measure has changed from prior year, click on last column "Version Compare ".
5. Transfer information to Data Definition Worksheet (column a).
   a. ***Measure Description:*** Brief statement describing the measure.
   b. ***Numerator:*** Criteria for inclusion in the standard.
   c. ***Denominator (Initial Patient Population):*** Criteria for inclusion in the universe.
   d. ***Exclusions:*** Criteria for patients to be excluded from the denominator (or universe).
6. Scroll to **Specifications** and click on html link to identify additional criteria for the measure. Takes you to new specifications detail page. Scroll to "Data Criteria" and identify any terms requiring further clarification.
7. Select term from "Data Criteria" and cut and paste the SNOMED code in parenthesis in a google browser. Your google browser will bring up a USHIK link. Click on the link. Scroll down the list to the data criteria you are interested in. Click on the link. NOTE: You will need to sign up for a user ID and password to use USHIK but the process is quick and only required once.

The *HITEQ Center, for Health Information Technology, Evaluation, and Quality Improvement* is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under cooperative agreement number U30CS29366, National Training and Technical Assistance Cooperative Agreement

- This tool will lead you through the eCQI Resource Center and USHIK site.
- It provides step by step instructions and a place to document your findings.

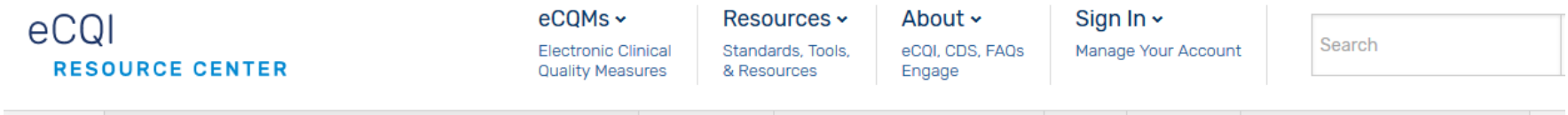
Download this and eCQM crosswalk mentioned earlier:
https://tinyurl.com/HITEQtools

Worksheet

Measure:				
eCQI Ref.:				
Description	A. Definition from specifications in eCQI Resource Center	B. Where and how is data documented in EHR?	C. Where is vendor pulling data for reporting?	D. Reconciliation/ Follow-up Action Required?
Numerator				
Denominator (Initial Patient Pop)				
Exclusions (Denominator)				
Value Set (USHIK)				

eCQI Resource Center Example

- Review population criteria and data criteria compared to your internal records.



Cervical Cancer Screening	CMS124v7	Effective Clinical Care	0032	309	Preventive Care
Child and Adolescent Major Depressive Disorder (MDD): Suicide Risk Assessment	CMS177v7	Patient Safety	1365	382	Prevention, Treatment, and Management of Mental Health
Childhood Immunization Status	CMS117v7	Community/Population Health	0038	240	Preventive Care
Children Who Have Dental Decay or Cavities	CMS75v7	Community/Population Health	None	378	Preventive Care
Chlamydia Screening for Women	CMS153v7	Community/Population Health	0033	310	Preventive Care
Closing the Referral Loop: Receipt of Specialist Report	CMS50v7	Communication and Care Coordination	None	374	Transfer of Health Information and Interoperability
Colorectal Cancer Screening	CMS130v7	Effective Clinical Care	0034	113	Preventive Care
Controlling High Blood Pressure	CMS165v7	Effective Clinical Care	0018	236	Management of Chronic Conditions

eCQI Resource Center Example

- http://**ecqi.healthit.gov**/eligible-professional/eligible-clinician-ecqms or use links in UDS manual for Table 6B/ 7 measures
- Under Specifications heading, go to CMS[#].html
- Next page will provide the following:

Description (**in plain English**) of measure and it's requirements.	**Population criteria** and related definitions.	**Data Criteria** with related **Value Sets,** which include codes

Data Criteria Example: Diabetes: (HbA1c) Poor Control (> 9%)

Agency for Healthcare Research and Quality
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United States Health Information Knowledgebase

Feedback / Help | Search Quality Reporting

USHIK Home | Standards | HITSP | Common Formats | Quality Reporting | All-Payer Claims | Draft Measures | Child EHR Format

Diabetes: Hemoglobin A1c (HbA1c) Poor Control (> 9%)

CMS122v6

Versions: CMS122v1, December 2012 EP • CMS122v2, June 2013 EP • CMS122v3, July 2014 EP • CMS122v4, June 2015 EP • CMS122v5, April 2016 EP • CMS122v6, May 2017 EP EC • CMS122v6, 2018 Clinical Quality Measures

Compare Versions

At A Glance | Downloads | Population Criteria | **Data Criteria** | Supplemental Data Elements | Metadata | References

Category	Data Element	Value Set
	Diagnosis: Diabetes	Diabetes 2.16.840.1.113883.3.464.1003.103.12.1001 *(Version: eCQM Update 2017-05-05)* ICD9CM (2013): 250.00, 250.01, 250.02, 250.03, 250.10, 250.11, 250.12, 250.13, 250.20, 250.21, 250.22, 250.23, 250.30, 250.31, 250.32, 250.33, 250.40, 250.41, 250.42, 250.43, 250.50, 250.51, 250.52, 250.53, 250.60, 250.61, 250.62, 250.63, 250.70, 250.71, 250.72, 250.73, 250.80, 250.81, 250.82, 250.83, 250.90, 250.91, 250.92, 250.93, 357.2, 362.01, 362.02, 362.03, 362.04, 362.05, 362.06, 362.07, 366.41, 648.00, 648.01, 648.02, 648.03, 648.04 SNOMEDCT (2014-09): 314894004 SNOMEDCT (2016-09): 10540100011910l, 106281000119103, 10… 190389009, 190390000, 190406000, 1904… 199229001, 199230006, 199231005, 2304… 314771006, 314772004, 314893005, 3148… 46635009, 4783006, 51002006, 57886004… 716362006, 71791000119104, 75524006,… ICD10CM (2017): E10.10, E10.11, E10.21, E10.22, E10.29, E… E10.3293, E10.3299, E10.331, E10.3311, … E10.3412, E10.3413, E10.3419, E10.349, … E10.3522, E10.3523, E10.3529, E10.3531… E10.3539, E10.359, E10.3591, E10.3592, … E10.43, E10.44, E10.49, E10.51, E10.52, … E10.69, E10.8, E10.9, E11.00, E11.01, E1… E11.3292, E11.3293, E11.3299, E11.331, … E11.3411, E11.3412, E11.3413, E11.3419, … E11.3521, E11.3522, E11.3523, E11.3529, … E11.3553, E11.3559, E11.359, E11.3591, … E11.42, E11.43, E11.44, E11.49, E11.51, … E11.65, E11.69, E11.8, E11.9, E13.00, E13… E13.3219, E13.329, E13.3291, E13.3292, … E13.3393, E13.3399, E13.341, E13.3411, … E13.3512, E13.3513, E13.3519, E13.3521… E13.3549, E13.3551, E13.3552, E13.3553… E13.37X9, E13.39, E13.40, E13.41, E13.4… E13.630, E13.638, E13.641, E13.649, E13… O24.119, O24.12, O24.13, O24.311, O24.…
	Discharge status: Discharged to Health Care Facility for Hospice Care	Discharged to Health Care Facility for Hospice Care 2.16.840.1.113883.3.117.1.7.1.207 *(Version: eCQM Update 201…* SNOMEDCT (2016-09): 428371000124100
	Discharge status: Discharged to Home for Hospice Care	Discharged to Home for Hospice Care 2.16.840.1.113883.3.117.1.7.1.209 *(Version: eCQM Update 201…* SNOMEDCT: 428361000124107

	Encounter, Performed: Annual Wellness Visit	Annual Wellness Visit 2.16.840.1.113883.3.526.3.1240 *(Version: eCQM Update 2017-05-05)* HCPCS (2016): G0438, G0439
Encounter	Encounter, Performed: Encounter Inpatient	Encounter Inpatient 2.16.840.1.113883.3.666.5.307 *(Version: eCQM Update 2017-05-05)* SNOMEDCT (2016-09): 183452005, 32485007, 8715000
Encounter	Encounter, Performed: Face-to-Face Interaction	Face-to-Face Interaction 2.16.840.1.113883.3.464.1003.101.12.1048 *(Version: eCQM Update 2017-05-05)* SNOMEDCT (2016-09): 12843005, 18170008, 185349003, 185463005, 185465003, 19681004, 207195004, 270427003, 270430005, 308335008, 390906007, 406547006, 439708006, 87790002, 90526000
Encounter	Encounter, Performed: Home Healthcare Services	Home Healthcare Services 2.16.840.1.113883.3.464.1003.101.12.1016 *(Version: eCQM Update 2017-05-05)* CPT (2016): 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350
Encounter	Encounter, Performed: Office Visit	Office Visit 2.16.840.1.113883.3.464.1003.101.12.1001 *(Version: eCQM Update 2017-05-05)* CPT (2016): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215
Encounter	Encounter, Performed: Preventive Care Services - Established Office Visit, 18 and Up	Preventive Care Services - Established Office Visit, 18 and Up 2.16.840.1.113883.3.464.1003.101.12.1025 *(Version: eCQM Update 2017-05-05)* CPT (2016): 99395, 99396, 99397
Encounter	Encounter, Performed: Preventive Care Services-Initial Office Visit, 18 and Up	Preventive Care Services-Initial Office Visit, 18 and Up 2.16.840.1.113883.3.464.1003.101.12.1023 *(Version: eCQM Update 2017-05-05)* CPT (2016): 99385, 99386, 99387
Intervention	Intervention, Order: Hospice care ambulatory	Hospice care ambulatory 2.16.840.1.113762.1.4.1108.15 *(Version: eCQM Update 2017-05-05)* SNOMEDCT (2016-09): 385763009, 385765002
Intervention	Intervention, Performed: Hospice care ambulatory	Hospice care ambulatory 2.16.840.1.113762.1.4.1108.15 *(Version: eCQM Update 2017-05-05)* SNOMEDCT (2016-09): 385763009, 385765002
Laboratory Test	Laboratory Test, Performed: HbA1c Laboratory Test	HbA1c Laboratory Test 2.16.840.1.113883.3.464.1003.198.12.1013 *(Version: eCQM Update 2017-05-05)* LOINC (2.56): 17856-6, 4548-4, 4549-2

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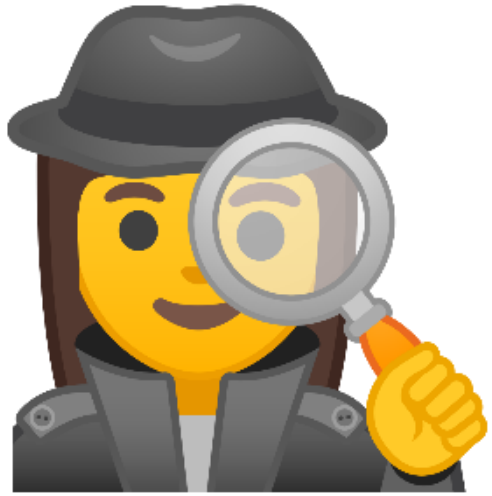
- PDF of Data Criteria

What do we do with this?

- Look at how care teams are documenting required fields and compare to specifications from the quality measures.



Where and how is Diabetes Dx documented?

Example: Diabetes: Hemoglobin A1c (HbA1c) Poor Control (> 9%)

Diabetes Diagnosis Value Set

2.16.840.1.113883.3.464.1003.103.12.1001 (Look at the most recent version)

ICD-10 (2018) E10.10, E10.11, E10.21, E10.22, E10.29, E10.311, E10.319, E10.321, E10.3211, E10.3212, E10.3213, E10.3219, E10.329, E10.3291, E10.3292, E10.3293, E10.3299, E10.331, E10.3311, E10.3312, E10.3313, E10.3319, E10.339, E10.3391, E10.3392, E10.3393, E10.3399, E10.341, E10.3411, E10.3412, E10.3413, E10.3419, E10.349, E10.3491, E10.3492, E10.3493, E10.3499, E10.351, E10.3511, E10.3512, E10.3513, E10.3519, E10.3521, E10.3522, E10.3523, E10.3529, E10.3531, E10.3532, E10.3533, E10.3539, E10.3541, E10.3542, E10.3543, E10.3549, E10.3551, E10.3552, E10.3553, E10.3559, E10.359, E10.3591, E10.3592, E10.3593, E10.3599, E10.36, E10.37X1, E10.37X2, E10.37X3, E10.37X9, E10.39, E10.40, E10.41, E10.42, E10.43, E10.44, E10.49, E10.51, E10.52, E10.59, E10.610, E10.618, E10.620, E10.621, E10.622, E10.628, E10.630, E10.638, E10.641, E10.649, E10.65, E10.69, E10.8, E10.9, E11.00, E11.01, E11.21, E11.22, E11.29, E11.311, E11.319, E11.321, E11.3211, E11.3212, E11.3213, E11.3219, E11.329, E11.3291, E11.3292, E11.3293, E11.3299, E11.331, E11.3311, E11.3312, E11.3313, E11.3319, E11.339, E11.3391, E11.3392, E11.3393, E11.3399, E11.341, E11.3411, E11.3412, E11.3413, E11.3419, E11.349, E11.3491, E11.3492, E11.3493, E11.3499, E11.351, E11.3511, E11.3512, E11.3513, E11.3519, E11.3521, E11.3522, E11.3523, E11.3529, E11.3531, E11.3532, E11.3533, E11.3539, E11.3541, E11.3542, E11.3543, E11.3549, E11.3551, E11.3552, E11.3553, E11.3559, E11.359, E11.3591, E11.3592, E11.3593, E11.3599, E11.36, E11.37X1, E11.37X2, E11.37X3, E11.37X9, E11.39, E11.40, E11.41, E11.42, E11.43, E11.44, E11.49, E11.51, E11.52, E11.59, E11.610, E11.618, E11.620, E11.621, E11.622, E11.628, E11.630, E11.638, E11.641, E11.649, E11.65, E11.69, E11.8, E11.9, E13.00, E13.01, E13.10, E13.11, E13.21, E13.22, E13.29, E13.311, E13.319, E13.321, E13.3211, E13.3212, E13.3213, E13.3219, E13.329, E13.3291, E13.3292, E13.3293, E13.3299, E13.331, E13.3311, E13.3312, E13.3313, E13.3319, E13.339, E13.3391, E13.3392, E13.3393, E13.3399, E13.341, E13.3411, E13.3412, E13.3413, E13.3419, E13.349, E13.3491, E13.3492, E13.3493, E13.3499, E13.351, E13.3511, E13.3512, E13.3513, E13.3519, E13.3521, E13.3522, E13.3523, E13.3529, E13.3531, E13.3532, E13.3533, E13.3539, E13.3541, E13.3542, E13.3543, E13.3549, E13.3551, E13.3552, E13.3553, E13.3559, E13.359, E13.3591, E13.3592, E13.3593, E13.3599, E13.36, E13.37X1, E13.37X2, E13.37X3, E13.37X9, E13.39, E13.40, E13.41, E13.42, E13.43, E13.44, E13.49, E13.51, E13.52, E13.59, E13.610, E13.618, E13.620, E13.621, E13.622, E13.628, E13.630, E13.638, E13.641, E13.649, E13.65, E13.69, E13.8, E13.9, O24.011, O24.012, O24.013, O24.019, O24.02, O24.03, O24.111, O24.112, O24.113, O24.119, O24.12, O24.13, O24.311, O24.312, O24.313, O24.319, O24.32, O24.33, O24.811, O24.812, O24.813, O24.819, O24.82, O24.83

Download the Value Set, which includes all the various codes (ICD-10, SNOMED, etc.) that meet the measure, according to the measure steward.

Where and how are exclusions documented?

Exclusions:

- Hospice Care

Exclusion Example: Diabetes: Hemoglobin A1c (HbA1c) Poor Control (> 9%)

Discharge Status: Discharged to Home for Hospice Care
2.16.840.1.113883.3.117.1.7.1.209 *(Version: eCQM Update 2017-05-05)*

Discharge Status: Discharged to Healthcare Facility for Hospice Care
2.16.840.1.113883.3.117.1.7.1.207 *(Version: eCQM Update 2017-05-05)*

Intervention, Performed: Hospice Care Ambulatory
2.16.840.1.113762.1.4.1108.15 *(Version: eCQM Update 2017-05-05)*

Intervention, Order: Hospice Care Ambulatory
2.16.840.1.113762.1.4.1108.15 *(Version: eCQM Update 2017-05-05)*

So, not terminal illness or last 6 months of life.

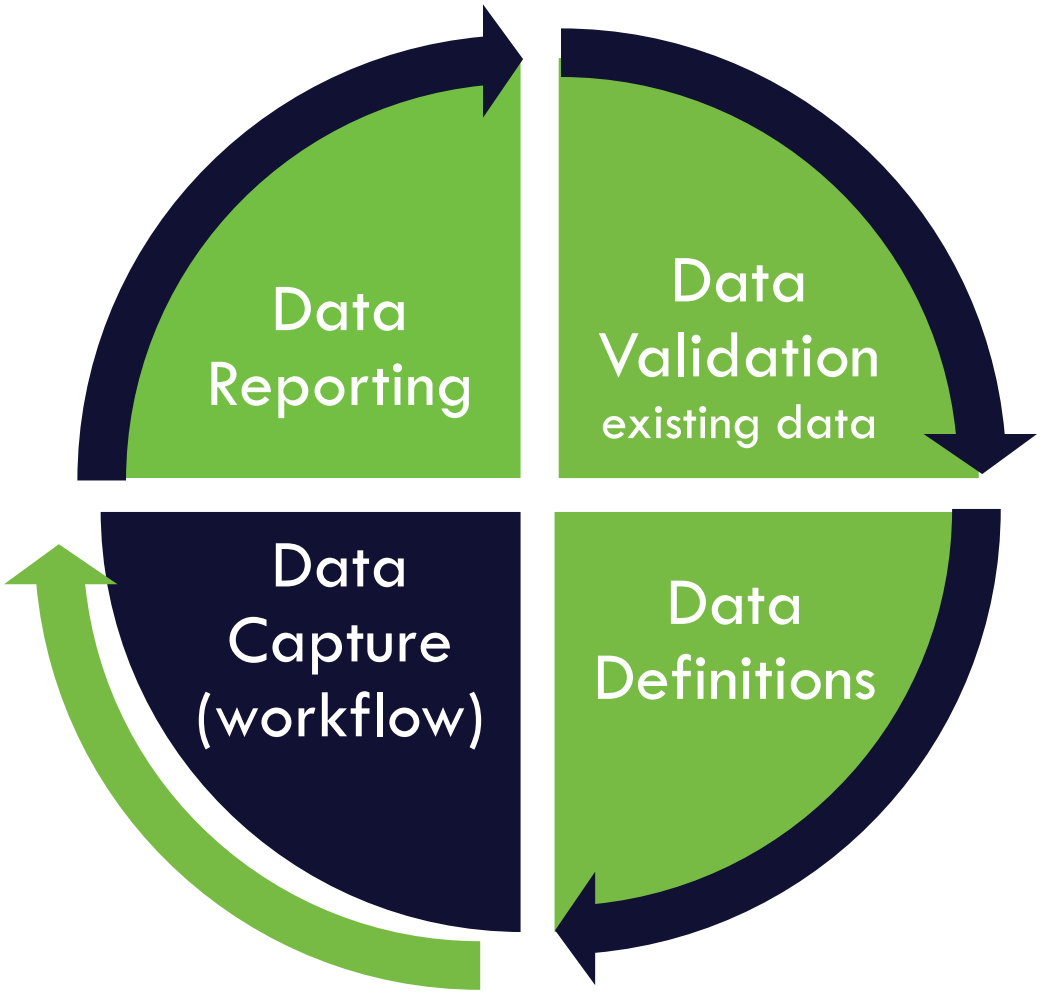
Filling In Worksheet: Measure Specs

Measure:	Diabetes: Hemoglobin A1c (HbA1c) Poor Control (> 9%)			
eCQI Reference:	CMS122v6 (for 2018 UDS)			
Description	A. Definition from specifications in eCQI Resource Center	B. Where and how is data documented in EHR?	C. Where is EHR vendor pulling data for reporting?	D. Reconciliation and Follow-up Action Required?
Numerator (Compliant Patients)				
Denominator (Initial Patient Pop)				
Exclusions (Denominator)	Hospice Care			
Value Set (USHIK)	Exclusions: 2.16.840.1.113762.1.4.1108.15 (V. eCQM Update			

Filling In Worksheet: EHR Requirements

Measure:	Diabetes: Hemoglobin A1c (HbA1c) Poor Control (> 9%)			
eCQI Reference:	CMS122v6 (for 2018 UDS)			
Description	A. Definition from specifications in eCQI Resource Center	B. Where and how is data documented in EHR?	C. Where is EHR vendor pulling data for reporting?	D. Reconciliation and Follow-up Action Required?
Numerator (Compliant Patients)			**From EHR User Guide or Workflow**	
Denominator (Initial Patient Pop)				
Exclusions (Denominator)				
Value Set (USHIK)				

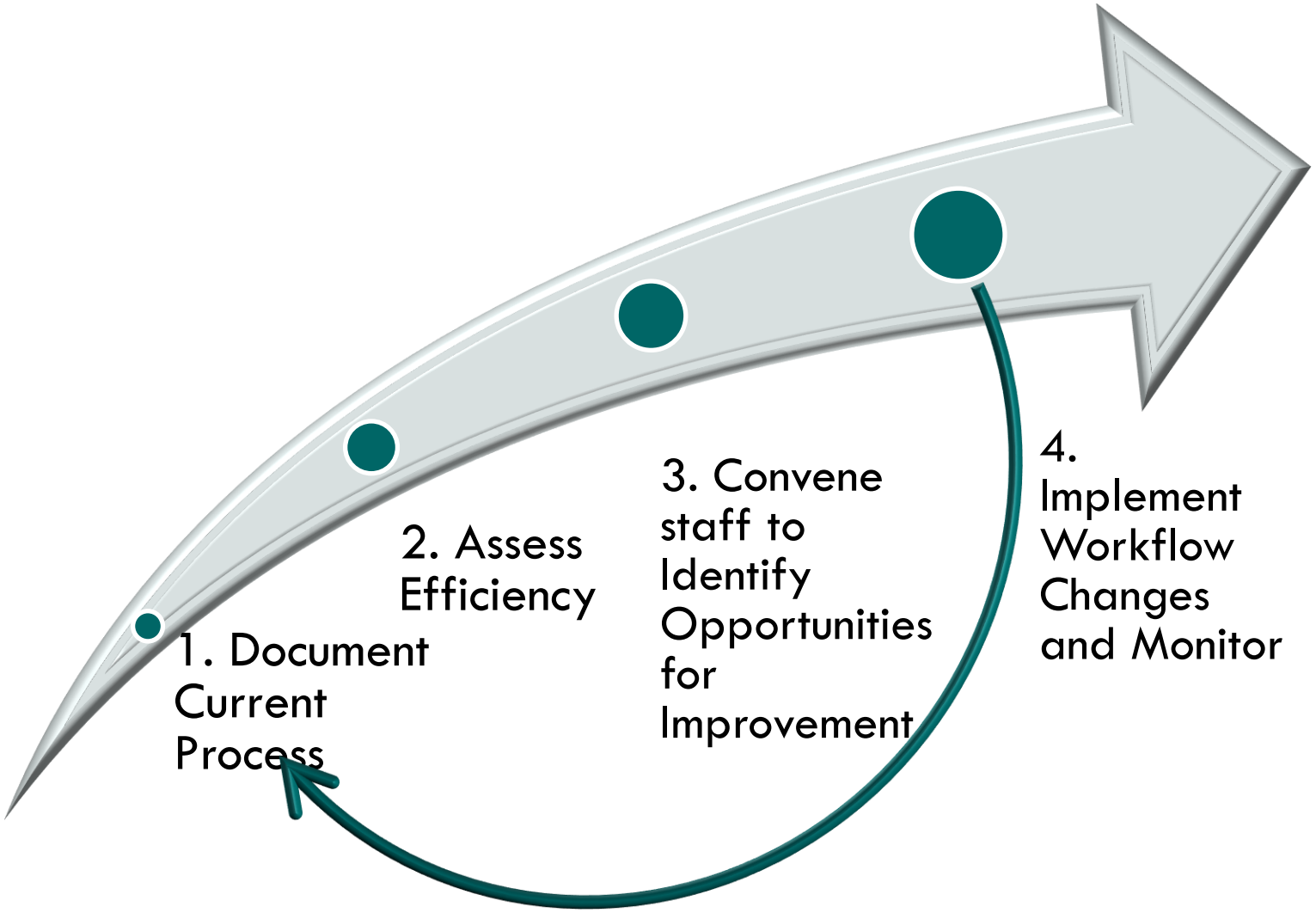
Step 3


Data Reporting
Data Validation
existing data
Data Definitions
Data Capture (workflow)

Filling In Worksheet

Measure:	Diabetes: Hemoglobin A1c (HbA1c) Poor Control (> 9%)			
eCQI Reference:	CMS122v6 (for 2018 UDS)			
Description	A. Definition from specifications in eCQI Resource Center	B. Where and how is data documented in EHR?	C. Where is EHR vendor pulling data for reporting?	D. Reconciliation and Follow-up Action Required?
Numerator (Compliant Patients)				
Denominator (Initial Patient Pop)				
Exclusions (Denominator)	Hospice Care Patients with a diagnosis of secondary diabetes due to another condition			
	Exclusions:			

Steps to Optimizing Workflow



Current Processes

Document the current process related to the measure being optimized

- How is required information collected? (Process)
- Who is responsible for updating information? (People)
- What EHR functions are used to support process? (Technology)

Refer to Results of Data Validation

- [**Process**] In those cases where the results between EHR and chart review did not align– how were data required for Diabetes measure captured?
- [**People**] Who is doing that documentation ?

Assess Efficiency

Assess current workflow efficiency related to measure

- Observe current flows
  - Document the clicks
  - Document face-to-face time
  - Identify opportunities for patient to complete information before encounter
  - Determine best staff for task
  - Document deviations from expected flow

Create Alignment

Assess current workflow efficiency related to measure

- From audit of a sample of charts from the universe (data validation).
- ID any data documentation inconsistencies
- Multiple places where data is reported.

Identify Inconsistencies in Process

Site A	Site B	Site C	Mobile Site Serving Homeless Pts
90% Controlled	40% Controlled	62% Controlled	22% Controlled
68% Controlled			

Denominator: 18-75 medical pts with DM dx	10,000	100%
Exclude: Pts in hospice	12	0.12%
Last HbA1c >9%	3,200	32%
No HbA1c in 2018	950	9.5%

Leveraging Technology

- What tools are used to identify diabetic patients, those who need HbA1c, and those whose HbA1c is uncontrolled as of last test?
- Whether you are doing running care gap reports to monitor this, doing pre-visit planning, or using other tools, this validation and optimization process supports all!

Use CDS 5 Rights Framework

To improve targeted care processes/outcomes, get:

the right ***information***

- ✓ current, evidence-based, actionable… [what]

to the right ***people***

- ✓ clinicians and patients… [who]

in the right ***formats***

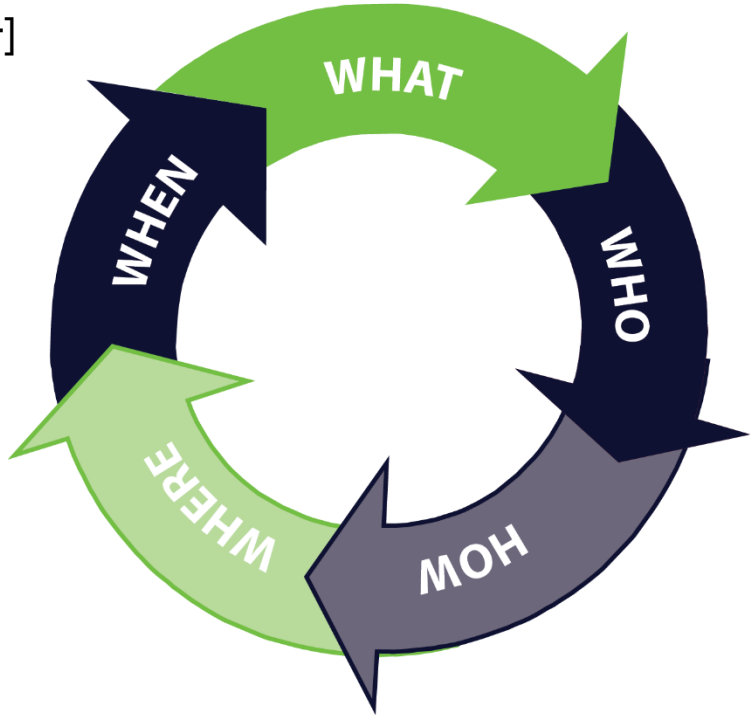
- ✓ Registry reports, documentation tools, data display, care plans… [how]

through the right ***channels***

- ✓ EHR, patient portal, smartphones/ apps, home monitoring, HIE … [where]

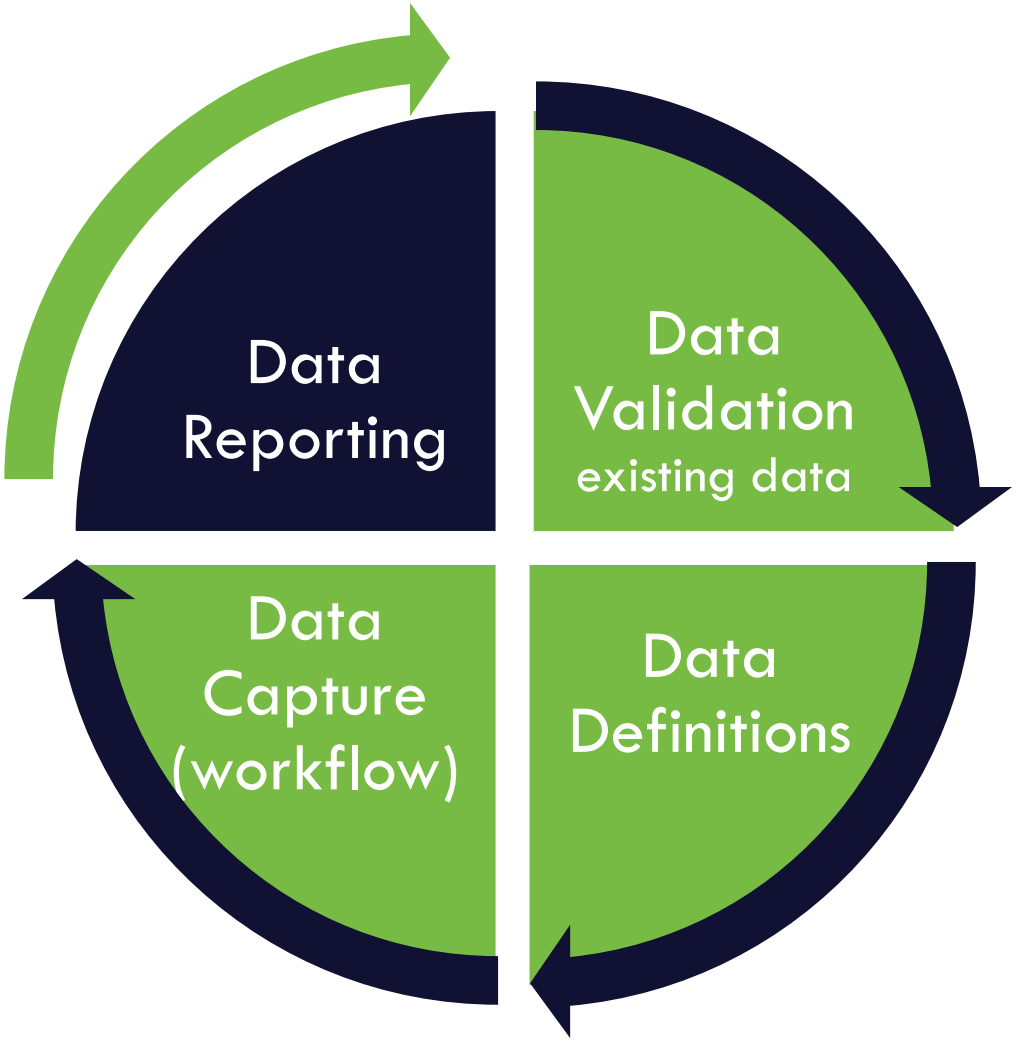
at the right ***times***

- ✓ key decision/action points, prior to visits … [when]



Recommended as a QI best practice by CMS: bit.ly/cmscdstips

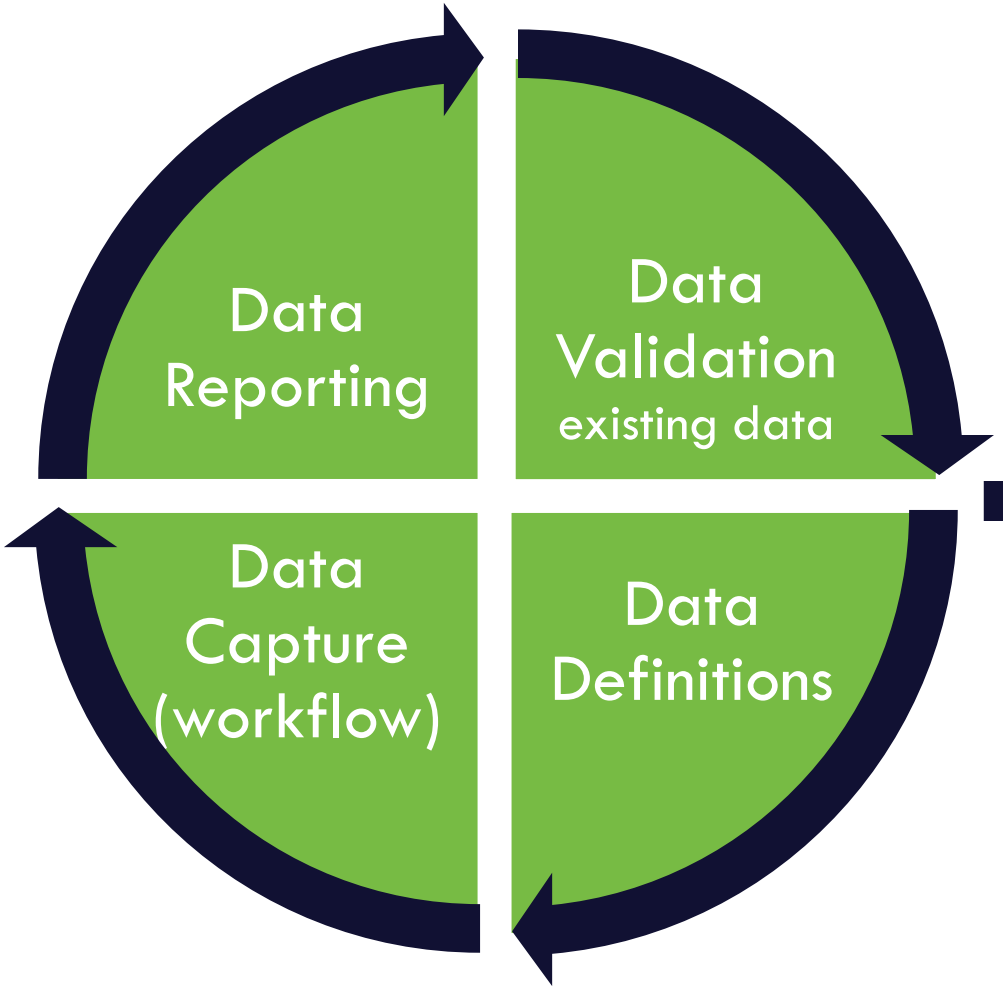
Step 4


Data Reporting
Data Validation
existing data
Data Definitions
Data Capture (workflow)

Work with Your Vendor

- As early as possible, work with your vendor to understand where reports are pulling from and what data is required.
  - Address issues well before UDS season or other reporting.
- Bring your **Use Cases** from data validation tool to those conversations.
- Be sure any issues are fixed as opposed to just changing to 'compliant'

What's Next?



Trusted information from which:

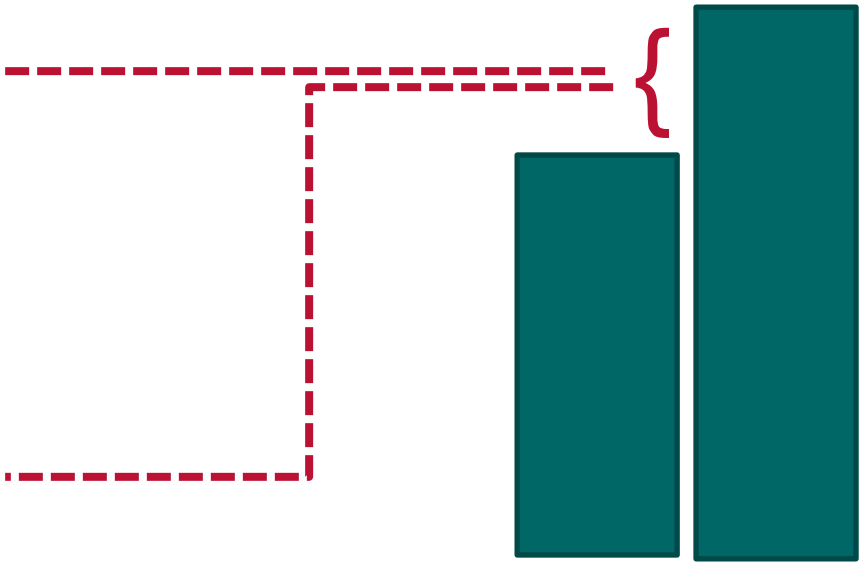
- Providers can act
- Care management can be directed
- Quality Improvement can be informed

Selecting Targets and QI Activities

- Goals or targets are **only as achievable as the data is good.**
- QI activities are only useful if they **specifically address the gaps** as they currently exist.

Some portion may be addressed through lifestyle changes or care management.

Some portion may be addressed through addressing data issues.



Recap

- **Challenge assumptions** and broad-based solutions by digging into your data
- Look at **all components** of data to improve your understanding and targeting of responses
  - Use data validation tool, chart reviews, peer teaching, etc.
  - Align with eCQM data criteria
- Tackle data issues, care gaps, and long-term outcomes **specifically (and maybe separately)**
- **Tie goals + QI activities** to specific issues uncovered

Discussion/Conclusion

Q&A

- What value do you see in the things that we have discussed?
- How might you use it?
- What more would you like to see?

Reach me:

Jillian Maccini | hiteqinfo@jsi.com

HITEQ Center

- In addition the Health IT QI tools and guide discussed, HITEQ has several other resource sets on health center priority topics.
- For additional information see HITEQcenter.org or contact HITEQ here.
- If you are interested in hosting a workshop or training with your health centers around these tools, please reach out to us!