



CALIFORNIA ASSOCIATION of
**PUBLIC HOSPITALS
AND HEALTH SYSTEMS**



CALIFORNIA HEALTH CARE
SAFETY NET INSTITUTE

DATA FOR IMPROVEMENT MODULE #2 WEBINAR DATA QUALITY



Wednesday, May 31, 2017

12:00-1:00

Recording link:

<https://safetynetinstitute.webex.com/safetynetinstitute/lsr.php?RCID=d24ea1f7c96748289dde744b95166864>

Welcome



Mute yourselves
locally

Line are unmuted!



Webinar will
be recorded



Deck & tools will be
saved on [SNI Link-->
Data Driven
Organizations](#)



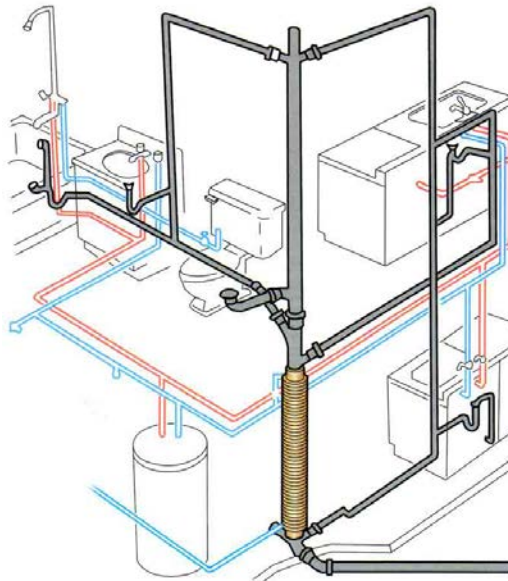


Thanks to the support of



**KAISER
PERMANENTE®**





Treating the symptom (over & over...)



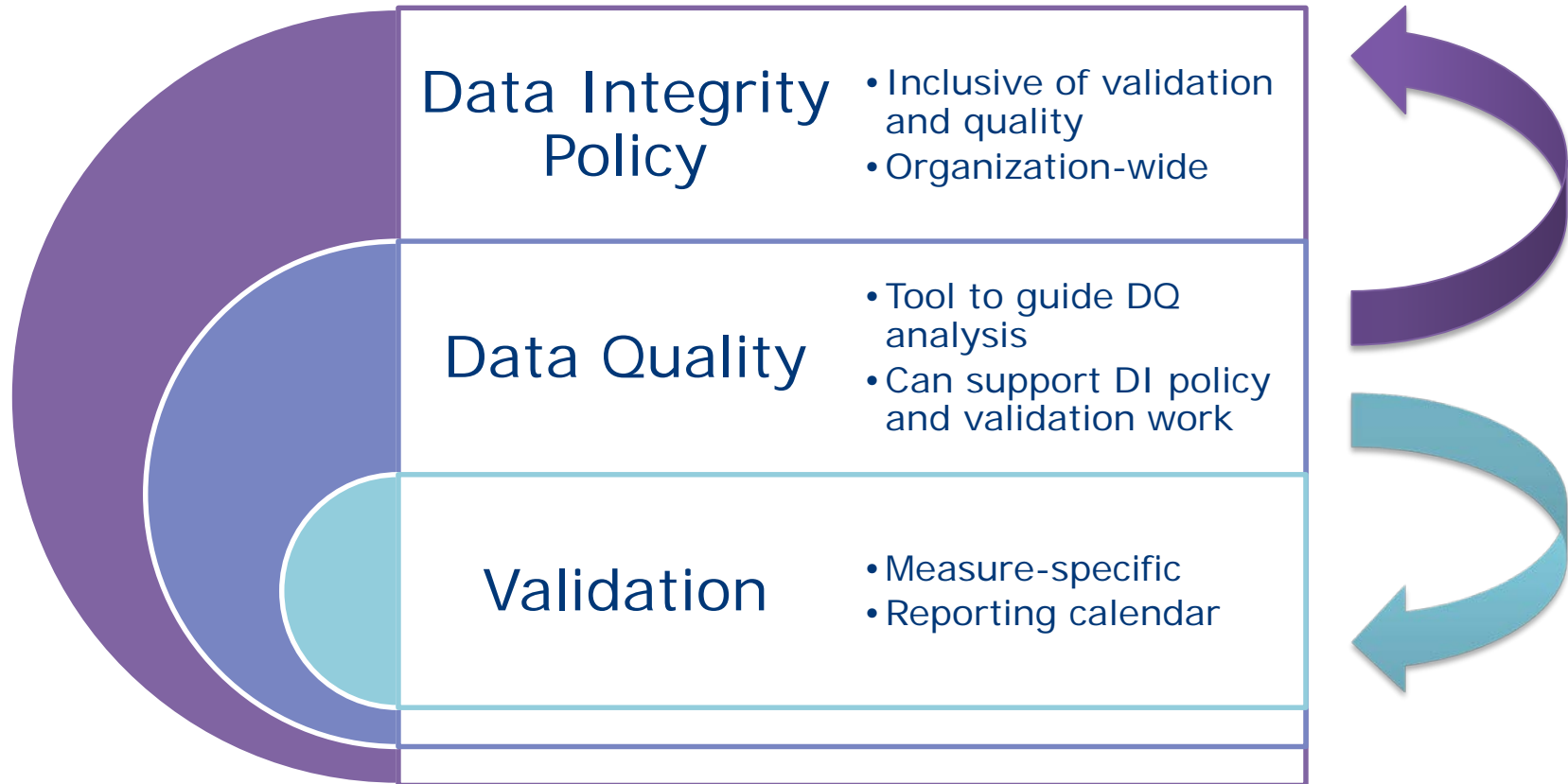
Targeted Data Quality Improvement



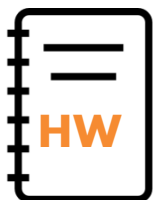
Real solution



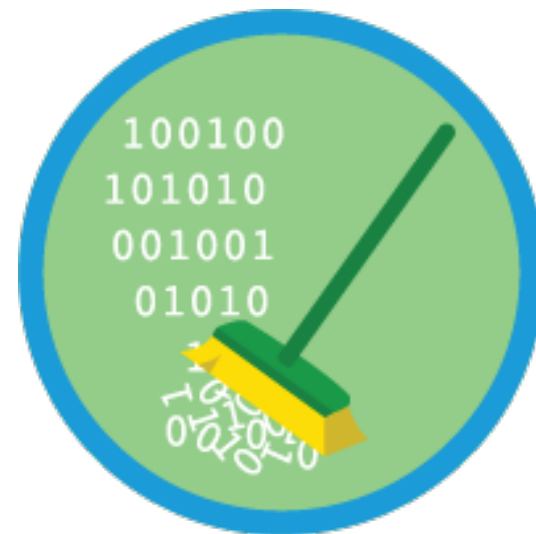
Data Integrity, Validation & Quality



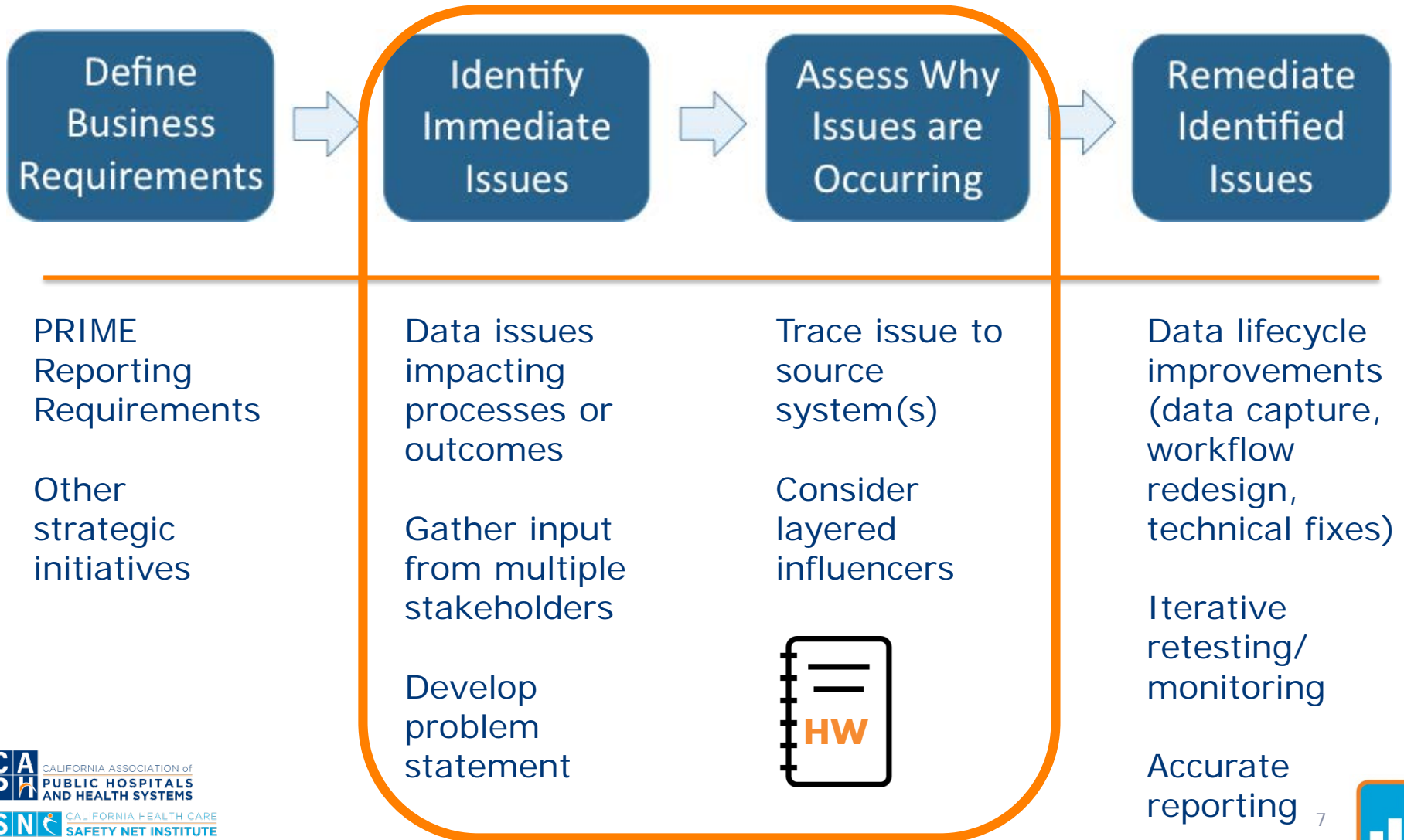
APPLYING DATA QUALITY FOR PRIME



*a.k.a your homework
assignment*



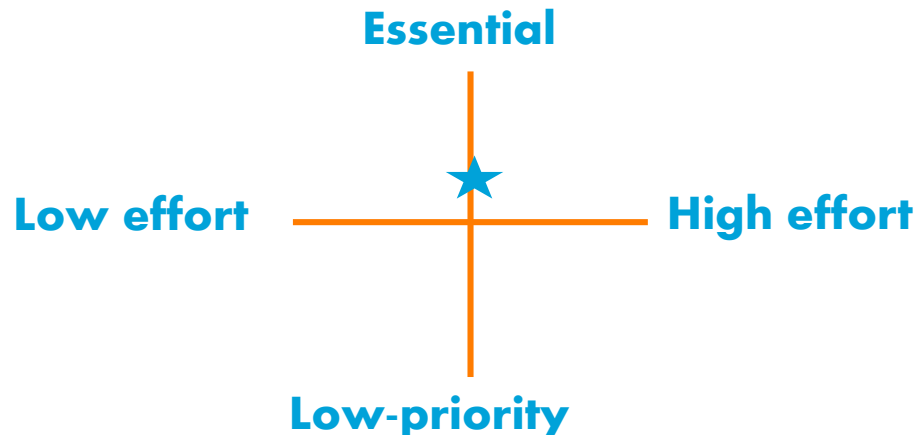
Targeted Data Quality Improvement



Step 1: Select a Metric

Identify a PRIME metric for this homework exercise that meets as many of these criteria as possible. The measure:

- Figures centrally to your PRIME program
- Includes at least some data from source systems for your PRIME reporting *that your central organization has authority over*
- You have some reason to suspect data quality deficiencies in the numerator and/or denominator
- Sweet spot of feasible & important



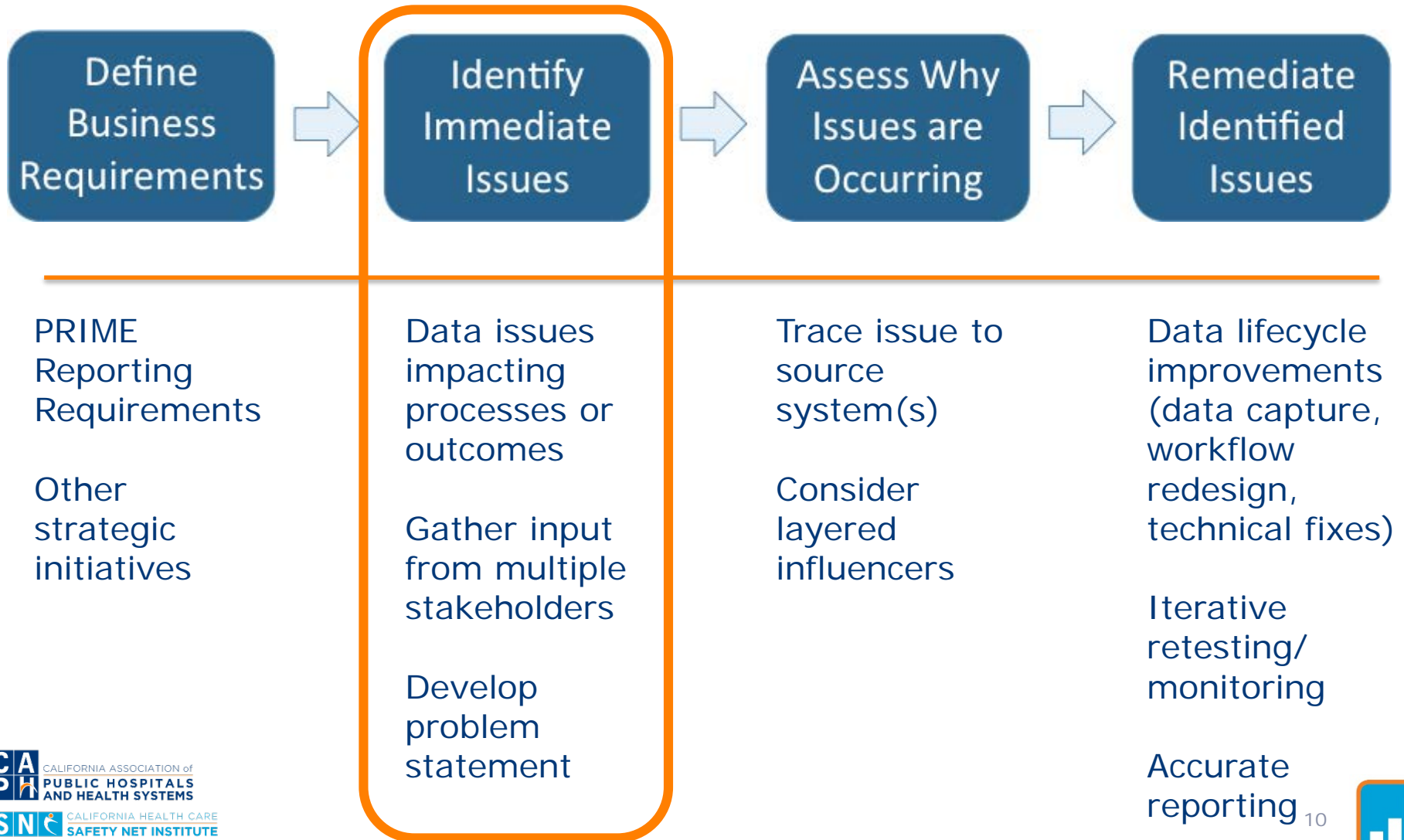
Metrics to Consider

1. Colorectal Cancer Screening
2. Prenatal Care
3. What you selected in January 2017 (*see below*)
4. Other?

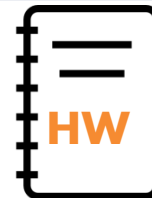
Member	Metric
Alameda	Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%)
Arrowhead	Colorectal Cancer Screening
Kern	Exclusive Breast Milk Feeding
Riverside Ventura	Tobacco Assessment/Counseling
San Joaquin	Cervical Cancer Screening
San Mateo	Depression Screening
Santa Clara	Well Child Visits for Children in Foster Care, first 15 months of life



Step 2: Identify Data Quality Issues



Identifying Immediate Issues



Part
I

Issue Impact

- What are the specific, immediate symptoms that you are noticing regarding this measure (i.e. “numerators/denominators are inconsistent depending on the system used to run the report”)
- How do these symptoms impact reporting on the measure?
- What is the impact of the issue more generally? What processes are being used to work around it?

Stakeholder Input

- Who has identified the issue, in what context, and do they have a partial or complete view into data for the measure?
- Involve all teams associated with the measure in the data collection process
- Include external stakeholders if they are key data sources – but also if they are data consumers (i.e. the measure has operational impact)
- Establish a pathway to easily investigate workflows among all of these teams

Problem Statement

- Create a concise problem statement that includes the impact of the issue
- Be sure to document the chain of stewardship for the measure, including both data sources as well as data consumers
- This statement will serve as a “charter” to guide remediation of the issue, including through future cycles of sustainment and improvement

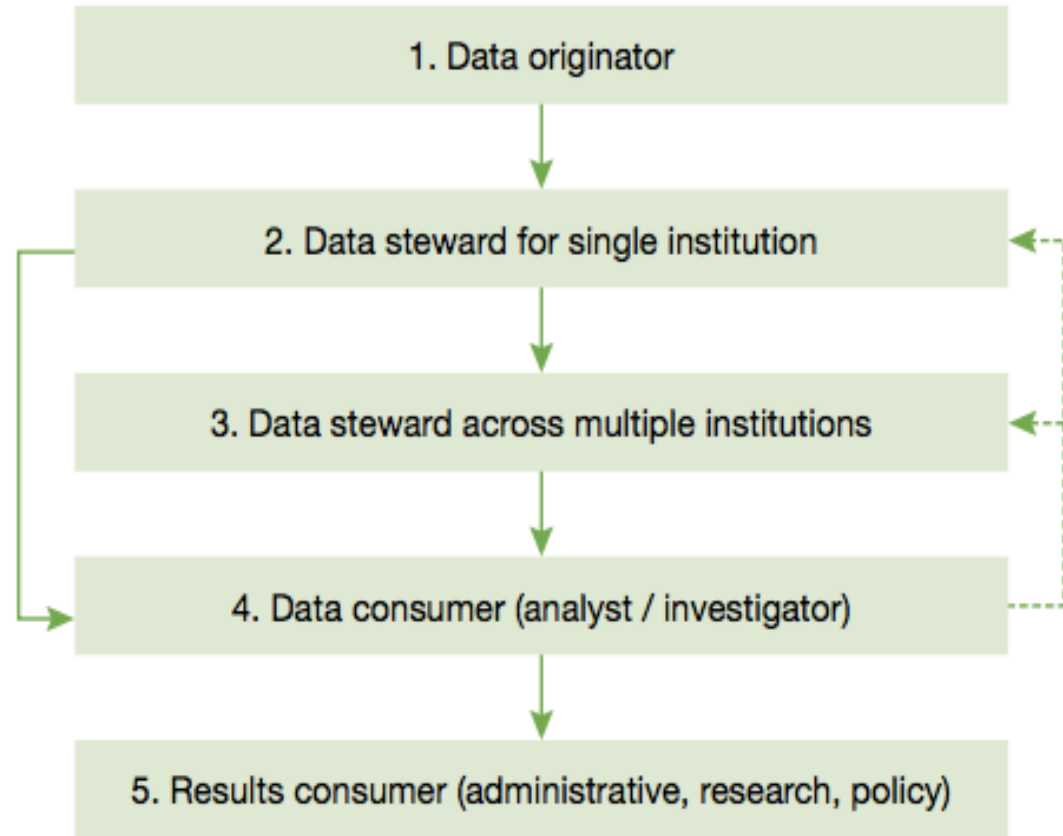


Chain of Data Stewardship

Gather input from stakeholders at each step of the chain of data stewardship

Supports identifying issues and the steps/systems where they are having an adverse impact

Including these stakeholders now lays groundwork for future remediation



Notes: Dashed lines represent data quality issues referred back to previous data stewards.



Write a Problem Statement

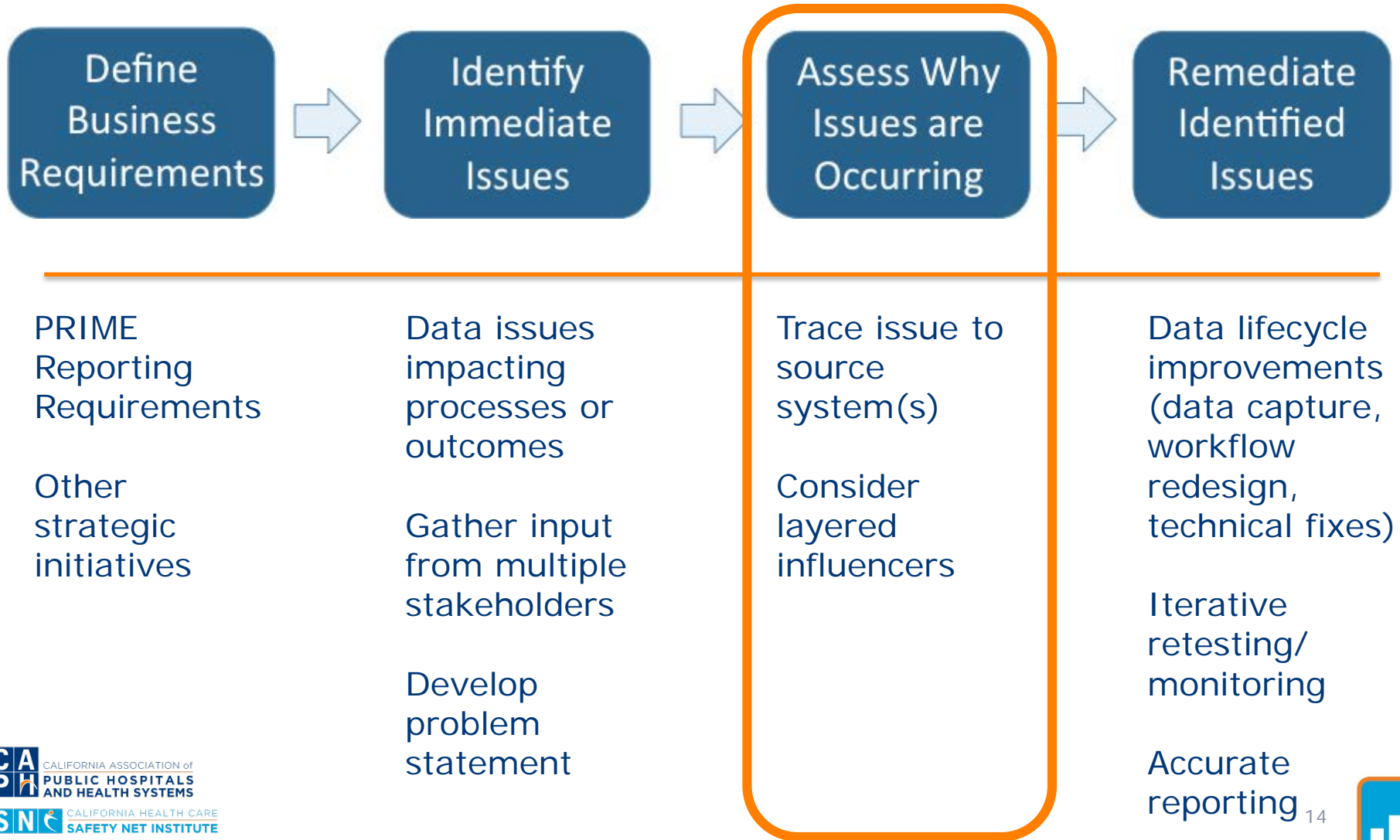
- **Description of problem** (e.g. the observed irregularities in a given measure)
- **Relevant data pathway and chain of stewardship**
- **Impact of problem** (how does the issue impact business, clinical, and operational processes and outcomes)
- **Existing approach** to addressing problem, if any (e.g. current workarounds)
- **Hypothesis** regarding the cause of data quality problem



Part
2



Step 3: Assess Why Issues Occurring



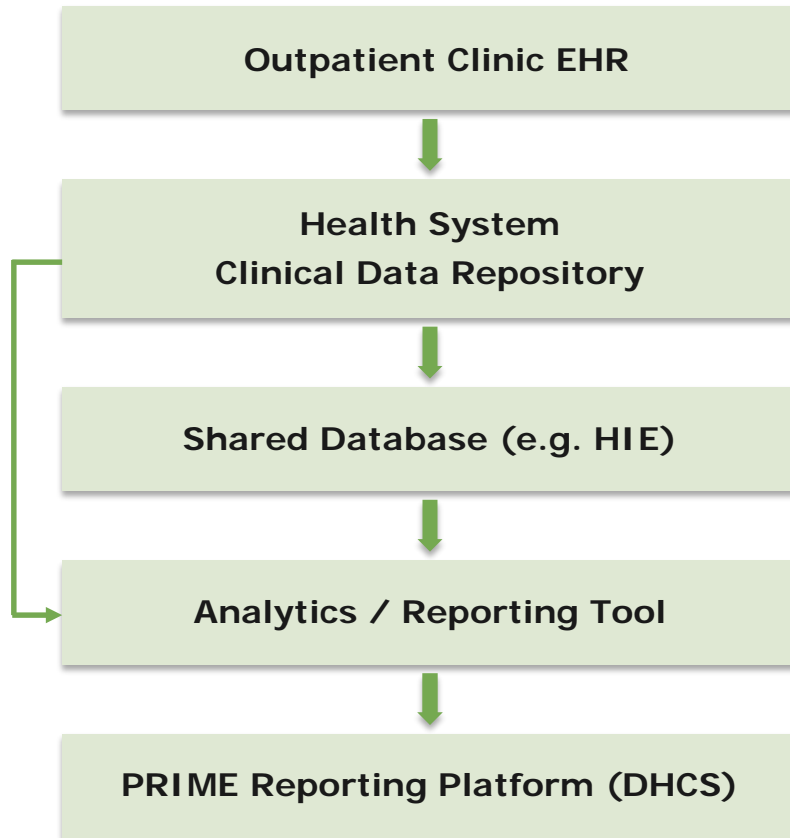
Which data integrity issues are involved for this specific measure?

Data Integrity

Consistency	Reliability	Accuracy	Completeness
Data is absent contradictions within the data set	Data is sufficiently complete and error-free to enable intended uses in context	What given data should be, based on the understanding of other data or measurement of true values	All required data elements are present and recorded



Example Data Pathway



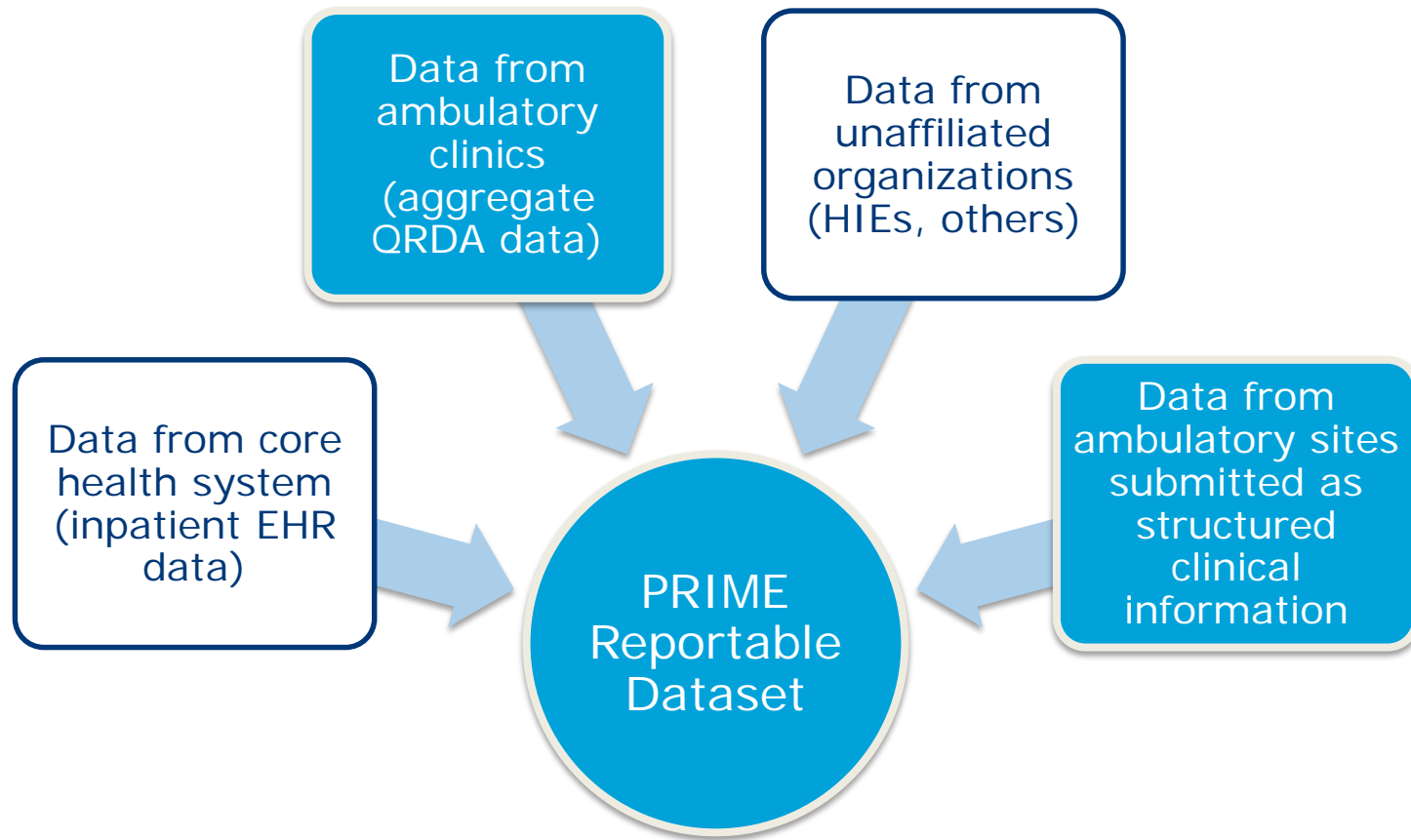
Source systems may be several steps removed from reporting platform

Following these steps “upstream” is one tactic to identify points of failure

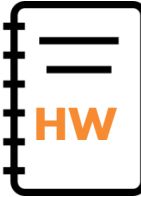
Start by discussing issue with relevant data stewards



Data Sources



Analyzing Data Integrity



Part
3

Consistency

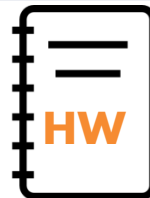
- Are measure results the same from different sources (e.g. EHR registry vs. PHM software)?
- When charting a sample from reported data, do numbers in patient records match report?
- Are patient records de-duplicated?
- Are the correct codes consistently associated with the test or diagnosis being measured?
- Is there a referenceable audit trail for the data that can be leveraged?

Reliability

- Are data entered into proper EHR fields?
- Are EHR fields free of text elements that could nullify data (e.g. text in numeric field)?
- Have any elements of the data been transposed or mapped?
- Are data recorded properly (e.g. BP readings being rounded up or down before entry)?
- Are data appropriately limited to only cover sites, providers, and patients that are exposed to the QI interventions?
- Are all eligible data elements being captured in the report logic (e.g. relevant ICD codes)?
- Is the date of a procedure based on the order date or the completion date? (If by order date could show false positives if procedure not completed)
- Do start date/times occur before stop date/times reliably?
- If the measure contains two linked data-points, is there enforcement for data being present among both variables, and/or are illogical entries disallowed (e.g. being both "Pregnant" and "Male")?



Analyzing Data Integrity



Part
3

Accuracy

- Are numerators/denominators relatively consistent over time? Is there a logical reason if not?
- Are tests being counted as completed when there is text in a results field? If so, are results always entered or is other text entered in the field that may falsely indicate completion?
- Is the report logic querying data from the proper EHR fields?
- Are patients who “age out” of the measure specifications or who develop an exclusion properly excluded at the appropriate time?
- Have pertinent codes (LOINC or ICD) changed? (e.g. new ones added or old ones retired)
- Is there a logical relationship between proportions? (e.g. diagnosed HTN cohort numerators should add up to the diagnosed cohort denominator)
- Are results very similar for reports one day of the week vs. another?

Completeness

- Are elements consistently documented in structured fields or with standardized free text?
- Are scanned patient documents/reports attached to orders so that they can be queried?
- Are critical data points (e.g. BP readings) documented in a telephone encounter or other place in the EHR that cannot be queried?
- If a repeat measure is taken, is it entered into the reportable vitals field, or into free text (where it might be retrieved by the measure query)?
- Do start dates and end dates align with the measure specifications?
- Are select sites, providers, or patients missing from the data set?





Preparing to Remediate

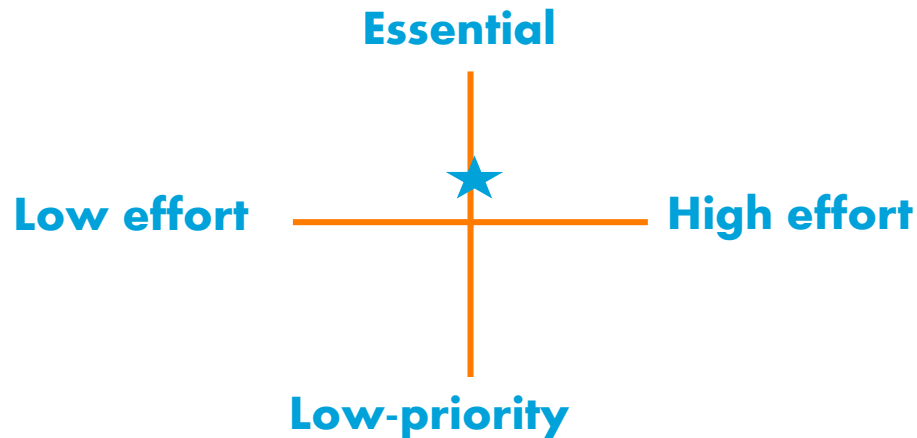
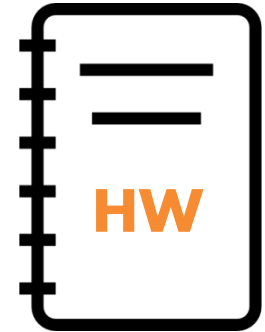
Is the issue originating with people, process, or technology, or some combination?

- Isolate the steps / system(s) where the issues are originating
- Investigate whether there are technical issues
- Speak with relevant data steward(s) and individuals generating data
- Review workflows

How can the root cause(s) be addressed?



In doing the homework

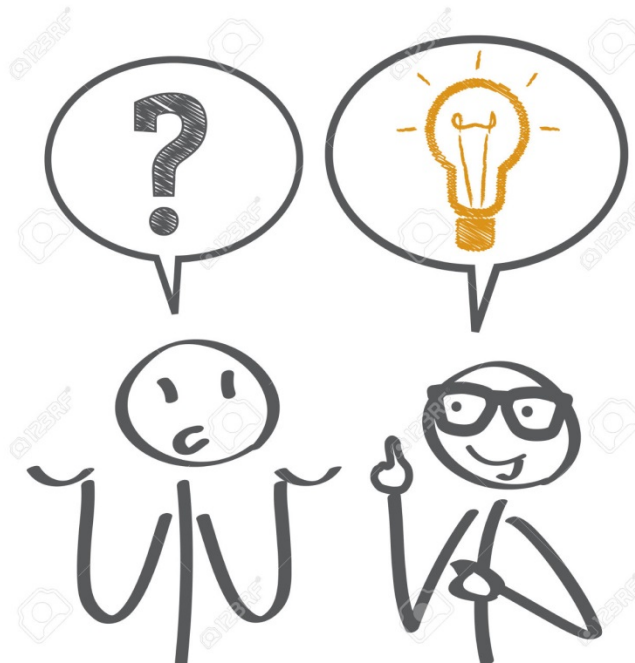


Questions?



Other support: Faculty Consults

In the course of completing the homework, you would like to set up a **1:1 30 minute session with Intrepid Ascent** in between now and **June 30**, please email Ronli Levi (rlevi@caph.org)



What's next



Module 2 Homework: Data Quality Measure Analysis

- Template will be sent out after this webinar
- **Your role:** complete as a team and submit to [Kristina](#)



Learning Lab Webinar (12:00-1:00)

- **Your role:** consider presenting; attend

Q1 Performance Measurement

Q2 Data Quality

Q3 Analysis of Data

Q4 Data Literacy

Next in person event: Oct. 2017



Help us practice what we preach....



Won't you take
our post-webinar
survey?

Thank you!

