Hospital IQR Program
Hybrid Hospital-Wide 30-Day Readmission Measure Core Clinical Data Elements for Calendar Year 2018 Voluntary Data Submission

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Purpose

This presentation will provide participants with an overview of the Hybrid Hospital-Wide 30-Day Readmission (HWR) measure that hospitals may voluntarily report in calendar year (CY) 2018 for the Hospital Inpatient Quality Reporting (IQR) Program.

Objectives

Participants will be able to perform the following:

- Define the Hybrid HWR measure
- Understand the importance of voluntary submission in CY 2018
- Identify core clinical data elements for data submission of the Hybrid HWR measure
- Locate resources related to the Hybrid HWR measure

Agenda

- Introduce voluntary reporting of the Hybrid HWR measure
- Introduce the Hybrid HWR measure
- Describe successful data submission of voluntary EHR data in CY 2018
    - Collect core clinical data elements and linking variables as finalized in the final rule
    - Develop Quality Reporting Document Architecture (QRDA) Category I file
    - Submit QRDA Category I file to *QualityNet*
- Address commonly asked questions
- Review core clinical data element resources available on the eCQI Resource Center
- Open question-and-answer session

Definitions/Acronyms

- EHR
  - o Electronic health record
- HWR
  - o Hospital-wide all-cause readmission
- IP
  - o initial population
- Hybrid measure
  - o Measure that uses a combination of claims and EHR data to calculate the performance score
- QRDA
  - o Quality Reporting Document Architecture
- Voluntary EHR Data
  - o Core clinical data elements
    - ▪ Information that reflects the patient's clinical status when first presenting to an acute care hospital
  - o Linking variables
    - ▪ Data used to correctly link the claims data to the EHR data

Voluntary Reporting

- The Hybrid HWR measure is a voluntary measure in the Hospital Inpatient Quality Reporting (IQR) Program. Providers are not required to submit the EHR data, and participation will not impact payments to hospitals.

- Benefits of voluntary reporting include the following:
  - CMS is moving towards quality measures that utilize medical record data rather than, or in addition to, administrative claims. Getting a head start in EHR collection will prepare your hospital for the future.
  - Opportunity to build processes to extract and report core clinical data elements
  - Receiving feedback on measure performance and success of EHR data submission

Hybrid HWR Measure

- The original (claims-based) and Hybrid HWR measures are both 30-day, all-cause, risk-standardized measures.

- Both include the following:
  - Medicare Fee-For-Service (FFS) beneficiaries
  - Ages 65 years or older
  - Discharged alive from non-federal acute care hospitals
  - Not transferred to another acute care facility.

- The Hybrid HWR measure uses core clinical data elements (found in the EHR) to enhance the risk-adjustment methodology, whereas the original measure uses claims data for the risk-adjustment.

Hybrid HWR Measure

- The core clinical data elements:

    o Are intended to reflect a patient's clinical status when the patient first presents to an acute care hospital for treatment.

    o Are routinely and consistently captured in most adult inpatients and can be electronically extracted from hospital EHRs.

- To calculate the hybrid measure, administrative data from the EHR (linking variables) are needed to link the core clinical data elements to the claims data.

Steps to Successful Submission

1. Extract/collect the data (using correct timing windows and data standards)

2. Populate the core clinical data elements into QRDA Category I file

3. Submit the QRDA Category I file through *QualityNet* via the *QualityNet Secure Portal*

Step 1:
Collect Data – Voluntary EHR Data

The 13 core clinical data elements, plus age, for risk-adjustment of the Hybrid HWR measure include:

- Heart rate
- Systolic blood pressure
- Respiratory rate
- Temperature
- Oxygen saturation
- Weight
- Hematocrit
- White blood cell count
- Potassium
- Sodium
- Bicarbonate
- Creatinine
- Glucose

The 6 linking variables include:

- CMS certification number
- Health insurance claim number (HICN) or Medicare Beneficiary Identifier (MBI)
- Date of birth (DOB)
- Sex
- Admission date
- Discharge date

Step 1: Extract Data – Timing

- The goal is to capture a clinical snapshot of patients when they **first** present to the hospital.

- Begin by looking for core clinical data element results associated with the **admission** that were captured in the 24 hours that immediately preceded the admission.
  - The 24-hour lookback period starts at the time of admission.
  - Admission date and time are used because it is captured in a standard way across hospitals.

- Select the first result associated with the stay within that 24-hour window, such as data captured during an emergency department encounter that preceded the admission.

Step 1:
Collect Data – Timing

- If no results are available within the lookback period, then look forward into the admission for core clinical data element results.

  - 2-hour look-forward period for vitals: heart rate, systolic blood pressure, respiratory rate, temperature, and oxygen saturation

  - 24-hour look-forward period for labs: hematocrit, white blood cell count, potassium, sodium, bicarbonate, creatinine, glucose, and weight

    - Look-forward period is provided to capture the first clinical data for patients who were directly admitted to the hospital.

    - Vitals, such as heart rate, that are likely to be taken at admission and frequently thereafter, have a 2-hour look-forward period.

    - Labs, like creatinine, may take time to order, collect, process, and result, so these have a 24-hour look-forward period.

Step 1:
Extract data – Logic Example

- **Numerator =**
  - AND:
    - OR:
      - OR: First:
        » "Physical Exam, Performed: Heart Rate LOINC" satisfies all:
          - (result)
          - <= 1440 minute(s) starts before start of "Occurrence A of Encounter, Performed: Acute care hospital Inpatient Encounter (admission datetime)"
      - OR: First:
        » "Physical Exam, Performed: Heart Rate LOINC" satisfies all:
          - (result)
          - <= 120 minute(s) starts after start of "Occurrence A of Encounter, Performed: Acute care hospital Inpatient Encounter (admission datetime)"
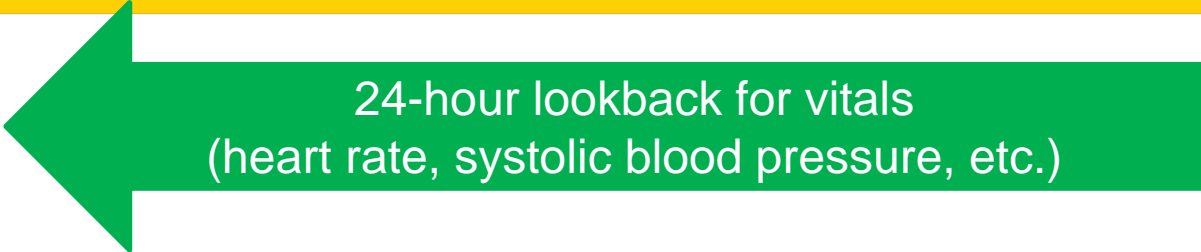
Step 1:
Collect Data

Data Elements	Units of Measurement	Time Window for First Captured Values
Heart Rate	Beats per minute	0–2 hours
Systolic Blood Pressure	mmHg	0–2 hours
Respiratory Rate	Breath per minute	0–2 hours
Temperature	Degrees Fahrenheit	0–2 hours
Oxygen Saturation	Percent	0–2 hours
Weight	Pounds	0–24 hours
Hematocrit	% red blood cells	0–24 hours
White Blood Cell Count	Cells/mL	0–24 hours
Potassium	mEq/L	0–24 hours
Sodium	mEq/L	0–24 hours
Bicarbonate	mmol/L	0–24 hours
Creatinine	mg/dL	0–24 hours
Glucose	mg/dL	0–42 hours

Work Flow Example 1:
Vitals Captured BEFORE Admission

← 24-hour lookback for vitals
(heart rate, systolic blood pressure, etc.)

**Vitals taken
at 9:30 PM**

**Inpatient admission
time 12:00 AM**

1/15/18 9:30PM
Vitals taken in emergency department HR 120 bpm, Syst BP 165 mmHg

→

1/16/18 12:00AM
Patient admitted to inpatient unit for suspected appendicitis

In this case, we would use the vitals taken at **9:30 PM,**
as they are the earliest value available for this hospital admission.

Work Flow Example 2:
Vitals Captured BEFORE Admission

24-hour lookback for vitals

Vitals taken in emergency department at 9:30 PM	Vitals taken in emergency department at 11:30 PM	Inpatient admission time 12:00 AM
1/15/18 9:30 PM Vitals taken HR 145 bpm, Syst BP 180 mmHg	1/15/18 11:30 PM Vitals taken HR 120 bpm, Syst BP 165 mmHg	1/16/18 12:00 AM Patient admitted to inpatient unit for suspected appendicitis
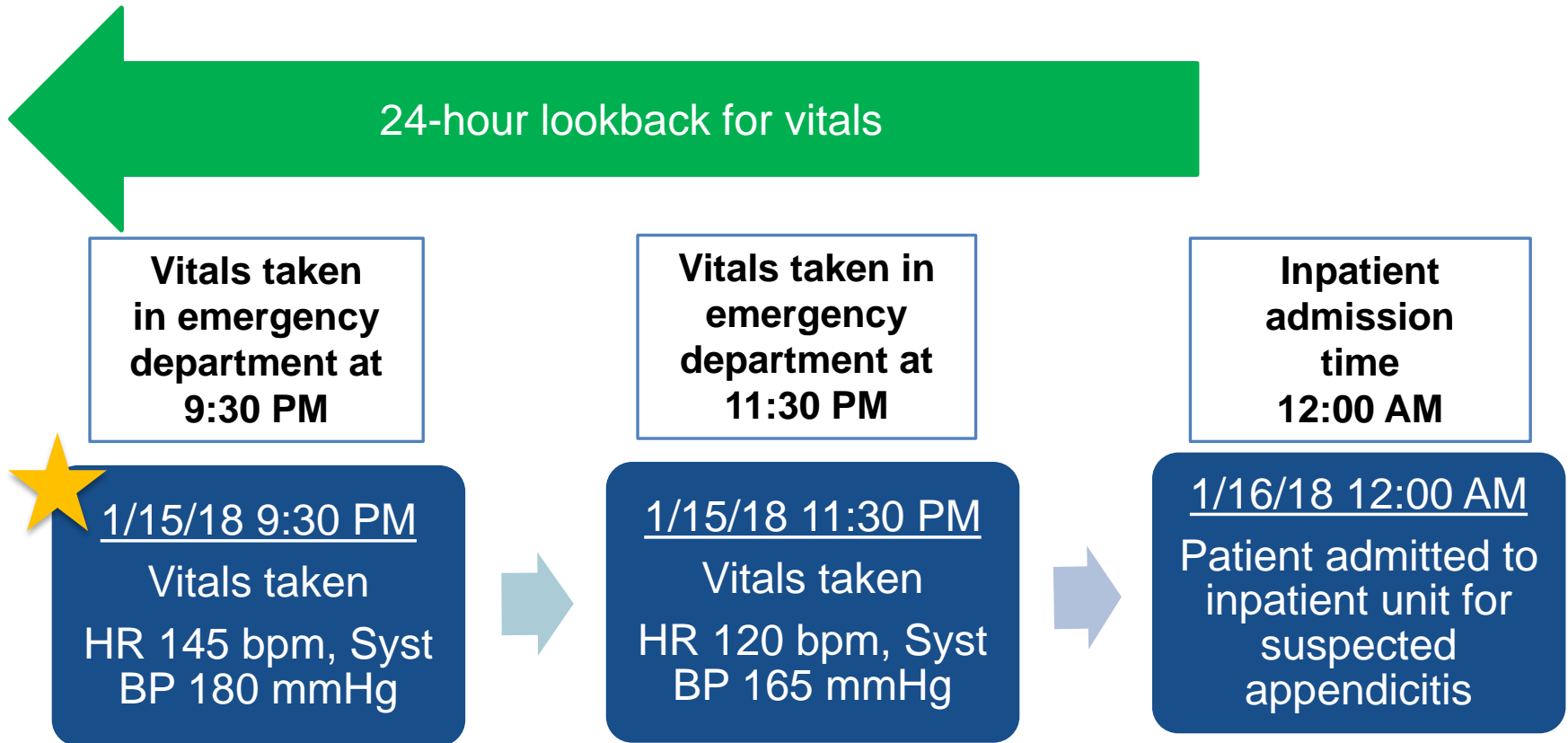
In this case, a hospital would report the vitals taken at **9:30 PM on 1/15/18** because they were measured during the same hospital visit and are the earliest of the values within the 24-hour window.

Work Flow Example 3:
Vitals Captured AFTER Admission

24-hour lookback for vitals — **Then** — **2 hours forward**

No vitals found	Inpatient admission time 12:00 PM	Vitals taken at 1:30 PM
1/14/18 11:00 AM Patient presents for routine lab draw only, no vitals taken	**1/15/18 12:00 PM** Patient admitted to inpatient unit for suspected appendicitis	**1/15/18 1:30 PM** Vitals taken on the inpatient unit HR 120 bpm, Syst BP 165 mmHg
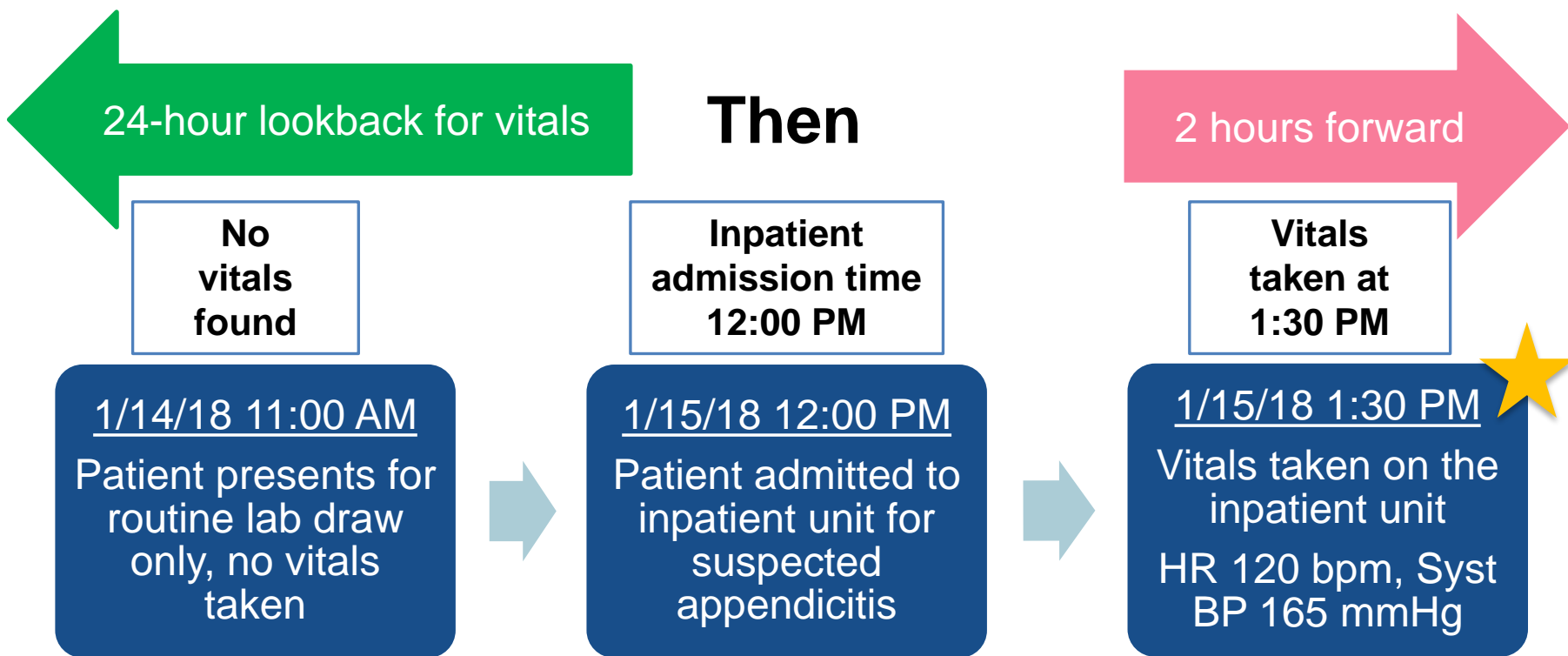
In this case, we would use the vitals taken at **1:30 PM on 1/15/18** as they are the earliest value available for this hospital admission.

Work Flow Example 4:
Labs Resulted BEFORE Admission

24-hour lookback for labs (for example, creatinine)

Labs resulted at 9:00 AM

Inpatient admission time 12:00 PM

1/15/18 8:00 AM
Patient arrives to the emergency department, labs ordered, drawn
9:00 AM
Labs resulted in the EHR system and are available for clinical staff

1/15/18 12:00 PM
Patient admitted to inpatient unit for suspected appendicitis
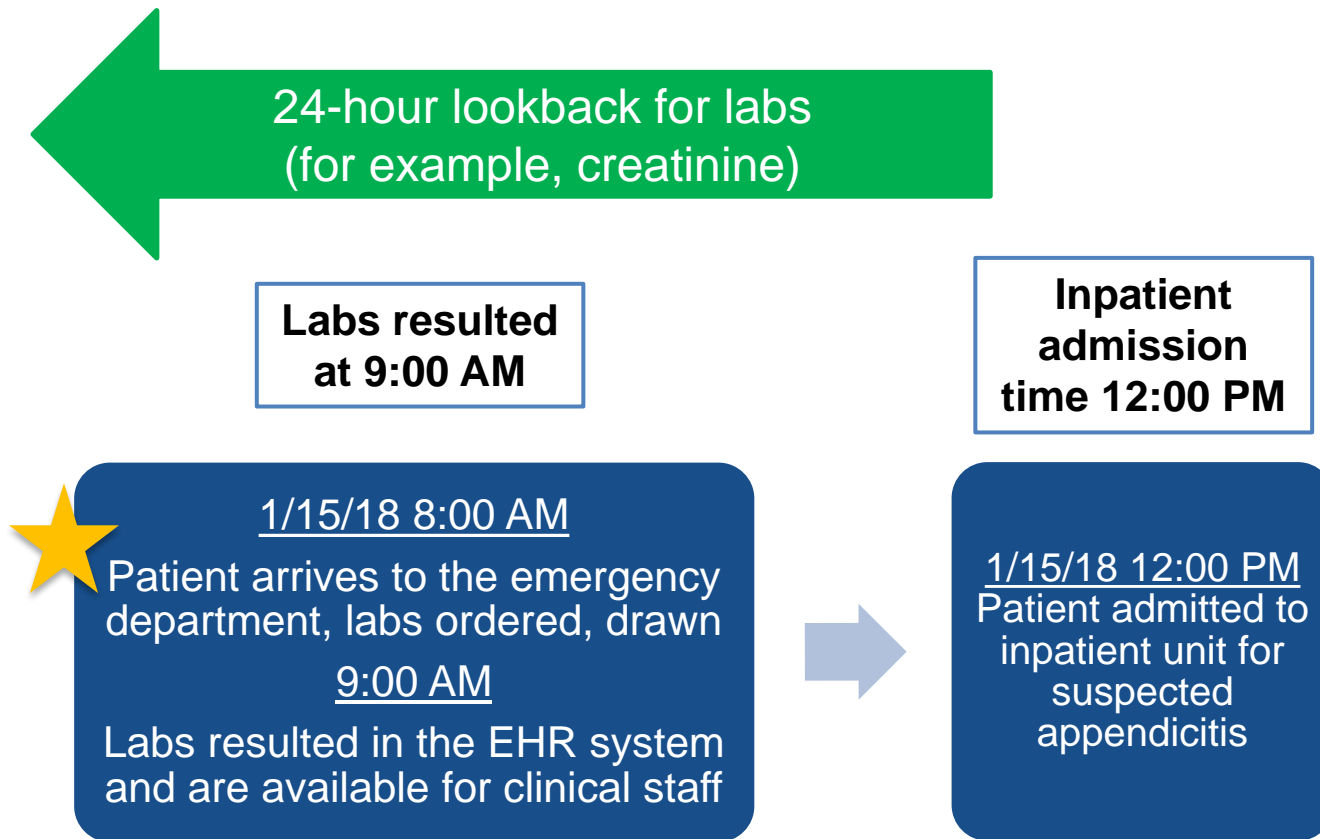
In this case, we would use the labs resulted at **09:00 AM** as they are the earliest value available for this hospital admission.

# Work Flow Example 5:
Labs Resulted BEFORE Admission

24-hour lookback for labs

Labs resulted at 09:00 AM	Labs resulted at 10:00 AM	Inpatient admission time 12:00 PM

1/15/18 8:00 AM
Patient arrives to emergency department, labs ordered and drawn

9:00 AM
Labs resulted in EHR system, available for clinical staff

1/15/18 9:30 AM
Second set of labs ordered and drawn

10:00 AM
Second set of labs resulted

1/15/18 12:00 PM
Patient admitted to inpatient unit for suspected appendicitis

In this case, we would use the labs resulted at **09:00 AM** as they are part of the same hospital visit and are the earlier of the two values.

Work Flow Example 6:
Labs Resulted AFTER Admission

24-hour lookback for labs

Then

24 hours forward

No labs found in 24 hours before admission time	Inpatient admission time 12:00 PM	Labs resulted at 3:00 PM

No patient encounter records found

1/15/18 12:00 PM
Patient admitted to inpatient unit for suspected appendicitis

1/15/18 2:00 PM
Patient arrives on inpatient unit, labs ordered and drawn
3:00 PM
Labs resulted
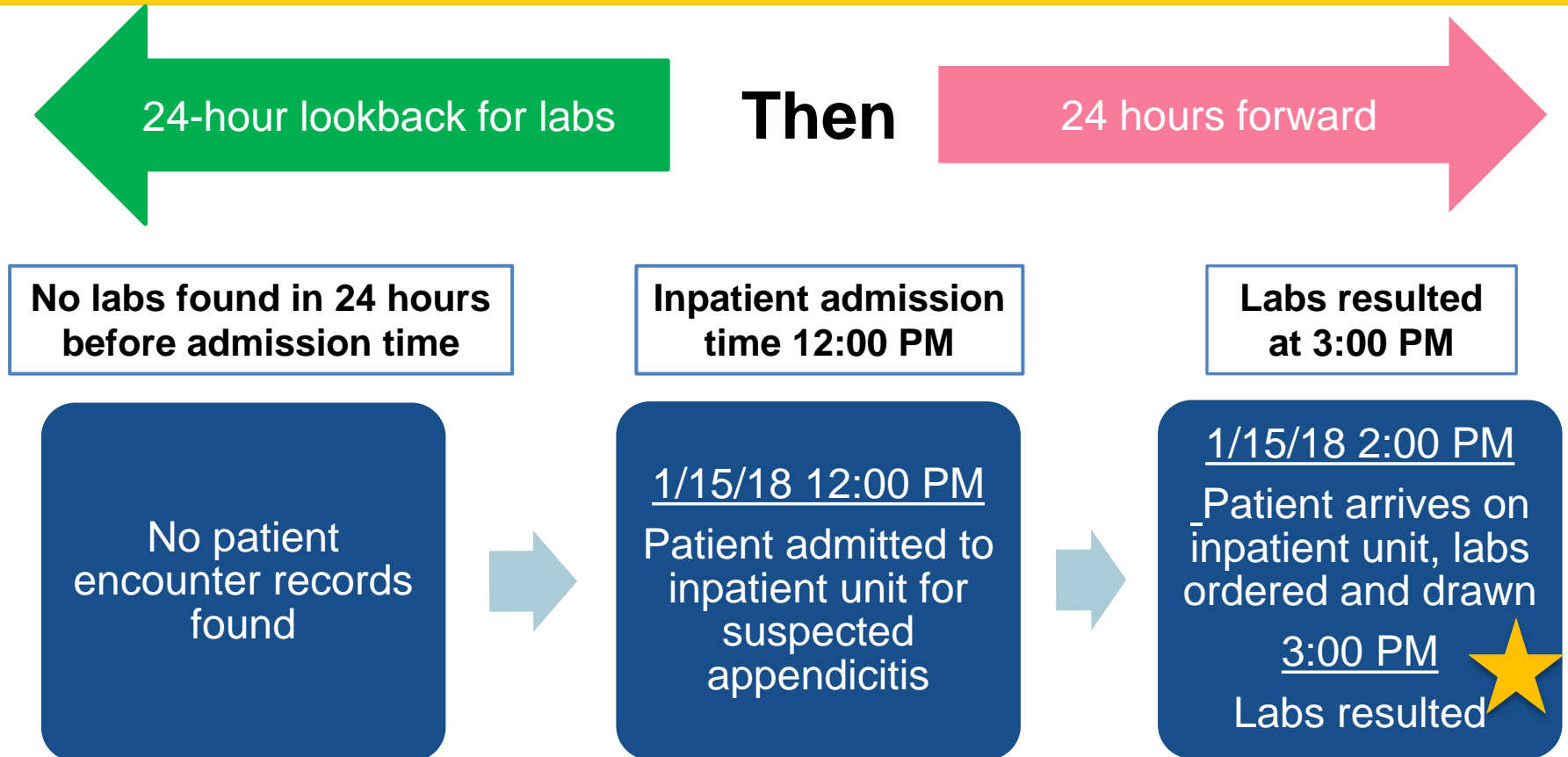
In this case, we would use the labs resulted at **3:00 PM** as they are part of the same hospital visit and are the earliest values captured.

Work Flow Example 7:
Labs Resulted AFTER Admission

24-hour lookback for labs **Then** **24 hours forward**

Labs resulted at 9:00 AM

1/11/18 8:00 AM
Labs collected during the pre-op visit, patient goes home
9:00 AM
Labs resulted

Inpatient admission time 8:00 AM

1/15/18 8:00 AM
Patient comes back two days later and is admitted for the scheduled surgery

Labs resulted at 4:00 PM

1/15/18 3:00 PM
Labs collected post-operatively
4:00 PM
Labs resulted
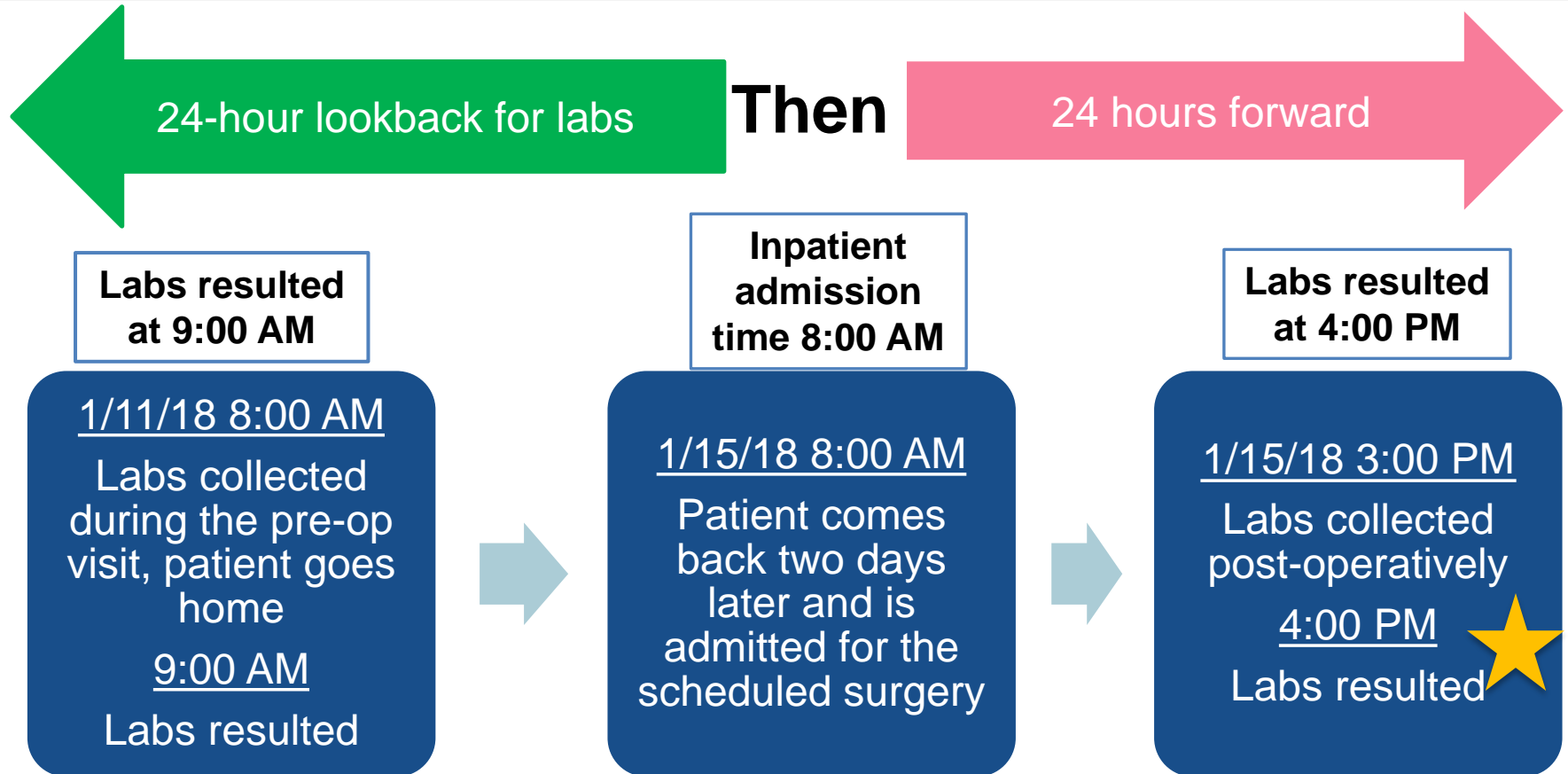
In this case, we would use the labs resulted on **4:00 PM on 1/15/18** as they are part of the inpatient admission. The labs resulted on 1/11/18 are not part of the inpatient admission that occurred on 1/15/18.

Work Flow Example 8:
Observation Stay BEFORE Admission

24-hour lookback for vitals and labs

Vitals taken at 8:00 AM

1/11/18
8:00 AM
Intake vital signs taken

Labs resulted at 11:00 AM

1/11/18
10:00 AM
Patient placed in observation status, labs ordered and drawn

11:00 AM
Labs resulted

Vitals taken at 4:00 PM; Labs resulted at 5:00 PM

1/11/18 4:00 PM
Vitals taken, labs ordered and drawn

5:00 PM
Labs resulted

Inpatient admission time 6:00 PM

1/11/18
6:00 PM
Patient admitted to inpatient unit for suspected appendicitis

Vitals taken

In this case, we would use the vitals taken at **8:00 AM** and the labs resulted at **11:00 AM**, since these are the earliest results for the core clinical data elements within this hospital visit.

Step 1: Collect Data – Must Account for Potential Pathways to Inpatient Stay Within the Hospital

Hospital-based outpatient procedure areas

Observation unit

Planned/scheduled surgeries

Emergency department

Ambulatory surgery

Others?

Inpatient

Step 1: Collect Data – Performance Year Requirements

PY	Eligible HWR Occurring During	Core Voluntary EHR Data submitting requirements
1	January 1, 2018–June 30, 2018	At least 50% and up to 100% of discharged hospitalizations for Medicare FFS patients age 65 years or older

Step 2: Create QRDA Category I file for each patient

- A QRDA Category I file is created for each patient meeting the initial population (IP) criteria of the core clinical data element specification.

- These QRDA Category I files will be distinct from those reported for CY 2018 eCQM reporting.

Step 3: Submit Data – Deadlines

The submission period for voluntarily reporting the Hybrid HWR Measure data is from September 1, 2018 through November 30, 2018.

Step 3: Submit Data – File Naming

- When you are ready to submit your final core clinical data elements' data file (with all of your patient data), name your file with your "[Hospital Name]-[CMS Certification Number]"
  - o We ask that you also do the following :
    - ▪ Date your file as such: MM.DD.YYYY
    - ▪ Provide a version number (for example, v1.0) for tracking
  - o For example, this is how your final file name will look: **Samplehospital-XXXXXX_09.28.2016_v1.0**

Note: CMS does not require a file naming convention for QRDA Category I files submitted for mandatory eCQM reporting for the IQR and the EHR Incentive Programs.

Step 3: Submit Data - Transmission

- Core clinical data elements, whether submitted by a provider or third-party data vendor acting on the provider's behalf, must be transmitted via the *QualityNet Secure Portal*.

- Prerequisites to accessing [*QualityNet*](#):
  - Must have a valid *QualityNet* account
  - Must be enrolled in the *QualityNet Secure Portal*

- You can register by visiting the site and navigating to "*QualityNet* Registration." Select "Hospital – Inpatient" and follow the instructions.

Common Questions

- If a hospital uses local codes, rather than standardized codes such as LOINC and SNOMED, is it possible for the hospital to still submit core clinical data elements?
  - Yes. Hospitals will need to map their local codes to the codes included in the value sets associated with the core clinical data element specifications.
- If a hospital identifies more than one value for each of the core clinical data elements for a hospital admission within the lookback and look-forward periods, should the hospital submit all of the available values?
  - No. Hospitals should just submit the *first* available value associated with the hospital admission.

IQR Voluntary Reporting Participant Resources

- IPPS/LTCH PPS Final Rule:

  - https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Final-Rule-Home-Page.html

- eCQI Resource Center

  - https://ecqi.healthit.gov/ecqm/measures/cms529v4

- 2018 CMS Implementation Guide for QRDA Category I

  - https://ecqi.healthit.gov/qrda

- *QualityNet*

  - https://www.qualitynet.org/

JIRA – CMS
Hybrid Measures Issue Tracker

The CMS Hybrid Measures (CHM) issue tracker is a tool for the following:

- Tracking and providing feedback on hybrid measures
- Entering issues/questions related to the core clinical data elements, to be answered by an expert
- Searching all previously entered issues for responses

https://oncprojectracking.healthit.gov/support/projects/CHM/summary

Measure Methodology Q&A

CMShybridmeasures@yale.edu
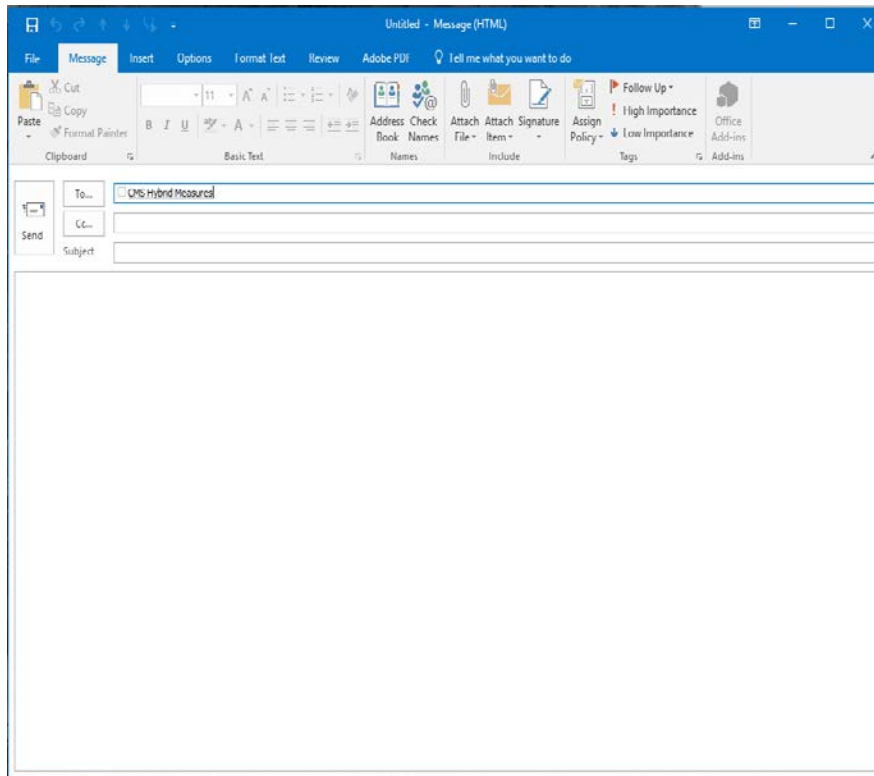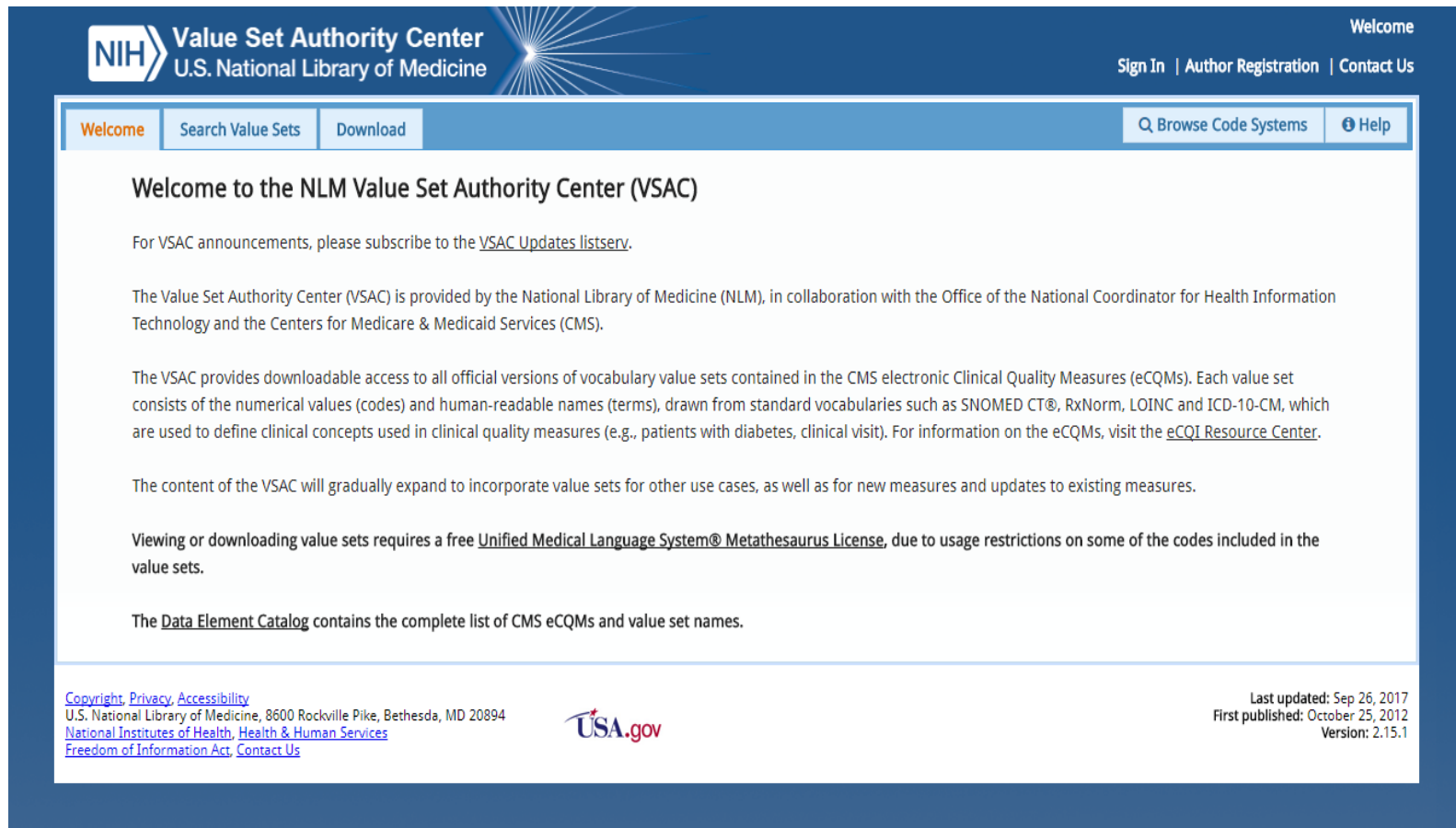
Submit questions about the Hybrid HWR measure methodology, such as:

- Previous measure testing and development
- Cohort inclusions
- Measure exclusions
- Approach to risk adjustment
- Assessment of the outcome
- The planned readmission algorithm

VSAC Instructions

https://vsac.nlm.nih.gov/

eCQI Resource Center

- Resources for various stages of eCQI
- Information about standards and tools to support eCQI
- Links to external resources related to eCQMs and data reporting include the following:
  - o ONC JIRA issue trackers
  - o Measure Authoring Tool
  - o Value Set Authority Center
  - o National Quality Strategy resources

Resources

QualityNet **Help Desk – PSVA and Data Upload**

- qnetsupport@hcqis.org
- (866) 288-8912, 7 a.m. to 7 p.m. CT, Monday through Friday

eCQM General Program Questions – IQR Policy and Program

- https://cms-ip.custhelp.com
- (866) 800-8765 or (844) 472-4477, 8 a.m. to 8 p.m. ET, Monday through Friday (except holidays)

Questions

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