VERMONT
GREEN MOUNTAIN CARE BOARD

Act 159 of 2020, Section 4: Hospital Sustainability Planning

June 2021

Agenda

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1. Introduction, Background & Vision (5 min)
2. BRG Quality Results: Overview of Methodology and Summary (15 min)
3. Questions for Berkeley Research Group/GMCB staff (25 min)
4. Health Equity Update (10 min)
5. Next Steps (5 min)

Introductions

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- GMCB
- Beth Greskovich, Berkeley Research Group

Background

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1. Hospital Budget Orders issued in 2019 for 6 of 14 then expanded to all in 2020 due the COVID-19 pandemic and the economic impact on all hospitals.

2. Section 4 of Act 159 of 2020 directs the Green Mountain Care Board (GMCB or the Board) to *"consider ways to increase the financial sustainability of Vermont hospitals in order to achieve population-based health improvements while maintaining community access to services."*

Why is the Board doing this work?

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Purpose of the Board per 18 V.S.A. § 9372 includes:

- Improving the health of the population; and
- Reducing the per-capita rate of growth in expenditures for health services in Vermont across all payers while ensuring quality and access to care.

Health Care Reform Principles per 18 V.S.A. § 9371 include:

- Balance cost containment with population health and affordability;
- Design of a health system that serves all Vermonters, including those in rural areas, in a sustainable way;
- Payment reform that enables practitioners to provide, on a solvent basis, effective and efficient health services that are in the public interest.

Act 159: Defining the work…

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Hospital financial sustainability: How can we ensure that hospital revenues (provider reimbursement) are sufficient to **cover the costs** of operating a system that strikes the appropriate **balance between efficiency** and **access in rural Vermont**?

How can sustainable hospital reimbursement ensure:

1. Access to essential services for all Vermont communities
2. Efficient and economic delivery of services
3. Improved health outcomes (population health) for Vermonters

Act 159: Report Development

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Part 1 – Current State and Gap Analysis

1. Hospital financial health
2. Provider reimbursement and variation in prices and costs
3. Community access to essential services and hospital system needs to improve health outcomes of Vermonters, including an assessment of hospital system capacity and quality

Part 2 – Hospital Engagement

Part 3 – Potential paths forward to improve hospital sustainability and preparedness for value-based care

*Report due to the legislature September 1st, 2021 but no later than **November 15th, 2021** should there be any delays associated with COVID-19*

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Berkeley Research Group (BRG) – Quality Analysis

INTELLIGENCE THAT WORKS

Green Mountain Care Board
Vermont Hospital Quality Report

June 10, 2021

BRG

BRG

CMS Quality Pay for Performance Programs

		Medicare FFS Revenue
Value Based Purchasing (VBP)	• Mortality and Complications • Patient Perception HCAHPS • Infections • Efficiency – Cost per Beneficiary	+/-2%
Hospital Readmission Reduction Program (HRRP)	• 30-day, all-cause Readmissions • 6 clinical conditions	-3%
Hospital Acquired Condition Reduction Program (HACRP)	• AHRQ Patient Safety Indicator Composite • CDC/NHSN Healthcare Associated Infections	-1%

CAH do not participate in VBP, HRRP or HACRP. CAH do participate in MBQIP – Medicare Beneficiary Quality Improvement Project. Data was not publicly available for the measures included in the project.

CMS IPPS Proposed Rule Released April 2021

- **CMS is, in effect, proposing to exclude CY 2020 performance data for HCAHPS and HAI for pay-for-performance purposes**
  - **CMS is proposing to suppress Pneumonia Mortality for the time period that includes COVID-19 discharges**

- CMS is proposing to make several changes to its national quality pay-for-performance programs for FFY 2022, FFY 2023, and beyond:

- FFY 2022:
  - Hospital-Acquired Condition (HAC) Reduction Program:
    - Suppress the CY 2020 NHSN HAI and CMS PSI-90 data
  - Hospital Value-Based Purchasing (VBP) Program:
    - Suppress HCAHPS, MSPB, and HAI measures (CY 2020 performance)
    - CMS will not calculate a total performance score (TPS); applying a neutral adjustment to all hospitals
    - CMS will calculate and publicly report all measure rates

- FFY 2023:
  - Hospital-Acquired Condition (HAC) Reduction Program:
    - Suppress the CY 2020 NHSN HAI and CMS PSI 90 data
  - Hospital Value-Based Purchasing (VBP) Program:
    - Suppress Pneumonia 30-Day Mortality Rate measure
    - Remove the PSI-90 measure beginning with FFY 2023
    - Update baseline measures affected by the COVID-19 ECE
  - Hospital Readmissions Reduction Program (HRRP):
    - Temporarily suppress the Pneumonia 30-Day Readmission measure for the FFY 2023 program year
    - Exclude COVID-19 diagnosed patients beginning with FFY 2023

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Updated FY 2022 Performance Periods

CMS Quality Program	Updated Discharge Period	FY 2022 Proposed Rule Changes
Hospital Readmissions Reduction Program:		
AMI, COPD, HF, PN, CABG, and THA/TKA	July 1, 2017 through December 1, 2019 (Original end date June 30, 2020)	No changes
Hospital Value-Based Purchasing (VBP) Program:		
HAI and HCAHPS	July 1, 2020 – December 31, 2020 (Original start date January 1, 2020)	Suppress all quarters of CY 2020
Efficiency (MSPB)	Admission dates on/after October 2, 2020 and with discharge dates prior to December 1, 2020 (Original discharge period January 1, 2020 – December 31, 2020)	Suppress all quarters of CY 2020
Mortality (AMI, COPD, HF, PN, and CABG)	July 1, 2017 through December 1, 2019 (Original end date June 30, 2020)	No changes
THA/TKA Complication Rate	April 1, 2017 through October 2, 2019 (Original end date March 31, 2020)	No changes
Hospital-Acquired Conditions (HAC) Reduction Program:		
HAI	January 1, 2019 – December 31, 2019 + July 1, 2020 – December 31, 2020 (Original discharge period January 1, 2019 – December 31, 2020)	January 1, 2019 – December 31, 2019 only Suppress all quarters of CY 2020
PSI-90	July 1, 2018 through December 31, 2019 (Original end date June 30, 2020)	No changes

BRG Calculated Quality Measure Definitions

- Data Source: Vermont Health Care Uniform Reporting and Evaluation System (VHCURES)

- All Cause Readmissions – evaluated 30-day unplanned readmissions. Assigned to initial admission hospital for readmission occurring at any hospital included in the VHCURES data.
  - Maryland All Payer data used for expected values. Maryland is the only all-payer data set available to evaluate all cause readmissions at the DRG level. Maryland Medicare readmission rate is equal to National average Medicare readmission rate.
  - Performance evaluated at Vermont hospital case-mix.

- In Hospital Mortalities – evaluated in-hospital mortalities, Medicare only
  - National Medicare LDS data was used for expected values. Hospital specific peer groups were developed from National Medicare LDS data. See pages 13 - 15 for Peer Groups.
  - Performance evaluated at Vermont hospital case-mix.

- Patient Safety Indicators (PSI) – AHRQ PSI software, Medicare only
  - Due to limitations in the data (POA and Procedure date), only Medicare patients were evaluated

- Complications – evaluated specific diagnosis **Not** Present on Admission, Medicare only
  - Due to limitations in the data (POA and Procedure date), only Medicare patients were evaluated
  - Maryland data and National Medicare LDS data were used as a comparison. Maryland has focused on complications and POA over the last several years under MD quality payment programs. Additionally, Hospital specific peer groups were developed from National Medicare LDS data. See pages 13 - 15 for Peer Groups.
  - Performance evaluated at Vermont hospital case-mix.

- Prevention Quality Indicators (PQI) – AHRQ PQI software
  - Adults 18 + were assigned PQIs if primary diagnosis met PQI criteria
  - AHRQ publishes PQI rates per capita which were used as benchmarks for Vermont Hospital Service areas (AHRQ uses HCUP data to generate these rates)

All Cause 30-day Unplanned Readmissions

- Assigned Observed (numerator) to an initial admission at a Vermont hospital for a 30-day unplanned readmission occurring at any hospital included in the VHCURES data.

- Assigned eligible status to an admission at a Vermont hospital that met criteria. Eligible admissions contribute to expected values and are the denominator in a raw readmission rate.
- The expected value of readmissions is the number of readmissions a hospital would have experienced had its rate of readmissions been identical to that experienced by a reference or normative set of hospitals, given its mix of patients as defined by MS DRG. Expected readmissions are calculated at the MS DRG level by multiplying the sum of Vermont eligible admissions and the Peer Group Medicare FFS DRG average readmission rate. Similar computations were made using Maryland All Payer data. Expected readmissions are the denominator in the O/E ratio. (Maryland is the only all-payer data set available to evaluate all cause readmissions at the DRG level. Maryland Medicare readmission rate is equal to National average Medicare readmission rate.)
- Performance evaluated at Vermont hospital case-mix.
- Data Source: Vermont Health Care Uniform Reporting and Evaluation System (VHCURES)

All Cause 30-day Unplanned Readmissions

- Eligible Criteria:
  - Planned readmissions are excluded from the numerator (observed) based upon the CMS Planned Readmission Algorithm V. 4.0. Planned admissions are counted as eligible because they could have an unplanned readmission.
  - Admissions that result in transfers, defined as cases where the discharge date of the admission is on the same as or the next day after the admission date of the subsequent admission, are removed from the eligible counts. Thus, only one admission is counted as eligible, and that is the admission to the **receiving transfer hospital**. It is this discharge date that is used to calculate the 30-day readmission window.

  - Hospitalizations within 30 days of a hospital discharge for a patient who dies during the second admission are counted as readmissions, however, the readmission is removed from the eligible count because there cannot be a subsequent readmission.
  - Rehab and Oncology as defined by specific MS DRGs are not considered eligible as an initial admission or a readmission.
  - Newborns are excluded from the readmission logic. Deliveries will not be assigned as a readmission but are eligible to have a readmission.

In Hospital Mortalities

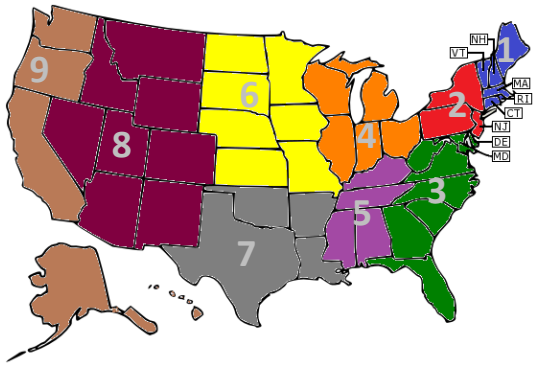
- Assigned Observed (numerator) to an admission at a Vermont hospital with a discharge disposition of expired
- Assigned eligible status to an admission at a Vermont hospital that met criteria. Eligible admissions contribute to expected values and are the denominator in a raw mortality rate.
- The expected value of mortalities is the number of mortalities a hospital would have experienced had its rate been identical to that experienced by a reference or normative set of hospitals, given its mix of patients as defined by MS DRG. Expected mortalities are calculated at the MS DRG level by multiplying the sum of Vermont eligible admissions and the Peer Group Medicare FFS DRG average mortality rate. Expected mortalities are the denominator in the O/E ratio
- Eligible Criteria:
  - Admissions with a transplant DRG were excluded from the measure.
- Performance evaluated at Vermont hospital case-mix.
- Data Source: Vermont Health Care Uniform Reporting and Evaluation System (VHCURES)

Complications

- Assigned Observed (numerator) to an admission at a Vermont hospital with specific I-10 Dx codes that were **Not** Present on Admission
- I-10 Diagnosis codes were assigned to Clinical Categorization Software (CCS)
- CCS were assigned to Complication Groupings:
  - Sepsis, Pneumonia, SSI, CLABSI, CAUTI/UTI
  - Shock, Respiratory Failure, Pressure Ulcer, Falls & Fractures, DVT/PE, Pneumothorax and Medication Error
- The expected value of complications is the number of complications a hospital would have experienced had its rate been identical to that experienced by a reference or normative set of hospitals. Expected complications are calculated by multiplying the sum of Vermont eligible admissions and the Peer Group Medicare FFS average complication rate. Similar computations were made using Maryland All Payer data. Maryland has focused on complications and POA over the last several years under Maryland quality payment programs. Expected complications are the denominator in the O/E ratio
- Eligible Criteria:
  - All Admissions were eligible for this measure
- Data Source: Vermont Health Care Uniform Reporting and Evaluation System (VHCURES)

Medicare Peer Group Selection for University of Vermont Medical Center

– US News and World Report Honor Roll 2020-2021 Hospitals were selected in addition to Dartmouth Hitchcock and Albany Medical Center



REGION		STATES
1	New England	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
2	Middle Atlantic	New Jersey, New York, Pennsylvania
3	South Atlantic	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia
4	East North Central	Illinois, Indiana, Michigan, Ohio, Wisconsin
5	East South Central	Alabama, Kentucky, Mississippi, Tennessee
6	West North Central	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
7	West South Central	Arkansas, Louisiana, Oklahoma, Texas
8	Mountain	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
9	Pacific	Alaska, California, Hawaii, Oregon, Washington

USNWR Rank	Name	Region	URGEO	BEDS	MC CMI	MC FFS Bills
	University Of Vermont Medical Center	**1**	**ourban**	**410**	**1.95**	**7,255**
1	Mayo Clinic Hospital Rochester	6	ourban	1,092	2.37	18,666
2	Cleveland Clinic	4	lurban	1,268	2.73	13,888
3	Johns Hopkins Hospital, The	3	lurban	997	2.20	10,899
4	New York-Presbyterian Hospital-New York Weill Corn	2	ourban	1,942	2.24	23,926
4	Ronald Reagan UCLA Medical Center	9	ourban	460	2.70	5,285
6	Massachusetts General Hospital	1	ourban	979	2.28	16,795
7	Cedars-Sinai Medical Center	9	ourban	874	2.27	17,775
8	UCSF Medical Center	9	lurban	782	2.59	8,685
9	NYU Langone Hospitals	2	lurban	877	2.14	16,076
10	Northwestern Memorial Hospital	4	ourban	865	2.30	10,663
11	University Of Michigan Health System	4	ourban	924	2.41	10,613
12	Brigham And Women's Hospital	1	ourban	763	2.34	13,332
13	Stanford Health Care	9	lurban	447	2.57	9,188
14	Mount Sinai Hospital	2	lurban	996	2.42	11,887
15	Hospital Of Univ Of Pennsylvania	2	lurban	706	2.73	8,705
16	Mayo Clinic Hospital	8	ourban	261	2.24	7,692
17	Rush University Medical Center	4	ourban	551	2.25	8,305
18	Keck Hospital Of USC	9	lurban	318	3.15	3,660
18	Barnes Jewish Hospital	6	lurban	1,227	2.43	14,915
20	Houston Methodist Hospital	7	lurban	914	2.44	13,401
	Mary Hitchcock Memorial Hospital	1	rural	378	2.43	7,269
	Albany Medical Center Hospital	2	ourban	686	2.04	8,824

Source: https://health.usnews.com/health-care/best-hospitals/articles/best-hospitals-honor-roll-and-overview and Medicare LDS data

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Guiding Questions

Discussion

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- Keeping in mind the objective is Vermont's transition to value-based care/balancing access, affordability, provider sustainability, and driving population health outcomes, what is missing from these measures?
- Are these results what you would expect?
- How and when should we consider variation in hospital type or designation regarding quality measurement?
- How do you (or would you like to) use data (and which data) to guide your quality improvement initiatives?
- How should we think about alignment between measures for hospital accountability on quality and consumer quality measures associated with the hospital price transparency work?

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Health Equity Background and Standardizing Demographic Data Collection

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REaL data

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- REaL data — attributes of race, ethnicity, and language (REaL) tied to individual data records — used to stratify clinical, patient, and public health measures.

Domain	Determinant
Integrated Healthcare	Healthcare Access
	Social Services
	Behavioral Health
Community Resiliency	Civic Engagement
	Social Vulnerability
	Equity in Policy
Physical Environment	Natural Environment
	Transportation
	Environmental Hazards
Socioeconomics	Housing Burden
	Food Insecurity
	Education
Community Trauma	Discrimination
	Incarceration
	Public Safety

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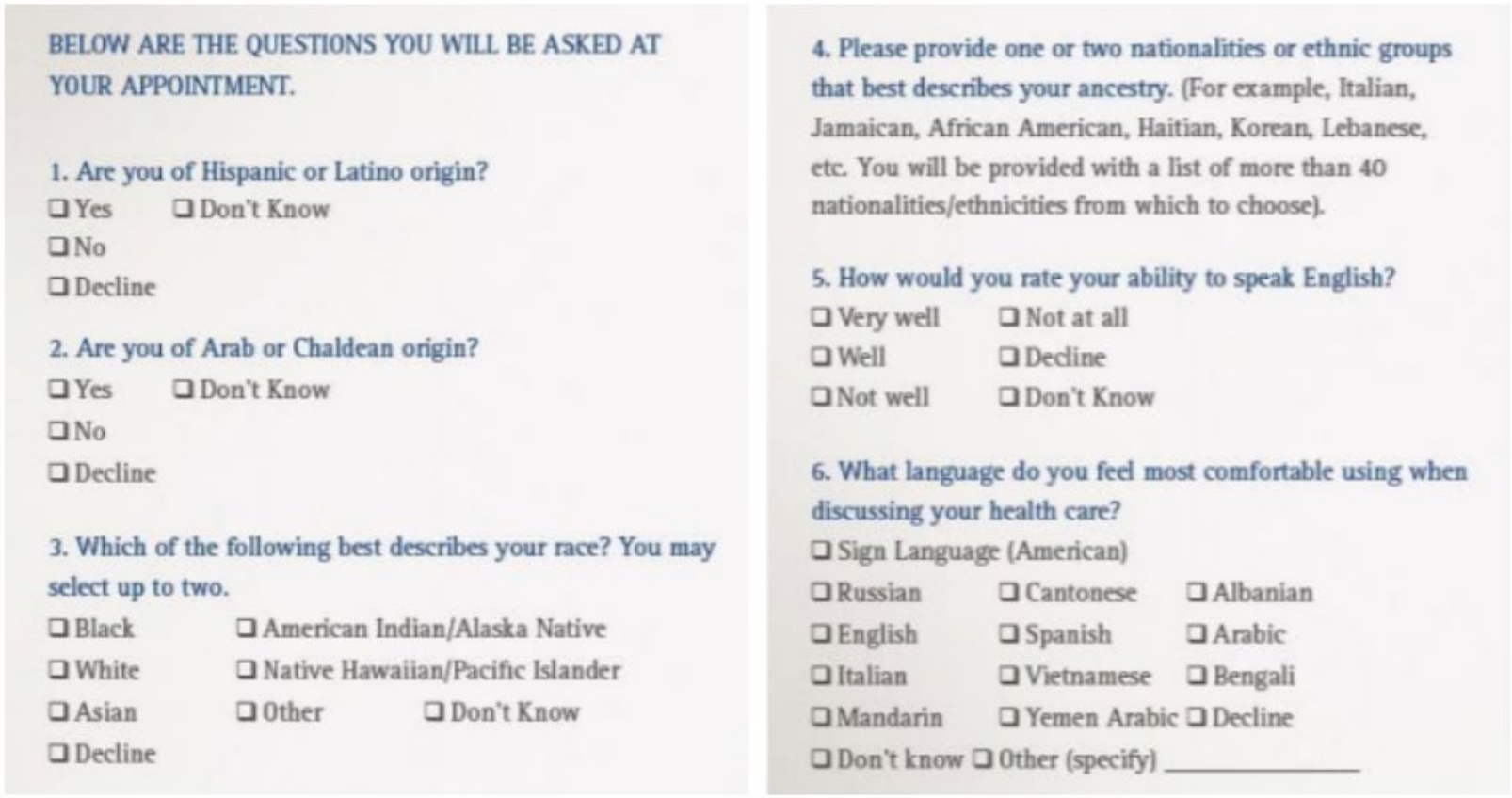
Figure 2. Henry Ford Health System REaL Data Collection Example



BELOW ARE THE QUESTIONS YOU WILL BE ASKED AT YOUR APPOINTMENT.

1. Are you of Hispanic or Latino origin?
❑ Yes ❑ Don't Know
❑ No
❑ Decline

2. Are you of Arab or Chaldean origin?
❑ Yes ❑ Don't Know
❑ No
❑ Decline

3. Which of the following best describes your race? You may select up to two.
❑ Black ❑ American Indian/Alaska Native
❑ White ❑ Native Hawaiian/Pacific Islander
❑ Asian ❑ Other ❑ Don't Know
❑ Decline

4. Please provide one or two nationalities or ethnic groups that best describes your ancestry. (For example, Italian, Jamaican, African American, Haitian, Korean, Lebanese, etc. You will be provided with a list of more than 40 nationalities/ethnicities from which to choose).

5. How would you rate your ability to speak English?
❑ Very well ❑ Not at all
❑ Well ❑ Decline
❑ Not well ❑ Don't Know

6. What language do you feel most comfortable using when discussing your health care?
❑ Sign Language (American)
❑ Russian ❑ Cantonese ❑ Albanian
❑ English ❑ Spanish ❑ Arabic
❑ Italian ❑ Vietnamese ❑ Bengali
❑ Mandarin ❑ Yemen Arabic ❑ Decline
❑ Don't know ❑ Other (specify) _____

Adapted from IHI

REaL Data

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Accuracy

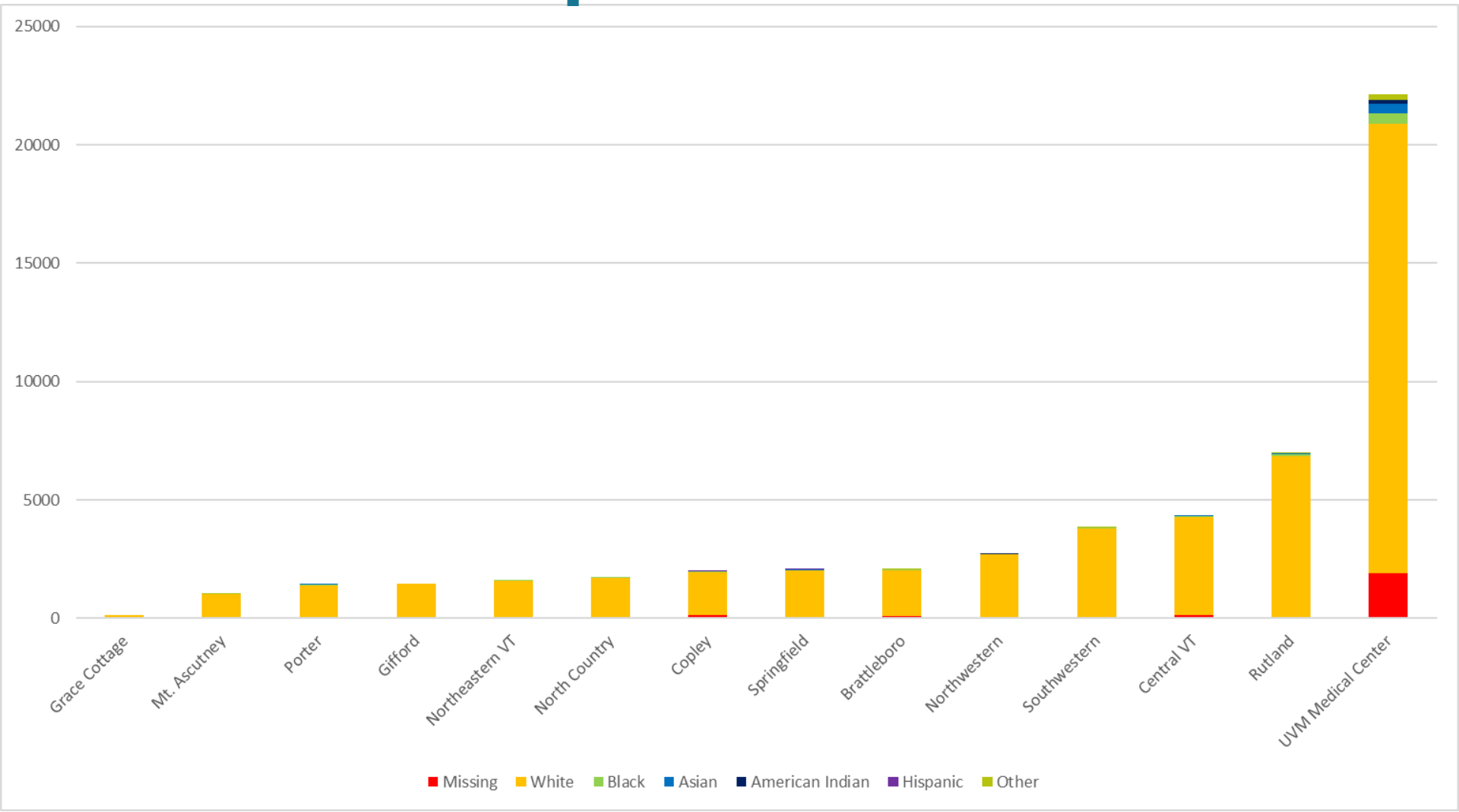
Completeness

Uniqueness

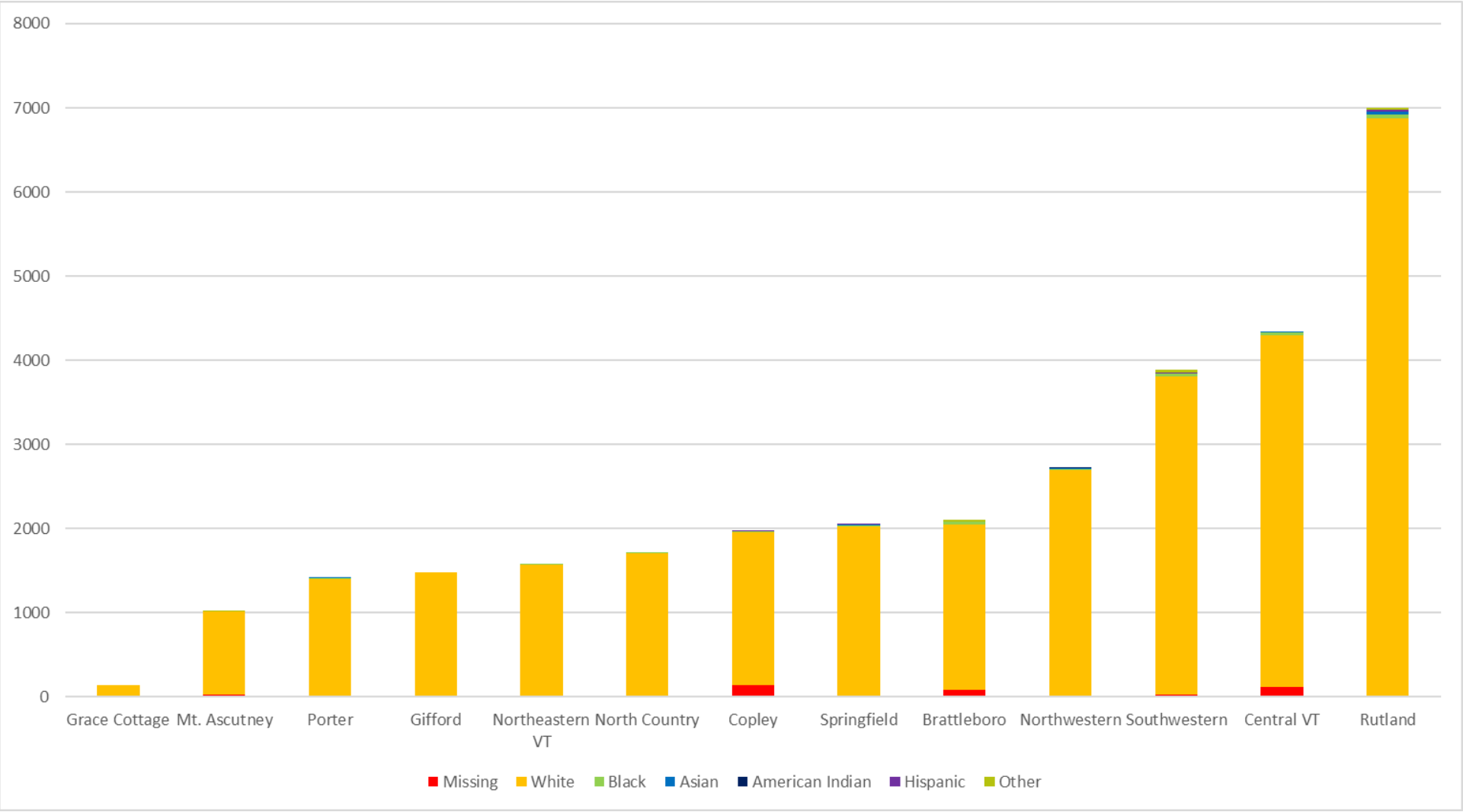
Timeliness

Consistency

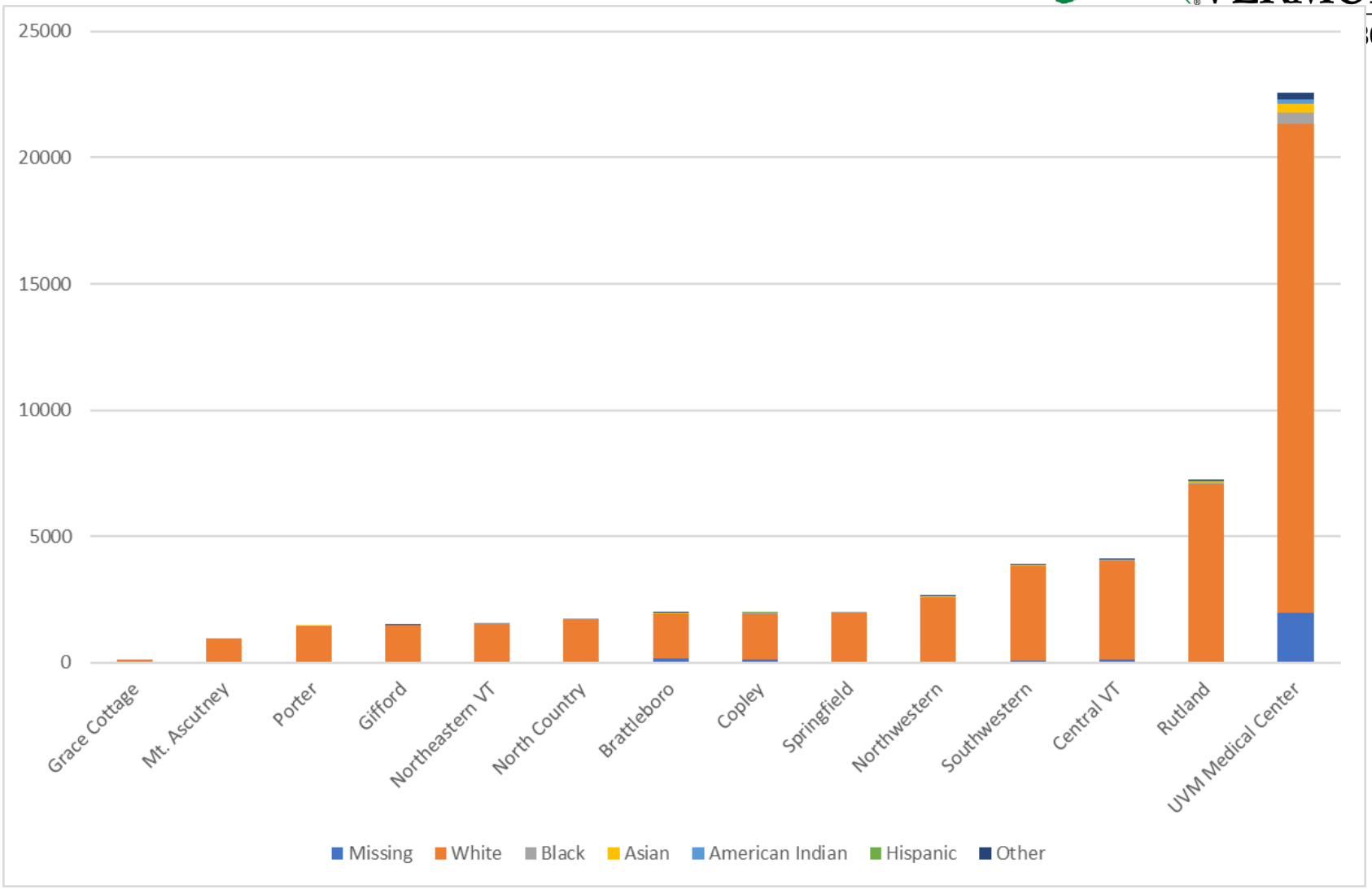
2017 – All Hospitals



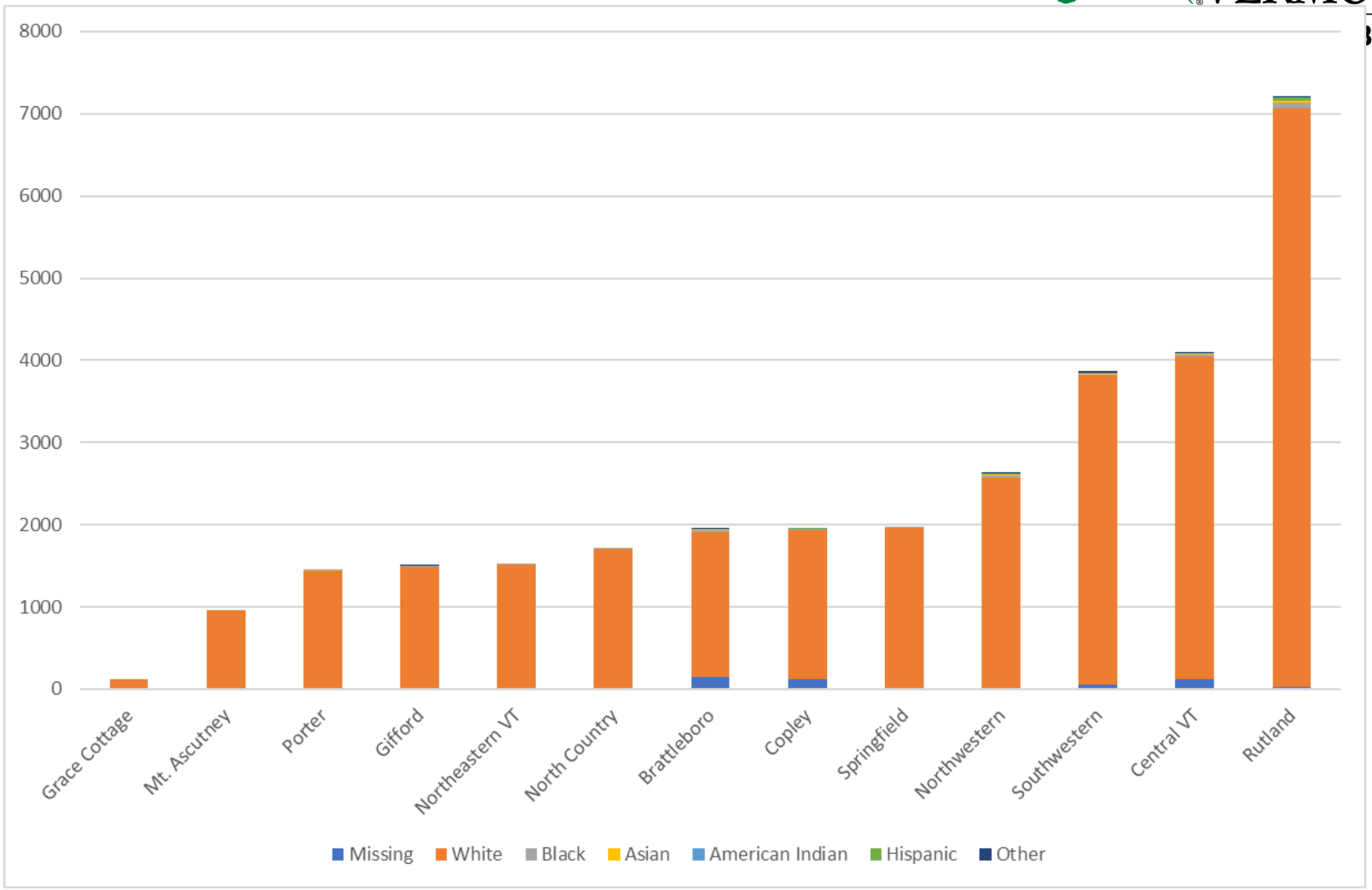
2017 – UVMMC Removed



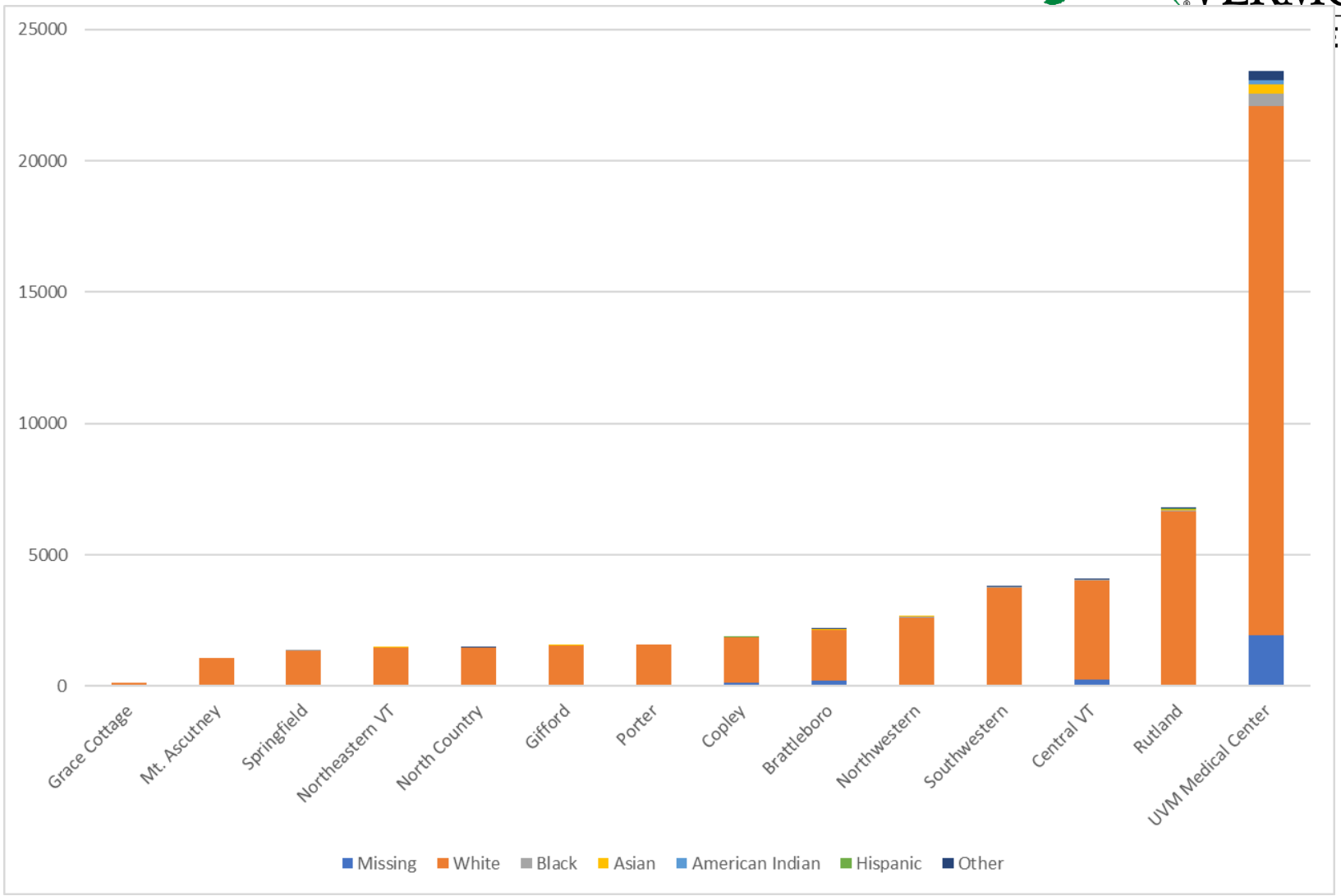
2018 – All Hospitals



2018 – UVMMC Removed



2019 – All Hospitals



2019 – UVMMC Removed

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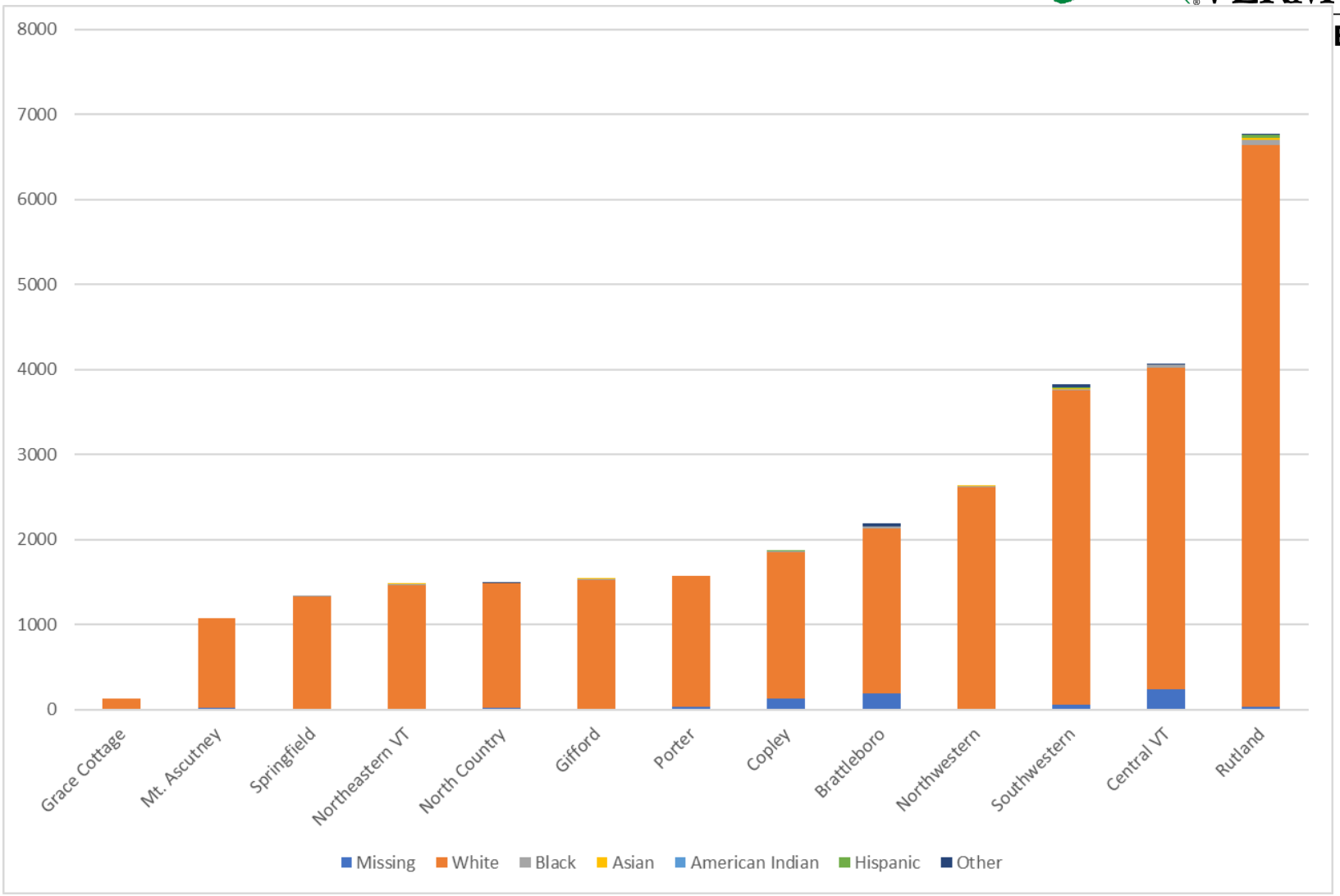

2017 – 2019 Inpatient

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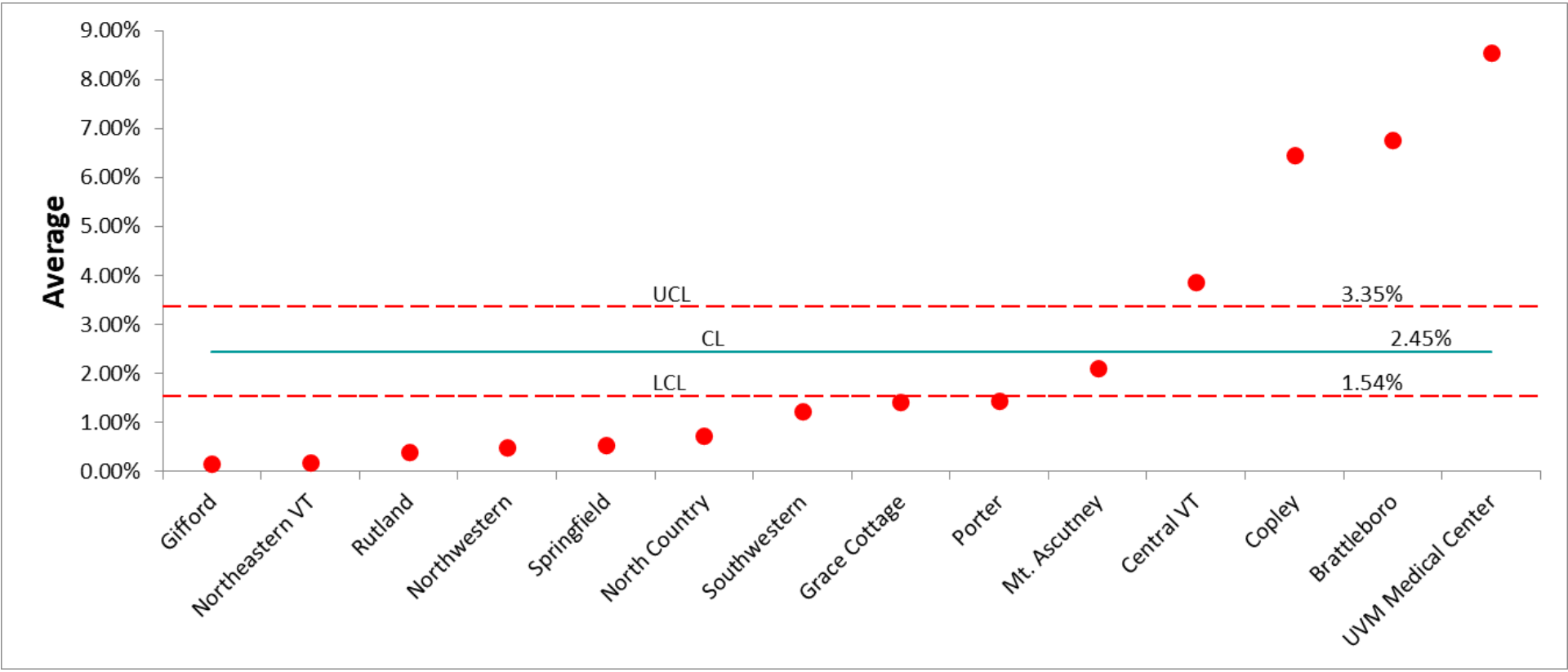

2017 – 2019 Outpatient

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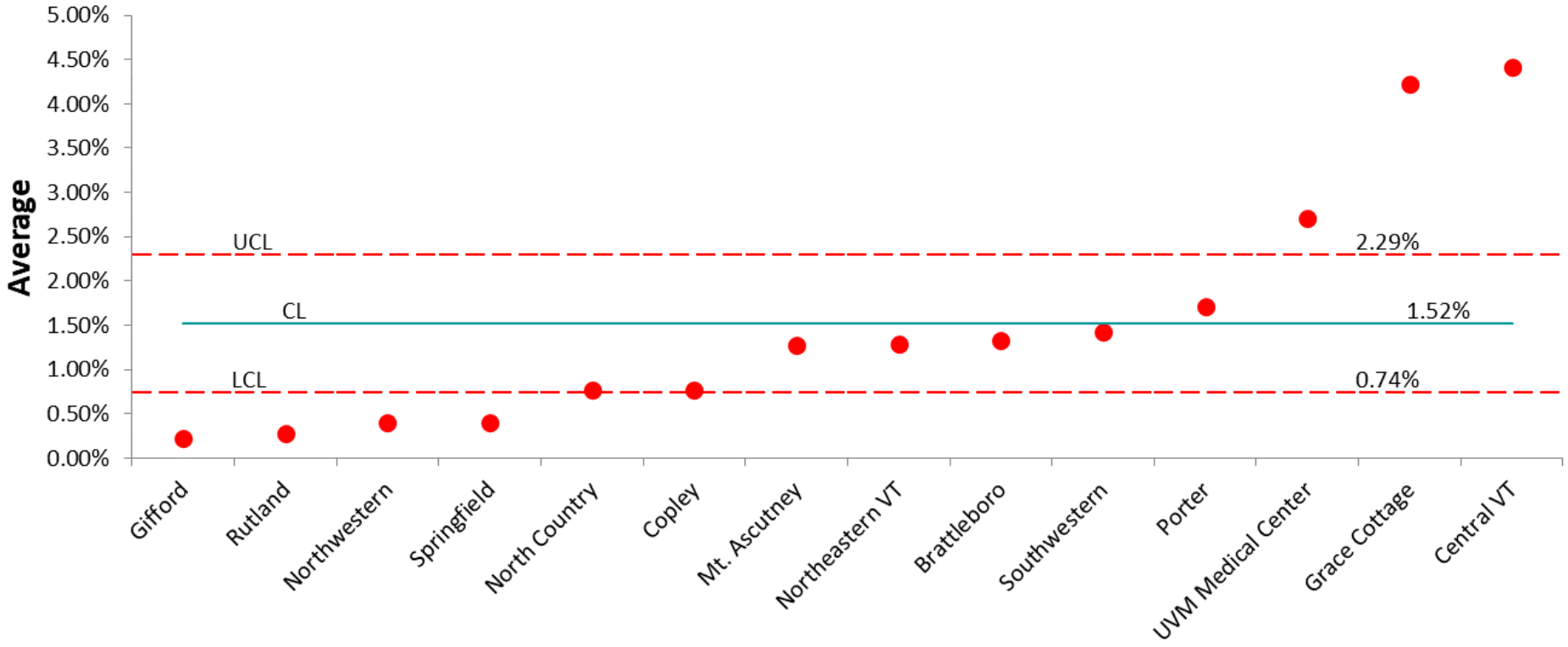

Our Ask:

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- Research the attitudes and practices regarding collection of REaL data at individual institutions
- Make recommendations on how this information can be standardized to better serve Vermont Data

Next Steps & Timeline: Quality/Capacity

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Next Step	Date
GMCB/VPQHC and Quality Directors/Care Managers working meetings	June 10th & June 16th
Any hospital-specific feedback on quality/capacity due to GMCB	July 15th, 2021
VPQHC to share a proposed workplan with Board staff to develop a quality framework to be incorporated into the Board's regulation of hospital budgets	Fall 2021
Questions to be issued to hospitals on sustainability and value-based care preparedness	Fall 2021
Act 153 Section 4 final report due to legislature	September 1st, 2021 no later than November 15th, 2021
Eric Shell: A National Perspective on Rural Hospital Sustainability and the Shift to Value-Based Care	June 23rd, 2021
Standardizing Race/Ethnicity data for health equity per H.210 of 2021	Summer/Fall 2021

Follow up questions?

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Alena.Berube@Vermont.gov

PQIs – Prevention Quality Indicators

- The Prevention Quality Indicators (PQIs) identify issues of access to outpatient care, including appropriate follow-up care after hospital discharge. More specifically, the PQIs use data from hospital discharges to identify admissions that might have been avoided through access to high-quality outpatient care. The PQIs are population-based indicators that capture all cases of the potentially preventable complications that occur in a given population (in a community or region) either during a hospitalization or in a subsequent hospitalization. The PQIs are a key tool for community health needs assessments.
- The PQIs provide a good starting point for assessing quality of health Products in the community. The PQIs use administrative data found in a typical hospital discharge abstract to:
  - Flag potential health care quality problem areas that need further investigation;
  - Provide a quick check on primary care access or outpatient Products in a community;
  - Help organizations identify unmet needs in their communities.
- Using VCURES data, PQIs were identified for Vermont residents for and evaluated as PQI admissions / 1,000 population
  - PQIs include non-Vermont hospitals admissions, 705 out of 5,054 total PQIs

https://www.qualityindicators.ahrq.gov/Modules/pqi_resources.aspx#techspecs

Source: Vermont Health Care Uniform Reporting and Evaluation System (VHCURES)

BRG

PQIs – Prevention Quality Indicators

Prevention Quality Indicators Technical Specifications Updates - Version v2020 (ICD 10-CM/PCS), July 2020

PQI 01 Diabetes Short-term Complications Admission Rate	
PQI 03 Diabetes Long-term Complications Admission Rate	
PQI 05 Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate	
PQI 07 Hypertension Admission Rate	
PQI 08 Heart Failure Admission Rate	
PQI 11 Community Acquired Pneumonia Admission Rate	
PQI 12 Urinary Tract Infection Admission Rate	
PQI 14 Uncontrolled Diabetes Admission Rate	
PQI 15 Asthma in Younger Adults Admission Rate	
PQI 16 Lower-Extremity Amputation among Patients with Diabetes Rate	
PQI 90 Prevention Quality Overall Composite	(Includes all PQIs)
PQI 91 Prevention Quality Acute Composite	(Includes PQI 11 and 12)
PQI 92 Prevention Quality Chronic Composite	(Includes PQI 1,3,5,7,8,14,15 and 16)
PQI 93 Prevention Quality Diabetes Composite	(Includes PQI 1,3,14 and 16)

https://www.qualityindicators.ahrq.gov/Modules/pqi_resources.aspx#techspecs

Source: Vermont Health Care Uniform Reporting and Evaluation System (VHCURES)