Working with VISION Data

Kayla Moore and Jialin Mao
Accessing VISION Data: How to get your project on “The List”

Kayla Moore, MPH
Overview: Understanding how to work with VISION Data

• What makes VISION special?
• What are the Medicare-derived late outcomes?
• What are the rules governing use of VISION data? (scope, access, data transfers)
• How do I get my project on the “on-deck list”?
• How to avoid common pitfalls
• Where do I find more information?
• VQI + Medicare Claims = VISION
  • 140+ clinical covariates in VQI
  • Longitudinal follow-up in Medicare (can follow individuals if they move to different centers)
  • Cost data
• Existing CMS Data Use Agreement
  • Bypasses need to obtain a new DUA for every research question (*restrictions apply*)
  • Significant savings in cost and time – a new CMS DUA takes a minimum of 3-5 months. Data is costly and requires additional resources for security, cleaning, linking, and developing analytic datasets
• Analytic team with specialized knowledge
Restrictions Apply:

Rules governing use of CMS Data

- Data must remain on secure HIPAA/FISMA compliant server
- Access is restricted to individuals named on the DUA
- No individual level data can be removed from the server
- Only aggregate/de-identified data (tables, figures) be removed from the server.
- Output is reviewed by IT security team prior to transfer to ensure suppression requirements are applied (no cell sizes less than 10)
- In addition, CMS requires that each DUA be project-specific and tied to a single funding source
Scope of research allowed under WCM’s existing DUA

Research must focus on evaluation of device outcomes, including the following:

- safety and efficacy of devices
- the impact of provider characteristics on device outcomes
- health disparity related to device use and outcomes
- the impact of medical practice guidelines and healthcare policies

What if I want to use VISION data for a project that is not within the scope of the existing DUA?

- Obtain separate funding and apply for a “re-use” of the VISION DUA
What are the Medicare-derived variables in VISION?

- Death
- Procedure-specific adverse outcome (stroke, aortic rupture, amputation)
- Reintervention (repeated vascular procedures)
- Readmission
- Post-procedure imaging (CT, MRI)
- Cost

Contact us to request a copy of the late outcomes variable dictionary.
How do I get access to VISION data?

VQI/VISION-funded projects – How do I get on the “on-deck list”?  

How do I get access to VISION data?

VQI/VISION-funded projects – How do I get on the “on-deck list”? 
How do I get access to VISION data?

VQI/VISION-funded projects – How do I get on the “on-deck list”?
How do I get access to VISION data?

VQI/VISION-funded projects – How do I get on the “on-deck list”? 
How do I get access to VISION data?

VQI/VISION-funded projects – How do I get on the “on-deck list”?  
1. Obtain VQI/RAC approval
How do I get access to VISION data?

VQI/VISION-funded projects – How do I get on the “on-deck list”?  
1. Obtain VQI/RAC approval  
2. VISION Priorities Committee conducts secondary screening to ensure:  
   ☐ Clarity/feasibility of research question
How do I get access to VISION data?

VQI/VISION-funded projects – How do I get on the “on-deck list”?

1. Obtain VQI/RAC approval

2. VISION Priorities Committee conducts secondary screening to ensure:
   - Clarity/feasibility of research question
   - Clear need for Medicare data
How do I get access to VISION data?

VQI/VISION-funded projects – How do I get on the “on-deck list”?  
1. Obtain VQI/RAC approval  
2. VISION Priorities Committee conducts secondary screening  
   to ensure:  
   - Clarity/feasibility of research question  
   - Clear need for Medicare data  
   - Falls within scope of DUA
How do I get access to VISION data?

VQI/VISION-funded projects – How do I get on the “on-deck list”?

1. Obtain VQI/RAC approval

2. VISION Priorities Committee conducts secondary screening to ensure:
   - Clarity/feasibility of research question
   - Clear need for Medicare data
   - Falls within scope of DUA
   - Addresses a gap in knowledge
How do I get access to VISION data?

VQI/VISION-funded projects – How do I get on the “on-deck list”?  
1. Obtain VQI/RAC approval 
2. VISION Priorities Committee conducts secondary screening to ensure:  
   - Clarity/feasibility of research question 
   - Clear need for Medicare data 
   - Falls within scope of DUA 
   - Addresses a gap in knowledge 
3. VISION Analytic Team requests research memorandum
How do I get access to VISION data?

VQI/VISION-funded projects – How do I get on the “on-deck list”?  
1. Obtain VQI/RAC approval  
2. VISION Priorities Committee conducts secondary screening to ensure:  
   - Clarity/feasibility of research question  
   - Clear need for Medicare data  
   - Falls within scope of DUA  
   - Addresses a gap in knowledge  
3. VISION Analytic Team requests research memorandum  
4. VISION Analytic Team works with you to refine analytic plan and conduct analyses
How do I get access to VISION data?

Externally funded projects

*Example:* NIH, AHA, PCORI, FDA

1. Engage VISION team during proposal development to:
   - Ensure feasibility
   - Obtain preliminary data for use in proposal
   - Define scope and budget for VISION Team (can vary from basic DUA support to in-depth analytic support)

2. Obtain VQI/RAC Approval

3. Apply for a “re-use” DUA to use VISION data at WCM (CMS requires a separate DUA for each funding source)
Recap: Steps for success & How to avoid Common Pitfalls

• Before RAC proposal
  ✓ Become familiar with rules governing use of VISION Data
  ✓ Identify which late-outcomes variables you wish to use
  ✓ Ensure project is feasible (aligns with available data years, not overly complex)
  ✓ Ensure projects includes a device-specific component
  ✓ Contact VISION Team with any questions

• After RAC Approval
  ✓ Follow-up with VISION Team to discuss timeline/priority
  ✓ Be open to potential collaboration with other investigators with overlapping projects
Additional Information

https://www.vqi.org/data-analysis/blinded-datasets/

Kayla.O.Moore@Dartmouth.edu
Now that you are on "the list"
Working with the VISION analytical team

Jialin Mao, MD, MS
A full research protocol

Research Memorandum

I. Brief background and research question

a. Brief background
(Provide specific goals and objectives of research, and hypothesis if any)

b. Device being studied
(The ICA, with CME as device brand. Examples: stents, carotid patches, angioplasty balloons)

c. Prior research related to the topic that you think would be helpful to refer to, if any

II. Methods

a. Datasets and population

Please specify the VQI-Medicare linked dataset you intend to use:

- EVAR
- Opara AAA
- CEA
- CAS
- PTI
- India
- Supra
- TEVAR

Years of inclusion:
(currently there are linked data up to 2018 available)

b. Study population

b1. Inclusion criteria (i.e., age group, sex, indication or diagnosis, specific procedures)

(If you know the exact variable for procedures indications in VQI that will be used here, specify one here would be helpful.)

Example:
- Medicare beneficiaries above age 65 linked to VQI
- Underlying balloon angioplasty, or stent placement
- Femoral popliteal disease

b2. Exclusion criteria, if any (i.e., certain patient characteristics, previous or concurrent procedures)

c. Key variables:

c1. Exposures (i.e., time trend, comparison groups):

c2. Outcomes:

c3. Covariates:

If not otherwise specified, we will include age, sex, race, ethnicity, and procedure year by default. Please specify other important covariates you'd like to include:
(i.e., comorbidities, procedure characteristics, center/setting)

d. Statistical methods

Please include any preliminary thoughts you have. This can be further refined later.

III. Additional information

Include any additional information you'd like to provide.
Dataset and years

- Dataset
  - AAA, Carotid, PAD
  - Vein will be added this year

- Data years: currently up to 2016, expecting update to 2018
  - Are there restrictions to the years of data due to procedures or the availability of variables?
  - Is the current sample size going to be big enough?

Wait or change some criteria?

Note: CMS data release + DUA amendment -> 2 year data lag
Study design

• Inclusion/exclusion criteria
• Exposure and outcome
• Important covariates
• Statistical methods: preliminary thoughts are ok!

*Have questions? Contact us!*
What's helpful for the analytical team to know?

• A little bit background would be helpful
• Former studies with similar topics or designs
• Definition of variables based on VQI data
• Things that you are looking for from claims data
What's helpful for the analytical team to know?

- A little bit background would be helpful
- Former studies with similar topics or designs
- Definition of variables based on VQI data
- Things that you are looking for from claims data

What if the variables are not in the current dataset?
What happens next

✓ On deck
✓ Full protocol
✓ Your turn
  • We will review your protocol and mark our questions and thoughts
  • We will reach out to you to kick start:
    • We are all very good at using Zoom now
    • We bring our questions, you bring yours
  • Likely staged process
    • Clarify questions
    • Query rough numbers
    • Analysis <-> Changes
Questions?

Thank you