

## Virginia Heart Attack Coalition Northern Region

Spring 2023  
Thursday, May 25, 2023  
10:00 am



VIA ZOOM

**Type of Meeting:** Collaborative exchange of information to improve the STEMI system of care in the Northern Virginia region

**Chair Persons:** EMS Battalion Chief Brian Orndoff, City of Fairfax Fire Department  
Dr. Behnam Tehrani, Co-Director of Cardiac Catheterization Laboratories for Inova Fairfax Medical Campus

### AGENDA

- Call to order
- Approval of minutes of the February 23, 2023 meeting
- AHA Update – Amber Brown
- VCSQI Data Review – Eddie Fonner
- Regional EMS Data Update – Michelle Ludeman
- Hospital and EMS Agency Roundtable
- Northern Virginia Regional STEMI Plan
- Next Meeting Topic Discussion
- Adjournment

**Virginia Heart Attack Coalition  
Northern Region  
Regional Cardio Workgroup**

**Summer 2023  
Thursday, May 25, 2023  
10:00 am**



Those present were: (All present via Zoom)

Amber Brown	amber.brown@heart.org
Andrew Sanders	asanders@pwcgov.org
Beth Adams	beth.adams@fairfaxcounty.gov
Brian Orndoff	brian.orndoff@fairfaxva.gov
Courtney Deihl	courtney.deihl@mwhc.com
David Wielgosz	david.wielgosz@mwa.com
Dennis Bernier	dennis.bernier@inova.org
Eddie Fonner	cefonner@gmail.com
Harmony Vazquez	harmony.vazquez@hcahelathcare.com
James Cooper	jamie.cooper@loudoun.gov
Jessica Mountjoy	jessica.mountjoy@mwhc.com
John Morgan	john.morgan@loudoun.gov
Kate Kramer	kkramer@arlingtonva.us
Kate Passow	kate.passow@gmr.net
Laura Vandegrift	laura@vaems.org
Marissa Snellinger	marissa.snellinger@heart.org
Michelle Ludeman	<a href="mailto:michelle@vaems.org">michelle@vaems.org</a>
Peter O'Brien	peter.obrien@centrahealth.com
Shelbie Kidd	shelbie.kidd@hcahealthcare.com
Stephen Day	sday@tcg.md

The quarterly Virginia Heart Attack Coalition (VHAC) meeting was started at 10:02 am by Brian Orndoff.

## Virginia Heart Attack Coalition

Meeting Minutes

May 25, 2023

### APPROVAL OF MINUTES

- February 23, 2023, meeting minutes were sent for review
  - Motion to approve by Beth Adams, seconded by Kate Kramer
    - ***Minutes unanimously approved***

### AHA UPDATE

Amber Brown provided the following AHA update:

- GWTG CAD Registry updates were done in April, and another update is expected in June
- If any hospitals submitted data for award processing, she should get notifications soon and be able to send out those award notices
- There are updated resources in their IRP library for webinars and data abstraction training

### VCSQI DATA REVIEW

Eddie Fonner's data review presentation is found at the end of these minutes.

- Dr. Pete O'Brien added that September 14<sup>th</sup> will be the State VHAC meeting which will be hybrid. It should be from about 12:30 pm afternoon. You can choose to stay afterward for the VCSQI presentations after that.
  - There is a great slate of speakers scheduled to speak on various topics. They will have Dr. Tehrani, Dr. Contos, and even Bob Page from OEMS to discuss EMS provider burnout and recruitment & retention efforts by OEMS.
  - They are finalizing the venue now, and it will likely be in Richmond, but could be Charlottesville.
    - They will notify everyone of the venue once secured

### REGIONAL EMS DATA UPDATE

Michelle Ludeman provided the following update:

- Michelle shared STEMI transports for the region for the first quarter of 2023
  - Compared to the last quarter, they are roughly the same.
  - A copy of that data can be found at the end of these minutes.
- The state is working with ESO to get more in-depth information for reporting because many agencies use different software, so there isn't a smooth transfer of data into ESO
  - Unfortunately, everyone uses different platforms, so it will never be consistent until everyone is on the same thing, which isn't likely to happen

### HOSPITAL AND EMS AGENCY ROUNDTABLE DISCUSSION

- Hospitals
  - Dr. Day – Inova
    - There are no significant changes to note
  - They are looking at cases where a patient presents to an Inova freestanding ED and whether the patient is taken to a PCI-capable are they going to the closest mechanical support-capable hospital, such as Fairfax. Right now, they are looking at this on a case-by-case basis for Alexandria Hospital now; Loudoun Hospital

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would be longer transport times. Loudoun would likely do a balloon pump and then transfer to PCI for now. While there isn't much data to support doing this across the board, they are looking at it within the Inova system

- Reston Hospital – no updates
- Mary Washington Hospital – no updates
- Spotsylvania Regional Medical Center – no updates
- EMS Agencies
  - Kate Kramer from Arlington Co FD had two questions
    - How are EMS agencies transmitting EKGs to receiving hospitals? Is this a problem that ESO will solve?
      - CFFD was transmitting through Tiger Text previously, now they use Epic, and the software is called Canto. Fairfax can't receive LifeNet transmissions, so this is something they will consider when looking at new cardiac monitors
      - Andrew Sanders from Prince William Fire & Rescue stated they recently had a patient that was diverted from Sentara to Fairfax, and they found out then that they were unable to transmit via LifeNet. They are now trying to determine how to send EKGs to them as it led to a delay in care and delay in moving this patient quickly through the ED upon their arrival. They also use LifePak 15s across the board and can transmit to everyone but Fairfax Hospital. They transmit through LifeNet.
      - Beth Adams stated Fairfax County Fire transmits via Zoll monitor, through the Zoll cloud mechanism.
      - Per Jamie Cooper, Loudoun transmits over LifeNet with Stryker LifePak.
    - There was a discussion recently at the OMD meeting about a patient who EMS brought into an ED successfully paced, and EMS cardiac monitor was removed by the ED before they had put the patient on a pacemaker of their own, essentially losing the previous successful capture. Are the Eds aware that they should not remove pads before they are ready and have the patient being paced on their equipment?
      - Andrew from PWCDFR stated that for pacing, they just leave the LifePak with the patient at the hospital and leave extra batteries. It stays with the patient until their intervention is complete because they had similar issues in the past with pads being taken off a patient with successful transcutaneous pacing capture, and this was the best workaround instead of losing capture and the patient potentially dying.
      - Jamie Cooper from LCFRD stated that for pacing, they won't leave a LifePak. Their local hospitals have moved to Zoll monitors, so they won't be compatible any time soon. They don't have a great solution, which has happened to them recently.
      - Kate stated she thinks there needs to be a synchronized pacing

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effort, as taking pads off from one monitor and attempting to move to another doesn't work. If they can synchronize between the two monitors and then remove EMSs monitor, that would be best

- City of Fairfax FD – no updates
- Fairfax County FD – no updates
- Loudoun County FD – Dr. Morgan expanded on the discussion regarding pacemakers
  - Recently, they had pushback on bringing an actively paced patient to a non-STEMI receiving facility, but it was a hospital, not a free-standing ED. The patient had severe bradycardia and mental status changes but not a STEMI.
    - Do others feel it's more appropriate to bypass a non-STEMI receiving hospital and take the extra time to continue to a PCI center? Obviously, they would bypass a freestanding ED.
      - Is there a benefit to bypassing a hospital without an interventional cath lab?
      - Dr. Day stated that all Inova facilities have STEMI capabilities. But there are two issues here:
        - One – the possible cause for this could be an acute ischemic event, so who do they call, electrophysiology on call or interventional cardiology? They should go to an interventional capable facility
        - Second issue – if it's another cause, they would be able to 24/7 to do temporary pacing wire or do it in ER; most are done in the cath lab, but it would depend on the facility. If they can call them in, he is not sure why they had pushback.
      - Dr. Morgan stated, for example, Mt Vernon Hospital doesn't have an interventional cath lab – would it make sense to go there or to Alexandria Hospital or somewhere else if this same scenario happened across the street?
        - Dr. Day stated it would make sense to go to Alexandria or another appropriate facility that can be called in 24/7 to treat.
        - If you're getting captured, it isn't a bad idea to bypass and go to the most appropriate facility
    - Dr. Morgan also informed the group that they recently had a call for chest pain in Prince William County. Providers identified it as a STEMI, which turned out to be a left BBB. Upon arrival at Prince William Hospital, they were told they had to wait outside the ED and remained outside for 8 minutes. The patient had an active STEMI in the end and was ultimately

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transported to Fairfax. This is just so everyone else is aware – they have not normally had issues with active cardiac cases and not being allowed into the ED in any hospital

- Dr. Day shared a story regarding the last STEMI seen at Loudoun that was brought in by Loudoun EMS. The run sheets show up in the hospital charts, and he often reviews it to see how the patient presented upon EMS's arrival. It stated that the patient was 57 years old, started having chest pain, and was concerned it could be something bad. Called 911, and upon EMSs arrival, he was sitting on the curb, pale and diaphoretic, smoking a cigarette. He said that while the patient did the right thing by recognizing his signs and calling 911, they discussed his smoking after his intervention, and hopefully, that was his last cigarette. He got a laugh out of the picture painted by the EMS provider of the man sitting on the curb smoking, having a STEMI.
- Andrew Sanders from PWC appreciated Dr. Morgan bringing up the case at PW Hospital. They are having issues with pushback on allowing EMS in, and while they are glad to see it's not just PW DFR, it's unfortunate that it's happening at all. Now they call with an ETA and go directly inside, they don't send a driver in to check in on bed availability anymore. They are all on the same page within the agency on what the OMD will and will not allow as far as delayed offload times of patients.
  - New fire chief – excited to get him on board and his vision for EMS
- David Wielgosz from MWAA stated that their only news is that Rick Bonnett is officially their new fire chief.
- Dr. Day asked a question
  - If they have a patient at Springfield Healthplex, for example, and they communicate CP, AMI, low BP, and the interventional cardiologist wants the patient to be taken to Fairfax vs. another PCI-capable hospital, does that create an issue breaking protocol?
    - Beth Adams from Fairfax County Fire stated that for transfers from a Healthplex to another facility, the first transport will go by MMT for Inova interfacility. If they cannot meet the time target, the hospital will call Fairfax County 911 and they go to wherever they are told.
    - Dr. Day asked if the patient is coming from the field with the same circumstances/type of case, can they do the same if the cardiologist specifies a hospital for transport?
      - Beth Adams stated that should be ok
      - Dr. Morgan stated there is reluctance within the field providers to go further with an “unstable” patient. Due to some outlier areas in PWC or Loudoun, they can consider Medevac due to distance if they go to Alexandria or Fairfax. They teach “reduce scene time, reduce time on the road” with these patients, so this requires some time and consultation, possibly with the ED doctor and cardiologist to

make that determination and whether that extra transport time makes sense.

- Dr. Day then asked, if the unstable and patient codes, what do they do? Pull over and work the patient? If there is a change in status, do they notify the ER and possibly change the location of the transport?
  - Dr. Morgan stated that many agencies have a device like LUCAS in place, so with someone who is a STEMI and goes into arrest, it depends on how many people are in the back to do CPR and get the help of the driver; they may pull over and request help from other personnel. If they are close to the ED, they'd probably just go there and notify them of the change.
  - Dr. Day stated that this is helpful information. For most of these shock patients, it's case by case basis and easier than coming up with an overall procedure.
  - Jamie Cooper from Loudoun County also added that when talking about destination determination with STEMI cases in the field, the general thought process is to get patients to the right facility. Clearly, with any critical and unstable patient, even a freestanding ED could get additional resources, although it's not the best option. There is a risk with field personnel in consultation with medical control; ultimately, where do you feel comfortable taking that risk? On the road getting the patient further than the closest or at the freestanding that can't handle this but can get additional resources to stabilize the patient.
  - Dr. Day stated its case by case with much consultation for door-to-balloon or door-to-mechanical support. The latter produces better results, but case by case overall. He thinks it's best to leave it as it is with some case-by-case consultation as they present
  - In Inova Alexandria, they are switching to using PHI more and more. They are sending them to Fairfax for potential surgery or mechanical support, and they are great at

being there quickly and have lots of capability

### NORTHERN VIRGINIA REGIONAL STEMI PLAN DISCUSSION

The Regional STEMI Plan was last updated in 2016. Supposed to be reviewed and revised each year. Any comments?

- Dr. Morgan from Loudoun County stated that the only thing he had concern about are the references to thrombolytic checklists in several places. That was a big push many years ago, but rare these days to get thrombolytics vs. going to a PCI center. Loudoun doesn't do a checklist because it adds distraction in the case. Should we reconsider its emphasis in this document?
  - Beth Adams said she had the same thoughts about the thrombolytic checklist. Other than that, she only saw some typos and grammar issues
  - The City of Fairfax FD also doesn't do a thrombolytic checklist
  - Dr. Day stated that these days, it's as rare as hens teeth, and it would be done in a rare situation like a snowstorm where someone can't get in, or every lab is full and can't take another. Maybe leave it as a resource for that one-off case, but reduce the references in the document.
  - Brian Orndoff suggested that we show it as a reference document in the event it's needed but shouldn't be standardized in the document
  - **Beth Adams made a motion to make the above-recommended changes (i.e. Remove thrombolytic checklist references throughout the document, edit typos, grammar, etc.) and then submit this plan to the NVEMSC Board of Directors for approval.**
    - Brian Orndoff asked if anyone has reviewed the document to be sure it matches AHA GWTG since it hasn't been updated since 2016.
      - Michelle Ludeman advised that the state doesn't have any recommendations at this time on their website.
    - **The motion was seconded by Kate Passow, PTS**
    - Dr. Day stated he was noticing as he scrolled through the document that it states the use of prehospital medications such as aspirin and heparin.
      - Dr. Morgan also advised it says the use of brilinta, so this should be updated as well, and suggested changing it to "as in consultation with the ED."
  - Kate Kramer asked if we are including PSAP in this meeting for the updated guidelines.
    - Beth Adams advised that they are given instructions by PASP
  - **Beth Adams AMENDED her motion to include rewording the portion on the use of brilinta to state "in consultation with receiving facility/cardiologist. "**
    - ***The motion was unanimously approved***
- Dr. Day discussed how patients who arrest and are resuscitated in the field and taken to a hospital with a cath lab. They don't always go to the cath lab due to new data. If there was a short downtime and an obvious STEMI, then they should; if it was a long downtime and no STEMI, they shouldn't. If they go to the cath lab and they stent, those who didn't

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have aspirin have had acute thromboses.

- Are crews always giving aspirin? With a resuscitated arrest, how do they give it?  
Need to be sure to communicate how it was given?
  - Beth Adams from Fairfax County stated ROSC patients go to a PCI center and they don't do aspirin post-resuscitation; they keep them NPO
  - Andrew Sanders from Prince William County stated they do the same
  - Dr. Morgan advised that Loudoun is the same
  - Dr. Day advised that he will let his colleagues know that they are not likely to be given aspirin in the field, so it's good for them to give it when they arrive and decide how to get it effectively in the bloodstream vs.
    - Beth Adams also advised it depends on where it started. If the patient was found in arrest, they are given no aspirin. If started as a chest pain call, they likely got aspirin before they arrested and were resuscitated.

### NEXT MEETING TOPIC

Suggestions for upcoming meeting topics

- There were no suggestions at this time

### 2023 UPCOMING MEETINGS

August 24, 2023

November 30, 2023

### ADJOURNMENT

The meeting was adjourned at 11:19 am.

### CERTIFICATION OF NORTHERN REGION QUARTERLY MEETING OF THE VIRGINIA HEART ATTACK COALITION

Northern Virginia EMS Council  
7250 Heritage Village Plaza, Suite 102  
Gainesville, Virginia 20155

I, Laura Vandegrift, Administrative Coordinator of the Northern Virginia EMS Council certify that the above minutes are a true and correct transcript of the meeting minutes of the Northern Region Quarterly Meeting of the Virginia Heart Attack Coalition held on May 25, 2023. The minutes were officially approved on August 24, 2023, at the meeting of the Committee.

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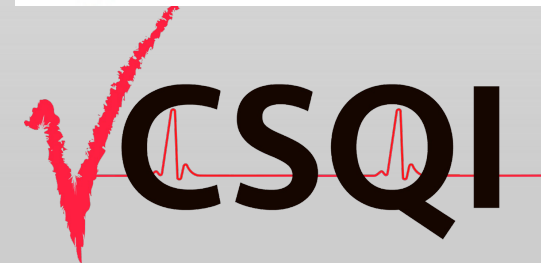
Laura Vandegrift  
Administrative Coordinator

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Date

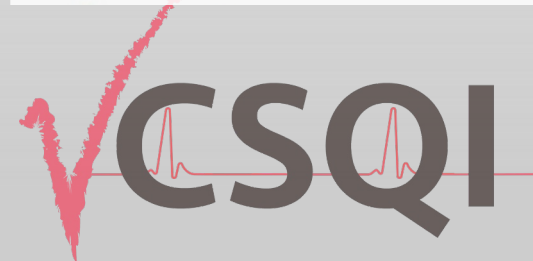
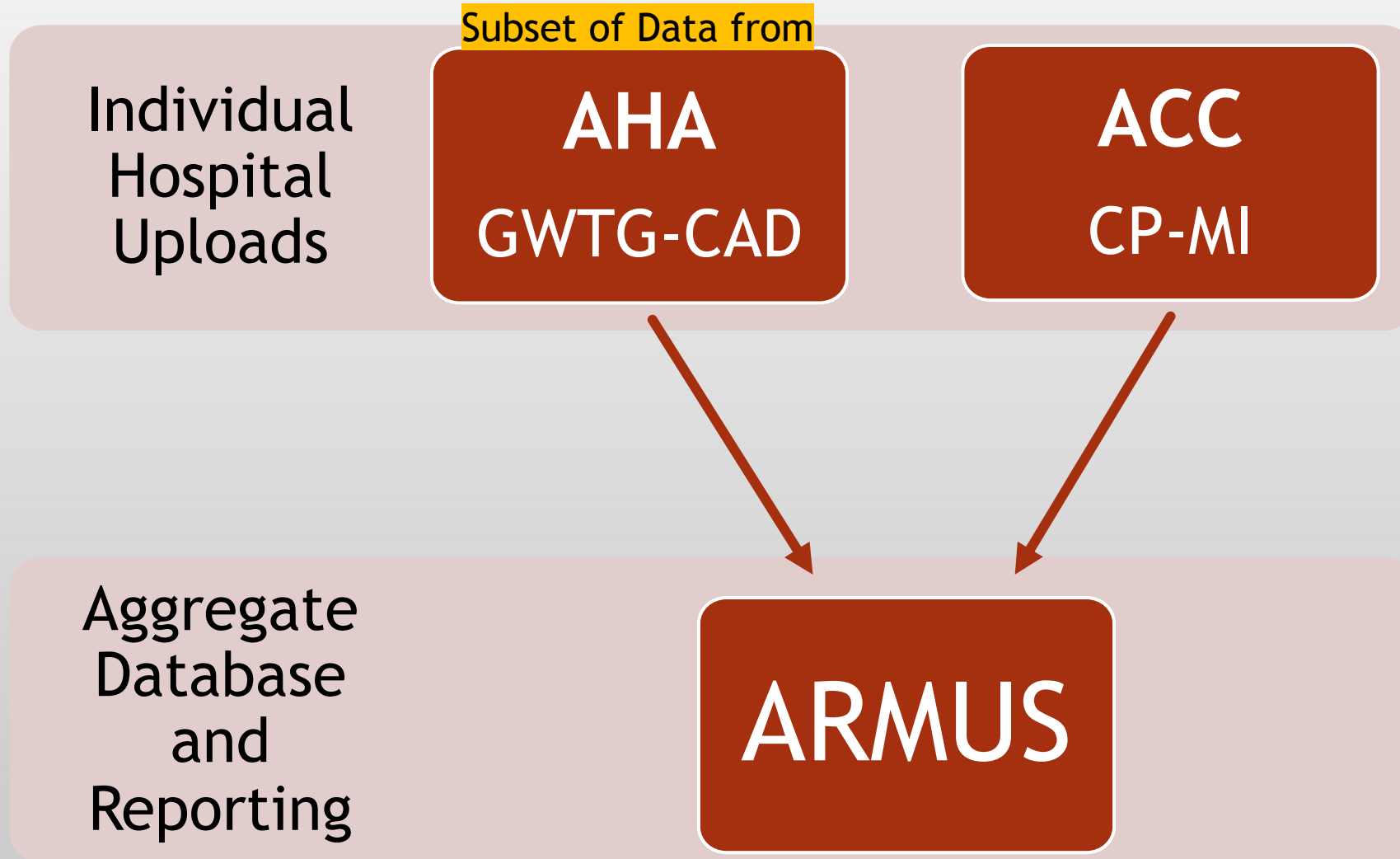
# VHAC-VCSQI Statewide STEMI Database

Q4 2022 Summary Reports: Northern Region



Transforming Cardiovascular Care to Improve Patient Experience and Value

# Data Aggregation Model



# STEMI Database Participation




- 19 Members currently sharing CP-MI data quarterly
  - 5 New members pending uploads
- 4 Centers from VHAC Northern Region submitting data
- GWTG-Only Centers:
  - Sharing a subset / data export from GWTG-CAD





# STEMI Reports by Region: Q1 - Q4 2022

Population: All STEMI Patients, Q1 – Q4 2022 (N=1,459)	VCSQI	East	North	Northwest	South	West
Median Door In - Door Out (Minutes): Transfer Patients	59.0	63.0	50.0	59.0	62.5	79.0
Median Transfer Time between Hospitals	31.0	29.5	26.5	33.0	38.0	40.0
FMC to Primary PCI <= 90 Minutes: Non-Transfer Patients	90.5%	89.9%	88.8%	95.8%	95.5%	83.3%
Median FMC to Primary PCI: Non-Transfer Patients	72.5	74.0	75.0	68.0	66.0	76.0

-  = Exceeds VCSQI Average
-  = Equal to VCSQI Average
-  = Lower than VCSQI Average




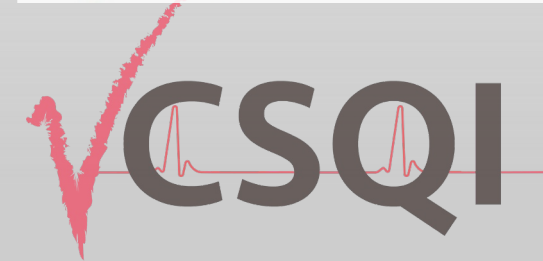
# Northern Region: Q1 - Q4 2022

Population: VHAC Northern Region, All STEMI Patients, Q1 – Q4 2022 (N=369)	North	3E3HC	5ZUU4	J5DO3	T4DUC
Median Door In - Door Out (Minutes): Transfer Patients	50.0	50.0	56.0	47.0	46.0
Median Transfer Time between Hospitals	26.5	16.0	33.0	14.0	22.5
FMC to Primary PCI <= 90 Minutes: Non-Transfer Patients	88.8%	93.3%	91.9%	80.5%	84.8%
Median FMC to Primary PCI: Non-Transfer Patients	75.0	75.5	75.0	78.0	73.0

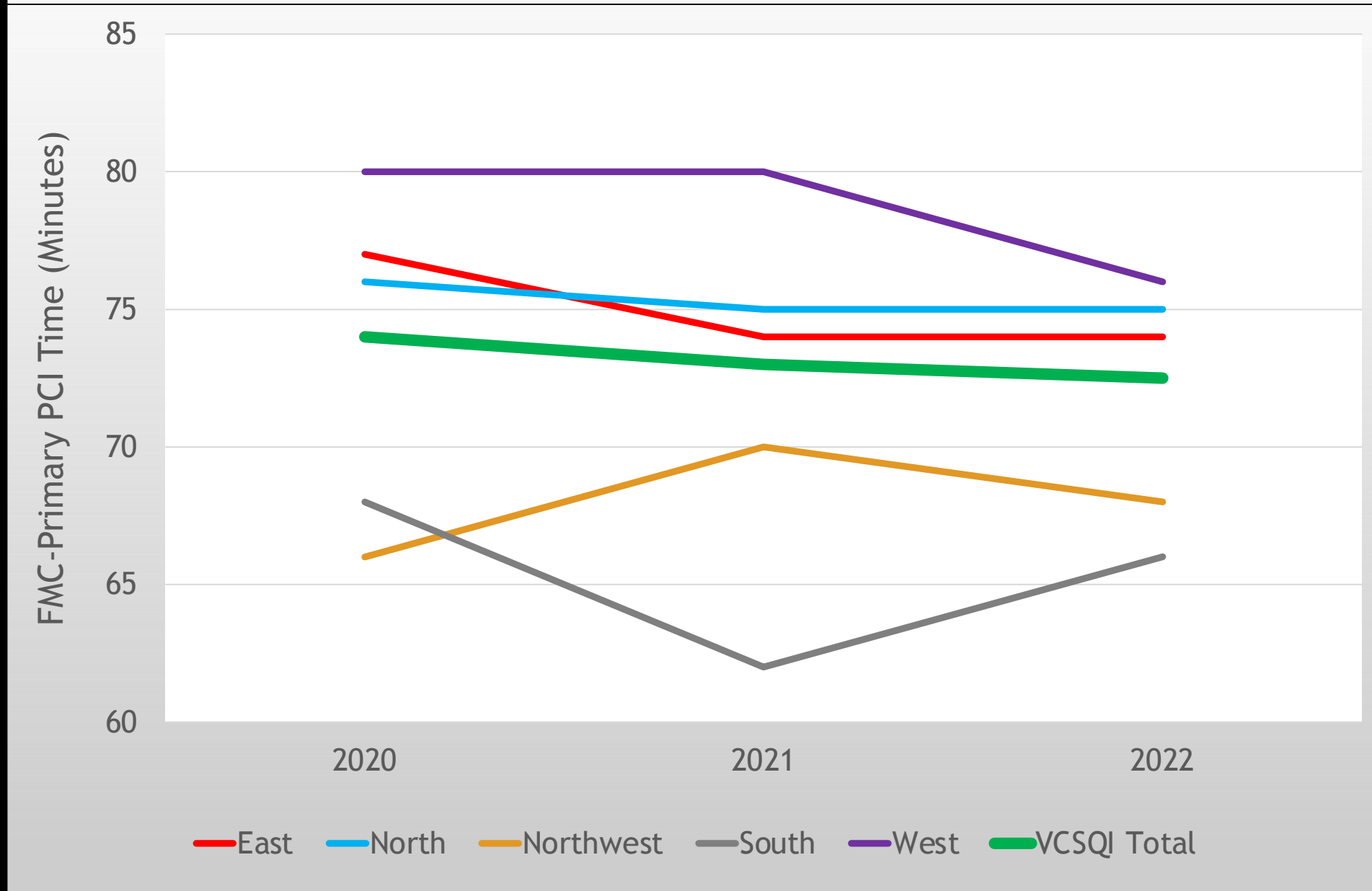
 = Exceeds VCSQI Average

 = Equal to VCSQI Average

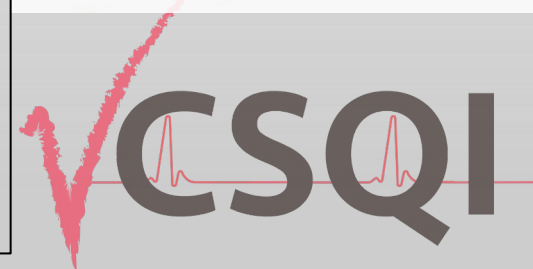
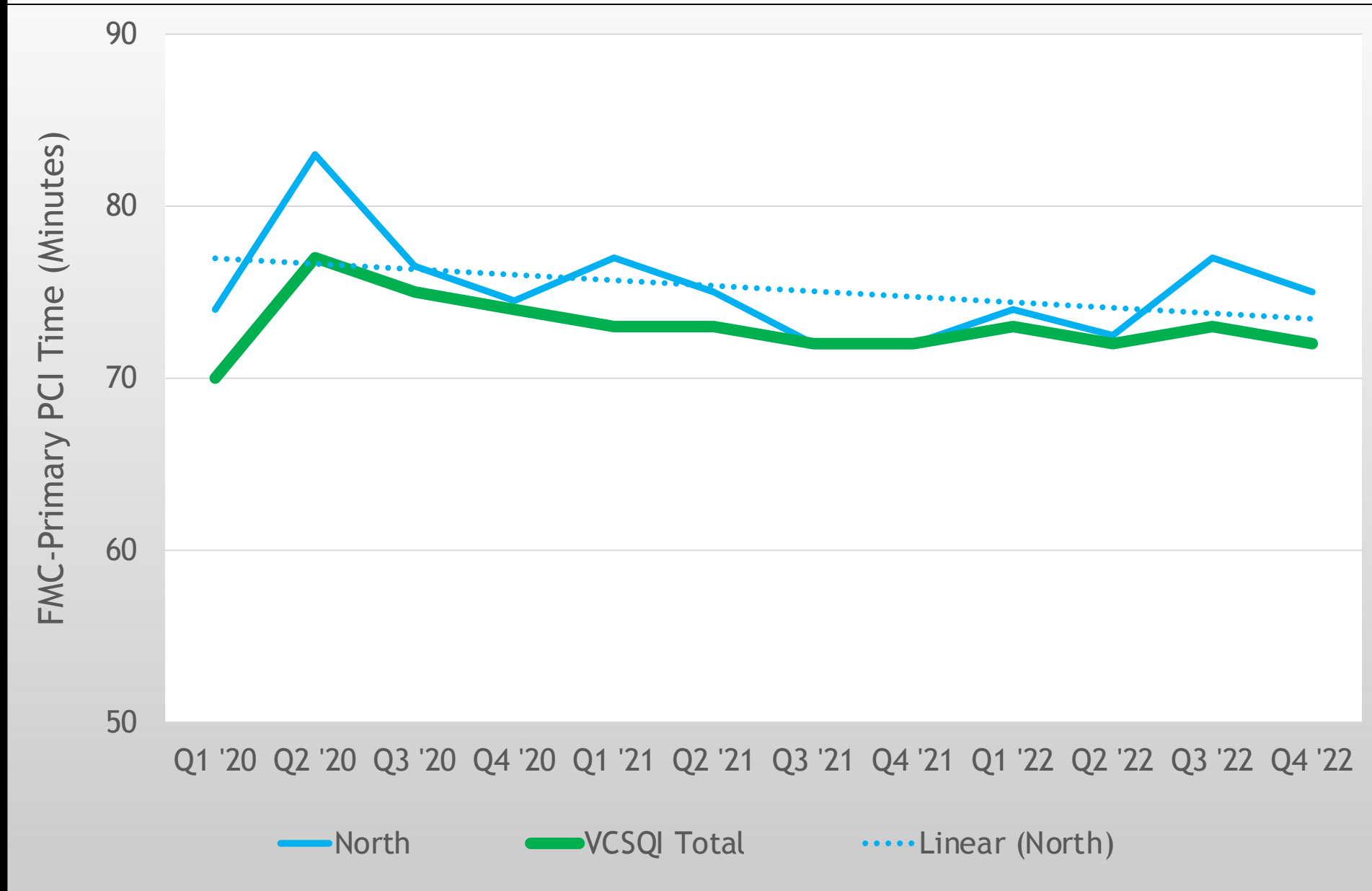
 = Lower than VCSQI Average



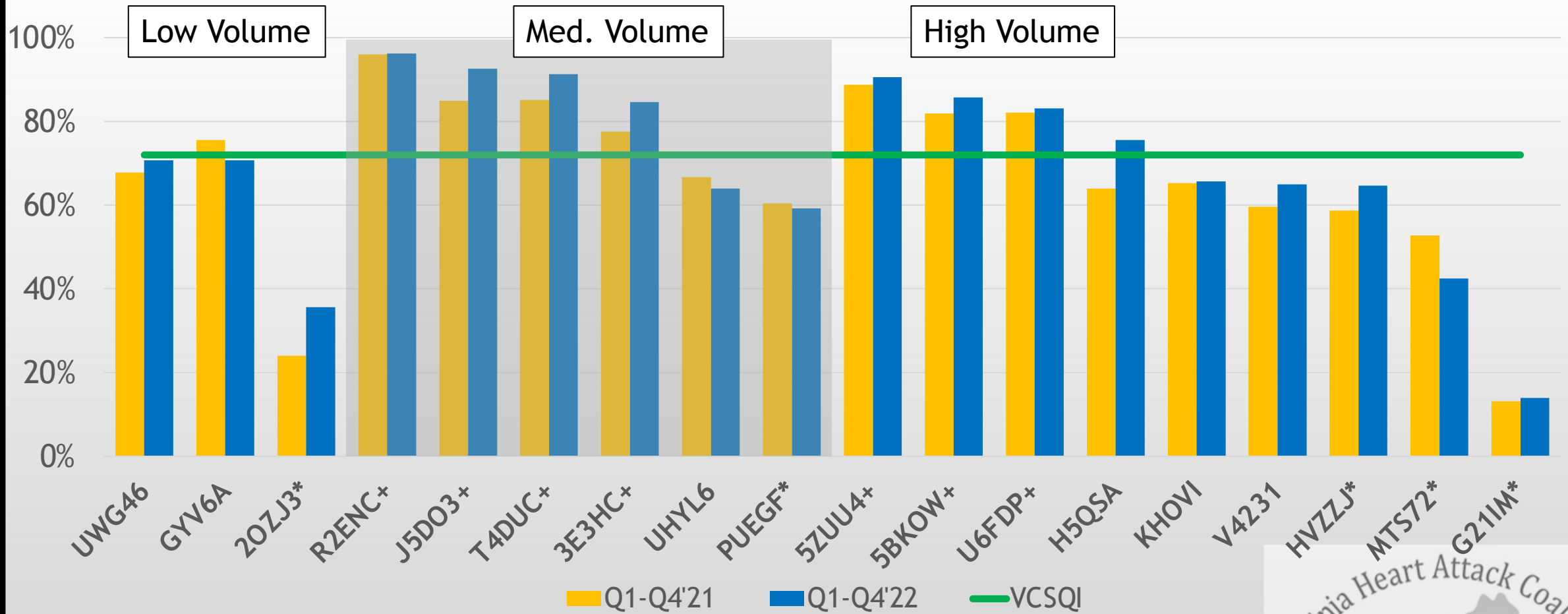
# Median FMC-Primary PCI (Non-Transfer) by Region and Year



# Median FMC-Primary PCI (Non-Transfer) by Quarter: Northern



# Radial Access Site by Hospital: Immediate PCI for STEMI Procedures, Q1 2021 - Q4 2022 (N=3,948)



VCSQI: Femoral - 27.9%

Radial - 72.0%



For the latest 4 quarter period:

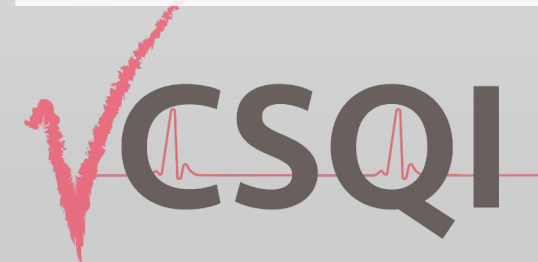
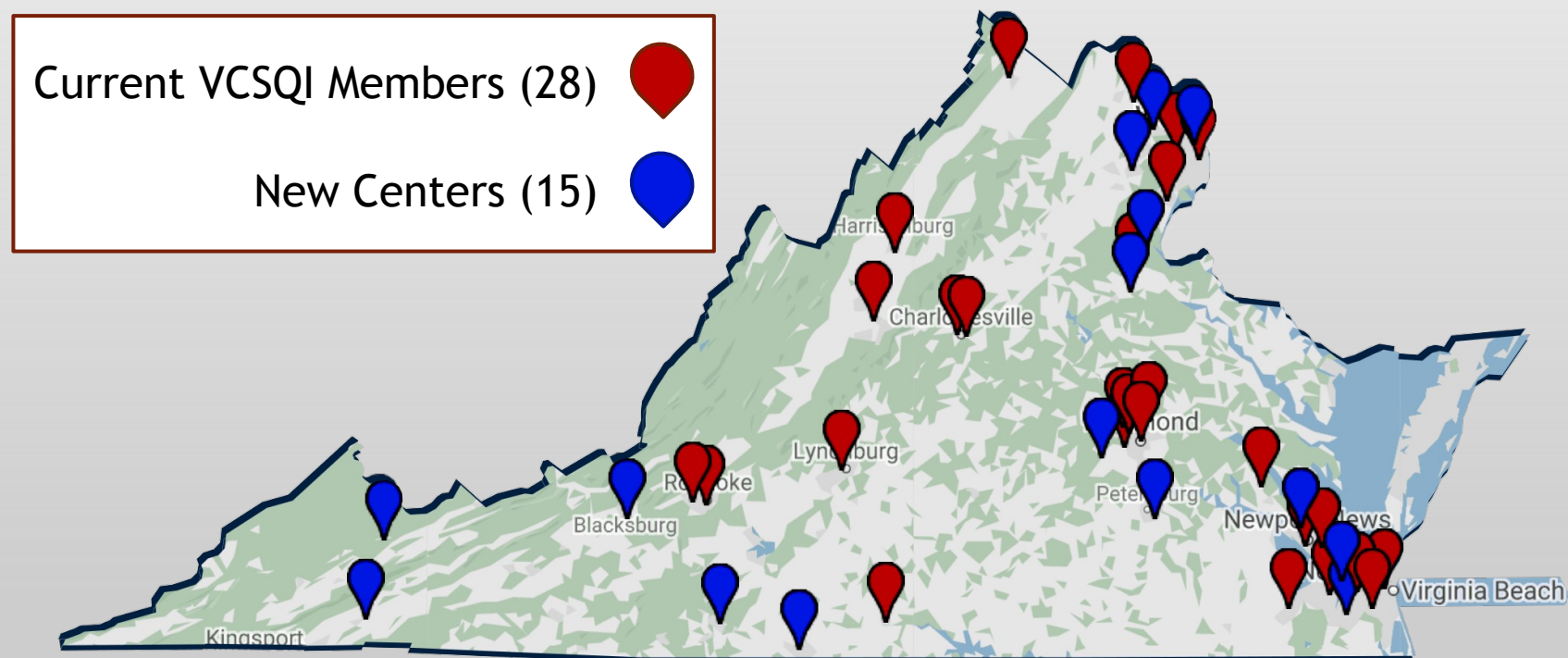
A plus (+) following the hospital code indicates the hospital is statistically better than the rest of VCSQI

An asterisk (\*) following the hospital code indicates the hospital is statistically poorer than the rest of VCSQI



# We Need Your Help! Logistics and Next Steps

- Data Use Agreements will be automatically incorporated into current VCSQI members' database contracts
- New members gain access to all VCSQI resources: quarterly reports, angiogram reviews, collaborative workgroups (Shock + AKI), and more!



**Date Range 01/01/2023 - 03/31/2023 (Q1)**

<b>STEMI Transports</b>	<b>169</b>
Inova Fairfax Hospital	52
HCA Reston	18
Sentara Northern VA Med Center	14
Inova Loudoun Hospital	32
Virginia Hospital Center	17
Inova Alexandria Hospital	21
UVA Prince William	15

**Suspected STEMI Transports By Destination Name NOVA**

This report is designed to assist agencies in evaluating the appropriate destination of suspected STEMI patients.