Virginia Stroke Care Quality Improvement Group

January 2024
Mary Washington Healthcare, Fredericksburg, VA

Patrick Wiggins, Chronic Disease Supervisor, VDH
Kathryn Funk, Stroke Registry Coordinator, VDH
Allie Lundberg, Stroke Epidemiologist, VDH

Agenda

8:30-8:45am   Welcome and Minutes Approval

8:45-9:25am   Brief Overview of the EMS Stroke Survey

Brief Overview of Stroke Registry and EMS Data Points

Advisory Group Discussion/Activity

Pre-hospital Metrics Reports
Combining Hospital and Pre-Hospital metrics/information

9:25am   Public Comment

9:40am   Adjourn

Code of Virginia § 32.1-111.15:1

- Effective January 1, 2019, the Code of Virginia § 32.1-111.15:1 was amended to require the Virginia Department of Health (VDH) to implement systems for stroke data collection and information sharing, apply evidence-based guidelines for community-based follow-up care, and implement a continuous process for stroke care quality improvement initiatives in collaboration with hospitals and emergency medical services (EMS) agencies. VDH convened a Virginia Stroke Care Quality Improvement (VSCQI) Advisory Group to fulfill these requirements.

State Stroke Triage Plan

- Workgroup has convened to update the 2018 State Stroke Triage Plan
- Collecting Stroke Triage Plans and Transfer Forms from the regional councils to compare to create a generic template for the state

2024 EMS Stroke Inventory Survey Key Results

Full report will be released soon.

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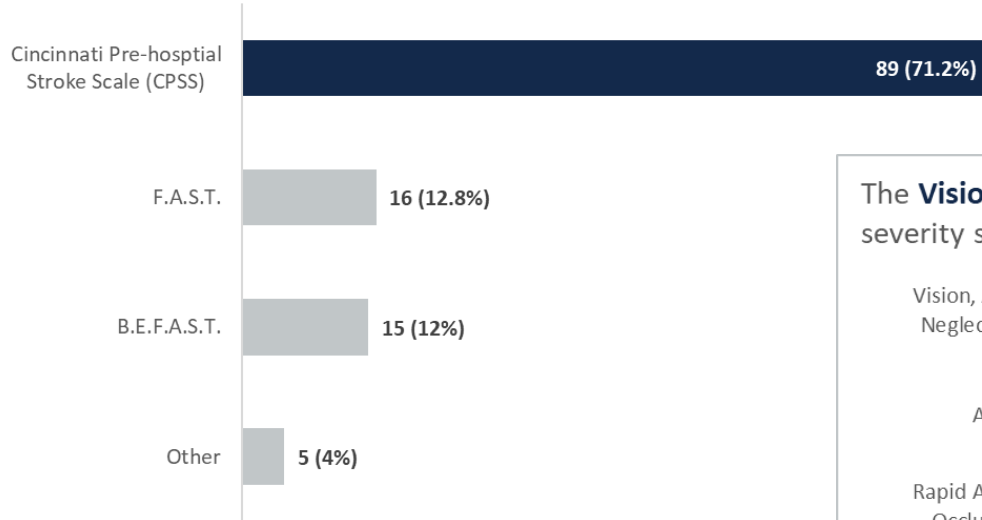Bethany McCunn, MPH, CPST - bethany.mccunn@vdh.virginia.gov
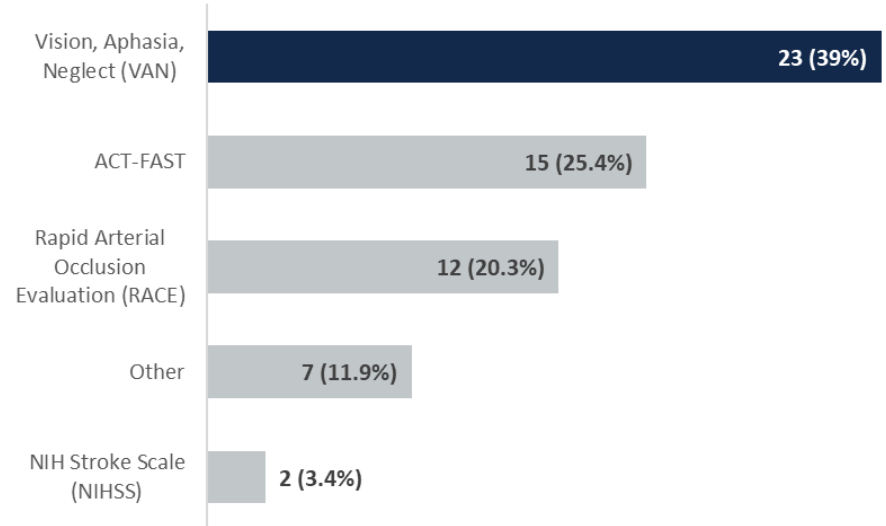
Stroke@vdh.virginia.gov

Survey Response

- Total of 130 complete responses – response rate of 23.7%

- All regional councils were represented – Southwest Virginia and Old Dominion had the highest number of responses

EMS Regional Council	Number of Responses (%)
Blue Ridge	4 (3.1%)
Central Shenandoah	12 (9.2%)
Lord Fairfax	5 (3.8%)
Northern Virginia	6 (4.6%)
Old Dominion	23 (17.7%)
Peninsulas	5 (3.8%)
Rappahannock	6 (4.6%)
Southwest Virginia	31 (23.8%)
Thomas Jefferson	4 (3.1%)
Tidewater	14 (10.8%)
Western Virginia	20 (15.4%)

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The **Cincinnati Pre-hospital Stroke Scale** is the most used stroke recognition scale.

Scale	Value
Cincinnati Pre-hosptial Stroke Scale (CPSS)	89 (71.2%)
F.A.S.T.	16 (12.8%)
B.E.F.A.S.T.	15 (12%)
Other	5 (4%)

The **Vision, Aphasia, Neglect (VAN)** is the most used stroke severity scale.

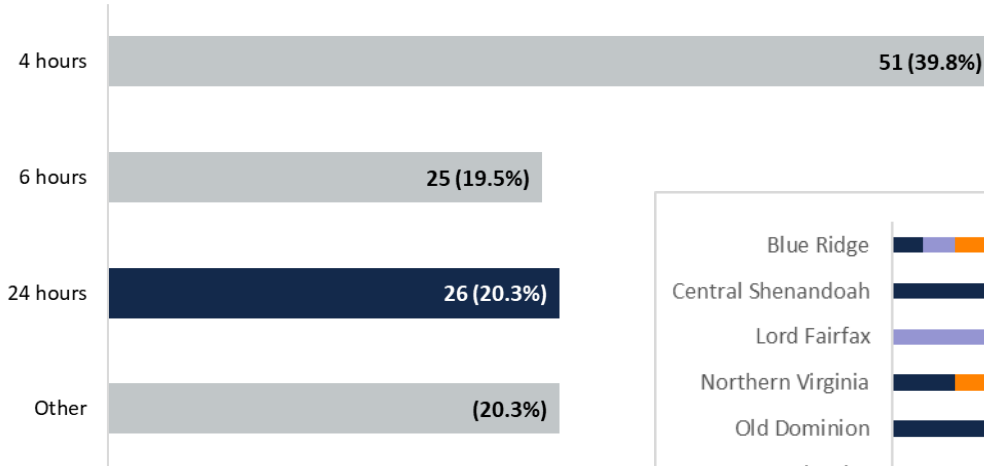| Scale	Value
Vision, Aphasia, Neglect (VAN)	23 (39%)
ACT-FAST	15 (25.4%)
Rapid Arterial Occlusion Evaluation (RACE)	12 (20.3%)
Other	7 (11.9%)
NIH Stroke Scale (NIHSS)	2 (3.4%)

Northern Virginia has the highest blood glucose completion rate of all regions when compared to the **statewide** completion rate.
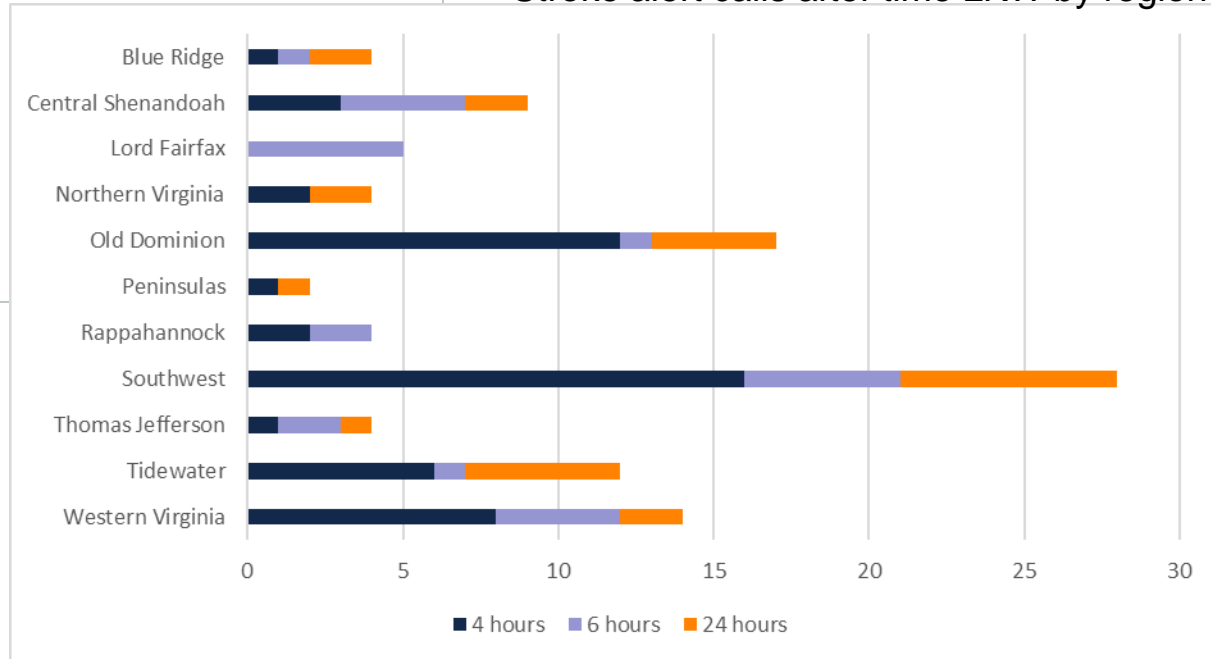
Region	Completion Rate
Virginia	87.4%
Blue Ridge	60.0%
Central Shenandoah	46.2%
Lord Fairfax	66.7%
Northern Virginia	71.4%
Old Dominion	56.0%
Peninsulas	42.9%
Rappahannock	28.6%
Southwest	43.8%
Thomas Jefferson	40.0%
Tidewater	40.0%
Western Virginia	42.9%
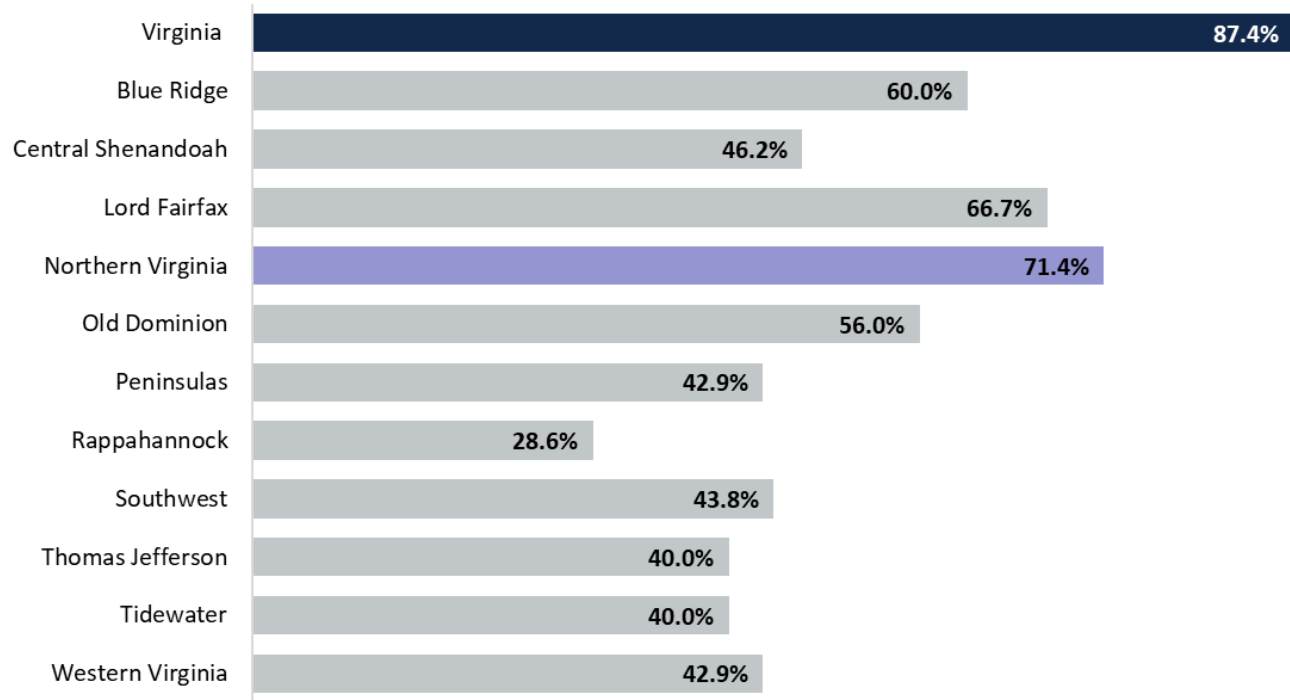
Only 41.9% of agencies meet the criterion of an on-scene time of **less than 15 minutes** for suspected stroke patients.

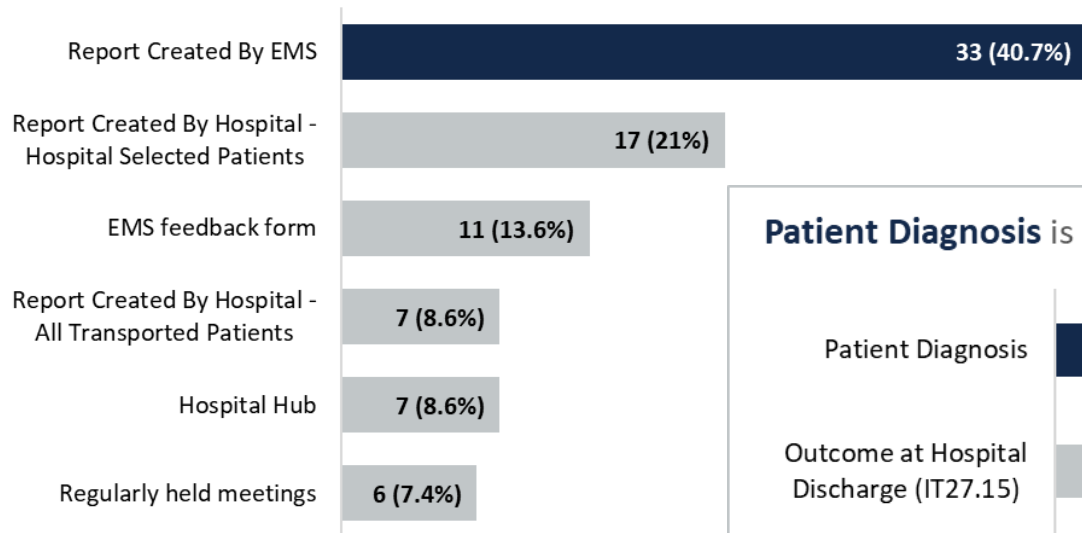|	
Less than 15 minutes	54 (41.9%)
Less than 20 minutes	42 (32.6%)
Less than 30 minues	14 (10.9%)
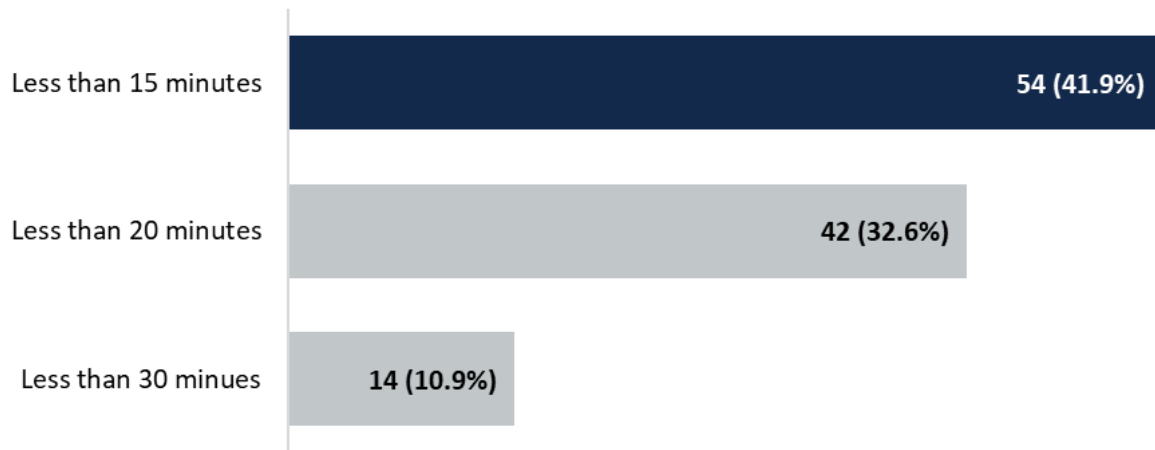
Only 20% of agencies call a stroke alert **up to 24 hours** since time LKW.

Time	Value
4 hours	51 (39.8%)
6 hours	25 (19.5%)
24 hours	26 (20.3%)
Other	(20.3%)

Stroke alert calls after time LKW by region

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Most feedback from hospitals come in **a report created by the EMS agency**.

Report Created By EMS	33 (40.7%)
Report Created By Hospital - Hospital Selected Patients	17 (21%)
EMS feedback form	11 (13.6%)
Report Created By Hospital - All Transported Patients	7 (8.6%)
Hospital Hub	7 (8.6%)
Regularly held meetings	6 (7.4%)

Patient Diagnosis is most helpful to EMS agencies.

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Patient Diagnosis	110
Outcome at Hospital Discharge (IT27.15)	82
Emergency Department Disposition	81
Hospital Disposition	71
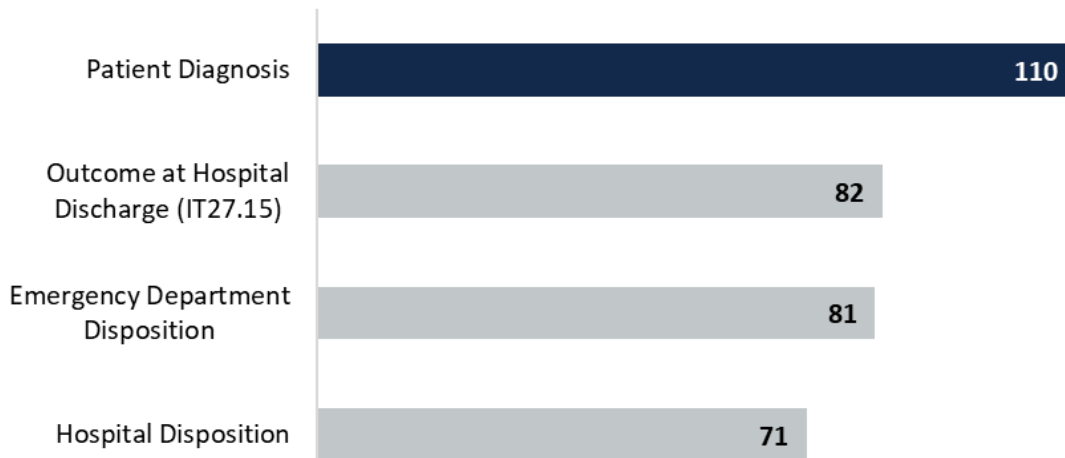
Two-thirds of agencies report transporting suspected stroke patients to a **stroke-certified hospital as their first-choice hospital location**.

Location	First Choice Hospital	Second Choice Hospital
Stroke Certified	80	53
Not Stroke Certified	29	30
Out of State	11	17
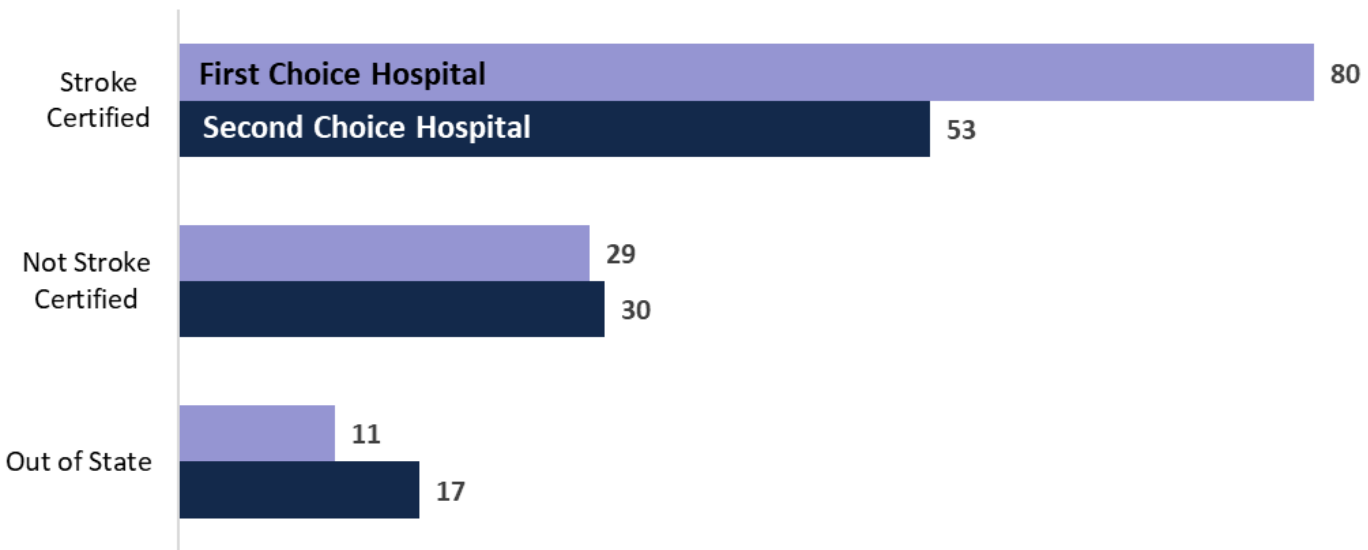
Stroke Certified as First Hospital Choice by Region
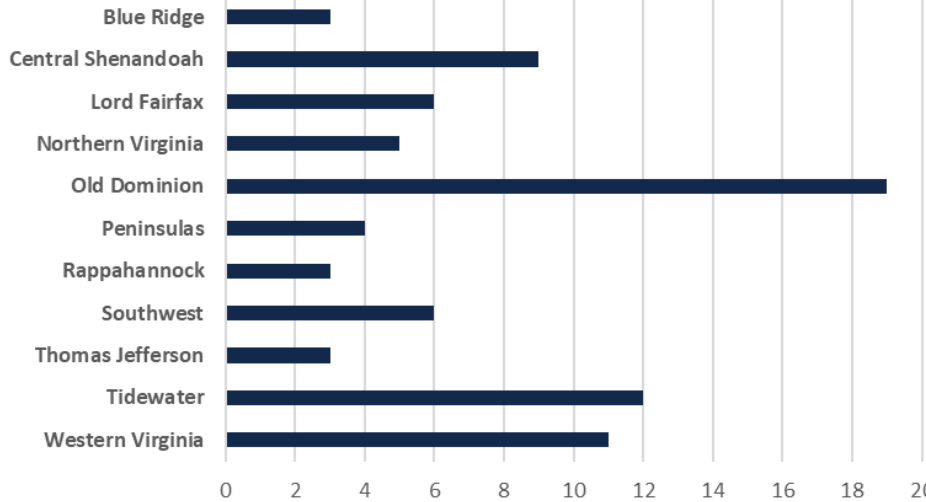
Not Stroke Certified and **Out of State** as First Hospital Choice by Region
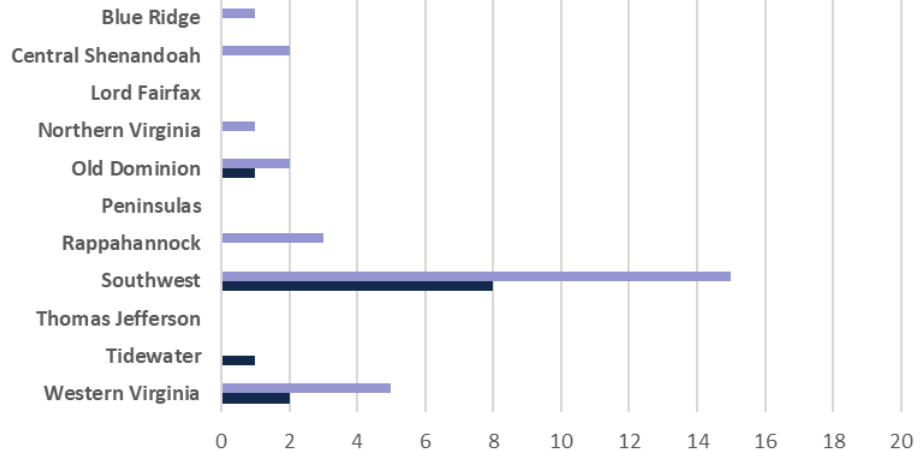
Stroke Registry Overview & Included EMS-Related data points

EMS-Related Data Points – Agency Information

- Agency Name
- Agency ID
- Agency Incident Number
- Patient Care Report Number
- Run Type
- Patient Disposition
- Reason for choosing destination

- Dispatch Delay
- Response Delay
- Transport Delay
- Agency Level of Care
- Transport Role

EMS-related Data Points – Dates & Times

- Call Time
- Unit Notified
- En Route
- Scene Arrival
- Patient Arrival
- Scene Departure
- Destination Arrival
- Patient Transfer

- Elapsed Scene Time
- Elapsed Transport

EMS-related Data Points – Narrative/Patient Information

- Pre-hospital Stroke Screen Type
- Pre-hospital Stroke Screen Result
- Pre-hospital Glucose Level
- Stroke Alert Sent to Hospital
- Primary Symptom
- Other Associated Symptoms

- Symptom Onset Date & Time
- Age
- Date of Birth
- Presence of Cardia Arrest
- Primary & Secondary Impression
- Narrative

Pre-Hospital/EMS QA Reports

Discussion and Activity