

# Virginia Stroke Systems Task Force

Quarterly Meeting (Virtual Available)

**Meeting Location:** Virginia College of Osteopathic

Medicine, Blacksburg, VA

**April 19, 2024 | 10am – 3:00pm**





# WELCOME

VIRGINIA COLLEGE OF  
OSTEOPATHIC MEDICINE DEAN

# Virtual Housekeeping

- ▶ **PLEASE PUT YOUR NAME AND ORGANIZATION OR ROLE IN THE CHAT BOX**
- ▶ **Please remain on mute for the duration of the meeting, unless speaking.**
- ▶ **Please turn your camera on!** It's always nice for the speaker to be able to see faces instead of talking to a bunch of blank squares.
- ▶ **Open the chat box** so you can view the discussion and ask any questions of the speaker. The chat box will be monitored by meeting hosts to ensure the questions are brought to the speakers' attention.
- ▶ If you want to speak to contribute to the conversation or ask a question, **please use the “raise hand” feature** found along the bottom of the participant's box.
- ▶ If joining the meeting over the phone only, you **can mute and unmute yourself by pressing \*6** on your phone's keypad.

# Agenda

- 10:00 - 10:05 Welcome
- 10:05 -- 10:25 VSSTF Business, co-chairs:  
Melanie Winningham, MD, Sentara Healthcare and David Long, Tidewater EMS
- 10:25 -- 10:40 State Stroke Triage Plan Updates, Ashley Camper, OEMS
- 10:40 -- 11:30 Workgroups Report Out
- 11:30--12:00 ZODIAC Trial, Stacie Stevens, VCU Healthcare
- 12:00 -- 12:30 Lunch
- 12:00 - 12:30 Simulation Center Tour - 2 Groups of 10 (Please Sign up if interested)
- 12:30 - 1:00 Rethinking Rehabilitation: Intensive Telerehabilitation to Maximize Recovery from Stroke,  
Kristin Nuckols, Imago Rehab
- 1:00--1:30 EMS Blood Draw for Stroke Patients-Pros and Cons, Panel Discussion  
Elizabeth Hart, Sophea Booker, Pat Edwards, David Long, Melanie Winningham
- 1:30 -- 1:45 VDH Updates, Allie Lundberg, Epidemiologist, VDH
- 1:45 -- 2:00 Final Remarks and Wrap Up, Melanie Winningham and David Long, co-chairs
- 2:00 -- 3:00 Virginia Stroke Coordinators Consortium Meeting, Elizabeth Hart, LewisGale, Co-Chairs, Mary  
Jobson-Oliver, incoming co-chair

**Special thanks to Imago for sponsoring today's meeting!**

*CEUs will not be provided for the industry sponsored speaker on **Rethinking Rehabilitation: Intensive Telerehabilitation to Maximize Recovery from Stroke***

*In the spirit of Collegiality and Professionalism, please be mindful of any information obtained and shared in this meeting that could be sensitive to an individual or an institution*

# VSSTF Business

- ▶ Approval of meeting minutes from January 19<sup>th</sup> meeting.
- ▶ New Voting Member Introductions
  - ▶ Daniel Linkins, EMS Representative
  - ▶ Dr. John Daniel, III, PCP Representative
- ▶ Voting Members Introductions
- ▶ Co-Chair Nominee Introductions
- ▶ New Co-Chair Voting



# Welcome and Introductions

Welcome from VCOM

Introductions of  
**VSSTF Voting Members**

Name, Title, Organization/Hospital, City/County

For those joining virtually, introduce yourselves using the chat box to let your colleagues know you are here

# VSSTF Co-Chair Nominations for April 2024 Voting (Nomination Information to come via email to VSSTF Voting Members)

## Reminder: VSSTF Structure

- ▶ Co-chairs
  - ▶ Two-year term; staggered
  - ▶ Elected by VSSTF voting members
- ▶ Voting members
  - ▶ Listed positions are based on 2014 VSSTF Guidance Document with noted modifications
  - ▶ Two-year term; staggered
  - ▶ Open nomination, except organizational representatives
  - ▶ Selected by VSSTF co-chairs
  - ▶ Member may be reappointed for additional two-year terms
- ▶ Nonvoting members



# Co-Chair Nominees

- ▶ **Dr. Sherita Chapman**

- ▶ Stroke Section Chief, Central Virginia VA Medical Center  
Associate Professor, UVA Department of Neurology



- ▶ **John Gaughen, MD**

- ▶ Stroke Medical Director, Centra Health  
Neurointerventional Medical Director, Centra Health





# OFFICE OF EMS STROKE PLAN UPDATES

Ashley Camper

Trauma and Critical Care Manager

Virginia Office of Emergency Medical Services



## VERBIAGE UPDATES

- Hospitals are accredited, and stroke programs are certified via multiple bodies
  - Joint Commission (TJC), Det Norske Veritas (DNV), and Accreditation Commission for Health Care (ACHC).
- 24-hour window of witnessed onset or last known baseline
- Replacing “first” step with “critical steps”
- Recognition of BEFAST/FAST
- Use of “facility” instead of “hospital” to recognize those that can deliver stroke care.

## CLARIFYING BETWEEN ASSESSMENT AND SEVERITY TOOLS

- There is a difference between Stroke Assessment Tools such as CPSS and BEFAST and stroke Severity Tools such as RACE and VAN. The Stroke Severity Tools are not designed to replace a basic Stroke Assessment tool but to guide destination decisions for potential LVOs.

# ADDITIONS



PREHOSPITAL STROKE  
RECOGNITION SECTION



PRE-HOSPITAL  
DESTINATION DECISION  
MAKING AND INTER-  
FACILITY TRANSPORT  
HAS UNDERGONE A  
TOTAL REWRITE



CONSIDERATION FOR  
PARALLEL ACTIVATIONS  
FOR STROKE AND  
TRAUMA ACCORDING  
TO INDEX OF SUSPICION



CONSIDERATIONS FOR  
PEDIATRIC STROKE



## ALGORITHMS AND CHECKLISTS

- Currently the following have been assigned for complete rewrites:
  - Acute Field Stroke Triage Decision Scheme
  - EMS Thrombolytic Candidate Checklist
  - Post Thrombolytic EMS/inter-facility Transfer sheet

These documents were largely found to be out of date or difficult to navigate in a timely manner.

# FINE TUNING



VETTING FOR EASE OF USE  
FROM INTENDED AUDIENCE



ONE SHEET ALGORITHMS  
FOR EMS PROVIDERS



CLEANING UP LANGUAGE,  
INCONSISTENCIES AND  
ABSOLUTE STATEMENTS

SPECIAL THANK  
YOU!!!

Dr. George Lindbeck

Kathryn Funk

Mary Jobson-Oliver

Stacie Stevens





- ▶ Work Group  
Reports  
April 2024

# Current Workgroups

1. **EMS Destination Protocols**, Daniel Linkins, Central Shenandoah EMS
2. **May Day for Stroke Awareness**, Melanie Winningham, Sentara Healthcare
3. **Messaging to Address Social Disparities**, Kristie Burnette, Mary Brandenburg, VHHA
4. **Post-Acute Discharge Disposition**, Chad Aldridge, UVA
5. **Teleneurology**, Branden Robinson, Sevaro
6. **Stroke Smart**, Alan Stillman, Kwikpoint

# EMS Destinations Workgroup

## February Meeting:

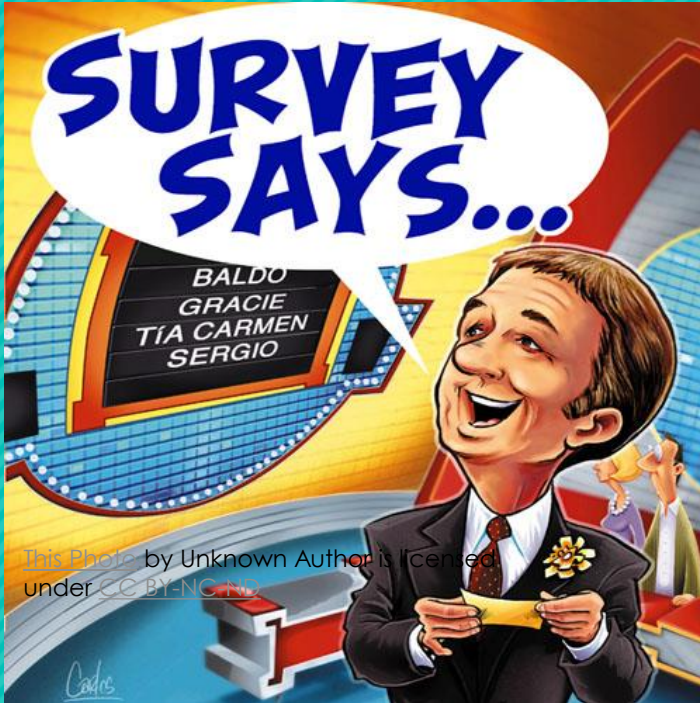
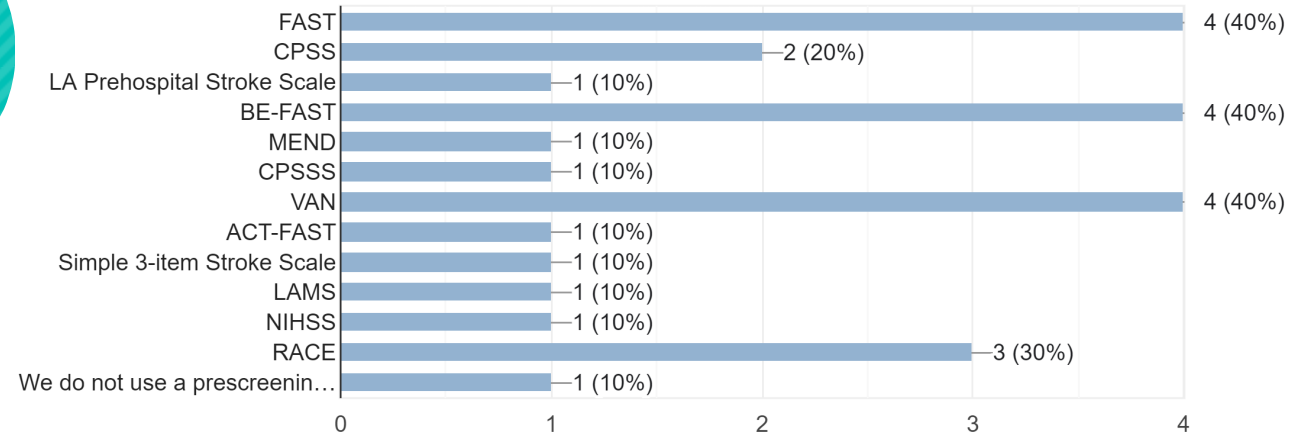
### Overview:

1. Need to gather data to identify where in Virginia patients are mistriaged and why.
2. Identify tools being used across the state (of 4 regions represented on the workgroup, 3 different scales being used).
3. Gather hospital preferences and pros/cons of each
4. Address implementation barriers

# 10 of the 11 Regional EMS Councils Responded

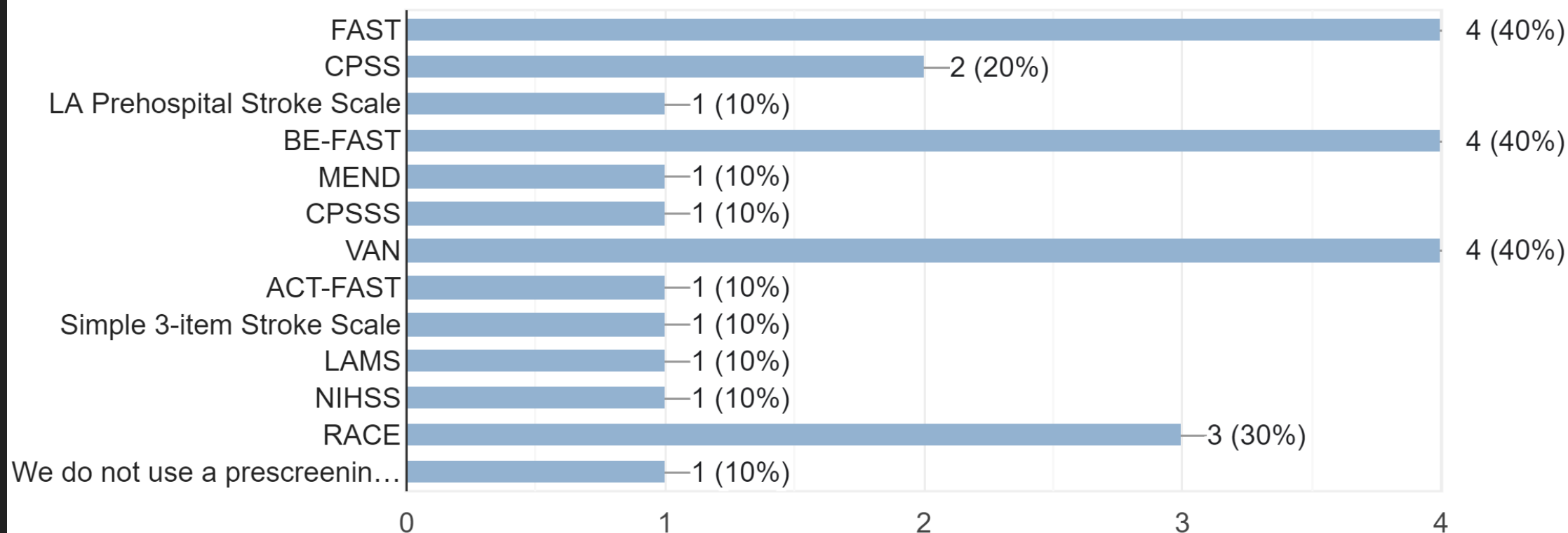
What initial stroke screening tools are used in your region to determine transport destination? Select all that apply, if you also perform a Large-Vessel-Occlusion Screening or others.

10 responses



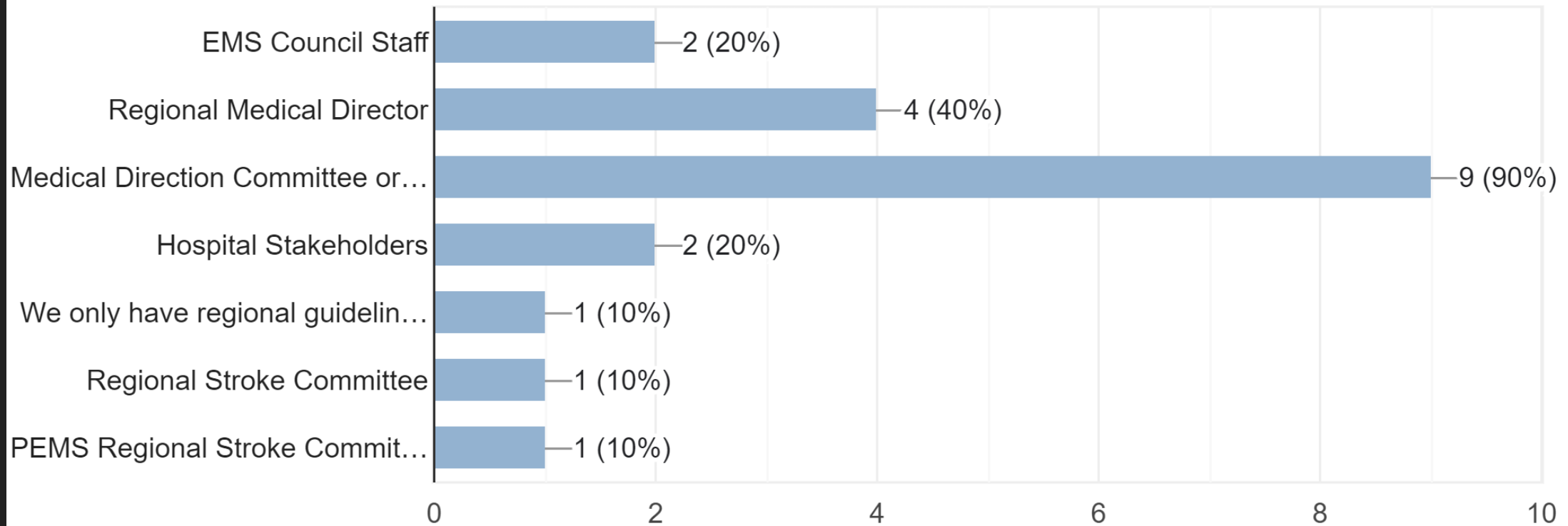
What initial stroke screening tools are used in your region to determine transport destination? Select all that apply, if you also perform a Large-Vessel-Occlusion Screening or others.

10 responses



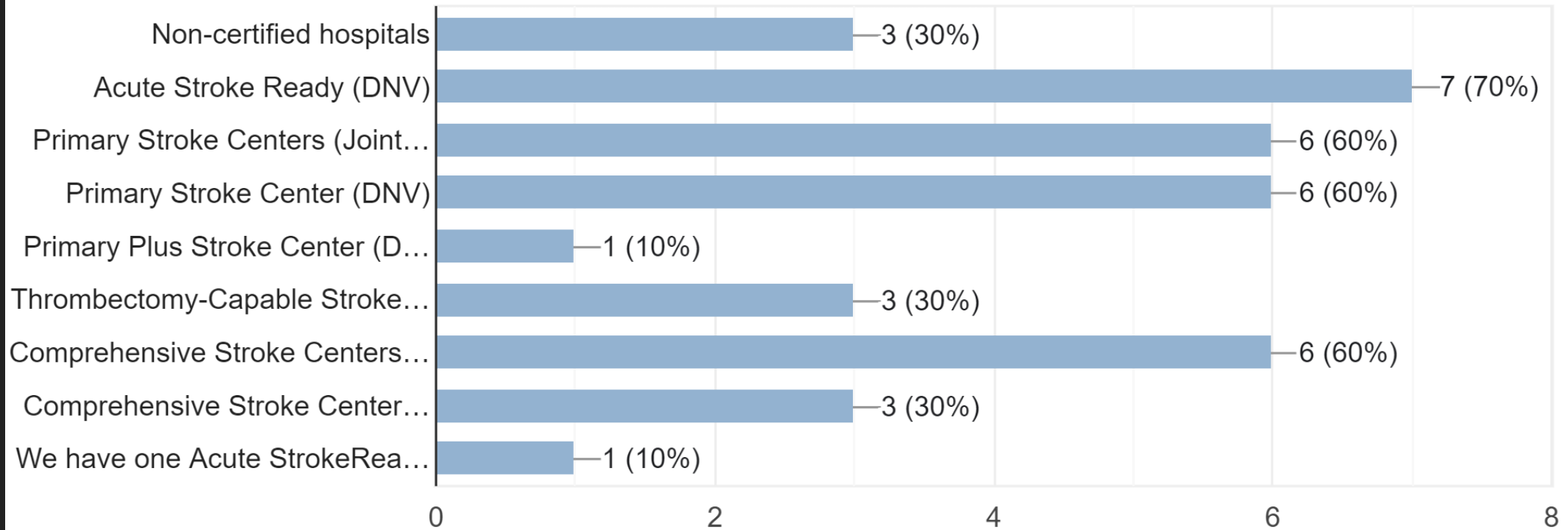
## How are stroke screening tools determined/adopted by your region?

10 responses



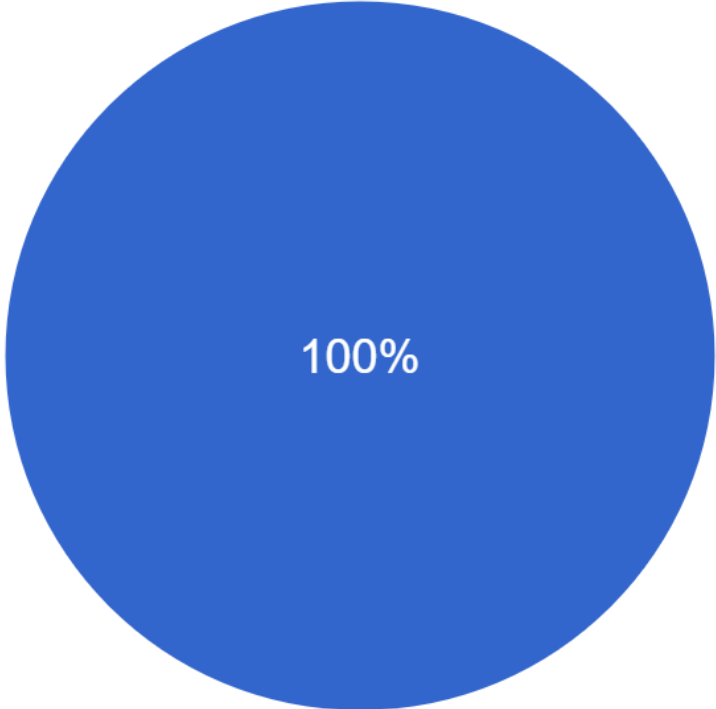
## What destination facilities are available in your region (select all that apply)?

10 responses



# Are EMS providers permitted to call stroke alerts in the field?

10 responses

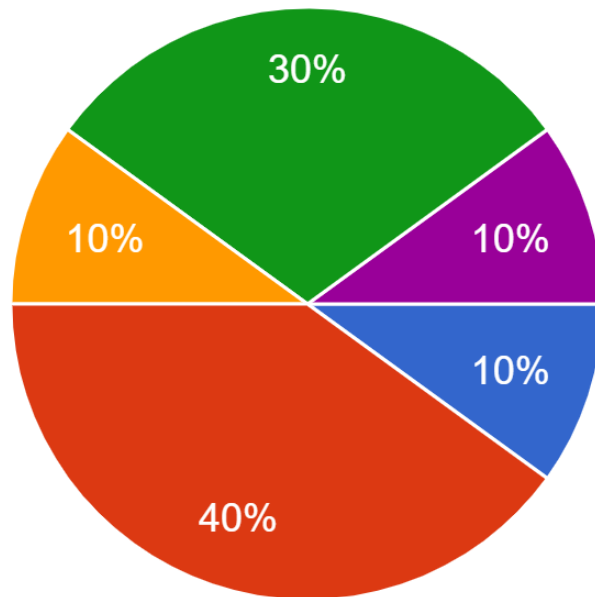


- Yes
- No



## How do receiving facilities respond to field-called stroke alerts?

10 responses



- Hospitals do not normally change their actions
- Hospitals act with urgency and decisiveness
- Hospital response is inconsistent from day to day
- Some hospitals respond with urgency and others do not
- Most act with urgency and decisiveness, while some do not

# Comment Summary:

The state should agree on a standard screening tool and severity tool for stroke alerts, and EMS should call stroke alerts in the field based on stroke screening. Geographically large regions benefit from transport to local facilities for scans, TELESTROKE consults, thrombolytics, and referral to stroke centers. Providers should be aware of stroke centers and their differences, and provide thorough stroke assessments. A meeting is planned to discuss consistency with stroke patients, protocols, assessment tools, best-practice, and continuity among EMS and hospitals. Patients with a RACE score of 5 or greater are presumed to have an LVO, bypassing primary stroke centers.

# Next Steps:

- × Workgroup Follow-up to discuss survey findings
- × Request Data regarding stroke outcomes, correlated with tools used
- × Request Data regarding stroke outcomes, correlated with destination type
- × Develop common nomenclature for EMS protocols in determining destinations
- × Develop best practices recommendations in collaboration with Regional EMS Councils

# What we need from others?

- × Stroke Coordinators Consortium:
  - + Provide preferred scales and the benefits of each in prehospital environment.
  - + If stroke alerts are called in the field, how does your hospital respond? Are they acknowledged/accepted resulting in immediate action?
    - By policy?
    - In practice?

# Questions, Comments and Suggestions?

[vsstf-destinations@g.vaems.org](mailto:vsstf-destinations@g.vaems.org)

Daniel W. Linkins, MPH, NRP, NCEE  
CSEMS Regional Director  
Office of Emergency Medical Services  
Virginia Department of Health  
[Daniel.Linkins@vdh.virginia.gov](mailto:Daniel.Linkins@vdh.virginia.gov)



# VSSTF: Messaging to Address Social Disparities Workgroup

April 19, 2024

## Members

Mary Brandenburg, VHHA Foundation (Co-Chair)

Kristie Burnette, VHHA (Co-Chair)

Karen Bonham, HQI / Twin County Regional Healthcare

Tanya Claiborne, Riverside Health System

Beth Cottone, Survivor

Sarah Fowler

Alecia Hamm, Thomas Jefferson EMS Council

Beth Hundt, Centra Health

Keri Johnson, UVA Health

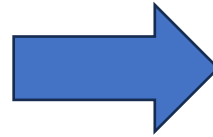
Alan Stillman, Kwikpoint

# Scope of Work & Goals

## Scope of Work

The Messaging to Address Social Disparities workgroup will:

- Review available stroke data, stratified by race/ethnicity, payor, zip code, and other socio-demographic factors
- Provide education to partners along the continuum of care about the impact of SDoH on health outcomes, how to identify health-related social needs, and how best to connect patients and their families to resources that address social needs
- Identify practices and frameworks that promote community collaboration on initiatives to address SDoH



## Goals

- Review available data and literature to identify disparities in Stroke treatment and outcomes; share findings with the VSSTF
- Create a multi-modal communication plan to educate partners about the impact of SDoH on health outcomes, the importance of standardized screening for health-related social needs, and how to connect patients and their families to social care resources in the community.
- Initiate innovative strategies to make available “best-practice” education and resources to foster collaboration and support statewide, regional, and community-level efforts to address the social drivers of health impacting Stroke patients and their families.

# Strategy Development

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## **1/5/24 Meeting**

- Approval of Charter & Goals
- Literature Review
- VHHA Analytics Data Overview

## **2/2/24 Meeting**

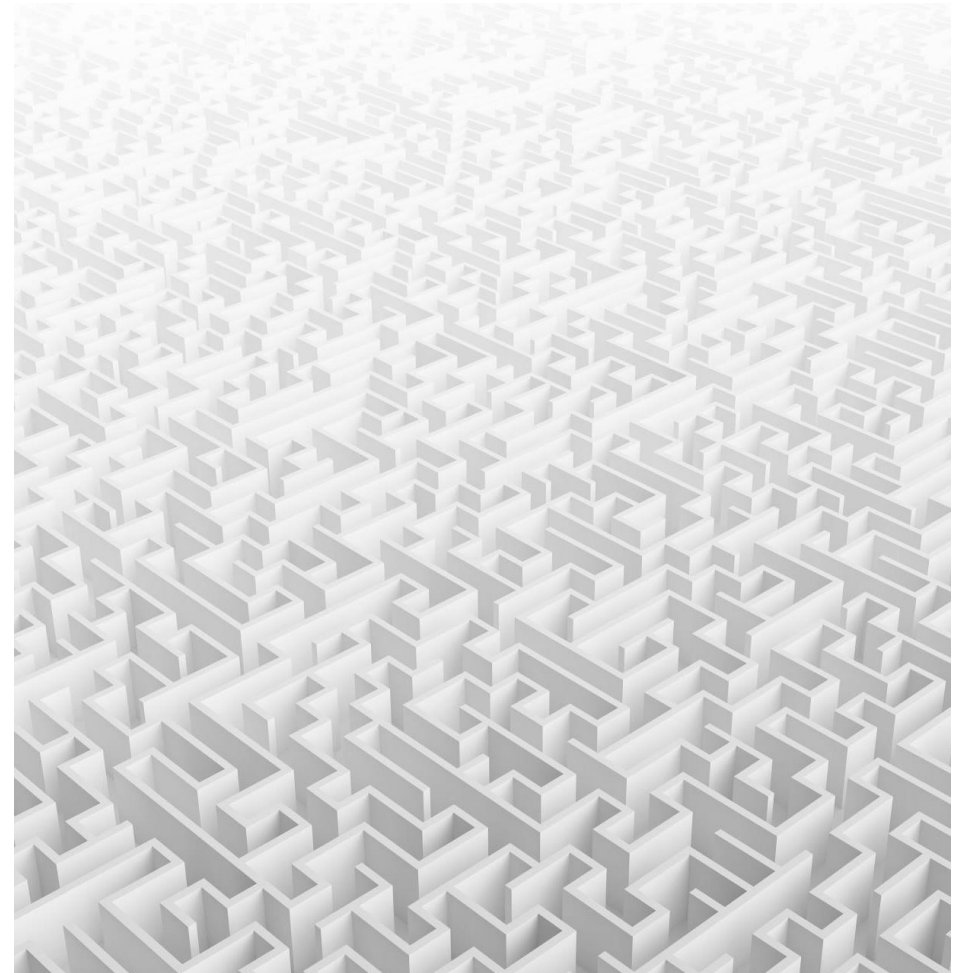
- VHHA & VDH Disparity Analysis

## **3/8/24 Meeting**

- Communication / Education Strategy Discussion -> Provider Assessment & Pilot Test

## **4/12/24 Meeting**

- VDH Stroke Burden by Locality
- Pilot Site Selection Criteria
- Two-Pronged Approach: Community & Provider Outreach





# Next Steps



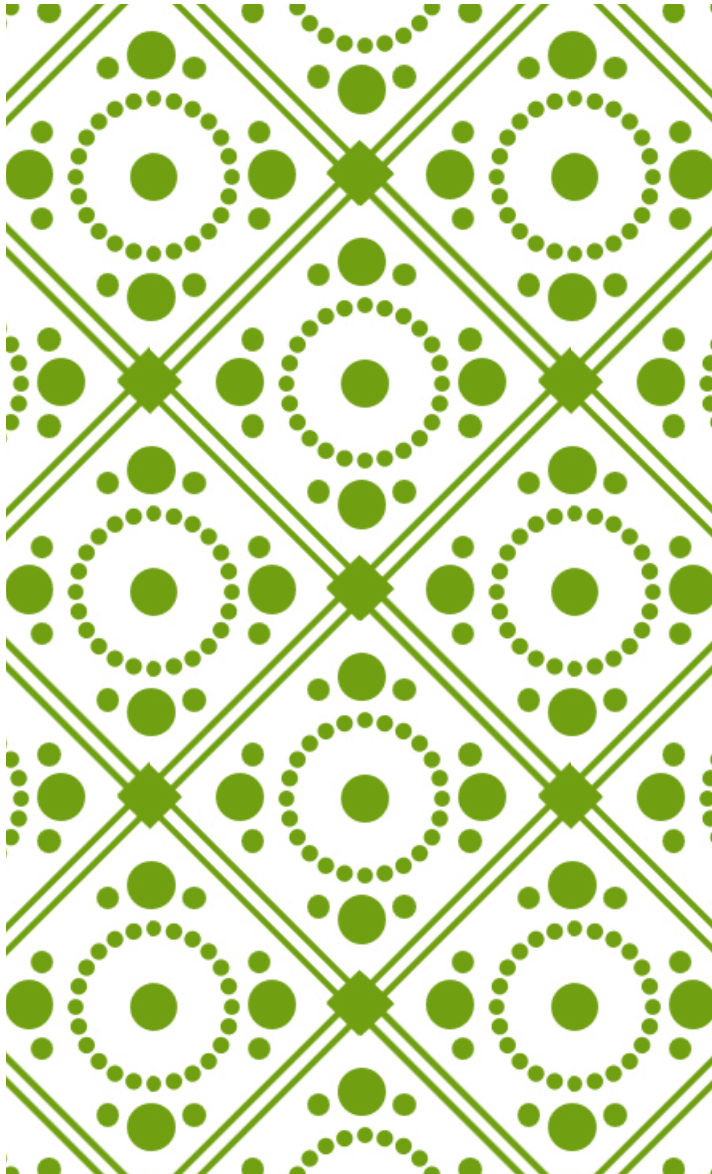
Provider Assessment Survey



Unite Us Resource Review



Pilot Site Selection



# MAY DAY! A COMMUNITY FIELD DAY TO RAISE STROKE AWARENESS

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**Melanie Winningham, MD**  
**Vascular Neurologist**  
**Sevaro Health / Sentara**

# MAY DAY 5.2025

Now planning for 2025 event.

Time to gather team with experience in fundraising, corporate sponsorship, and event planning.

First work group meeting to come.

Location pending – likely in Charlottesville or Richmond region initially.

Planning for a reproducible annual event akin to Relay for Life or Heart Walk.

Need strong marketing approach for success – news outlets/ social media.



# PROPOSED MAY DAY ACTIVITIES

- ❖ Plan to include invited speakers (stroke survivors) and/or “ask the Neurologist” panel.
  - ❖ Live music?
  - ❖ Health screenings (blood pressure / risk factors for stroke).
    - ❖ Stroke Smart presence? Selfie poster with QR code?
- ❖ Classic field day activities – would like recommendations to make these events accessible for all participants (including our stroke survivors).
- ❖ Activities for kids (face painting, focused education about stroke).
  - ❖ Food trucks.
  - ❖ Event t-shirts.





# TELENEUROLOGY WORKGROUP

VSST 4/19/2024

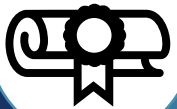
# WORKGROUP MEMBERS

- Carla Gunter, RN
  - Nursing Educator / Stroke Coordinator, Twin County Regional Hospital
- Kim Warren, DNP
  - CNO, Bon Secours Southampton Medical Center
- Laurie Mayer, MBA, BSN
  - Quality Program Specialist, Telespecialists
- Laith Altaweel, MD
  - System Stroke and Acute Care Neurology Medical Director, Inova Health System
- Branden Robinson
  - Chief Growth Officer, Sevaro Health

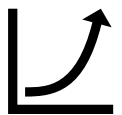
# TELENEUROLOGY WORKGROUP GOALS



Establish accepted metrics and processes for telestroke and standardization of the process



Educate hospitals that use telestroke and educate non-telestroke programs on the benefits of setting up a telestroke program



Improve outcomes by using telestroke to increase the use of thrombolytics in appropriate patients and route patients quickly for endovascular thrombectomies.

# METRICS

- Stroke alert to telestroke activation within 10 min.
- Telestroke activation to telestroke response within 10 min (total time 20 mins)
- Telestroke imaging interpretation(wet read) w/in 10min notification of imaging completion (total time 30 mins)
- Telestroke imaging interpretation to communicating treatment decision : (total time 40 mins)
  - EVT - 10 minutes
    - Notify onsite staff
    - Calling IR
    - Calling transfer center
  - Intravenous thrombolytic-10 minutes
  - ICH/SAH - 10 minutes
- % of stroke alerts presenting within 4.5 hrs LKW that receive thrombolytics 10%
- Reason thrombolytics was not given.
- Reason video not used
- Track proportion of stroke alerts that are assessed by video.
  - \*all times are median
- Patient outcomes (Mortality Rates, Functional Outcomes, etc)
- Patient Satisfaction (NPS or other Scales)



# BEST PRACTICES

- One-step notification from facility to teleneuro provider (CG)
- Teleneuro Provider Back-up Process (CG)
- Teleneuro Provider Etiquette (CG)
  - Introduction
  - Confirm Identification (Name and Date of Birth)
  - Identify staff and family in room
  - Inclusion/Exclusion Criteria
  - Risks/benefits and alternative conversation with patient or surrogate, and if none available, emergency policy consent.
- ED Provider in room at end of consult to facilitate care (CG)
- Acute Stroke Ready through CSC should expect the same level of care and response from telestroke
- Quick Access to Imaging Studies- Ensure rapid access to imaging studies (CT scans, MRIs) for remote neurologists.
- Utilize advanced imaging interpretation tools(AI) (Brainomix, Rapid, Viz)
- Establish a direct to CT and tele-cart setup protocol.
- Establish a process for telestroke neurologist to contact receiving facility/NIR MD.

# BEST PRACTICES CONT...

- Establish one process when on-site and teleneurology vendor cover different shifts.
- Televideo provider must document in the EHR
- Wifi Connectivity Mapping - designate areas for video evaluation
- NIHSS Certified RNs
- Telepresenter training for bedside staff Imaging shared with receiving hospital within 10 min of transfer request
- DIDO for acute stroke requiring transfer within 120 min
- Multidisciplinary Collaboration- Establish collaboration between neurologists, emergency room staff, radiologists, and other relevant healthcare professionals to include process and metric data sharing.
- Standardized Protocols and Guidelines- Develop and implement standardized protocols and guidelines for telestroke assessments, diagnosis, and treatment. Consistency in procedures helps ensure quality care.

# PHASE II

Education Q2 and Q3:

Current Telestroke Programs

Hospitals not using Telestroke



THANK YOU

[BRANDEN@SEVARO.COM](mailto:BRANDEN@SEVARO.COM)

# Stroke Smart Workgroup

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AMY SWIERCZEWSKI, ASSISTANT DIRECTOR OF PROGRAMS, MSVF

KATHRYN FUNK, AGACNP-BC, MSN-RN, SCRNP, CNRN, STROKE REGISTRY COORDINATOR, VDH



# Stroke Smart Workgroup Members

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## **Kwikpoint | Stroke Smart Virginia**

Alan Stillman

## **Medical Society of Virginia Foundation**

Jennifer Joss

Amy Swierczewski

## **Virginia Department of Health**

Kathryn Funk

Bethany McCunn

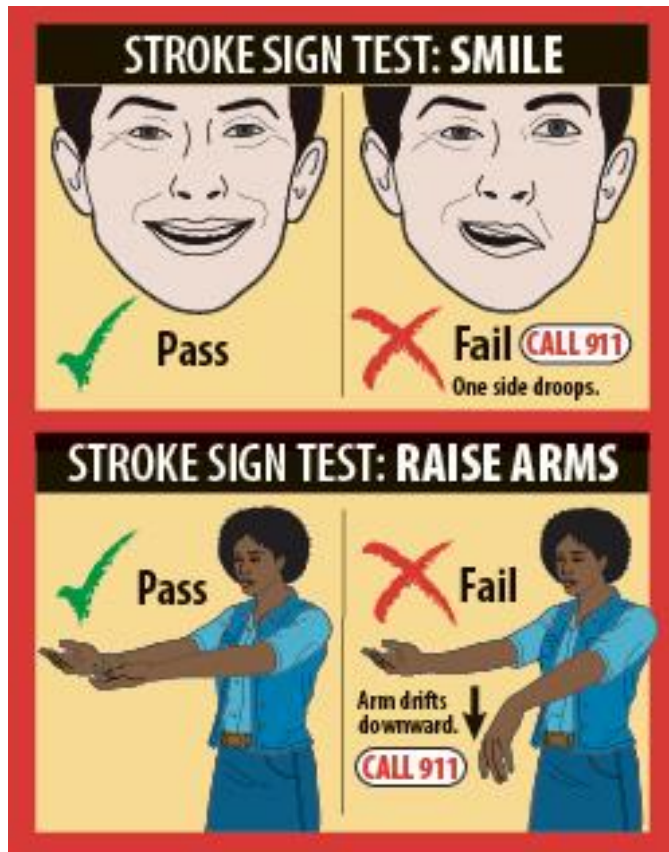
Anne McMillan

## **Virginia Hospital and Healthcare Association**

Kristie Burnette

# Stroke Smart – Objective

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Reduce pre-hospital delay and increase timely treatment of strokes

# Stroke Smart Workgroup: Focus Areas

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**Facilitate implementation of Stroke Smart Medical Practice (SSMP) through collecting and sharing resources**

Update the VDH Stroke Smart website and use it as the central repository for materials that can be used in implementation



**Create a way to recognize practices who have implemented some or all of the (5) SSMP actions**

**Collect data** of who has implemented SSMP and how

**(Publicly) Recognize** practices who have implemented; motivate further action

**Identify “best practices”**– collect what “works”

**Share and Inform** to those who want to adopt



Resources

How to Spot a Stroke- 3-Minute Video

Magnets & Wallet Cards

Data

Virginia Stroke System  
Force

Virginia Stroke Care Quality Initiative  
Advisory Group

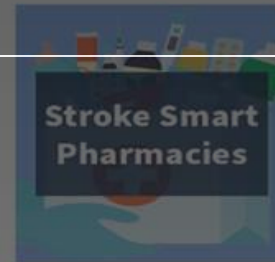
Virginia Stroke Coordinators  
Consortium

VDH Stroke Team

Contact Us

Email this page

# Sneak Peek: Updated VDH Stroke Smart Website



Coming Soon!

Coming Soon!

# Stroke Smart Medical Practice Recognition

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## Purpose:

- 1) **Collect data** from medical practices who implemented SSMP (what and how)
- 2) **(Publicly) Recognize** practices who have implemented; motivate further action
- 3) **Identify “best practices”**– collect information on what is working, and good practices/tools used
- 4) **Share and Inform** to assist interested practices in adopting initiative



# Stroke Smart Medical Practice Actions\*

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*Goals: Don't schedule appointments for people having a stroke and provide effective education on stroke signs and importance of calling 911*

1. Train office staff to spot strokes and follow practice protocol if a stroke is suspected
2. Ensure Stroke Smart education and materials are accessible to all patients
3. Identify high risk patients and provide targeted Stroke Smart education
4. Incorporate Stroke Smart script in phone system recordings
5. Track metrics on Stroke Smart program activities



*\* Approved by VSSTF January, 2023*

# SSMP Recognition – Overall (Proposed) Process



- 1) (4) Levels of Recognition are available:
  - a. Champion (implemented 1 action)
  - b. Silver (implemented 2 actions)
  - c. Gold (implemented 3 actions)
  - d. Platinum (implemented 4 or more actions)

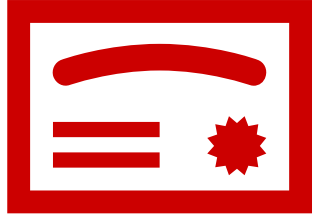


- 2) Online application for practice to select level, self-report which of (5) actions they have taken and provide information on “how”

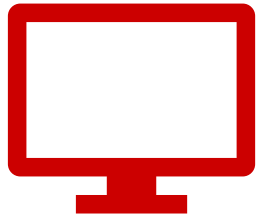


- 3) Working team reviews submissions: 1x/month
  - a. Determine if criteria was met
  - b. Provide any feedback

## Recognition Proposed Process Cont'd :



4) Issue certificate (electronically)



5) Recognize practices on VDH Stroke Smart website



6) Provide debrief of activity to VSSTF (minimum 1x per year)

# Online Application:

## Stroke Smart Medical Practice Recognition Submission Form

Page 1

Thank you for your interest in receiving Stroke Smart Medical Practice Recognition.

There are four (4) levels of Stroke Smart Recognition:

Stroke Smart Champion

Participant has implemented and consistently practices (1) element of the Stroke Smart Medical Practice criteria Silver Level

Participant has implemented and consistently practices (2) elements of the Stroke Smart Medical Practice criteria Gold Level

Participant has Implemented and consistently practices (3) elements of the Stroke Smart Medical Practice criteria Platinum Level

Participant has Implemented and consistently practices (4) or more elements of the Stroke Smart Medical Practice criteria The elements of the Stroke Smart Medical Practice Criteria are:

Train office staff to spot strokes and follow the practice protocol if a stroke is suspected (suggested: annually). Ensure Stroke Smart education and materials are accessible to all patients (i.e., wallet cards, magnets, posters, videos) Identify high risk patients and provide (intentional) education and materials Incorporate Stroke Smart script in phone system recordings Track metrics on Stroke Smart program activities Please complete the survey to submit your site for recognition.

Our practice would like to apply for the following level of Stroke Smart Medical Practice Recognition:

- Stroke Smart Champion (one element)
- Stroke Smart Silver Level (two elements)
- Stroke Smart Gold Level (three elements)
- Stroke Smart Platinum Level (four or more elements)

Check the element(s) of the Stroke Smart Medical

- 1. Train office staff to spot strokes and follow

# Recognition Application Process:



1. Radio Button link to be on VDH Stroke Smart Medical Practice Page

Recognize Your Stroke Smart Medical Practice



2. Practice would select level they are applying for (Champion, Silver, Gold, Platinum) based on # of criteria implemented



3. Basic information on implementation asked (i.e. type of staff trained, total #, what materials did you distribute, how did you distribute materials, etc.)



4. Practice can upload photos or samples of materials



5. Feedback requested on what worked well, needs improvement, general comments



6. Practice invited to share a “success story”

# Team Review:



Workgroup would assess application and make determination if practice met criteria (subjective) and award a level



Feedback given on application and certificate sent via email



Updates to website (listing practice and level) would be requested



Future: share “success stories”



Stroke  
Smart

VIRGINIA

2024

# Virginia Stroke Smart Medical Practice CHAMPION ACHIEVEMENT

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In recognition of your efforts to stop strokes and save lives.



Signature \_\_\_\_\_



Stroke  
Smart

**VIRGINIA**

2024

# Virginia Stroke Smart Medical Practice SILVER ACHIEVEMENT

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In recognition of your efforts to stop strokes and save lives.



Signature \_\_\_\_\_



Pre  
info

Stroke  
Smart

VIRGINIA

2024

# Virginia Stroke Smart Medical Practice GOLD ACHIEVEMENT

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In recognition of your efforts to stop strokes and save lives.



Signature \_\_\_\_\_



Stroke  
Smart

**VIRGINIA**

2024

# Virginia Stroke Smart Medical Practice PLATINUM ACHIEVEMENT

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In recognition of your efforts to stop strokes and save lives.



Signature \_\_\_\_\_



# Discussion/Questions Recognition?

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- Award Levels and Basic Criteria
- Application Form
- Certificates
- Overall Process

# Vote for Approval:

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- Award Levels and Basic Criteria
- Application Form
- Certificates
- Overall Process



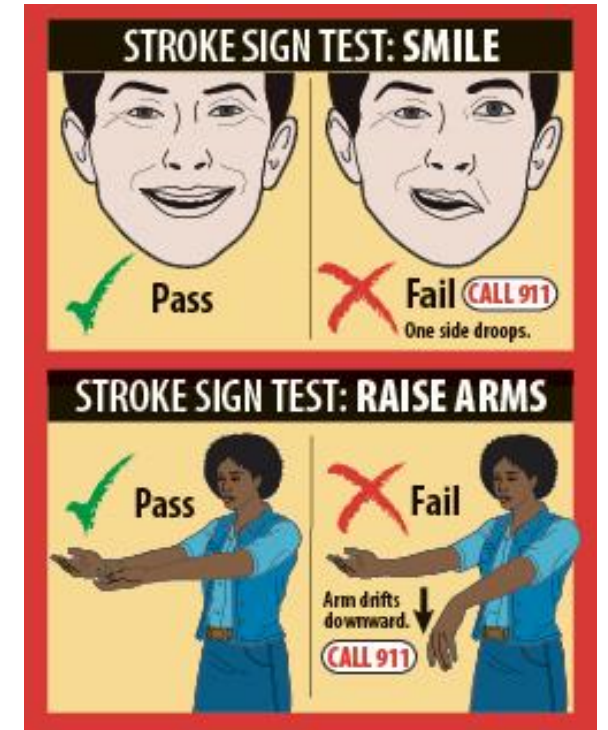


# Spot a Stroke-Stop a Stroke- Save a Life



# Stroke Smart Medical Practice – Elements\*

1. Train all office staff to spot strokes and follow the practice protocol if a stroke is suspected (suggested: annually)
2. Ensure *Stroke Smart* education and materials are accessible to all patients (i.e., wallet cards, magnets, posters, videos)
3. Identify high risk patients and provide (intentional) education and materials
4. Incorporate *Stroke Smart* script in phone system recordings (Suggested Element)
5. Track metrics on *Stroke Smart* program activities



\*Approved by Virginia Stroke System Task Force: Jan 2023



# Suggested Levels for Recognition:

## *Stroke Smart Champion*

- Participant has implemented and consistently practices **(1) element** of the Stroke Smart Medical Practice criteria

## *Silver Level:*

- Participant has implemented and consistently practices **(2) elements** of the Stroke Smart Medical Practice criteria

## *Gold Level:*

- Participant has implemented and consistently practices **(3) elements** of the Stroke Smart Medical Practice criteria

## *Platinum:*

- Participant has implemented and consistently practices **(4) or more elements** of the Stroke Smart Medical Practice criteria

# ZODIAC TRIAL

Stacie Stevens, VCU

# Lunch and Simulation Tours

# Rethinking Rehabilitation: Intensive ▶ Telerehabilitation to Maximize Recovery from Stroke

Kristin Nuckols, Imago Rehab

# EMS Blood Draw for Stroke Patients- Pros and Cons, Panel Discussion

Elizabeth Hart, Moderator

Sophea Booker, Pat Edwards, David Long, Melanie Winningham, Speakers

# EMS Blood Draw for Stroke Patients

# Performance Improvement Background

- Bon Secours Maryview Medical Center (MMC) is a 346-bed Primary Stroke Center located in Portsmouth, VA.
- MMC serves a community of 280,000 and has approximately 400 stroke patients each year.
- 70% of the acute stroke patients seen in the ED arrive via Portsmouth Fire, Rescue, and Emergency Services (PFRES).
- Maryview had an average DTN time of 70 minutes in 2014.
- Process gaps found in the ED included delays in care when transferring patients to ED beds and drawing blood in a timely manner.

# Goal

1. Improve overall care of Code S/stroke patients through a streamlined process change
2. Decrease the time Door to Lab to reduce Door to tPA/intervention times
3. Improve treatment times and overall experience/outcome for the acute stroke patient



# 2015 Pilot Program Process

- Planning meeting in February 2015
- Worked with Lab/POC to have MEDIC ID# assigned
- Process Algorithm developed for EMS pre-hospital screen and lab draws
  - Placed in all PFRES ambulances
- Training will be provided to Super-Users who will train others
- Lab draw packets will be provided to PFRES EMS and restocked as needed
- Feedback will be provided to PFRES by MMC Stroke Coordinator
- Feedback will be provided by Lab for any problems with blood draw
- Go Live Blood Draws set for April 1, 2015

## Pre-Hospital Stroke Pilot Program

EMS on scene with possible CVA with last seen normal  $\leq$  8 hours

### EMS protocol based CVA evaluation and stabilization with IV access

Prior to starting IV fluids draw 5 tubes of blood in this order

- Red, orange, blue, green, then purple
- Each tube needs to be filled at least  $\frac{3}{4}$  full
- Place a pre printed label with tech code **5130** on each tube
- Write the patient's name, drawer's initials, date, and time of the draw then place the blood back in the biohazard bag with the green label

ED Notification of Code "S" with rapid transport. STAT assessment by ED Physician, RN, Tech upon arrival to the door

- EMS Provider 2 validates the blood with the ED Tech/RN
- ED Tech hand delivers the blood to the lab

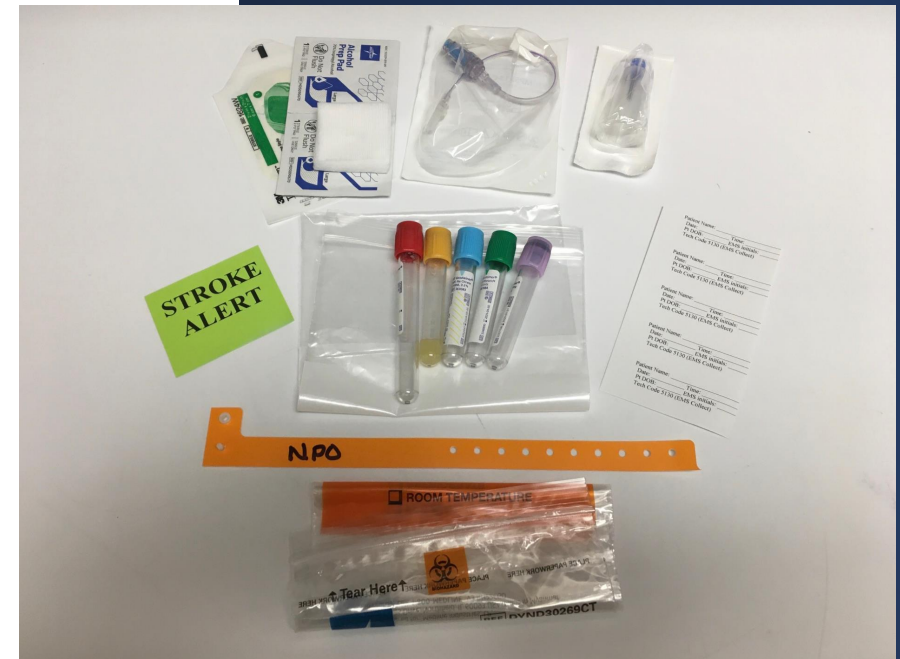
- EMS Provider 2 arrives the patient with the unit secretary
- Unit Secretary activates tele neurology consultation
- ED RN and Physician place CT and lab orders

- EMS Provider 1 transports the patient to CT with RN on the EMS monitor
- 2nd ED RN follows with ED stretcher and weighs the patient after CT

Transport to ED room and proceed with standard Code "S" care

# Training & Support

- PFRES asked for Volunteers for Super Users
  - Hoped for 5 but 15 EMS Super-users volunteered
  - Had 3 training sessions in March 2015
- EMS Super-users trained additional 200 PFRES personnel





**STROKE  
ALERT**



Patient Name: \_\_\_\_\_ Time: \_\_\_\_\_  
Date: \_\_\_\_\_ EMS initials: \_\_\_\_\_  
Pt DOB: \_\_\_\_\_  
Tech Code 5130 (EMS Collect)

Patient Name: \_\_\_\_\_ Time: \_\_\_\_\_  
Date: \_\_\_\_\_ EMS initials: \_\_\_\_\_  
Pt DOB: \_\_\_\_\_  
Tech Code 5130 (EMS Collect)

Patient Name: \_\_\_\_\_ Time: \_\_\_\_\_  
Date: \_\_\_\_\_ EMS initials: \_\_\_\_\_  
Pt DOB: \_\_\_\_\_  
Tech Code 5130 (EMS Collect)

Patient Name: \_\_\_\_\_ Time: \_\_\_\_\_  
Date: \_\_\_\_\_ EMS initials: \_\_\_\_\_  
Pt DOB: \_\_\_\_\_  
Tech Code 5130 (EMS Collect)

**NPO**





# 2015 Results for Lab Times

Average blood arrival in Lab times									
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
Avg Lab Received	0:19	0:23	:20						
With EMS	n/a	n/a	n/a	0:10	0:10	0:07	0:07	0:11	0:12
Without EMS				0:19	0:14	0:19	0:20	0:21	0:23
Difference				0:09	0:04	0:12	0:13	0:10	0:11
<b>% of difference</b>				<b>47%</b>	<b>29%</b>	<b>63%</b>	<b>65%</b>	<b>48%</b>	<b>48%</b>

**6 Month Average:**  
**With EMS: 9 min**  
**Without EMS: 19 min**





Bon Secours  
Maryview Medical  
Center  
2022-2023 EMS  
Blood Draw and CT  
Data

With EMS Blood Draw

- Door to CT Average – 14.63 minutes
- Door to Decision Average – 24.27 minutes
- Arrival to Result Average – **26.24 minutes**

Without EMS Blood Draw

- Door to CT Average – 31.72 minutes
- Door to Decision Average – 33.39 minutes
- Arrival to Result Average – **58.96 minutes**

Questions?



# Coverdell Re-Abstraction Process & Results

Allie Lundberg, MPH - Stroke Epidemiologist

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[stroke@vdh.virginia.gov](mailto:stroke@vdh.virginia.gov)

# Purpose

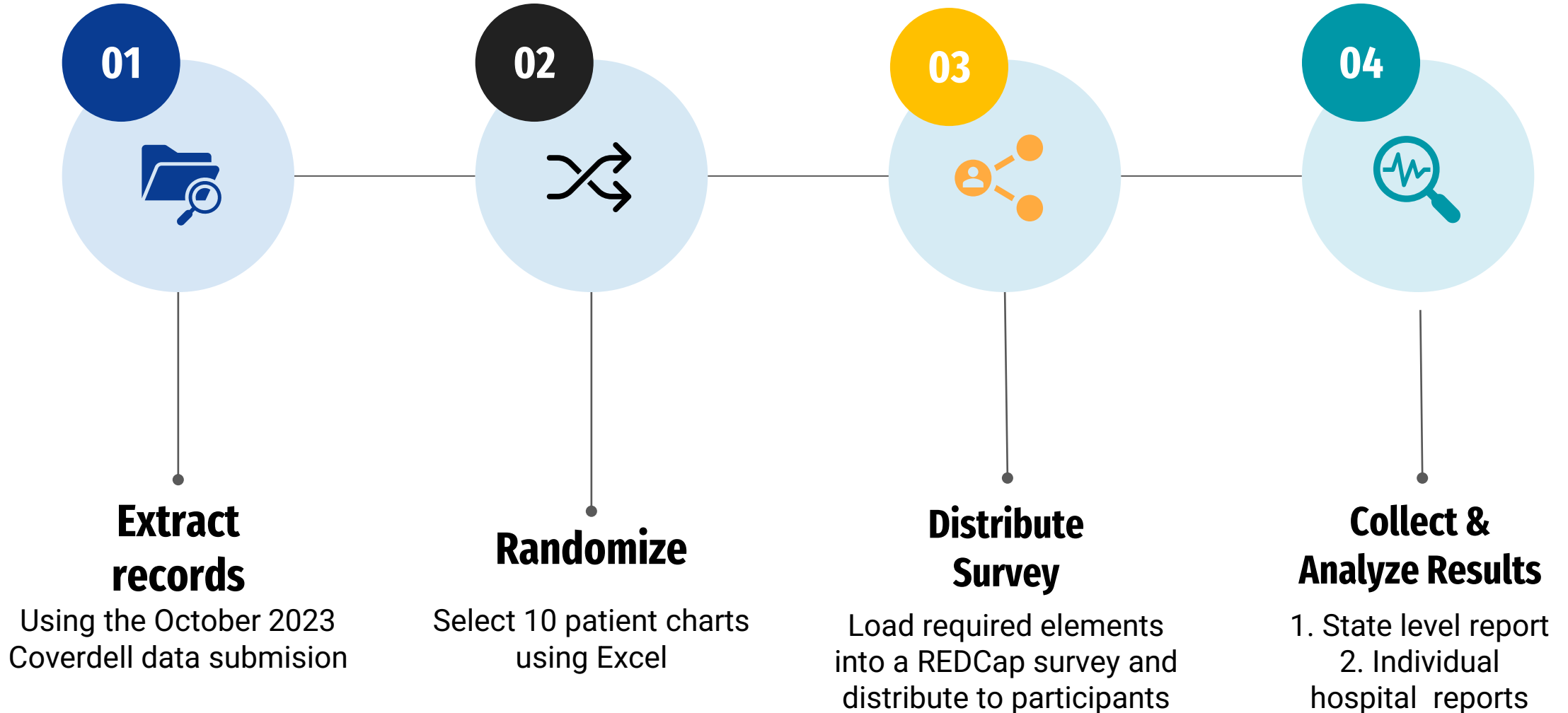
Re-abstraction of patient medical records or charts assists in the assessment of data coding quality and completeness.

This project included hospitals who have submitted data through Virginia's current Coverdell Stroke project.

# Why is re-abstraction important?

1. **Ensure patient data is accurate and reliable**
  - Reduce errors and adverse events affecting patient safety
  - Inaccurate data could restrict health data sharing
  - Inaccurate data could complicate clinical research
2. **Stay compliant**
  - Needed for certification, accreditation, etc.
3. **Initiate quality improvement**
  - Create improvement projects to monitor and improve performance metrics

# Process



# Data Elements Collected

1. Age
2. Gender
3. Race and Ethnicity
4. Date of Arrival at Hospital
5. Time of Arrival at Hospital
6. Date of Hospital Admission
7. Telestroke consultation performance
8. Brain imaging performance
9. Date and Time brain imaging first initiated at your hospital
10. Last known well date and time
11. NIH Stroke Scale performance
12. If performed, first NIH Stroke Scale total score
13. Was IV thrombolytic initiation
17. Was a dysphagia screen performed before administration of any PO medication?
18. Patient discharge date
19. Principal discharge ICD-10-CM code
20. Clinical diagnosis related to stroke that was ultimately responsible for this admission
21. Discharge disposition

# Re-Abstraction Survey

Distributed online survey on December 1, 2023 with a targeted completion date of January 31, 2024.

Requested: 44 hospitals

Received: 35 hospitals // 339 total records

The screenshot shows the VDH logo at the top left and a "Resize font" control at the top right. The title is "Coverdell Year 1 Re-abstraction". The main text explains that VDH is requesting assistance with re-abstracting stroke records for a CDC grant. It provides instructions on using patient IDs and completing survey fields. A deadline of January 31, 2023, is mentioned. Contact information for the VDH Stroke Team is provided at the bottom. The form includes two input fields: "Hospital Name" (a dropdown menu) and "Abstractor Name" (a text box), both with a red asterisk indicating they are required.

**VDH** VIRGINIA  
DEPARTMENT  
OF HEALTH

Resize font:

### Coverdell Year 1 Re-abstraction

The Virginia Department of Health (VDH) is requesting your assistance with performing a re-abstraction of your facility's stroke records as a requirement for VDH's awarded CDC Paul Coverdell Acute Stroke Grant and will assist in meeting your certification requirements of inter-rater reliability.

Please use the provided patient ID's (found in a separate email) and re-abstract the following data fields into this survey. Please complete each survey field with the information found in the patient's medical record, not in your stroke logs or *Get With The Guidelines*. All de-identified data entered in this survey will be submitted securely to VDH and will follow all applicable confidentiality policies required by Virginia state agencies.

Please submit your re-abstraction results into this survey by January 31, 2023. We will be providing a report by the end of February comparing your submitted data to the information obtained from this abstraction.

Thank you for your commitment to improving stroke care. If you have any questions, please contact the VDH Stroke Team at: [stroke@vdh.virginia.gov](mailto:stroke@vdh.virginia.gov).

**Hospital Name**

\* must provide value

**Abstractor Name**

\* must provide value  
First and Last Name

# Participants

(new participants are in **bold**)

**Augusta Health**

**Bon Secours Mary Immaculate**

**Bon Secours Maryview**

Bon Secours Memorial Regional

Bon Secours Rappahannock

Bon Secours Richmond

Bon Secours St. Francis

Bon Secours St. Mary's

Bon Secours Southside

**Carillion Roanoke Memorial**

Centra Lynchburg

**Chesapeake Regional**

**Fauquier Hospital**

**HCA Chippenham Johnston Willis**

Inova Alexandria

Inova Fair Oaks

Inova Fairfax

**Inova Loudoun**

**Inova Mount Vernon**

**Riverside Shore**

Riverside Walter Reed

Sentara Care Plex

Sentara Halifax

Sentara Leigh

Sentara Martha Jefferson

Sentara Norfolk

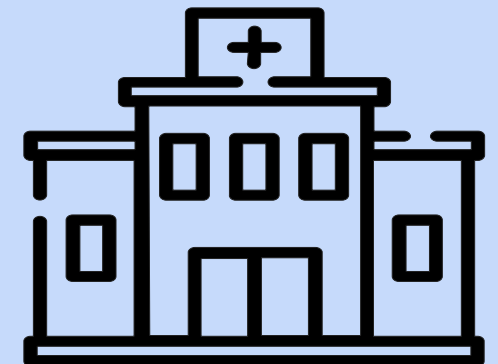
Sentara Virginia Beach

UVA Hospital

VCU Community Memorial

VCU Health

**Virginia Hospital Center**



# Comparison from 2023 Re-Abstraction Project

- Number of participating hospitals:  
27 -> **35**
- Number of records re-abstracted:  
240 -> **339**
- Number of discrepancies:  
1094 (14.7%) -> **559 (7.5%)**



# Summary Results

## Demographics

Total number of records = 339



### Age

Number matched: 332  
Percent matched: 97.9%



### Gender

Number matched: 331  
Percent matched: 97.6%



### Race and Ethnicity

Number matched: 2,355  
Percent matched: 99.2% (+1.1%)

# Summary Results

## Hospital Arrival & Admission

Total number of records = 339

### Date of Arrival at Hospital

Number matched: 339

Percent matched: 100% (+2.9%)

### Time of Arrival at Hospital

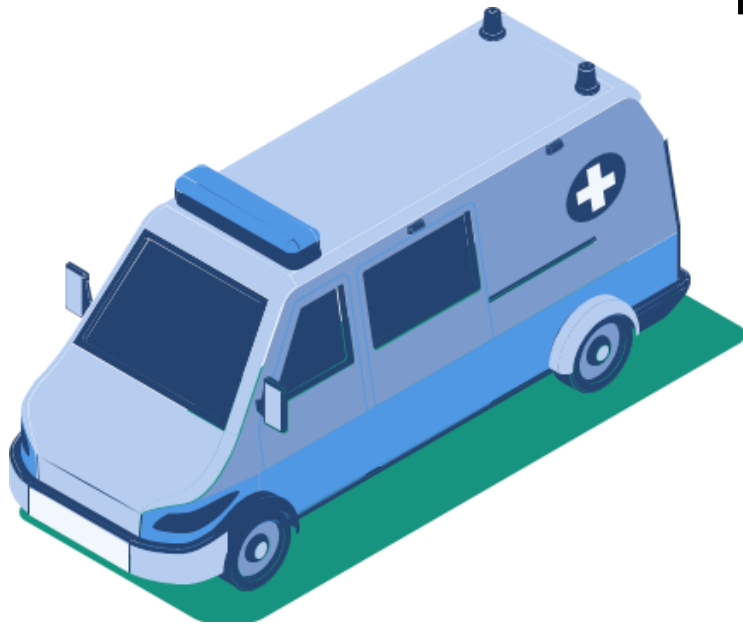
Number matched: 284

Percent matched: 83.8% (-5.4%)

### Date of Hospital Admission

Number matched: 309

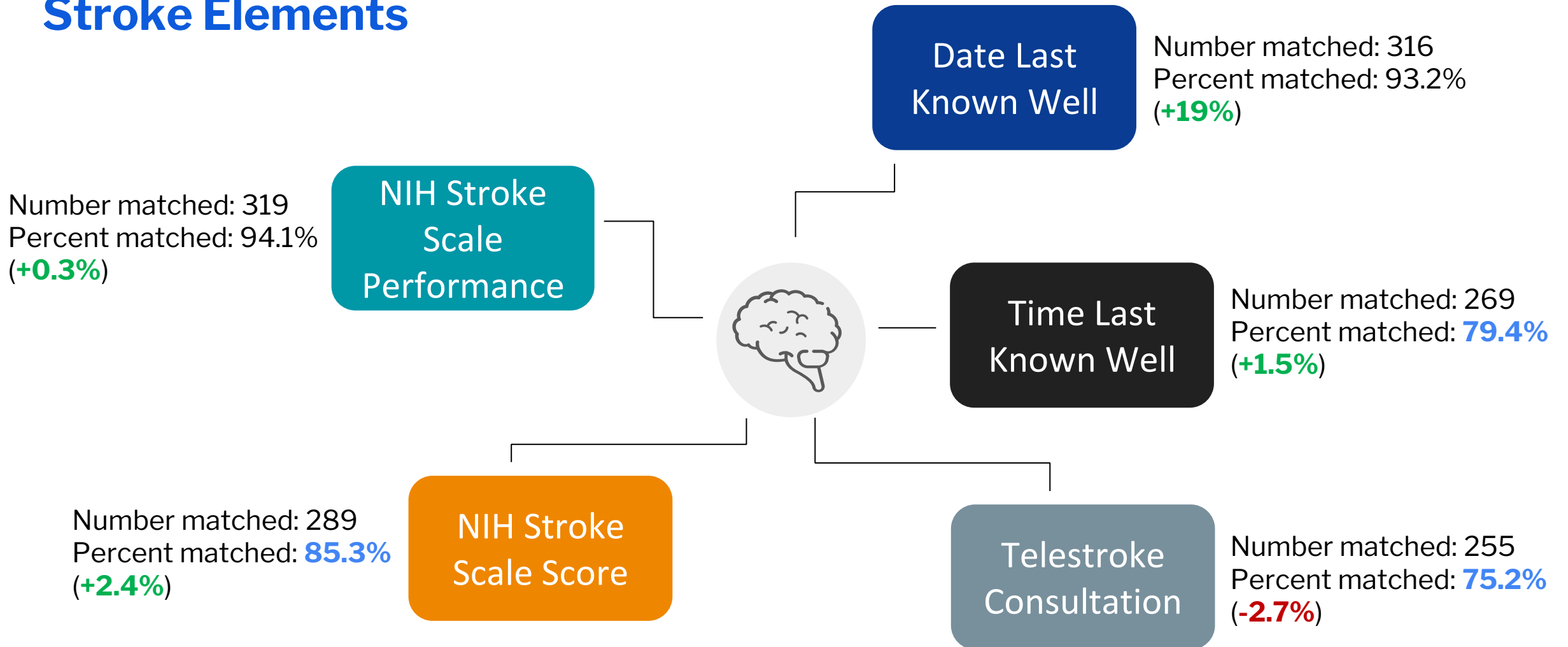
Percent matched: 91.2% (+21.3%)



# Summary Results

## Stroke Elements

Total number of records = 339



# Summary Results

## Brain Imaging

Total number of records = 339

### Was brain imaging done?

Number matched: 304

Percent matched: **89.7%** (-5.3%)

### Date of Brain Imaging at Hospital

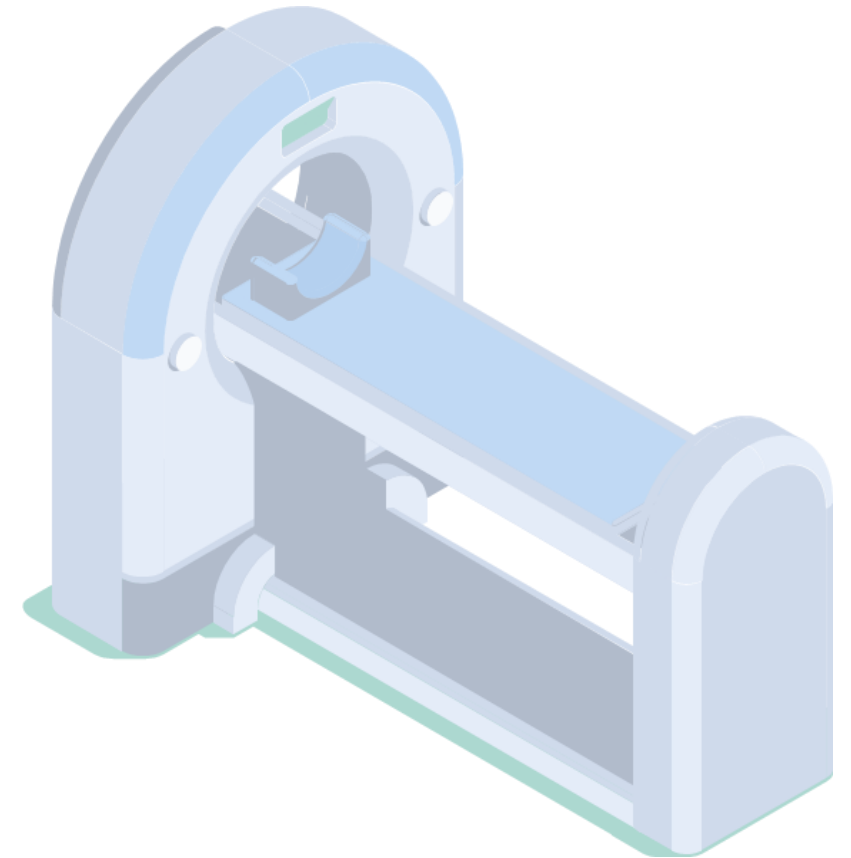
Number matched: 331

Percent matched: 97.6% (+5.5%)

### Time of Brain Imaging at Hospital

Number matched: 233

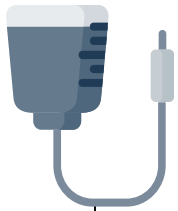
Percent matched: **68.7%** (-16.3%)



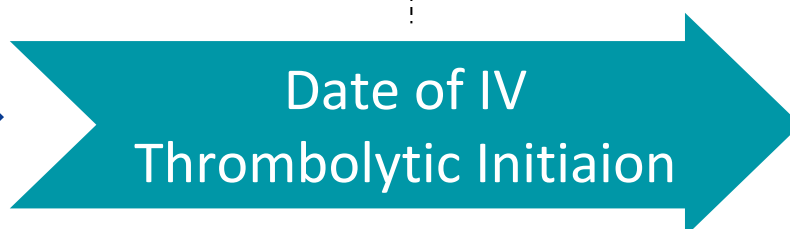
# Summary Results

## IV Thrombolytic Initiation

Total number of records = 339



Number matched: 338  
Percent matched: 99.7% (+4.7%)



Number matched: 338  
Percent matched: 99.7% (+14.7%)

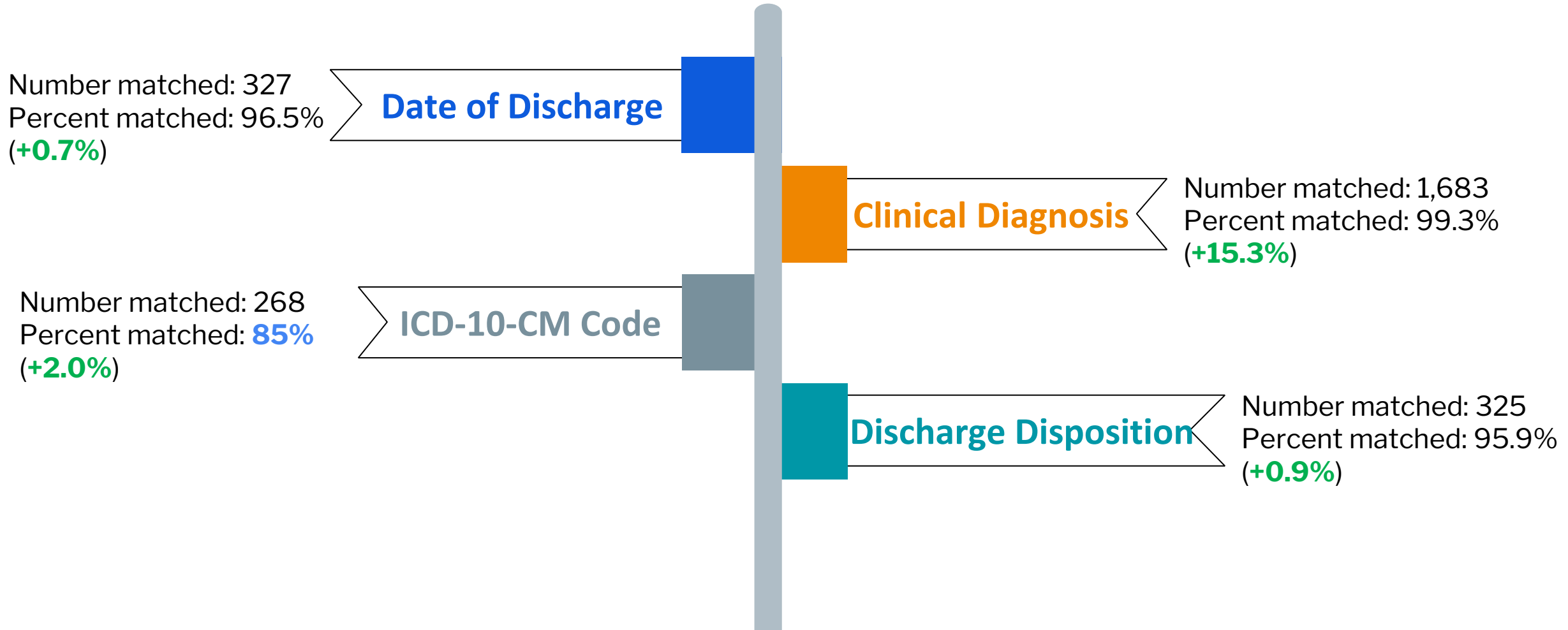


Number matched: 338  
Percent matched: 99.7% (+22.6%)

# Summary Results

## Discharge

Total number of records = 339



# 2024 Hospital Stroke Inventory Survey

- Survey is open and has been sent via email to stroke coordinators 4/16.
- Survey is due and **will close May 10<sup>th</sup>** (11:59pm).
- Please submit **one** survey for **each** facility and/or free-standing emergency department you oversee. Please allocate 15-20 minutes for completing the survey per site.

# Virginia Stroke Registry Update

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- Stroke Registry continues to be built and tested through vendor.
- VDH will not have open calls for beta testers. If beta testers are needed, VDH will reach out to select hospitals directly.
- VDH Stroke Team is obtaining GWTG SuperUser access (TBD) – please be on the lookout for data sharing contracts.



# Questions?

**For further questions, please contact:  
[Stroke@vdh.virginia.gov](mailto:Stroke@vdh.virginia.gov)**

# VSSTF Final Remarks and Wrap Up

*VSSTF Co-Chairs: Melanie Winningham, MD,  
and David Long, MA, NRP,*

## ▶ Next Meeting Dates Schedule:

- ▶ July 19, 2024, Maryview Medical Center, Portsmouth, VA
- ▶ October 18, 2024, in Richmond, Site TBD

# Virginia Stroke Coordinators Consortium

April 19, 2024

Mandi Zemaïduk, Centra Health, Lynchburg

Elizabeth Hart LewisGale Hospital, Salem