



Stroke Care Committee Meeting
 Thursday, August 20, 2024, 1:00 PM – 3:00 PM
 9616 Micron Ave. Suite 900, Sacramento, CA. 95827
 Conference Room 1

Facilitators: Gregory Kann, M.D. EMS Agency Medical Director
 Minutes: Sydney Freer, EMS Coordinator

ITEM	Details (Key facts, Questions, Concerns)	Action Items/Decision
Welcome and Introductions	Meeting start time 1:00 pm	None
Approval of Minutes – May 21, 2024	Motion to Approve: Tressa Naik Second: Julie Carrington	None
Old Business	Discussion	Action Items/Decision
Stroke COMPASS Documentation	Dr. Kann: This is a study that we are looking to launch in the county which looks at large vessel occlusive strokes and the various prehospital LVO stroke assessment tools that can be used. We are working exhaustively, and I appreciate Julie Carrington in helping us, putting together a tool that will allow us to document various aspects of a stroke scale to assess a number of LVO tools. This will give us Sacramento County based data on the utility of these tools and the identification of LVOs in the field. After the documentation tool is complete, we will be moving forward into testing it and then training.	



Data Review and Analysis	Discussion	Action Items/Decision
<p>EMS Stroke Data</p> <p>Hospital / EMS Data Comparison</p>	<p>Slide 5: Julie Carrington: Does that include pertinent negatives?</p> <p>Sydney Freer: This would be anyone that doesn't have it documented. So, if they document not applicable or unable to complete, then it would be there.</p> <p>Sydney Freer: This is the same data dive that I had done for 3Q of last year. This is now 1Q 2024 hospital data that we compared to the EMS data to look at what we are stroke alerting versus what is actually a stroke. We are planning on doing this for all of 2024. With the Stroke COMPASS study coming up we will be able to look at these numbers now and then see if there are improvements after the study / training is done.</p>	
Case Presentations	Discussion	Action Items/Decisions
<p>Mercy General Hospital</p> <p>Mercy Hospital Folsom</p> <p>Sutter Medical Center Sacramento</p>	<p>Emily Browne presented for MGH</p> <p>Dr. Jaspreet Mann and Kandis Dowd presented for SMCS</p>	



Round Table	Discussion	Action Items/ Decisions
	<p>Dr. Kann: One of the things that has come out of Sydney and Fred’s review is understanding that we are calling a lot of strokes, but we are missing a lot of hospital diagnoses of stroke. We are targeting November as an EMS Stroke Awareness month to focus in on stroke awareness and identification training. This will fit in nicely with Dr. Keenan’s stroke COMPASS study. The goal will be to bring our providers Stroke awareness and recognition up.</p> <p>Jeremy Veldstra: How many of the missed in the field are posterior strokes? Because those are the most difficult strokes to catch, so much so that we at UC Davis have the dizzy seven questions. If that is the case, maybe we focus our attention on posterior stroke recognition.</p> <p>Sydney Freer: My goal during this month will be to look at the PCRs more real time, read the narratives, get numbers from our hospital Stroke liaisons, and communicate back to the providers within a short turn around to provide immediate feedback and education to the providers.</p> <p>Brian Morr: If your hospital is up for a case presentation and the patient was brought by my paramedics, let me know and I will add the whole beginning for you.</p> <p>Dr. Kann: One of the things coming out of our revamped trauma meetings has been how valuable painting the picture of what the prehospital care looked like is.</p>	
Adjournment	Adjourned at 2:05 pm	<p>Next meeting: November 19, 2024 1 PM – 3 PM</p>



**Department of Health Services Emergency Medical Services Agency
Stroke Care Committee
2024 Case Presentation Rotation**

Date:	2/20/2024	5/21/2024	8/20/2024	11/19/2024
KHN		X		
KHR				X
KHS	X			
MGH			X	
MHF			X	
MHS				X
MSJ	X			
SMCS			X	
SRMC				X
UCD		X		

Stroke Liaisons										
Contacts	KHN	KHR	KHS	MGH	MHF	MHS	MSJ	SMCS	SRMC	UCD
Primary	Jason Murray	Michelle Arrovo	Sherrv Whitcomb, JD, MSN, RN CPHQ	Emily Browne		Max Naximko, MSN, RN, SCRNI	Irina Rebello	Kandis Dowd	Jennifer Bingham	Kimberly Brink
Secondary	Jonathan Hartman MD					Anu Locricchio	Richard Otley, RN	Chase Childress	Patty McNamara	Dawn Warner
							Heidi Hollingsworth			

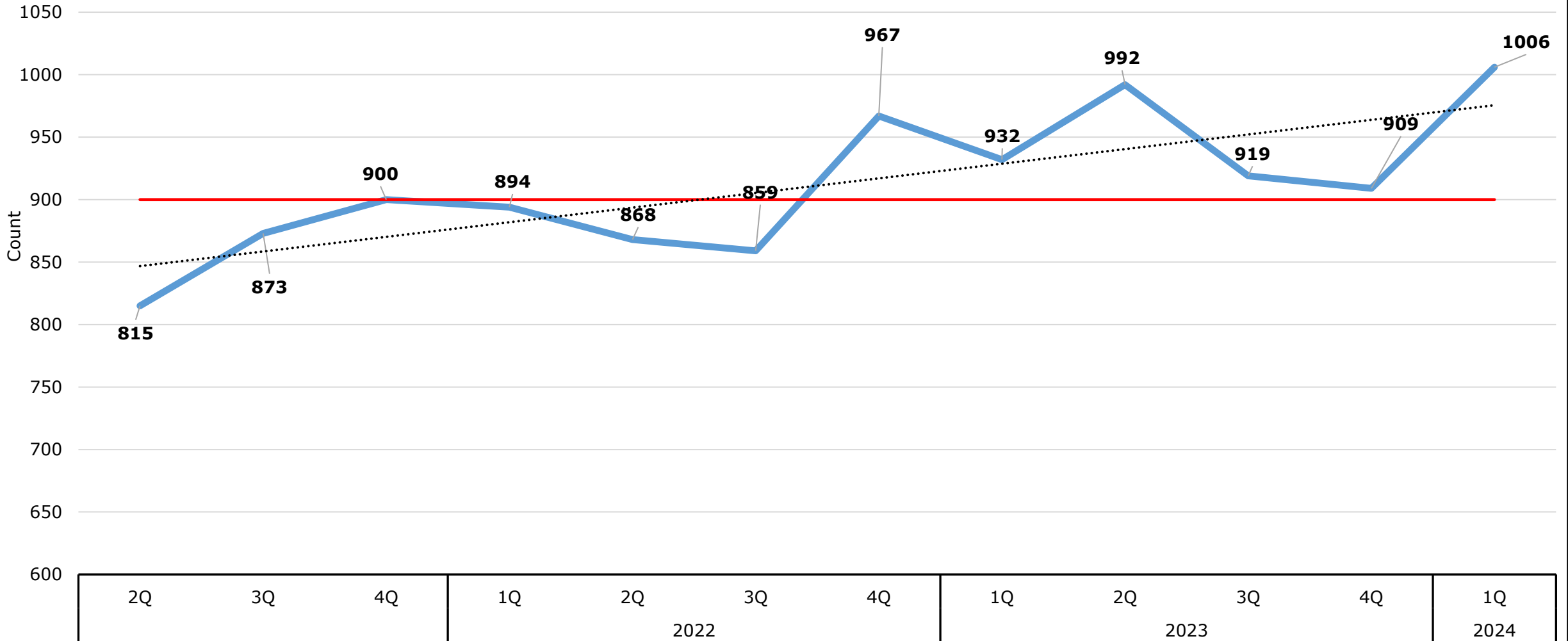
SCENE Calls (911-Response) – 1Quarter 2024	Incident Count	Percentages	Notes
Total ePCRs received	86,485	100%	All records
Responses (Emergency Primary Response Area)	60,516	69.97%	of total responses
Treated and Transported	33,415	38.64%	of 911 responses transported to the ED
Primary Impressions of Treated and Transported -911-Response (Scene)	Incident Count	Percentages	
ALOC - (Not Hypoglycemia or Seizure) (R41.82)	1,140	3.41%	
Stroke / CVA / TIA (I63.9)	1,006	3.01%	
Sepsis (A41.9)	882	2.64%	
Patient Arrival for Stroke/ CVA/ TIA (I63.9)	Incident Count	Percentages	From ImageTrend Patient Registry (Hospital Data)
Private Vehicle	319	30.24%	
EMS from home/scene	433	41.04%	
Transfer From Another Hospital	291	27.58%	
Other /Unknown /Not Documented	12	1.14%	
Total Patient Count	1055	100%	

Stroke Dashboard - EMS Data

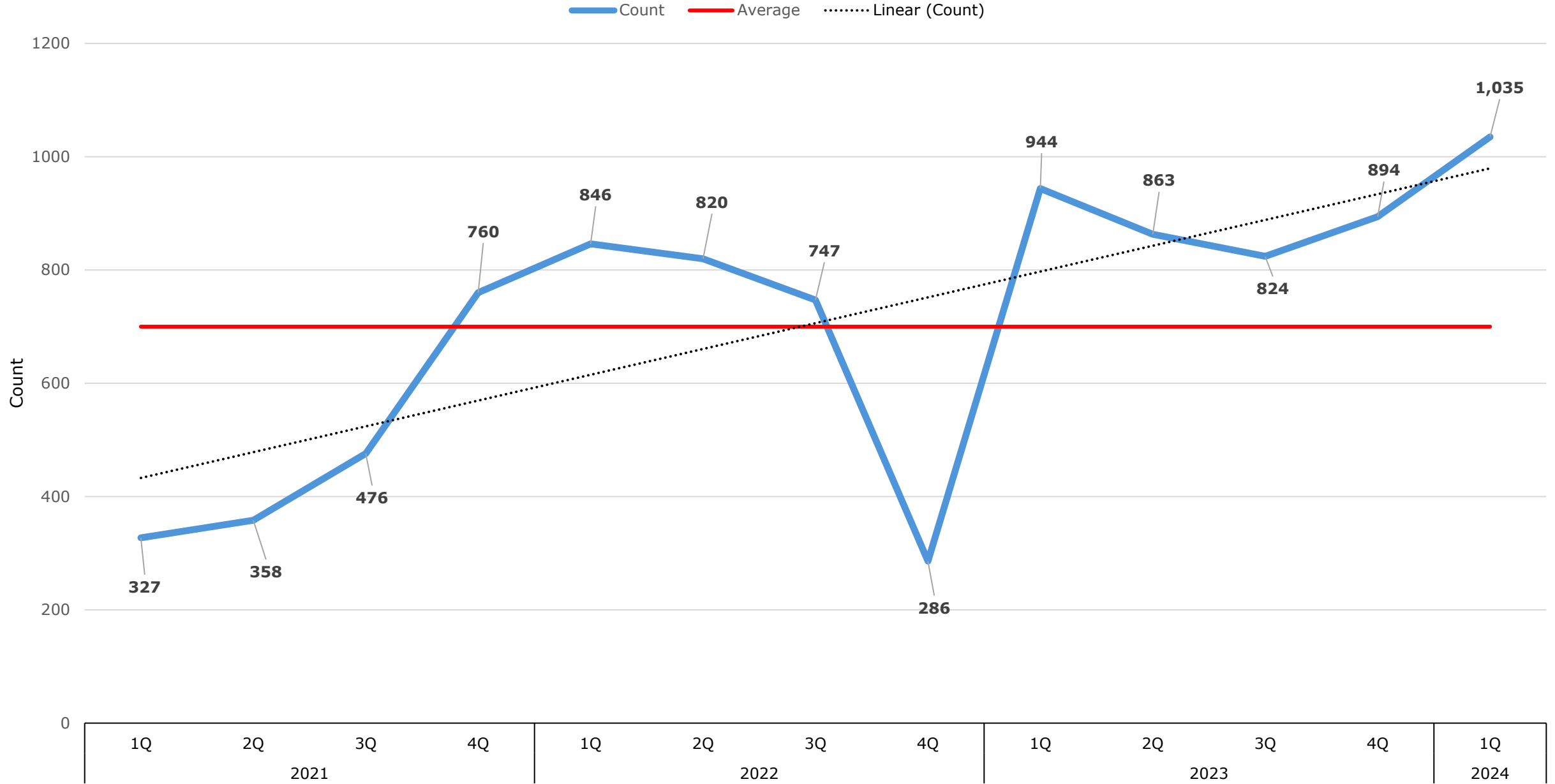
Stroke	System Total 2023 2Q	System Total 2023 3Q	System Total 2023 4Q	System Total 2024 1Q
Total transported patients with Primary impression of Stroke	992	919	909	1006
Number of patients with documented Stroke Screen	969	903	878	988
% of patients with documented Stroke Screen	97.68%	98.26%	96.59%	98.21%
Documented Glucose	958	875	863	968
% of documented Glucose	96.57%	95.21%	94.94%	96.22%
Patients with a Stroke pre-arrival notification	871	805	800	893
% of Stroke pre-arrival notification	87.80%	87.60%	88.00%	88.77%

Trend Count of Patients with Primary Impression of Stroke (EMS Data)

Count Average Linear (Count)

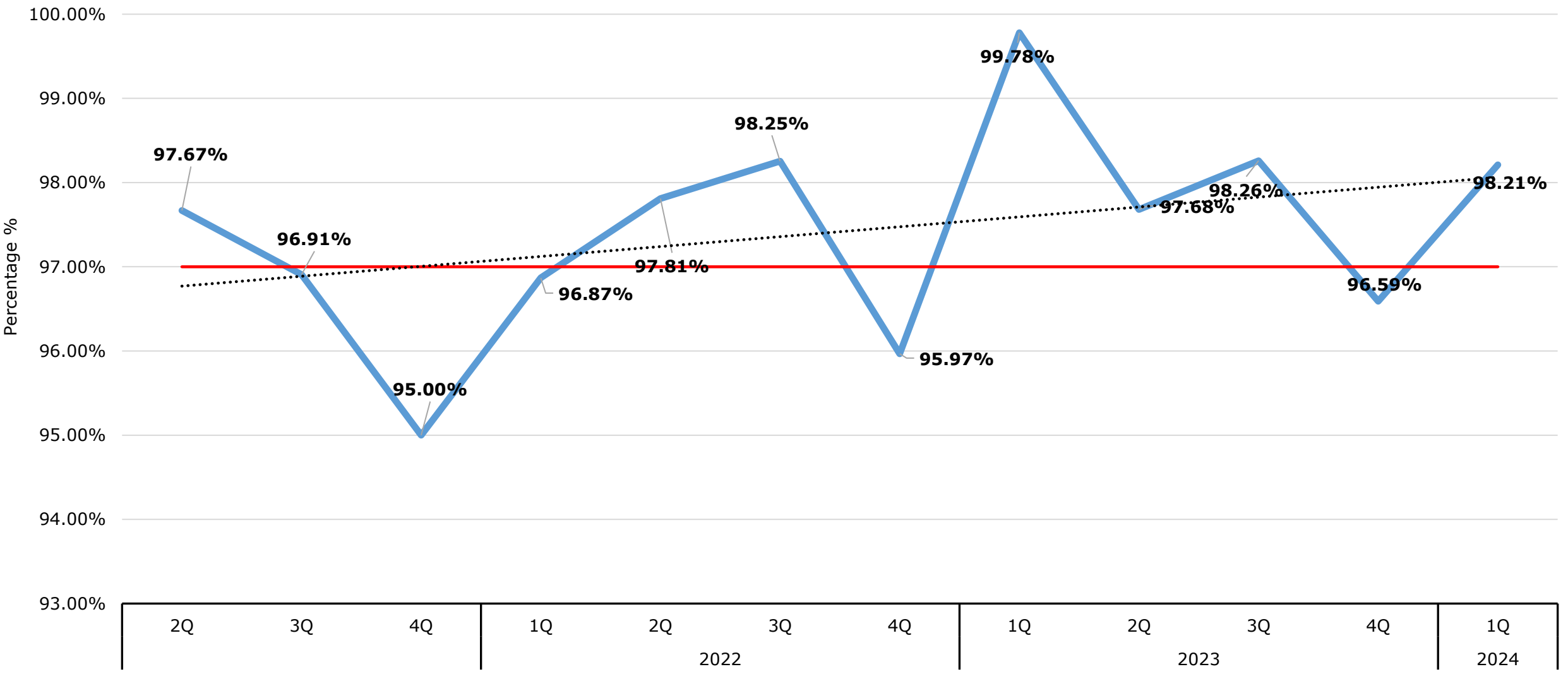


Trend Count of Patients with Final Diagnosis of Stroke (Hospital Data)



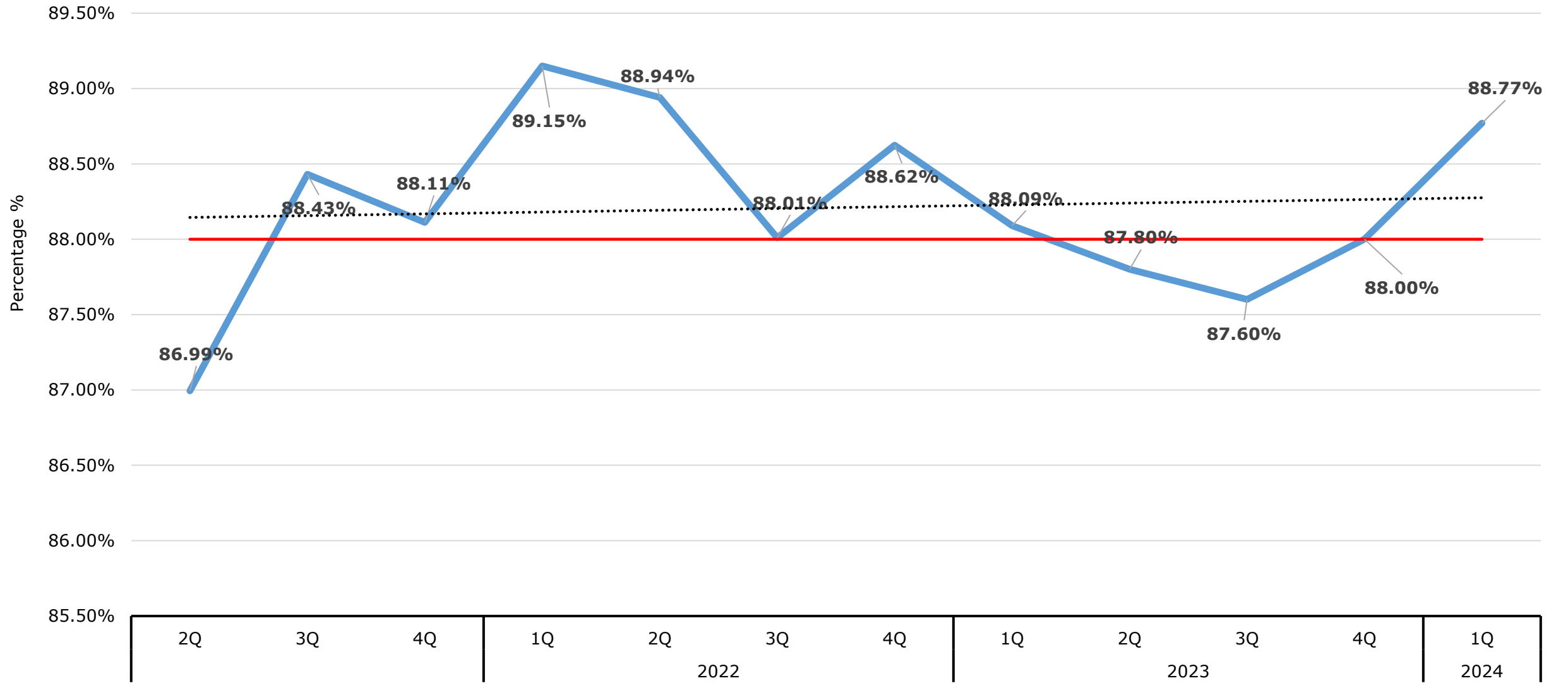
Percentage % Trend of Stroke Scales Performed on Patients with Primary Impression of Stroke

— Percentage%
 — Average
 ⋯ Linear (Percentage%)



Percentage % Trend of Stroke Alerts for Patients with a Primary Impression of Stroke

Percentage % Average Linear (Percentage %)



Stroke Primary Impression for Treated and Transported Patients - EMS Data

Hospital Name	2Q-2023	3Q-2023	4Q-2023	1Q-2024
KHR	56	69	51	56
KHN	153	157	153	147
KHS	208	167	178	173
MGH	49	47	45	63
MHF	76	51	52	55
MSJ	183	173	191	215
MHS	89	69	78	78
VAMC	0	0	0	0
SMCS	87	97	75	121
SRMC	30	25	22	31
UCD	60	63	61	62
OOA	1	1	3	5
Total	992	919	909	1006

Hospital / EMS Stroke Data

1Q 2024

Total Hospital Stroke Patients: 1043

Total Brought in by EMS: 458

Total EMS Stroke Alerts / Stroke Primary Impressions: 1006

*Arriving at out of county hospitals: 98

In-County EMS Stroke Alerts / Stroke Primary Impressions: 901

EMS patients with a Final Clinical Diagnosis of Stroke: 251 (= 27.86% of in-county EMS Stroke Alerts)

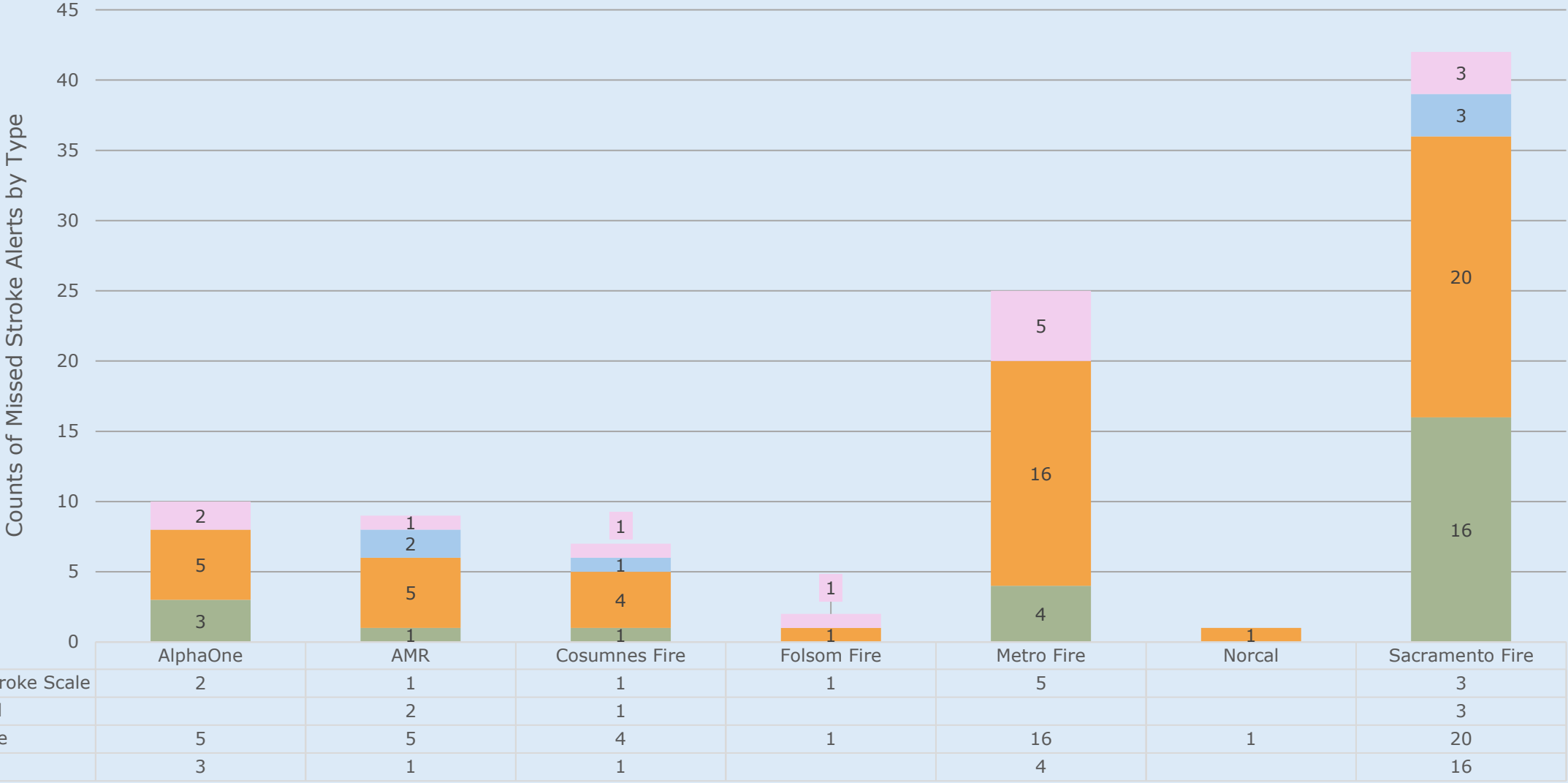
Hospital Stroke Calls	Count	Percentages
Total Hospital Stroke Patients	1043	100%
Brought in by EMS	458	43.91%
Of Patients Brought in by EMS	Count	Percentages
Stroke Alerted (or identified but care transferred)	255	55.68%
Blank / PCR Not Found	37	8.08%
Symptoms Greater than 24 Hours	14	3.06%
Missed in the Field (Not including Symptoms >24 hours	152	33.19%
Of Missed in the Field	Incident Count	Percentages
Chest Pain / Cardiac	5	3.29%
Seizure	3	1.97%
Traumatic Injury	7	4.61%
Unable to Perform Stroke Scale	13	8.55%
Possible Documentation Error	40	26.32%
Stroke Scale Negative	53	34.87%
Sepsis / Infection	1	0.66%
Symptoms but not Alerted	6	3.95%
No Stroke Scale	24	15.79%

Notable PCR Narrative Comments

- PT experiencing CVA symptoms: slurred speech, right arm and leg drift, AMS and has increased lethargy and slurred speech throughout the 30 minutes prior to EMS arrival. Staff state this is baseline. CVA exam by crew was negative and base told crew to alert.
- 72 y/o PT with Alzheimer's had ground level fall from wheelchair, no stroke scale was done, and PT was downgraded to BLS by ALS crew.
- PT with sporadic episodes of Aphasia was marked as CPSS negative and no alert was made. PT stated they were “having trouble finding words.”
- PT with sporadic episodes of Aphasia and R hand numbness was marked as CPSS negative. PT states they feel as if they are speaking gibberish.
- PT with slurred speech, L arm drift and L facial droop with no stroke alert.
- PT with confirmed POS CPSS, no mention of stroke alert in drop down or narrative.

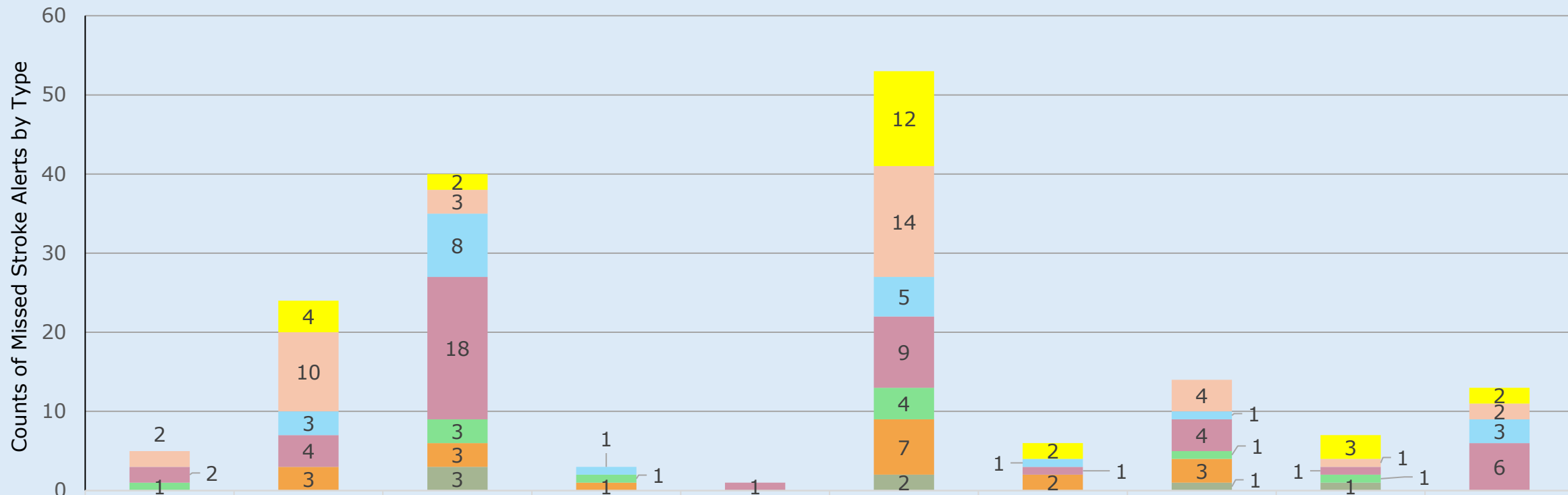
Missed Stroke Alerts – Per Agency

Reasons for Missed Stroke Alert - Per Agency



Missed Stroke Alerts – Per Hospital Destination

Missed Stroke Alert Reasons - Per Hospital



	Chest pain/Cardiac	No Stroke Scale	Possible Documentation Error	Seizure	Sepsis/Infection	Stroke Scale Negative	Pos CPSS Not Alerted	Symptoms Greater than 24 Hours	Traumatic Injury	Unable to Perform Stroke Scale
UCDMC		4	2			12	2		3	2
SMCS	2	10	3			14		4	1	2
MHS		3	8	1		5	1	1		3
MSJ	2	4	18		1	9	1	4	1	6
MHF	1		3	1		4		1	1	
MGH		3	3	1		7	2	3		
KHS			3			2		1	1	