



Stroke Care Committee Meeting
 Tuesday, May 17, 2022, 2:00 PM –4:00 PM
 9616 Micron Ave. Suite 900, Sacramento, CA. 95827
 Conference Room 1 and Zoom

Facilitators: Hernando Garzon, M.D. EMS Agency Medical Director
 Minutes: Kathy Ivy, EMS Specialist
 Meeting Attendees: X = Present

Agency	Representative	Present	Agency	Representative	Present
SCEMSA	Hernando Garzon, MD	X	UC Davis	Alex Schrick	X
SCEMSA	Ben Merin, EMS Coordinator	X	UC Davis	David Buettner, RN	X
SCEMSA	Dorthy Rodriguez, Specialist	X	UC Davis	Kimberly Brink, RN	X
SCEMSA	Kristin Bianco, Specialist	X	UC Davis	Kathleen Irwin	X
SCEMSA	Kathy Ivy, Specialist	X	UC Davis	Kwan Ng	X
SRFECC	Kevin Mackey, MD	X	Sutter Medical-R	Manoj Mittal, MD	X
Dignity Health-MHF	Reza Pirsaheli	X	Sutter Medical-R	Jennifer Bingham, RN	
Dignity Health-MHF	Octavian Pinteau, RN	X	Sutter Medical-S	Jennifer Denno, RN	X
Dignity Health	Irina Rebello, RN	X	Sutter Medical-R	Sonia Thompson, RN	X
Dignity Health	Richard Otley, RN	X	Sutter Medical-S	Chase Childress	X
Dignity Health-MSJ	Jeff Carl, RN	X	Sutter Medical-S	Lanette Wathen, RN	X
Dignity Health	Patricia Stiles, RN	X	Sutter Medical-R	Debbie Madding	X
Dignity Health	Anu Locriahio	X	Kaiser-S	Sherry Whitcomb	X
Dignity Health-MSJ	Raveca Pirttea	X	Kaiser-N	Cynthia Sinogui, RN	X
Sacramento Metro Fire	Brian Gonsalves	X	Kaiser-S	Richard Meidinger, RN	
Sacramento Fire Dept.	Brian Pedro	X	Kaiser-S	Jon Patane, MD	X
Cosumnes Fire	Julie Carrington		Kaiser-S	Jonathan Hartman, MD	
Folsom Fire	Mark Piacintini		Kaiser-S	Wendin Gulbransen, RN	X
AlphaOne Ambulance	Matthew Burrueal	X	Kaiser Roseville	Michelle Arroyo	X
AlphaOne Ambulance	Zack Whiting	X			



ITEM	Details (Key facts, Questions, Concerns)	Action Items/Decision
Welcome and Introductions	Via Zoom. Attendees typed names in the chatbox. In person-signed in	
Approval of Minutes – February 15, 2022	Motion to Approve: Debbie Madding, RN, Second: Raveca Pirttea, RN	APPROVED
Old Business	Discussion	Action Items/Decision
Pediatric Stroke Managment	Nothing prepared for this subject. Move to next meeting under old business.	Question asked in February Stroke meeting, meeting how pediatric stokes are handled system-wide. Add to old business for August meeting.
New Business	Discussion	Action Items/Decision
<ul style="list-style-type: none"> • Data uploads (duplicate issues)-Dorthy Rodriguez • LVO Screening Tool and Discussion of the Evidence Supporting bypass to Thrombectomy Capable Sites. 	<p>-Dorthy Rodriguez acknowledges everyone's work on data collection and is working with Mark Roberts on duplicate records.</p> <p>-Dr. Garzon-Subject of LVO and diverting to comprehensive centers. Dr. Mittal was delayed calling in due to an emergency at the hospital.</p> <p>-Sherry-6% of our patients are eligible for Thrombectomies.</p>	<p>Dr. Mittal logged in late due to Stroke activation and spoke about bypassing primary to LVO centers.</p> <p>-LVO Screening Tool and Discussion to Old Business for August meeting.</p>



	-Dr. Garzon- We will revisit this at the next meeting after everyone has a chance to read the article(s) Dr. Mittal sent out. Whatever the literature shows in other states the data here in Sacramento has to validate us doing bypass from primary to comprehensive stroke centers.	-Dr. Garzon forwarded the articles regarding LVOs to the medical directors in each LEMSA. -Dr. Garzon- prehospital stroke scale and does the data show bypassing primary stroke centers to go to LVO centers beneficial is what should be focused on.
Data Review and Analysis	Discussion	Action Items/Decision
Stoke Data	Data review by Dr. Garzon. <ul style="list-style-type: none"> • Stroke data • IFT (EMS calls only) • Stroke Core Measure • Stroke Dashboards • Stroke Primary Impressions • Hospital LVO status by EMS CPSS and Stroke Score Value 	PowerPoint attached to final minutes.
Case Presentations	Discussion	Action Items/Decisions
<ul style="list-style-type: none"> • Mercy Hospital Folsom • Methodist Hospital, Sacramento • UC Davis Medical Center 	<p>-UC Davis- Presenters: David Buettner, MS, RN, MICN, Kimberly Brink, BSN, RN Kwan Ng, MD, and Kevin Keenan, MD.</p> <p>-Mercy Folsom- Presenter(s): Octavian Pintevia.</p>	<p>SCEMSA to send out an email reminder that crews should either;</p> <ul style="list-style-type: none"> • Bring a family of DPOA with the patient to ER for stroke



	-Methodist Hospital, Sacramento- Push to next meeting.	<ul style="list-style-type: none"> • Get the information to give to ER regarding family/DPOA
Open Meeting Discussion Items	Discussion	Action Items/ Decisions
Closing and recap of any action items	<p>-Discussion around moving the Stroke meeting to 1:00 pm-2:30 pm, and STEMI meeting to 11:00 am-12:30 pm.</p> <p>-Kimberly Brink- We would like to partner with Fire Departments for stroke education.</p> <p>-Dr. Mittal-Stroke pre-alerts. Does EMS have technology so they can call and the stroke doctor can look at the patient using a mobile device?</p> <p>-Dr. Garzon:- Prehospital care is protocol driven. It is possible but how would they do it? Who do they call?</p> <p>-Dr. Mittal- Starting the conversation early with the patient saves time in the ER. Asking about the history, timelines, etc. delays the door to CT time.</p> <p>-Dr. Garzon- It would be a bit challenging for paramedics to keep track of who they should call, and when.</p> <p>-David Buettner-UC Davis ER is partnering with the Stroke program and discussing an app on a phone. UC Davis is taking the radio report along with the nurse's notes in the care point-device and we can send it</p>	<p>Move Stroke meeting time to 1 pm-2:30 pm.</p> <p>Brian Pedro, Sacramento City Fire Department, can be contacted for a stroke education partnership.</p>



	<p>straight to the team so they can start getting information before the patient arrives at the emergency department.</p> <p>-Dr. Garzon- There is an assembly bill that would streamline the implementation of a mobile CT scanner. A couple of pilot programs going on. I think telehealth can be done but needs to be talked out a lot more to assure it's getting done in a way that works for EMS and communications.</p> <p>-Dr. Mittal-What would be a good next step if we want to explore this further from your perspective?</p> <p>Dr. Garzon- I think the consensus from the different stroke programs is there and input from the neurologist on how this can work. How does it work if the tele-neurologist is different from the hospital they are going to?</p> <p>-Dr. Mittal- I will reach out to our partners across the system and put something together and send it to you.</p>	<p>Dr. Mittal to reach out to stroke partners and get back to Dr. Garzon.</p>
<p>Adjournment</p>	<p>3:50 PM</p>	<p>Next meeting: August 13, 2022</p>



Stroke Care Committee
2022 Case Presentation Rotation

Date:	2/15/2022	5/17/2022	8/16/2022	11/15/2022
KHN			X	
KHR				X
KHS			X	
MGH	X			
MHF		X		
MHS		X	X	
MSJ	X			X
SMCS			X	
SRMC	X			X
UCD		X		

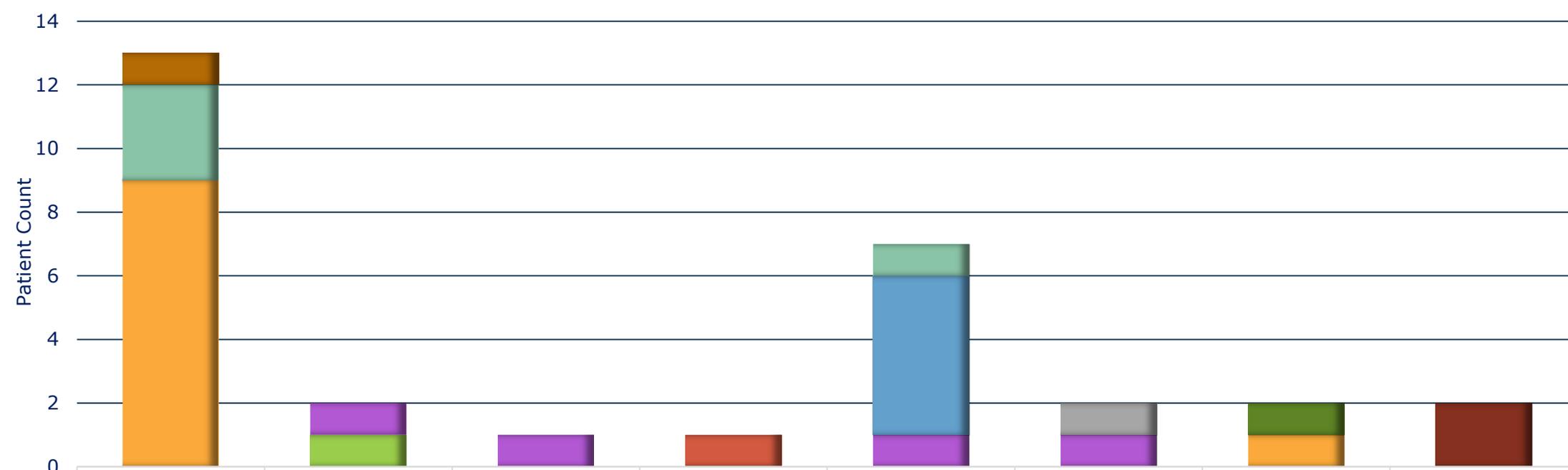
Stroke Liaisons

Contacts	KHN	KHR	KHS	MGH	MHF	MHS	MSJ	SMCS	SRMC	UCD
Primary	Cynthia Sinogui	Sonia Thompson, BSN, MSN, RN, CPHO	Sherry Whitcomb, JD, MSN, RN, CPHO	Richard Otley, RN	Octavian Pintea, RN	Max Naximko, MSN, RN, SCRNP	Irina Rebello	Kandis Dowd	Jennifer Bingham	Kimberly Brink
Secondary	Jonathan Hartman MD					Anu Locricchio	Raveca Pintea	Chase Childress	Patty McNamara	David Buettner

SCENE Calls (911-Response) - 2021-4Quarter	Incident Count	Notes
Responses (911-Response)	59,622	
Average Response Time of First Unit on Scene (PSAP to Arrived Scene)	0:11:14	
Average Response Time of First Unit on Scene (unit notified to Arrived Scene)	0:07:55	
Treated and Transported	32844	(of Scene Calls 911-Response).
Treated and Transferred Care & Assist	5355	
Transported By Law Enforcement	1	
Coroners / Diseased	736	
Cancelled	20662	No Patient found/ No Contact / Prior to Arrival
RST -4 (Percentage of Response with Lights and Sirens)	3554	
RST -5 (Percentage of Transports with Lights and Sirens)	10.44%	
IFT's	3529	
Primary Impressions of Scene calls treated and transported	Incident Count	
Traumatic Injury	4,799	
General Weakness	3,320	
Abdominal Pain/Problems (GI/GU)	2,437	
Behavioral/Psychiatric Crisis	2,132	
Non-Traumatic Body Pain	1,722	
Respiratory Distress/Other	1,674	
ALOC - (Not Hypoglycemia or Seizure)	1,422	
Pain/Swelling - Extremity - non-traumatic	1,189	
Chest Pain - Suspected Cardiac	1,167	
Nausea/Vomiting	988	
Seizure - Post	977	
Stroke / CVA / TIA	946	
Syncope/Near Syncope	847	
No Medical Complaint	733	
Respiratory Distress/Bronchospasm	728	
AMA/ Released / Refused / No Treatment of Scene Calls	Incident Count	
AMA's	4577	
Patient Refused Evaluation/Care (Without Transport)	3788	
Patient Treated, Released (per protocol)	830	

SCENE Calls (911-Response) - 2022-1Quarter	Incident Count	Notes
Responses (911-Response)	57992	All responses ePCRs 72,137
Average Response Time of First Unit on Scene (PSAP to Arrived Scene)	0:11:22	
Average Response Time of First Unit on Scene (unit notified to Arrived Scene)	0:07:39	
Treated and Transported	31200	(of Scene Calls 911-Response).
Treated and Transferred Care & Assist	5226	
Transported By Law Enforcement	0	
Coroners / Diseased	705	
Cancelled	10553	No Patient found/ No Contact / Prior to Arrival/ Private Vehicle
RST -4 (Percentage of Response with Lights and Sirens)	62.42%	
RST -5 (Percentage of Transports with Lights and Sirens)	10.68%	
IFT's		
Primary Impressions of Scene calls treated and transported to ED	Incident Count	
Traumatic Injury (T14.90)	4,087	
General Weakness (R53.1)	2,650	
Abdominal Pain/Problems (GI/GU) (R10.84)	2,145	
Behavioral/Psychiatric Crisis (F99)	1,984	
Respiratory Distress/Other (J80)	1,762	
Non-Traumatic Body Pain (G89.1)	1,594	
No Medical Complaint (Z00.00)	1,464	
ALOC - (Not Hypoglycemia or Seizure) (R41.82)	1,459	
Chest Pain - Suspected Cardiac (I20.9)	1,182	
Pain/Swelling - Extremity - non-traumatic (M79.60)	1080	
Nausea/Vomiting (R11.2)	962	
Stroke / CVA / TIA (I63.9)	892	
Syncope/Near Syncope (R55)	873	
Seizure - Post (G40.909)	863	
Respiratory Distress/Bronchospasm (J98.01)	731	
AMA/ Released / Refused / No Treatment of Scene Calls	Incident Count	
AMA's	4833	
Patient Refused Evaluation/Care (Without Transport)	4406	
Patient Treated, Released (per protocol)	928	

2022-1Q Intrafacility Transfers with Primary Impression of Stroke - EMS Data



- VAMC- Send
- UCD- Send
- SMCS- Send
- OOA- Send
- MSJ- Send
- MHS- Send
- MHF- Send
- MGH- Send
- KHS- Send
- KHN- Send

	KHN	KRH	MGH	MHF	MSJ	OOA	SMCS	UCD
VAMC- Send						1		
UCD- Send								2
SMCS- Send	1							
OOA- Send							1	
MSJ- Send	3				1			
MHS- Send					5			
MHF- Send		1	1		1	1		
MGH- Send				1				
KHS- Send	9						1	
KHN- Send		1						

Stroke Core Measure – EMS Data

Core Measure	Definition	2021- 3Q		2021- 4Q		2022- 1Q		2022-2Q	
		Patient Count	%	Patient Count	%	Patient Count	%	Patient Count	%
STR-01	Prehospital Screening for Stroke Patients	971	96.70%	900	95.00%	1,011	95.84%		
STR-02	Glucose Testing for Suspected Stroke Patients	971	94.95%	875	97.22%	860	96.60%		
STR-04	Advanced Hospital Notification for Stroke Patients with positive Stroke Scale	551	95.10%	584	94.00%	94.01%	602		

Stroke Dashboard EMS Data

Stroke	System Total 2021- 3Q	System Total 2021- 4Q	System Total 2022- 1Q	System Total 2022- 2Q
Total transported patients with Primary impression of Stroke	839	900	887	
Number of patients with documented Stroke Screen	825	855	851	
% of patients with documented Stroke Screen	98.33%	95.00%	95.94%	
Documented Glucose	816	875	860	
% of documented Glucose	97.26%	97.22%	96.96%	
Patients with a Stroke pre-arrival notification	743	805	795	
% of Stroke pre-arrival notification	88.56%	89.44%	89.63%	

Stroke Primary Impression for Treated and Transported Patients- EMS Data

Hospital Name	2021- 3Q	2021- 4Q	2022-1Q	2022-4Q
Kaiser Antioch	1	0	1	
KHR	35	47	38	
KHN	126	173	147	
KHS	167	153	176	
Lodi	1	0	1	
MGH	48	37	42	
MHF	41	66	72	
MSJ	180	164	171	
MHS	73	95	76	
VAMC	2	0	0	
SMCS	75	76	81	
SRMC	24	17	20	
UCD	66	72	62	
Total	839	900	887	

Stroke Score Value for Transported Patients by Destination Hospital

Hospital Name	Stroke Score				Not Recorded	Grand Total
	0	1	2	3		
Kaiser Permanente, Roseville Medical Center (20196)	16	14	7	5	5	47
Kaiser Permanente, Sacramento Medical Center (20197)	62	51	20	6	35	174
Kaiser Permanente, South Sacramento Medical Center (20205)	33	66	7	4	47	157
Mercy General Hospital (20280)	10	13	3		13	39
Mercy Hospital of Folsom (20282)	17	24	7	1	17	66
Mercy San Juan Medical Center (20286)	50	50	33	15	16	164
Methodist Hospital of Sacramento (20288)	22	31	13	6	24	96
Sutter Medical Center - Sacramento (20475)	18	30	5	1	24	78
Sutter Roseville Medical Center (20481)	5	6	3	1	2	17
UC Davis Medical Center (20508)	22	25	2		25	74
Grand Total	255	310	100	39	208	912

Hospital LVO Status by EMS CPSS and Stroke Score Value 2021-4Q				
CPSS Positive				
Stroke Score Value	Negative LVO	Positive LVO	Blank LVO	Grand Total
Stroke Score - 0	62	9	24	95
Stroke Score - 1	104	19	30	153
Stroke Score - 2	55	15	11	81
Stroke Score - 3	15	12	4	31
Not Recorded	29	10	5	44
Grand Total	265	65	74	404

Hospital LVO Percentage by EMS CPSS and Stroke Score Value 2021-4Q				
CPSS Positive				
Stroke Score Value	Negative LVO	Positive LVO	Blank LVO	Stroke Value Grand Total
Stroke Score - 0	65.26%	9.47%	25.26%	95
Stroke Score - 1	67.97%	12.42%	19.61%	153
Stroke Score - 2	67.90%	18.52%	13.58%	81
Stroke Score - 3	48.39%	38.71%	12.90%	31
Not Recorded	65.91%	22.73%	11.36%	44
Grand Total	65.59%	16.09%	18.32%	404

CPSS Non-Conclusive				
Stroke Score Value	Negative LVO	Positive LVO	Blank LVO	Grand Total
Stroke Score - 0	18	1	17	36
Stroke Score - 1	21	2	21	44
Stroke Score - 2	1		1	2
Stroke Score - 3				
Not Recorded	24	2	19	45
Grand Total	64	5	58	127

CPSS Non-Conclusive				
Stroke Score Value	Negative LVO	Positive LVO	Blank LVO	Grand Total
Stroke Score - 0	50.00%	2.78%	47.22%	36
Stroke Score - 1	47.73%	4.55%	47.73%	44
Stroke Score - 2	50.00%	0.00%	50.00%	2
Stroke Score - 3				
Not Recorded	53.33%	4.44%	42.22%	45
Grand Total	50.39%	3.94%	45.67%	127

CPSS Negative				
Stroke Score Value	Negative LVO	Positive LVO	Blank LVO	Grand Total
Stroke Score - 0	40		12	52
Stroke Score - 1	4		6	10
Stroke Score - 2	2			2
Stroke Score - 3				
Not Recorded	24	2	8	34
Grand Total	70	2	26	98

CPSS Negative				
Stroke Score Value	Negative LVO	Positive LVO	Blank LVO	Grand Total
Stroke Score - 0	76.92%	0.00%	23.08%	52
Stroke Score - 1	40.00%	0.00%	60.00%	10
Stroke Score - 2	100.00%	0.00%	0.00%	2
Stroke Score - 3				
Not Recorded	70.59%	5.88%	23.53%	34
Grand Total	71.43%	2.04%	26.53%	98

CPSS Not Recorded/ Not Applicable				
Stroke Score Value	Negative LVO	Positive LVO	Blank LVO	Grand Total
Stroke Score - 0	7		3	10
Stroke Score - 1	2	1	1	4
Stroke Score - 2				
Stroke Score - 3		1		1
Not Recorded	6	3	4	13
Grand Total	15	5	8	28

CPSS Not Recorded/ Not Applicable				
Stroke Score Value	Negative LVO	Positive LVO	Blank LVO	Grand Total
Stroke Score - 0	70.00%	0.00%	30.00%	10
Stroke Score - 1	50.00%	25.00%	25.00%	4
Stroke Score - 2				
Stroke Score - 3	0.00%	100.00%	0.00%	1
Not Recorded	46.15%	23.08%	30.77%	13
Grand Total	53.57%	17.86%	28.57%	28