



Trauma Improvement Committee (TIC)
Meeting Minutes

May 16, 2024

Facilitator: Gregory Kann, M.D. KannG@saccounty.gov

Meeting Attendees:

Name	E-Mail	Name	Email
Matt Burruel	Mattb@alphaoneamb.com	Gregory Kann	KannG@saccounty.gov
Tressa D Naik	TressaNaik@Cosumnescsd.gov	Sydney Freer	Freers@saccounty.gov
Jen Fitzgerald	Jkfitzgerald@ucdavis.edu	Yvonne Newson	NewsonY@saccounty.gov
Cheri White	Cheri.white@sutterhealth.org	Amy Richards	Amy.J.Richards@kp.org
Christine Williams	Chrwilliams@ucdavis.edu	Amelia Hart	Amelia.hart@commonspirit.org
Ashwini Chand-Kumar	Ashwini.Chand-Kumar@commonspirit.org	Jenna Alexander	Alexanderjen@saccounty.gov
Brian Morr	bmorr@sfd.cityofsacramento.org	Frederick Corvi	corvifred@saccounty.gov
Jeremy Veldstra	JFVeldstra@ucdavis.edu	Jennie Gunter	Jennie.Gunter@commonspirit.org
Maureen Murphy	MRMurphy@ucdavis.edu	David Shatz	dvshatz@ucdavis.edu
Jodi Coates	jcoates@samqi.com	Kevin Mackey	kmackey@sfd.cityofsacramento.org
Adam Blitz	Blitz.adam@metrofire.ca.gov		
Shelby Resnick	Shelby.resnick@kp.org		



Trauma Improvement Committee (TIC)
Meeting Minutes

Topic	Minutes	Action Items
Welcome and Introductions	Approval of Minutes: February 15, 2023 – Motion: Cheri White; Second: Amelia Hart	
Quarterly Data Review	<p style="text-align: center;"><u>Trauma Data Review 4th Quarter 2023</u></p> <p>David Shatz – Question on why non-911 providers are running trauma calls Greg Kann – The majority of trauma patients are coming from the fire agencies. But through the 911 system, the other providers may be called on scene to a “sick person,” but they are actually trauma patients. Also, if fire units are tied up, the call may be rolled over to the other dispatch centers. Matt Burruel - Alpha One does surge protection and standby events for Metro.</p> <p>IFT Question: Why is a non-trauma center (KHN) getting many transfers? Found that some of the patients were being transferred due to repatriation and neurological issues.</p> <p>(+) Trauma Triage to non-trauma centers</p> <ul style="list-style-type: none"> • Documentation error • Not actually being a (+) Trauma Triage Patient • Patient or Physicians choice <p>Amelia Hart – Was there a common theme of the calls that could have affected the decision? Sydney Freer – Two calls related to <i>low-level falls with a significant head impact</i>. Where one fell off the gurney with a laceration to the head. In the field, it didn’t seem to be a trauma, but because of the criteria, they were positive.</p>	



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Topic	Minutes	Action Items
	<p>TXA Administration Greg Kann - Some concerns were expressed from the field as it is difficult to hang in the back of the ambulance, so we decided to adjust the policy by taking away the IV drip and making it a slow push over a minute.</p>	
<p>Policy Review PD#8044.15 PD#8065.12 PD#TBD</p>	<p style="text-align: center;"><u>Policy Review</u></p> <p>PD# 8044.15 Spinal Motion Restriction (SMR)</p> <p>I. Pediatric Considerations</p> <p>i. Discussion on needing more data on cervical spine injuries compared to pre-hospital care before making changes.</p> <p>ii. Discussion regarding mechanism as an indication for SMR.</p> <p>PD# 8065.12 Hemorrhage</p> <p>I. TXA Inclusion</p> <p>i. Discussion on guidance for head and neck bleeding.</p> <p>PD# TBD Traumatic Brain Injury (TBI)</p> <p>I. Discussion on TXA use for these patients</p> <p>*Brought to MAC/OAC, and after discussion, TXA has been left out of this policy until further research*</p>	<p>Hospitals to send c-spine data to SCEMSA: 2023 Adult and Pediatric Trauma patients found to have spinal cord injuries.</p> <p>SCEMSA to put together formulary document for "other uses" of TXA.</p>
<p>Pre-Hospital Blood</p>	<p>Dr. Kann - Various places across the country have begun administration of blood in the field. Initial data looks good regarding mortality benefit. Dr. Mackey and I discussed putting together a small working group including pre-</p>	



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	<p>hospital providers, a representative from the blood bank, and a trauma surgeon to look at how this could be implemented in Sacramento County.</p> <p>Dr. Shatz – The New Orleans study saw only a 2-minute increase to scene time. San Antonio and New Orleans have not seen any issue with not having warmers.</p> <p>Dr. Mackey – Still mixed results regarding benefit and harm but there is an appetite at the state and the county to move forward with this. I have been thinking through logistics and I have a concept in mind as to how it can happen. The blood bank is the biggest thing, and the successful programs have had working groups from the very beginning that involve them.</p>	<p>Working group regarding pre-hospital blood administration to be established. Potential policies to be brought to TIC.</p>
Case Presentations	Sacramento City Fire – Brian Morr and Mercy San Juan – Jodi Coates	
Adjournment	Sydney Freer – The presentation schedule is designed so whoever is scheduled to present that meeting will pick the case and then collaborate with the corresponding provider/hospital who did the other portion of the patient care. Since MSJ presented this meeting, UCDMC agreed to present in August.	

Next Meeting: Thursday, August 15, 2024: 1:00– 3:00 pm at UC Davis Medical Center.
Case Presentations by: UCDMC and KHS.



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**Emergency Medical Services
Trauma Improvement Committee**

2024 Meeting Dates / Presentation Schedule

Date:	5/16/2024	8/15/2024	11/21/2024	2/20/2025
KHS		X		
MSJ				X
SRMC				X
UCDMC		X		
Cosumnes Fire			X	
Folsom Fire	X			
Metro Fire			X	
Sacramento City Fire	X			

Trauma Improvement Committee

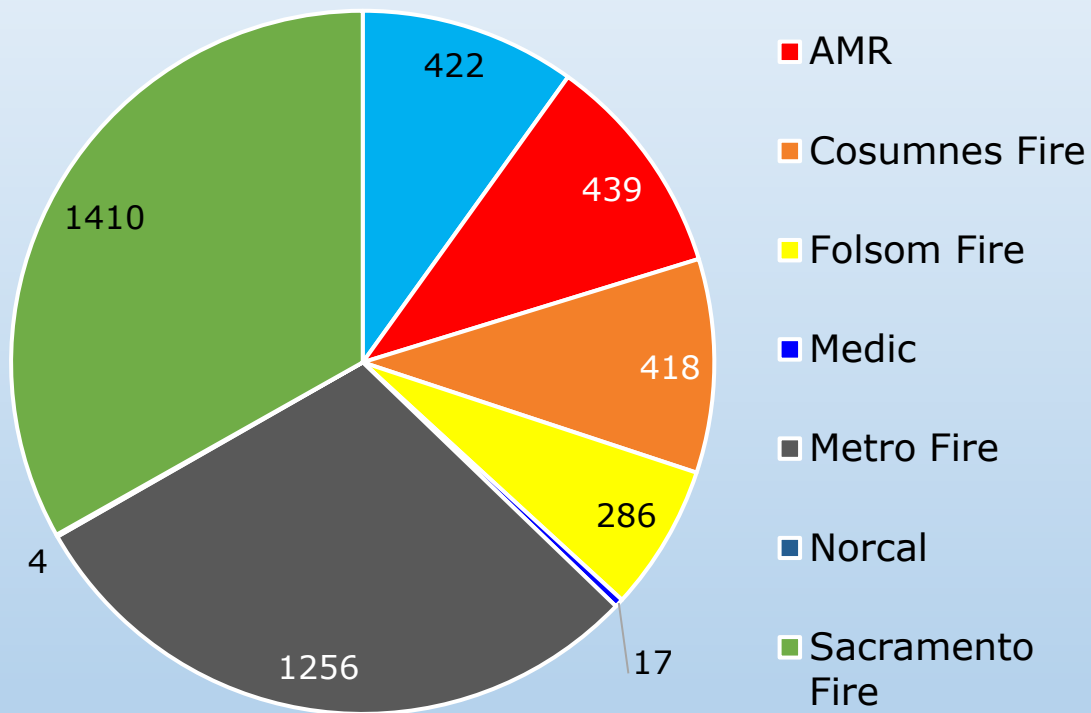
Facilitated By: Gregory Kann, M.D.

2023 – 4th Quarter (Oct-Dec)

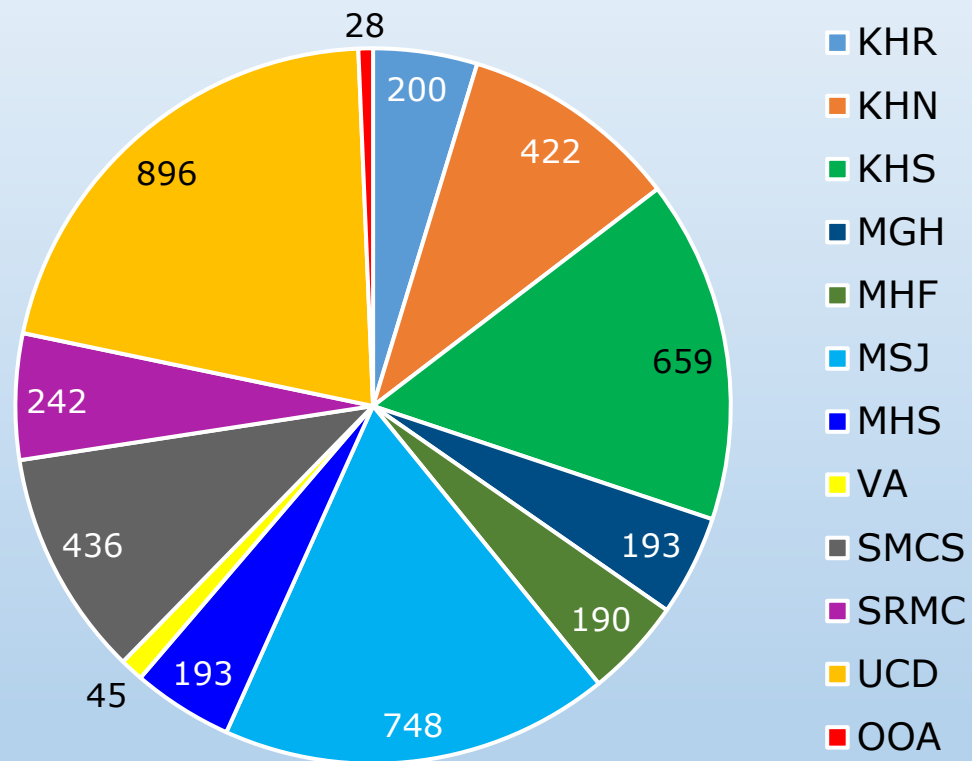
Presented May 16th, 2024

Treated and Transported Patients with Primary Impression of Trauma – 4Q 2023

EMS Agencies



EMS Hospital Destination

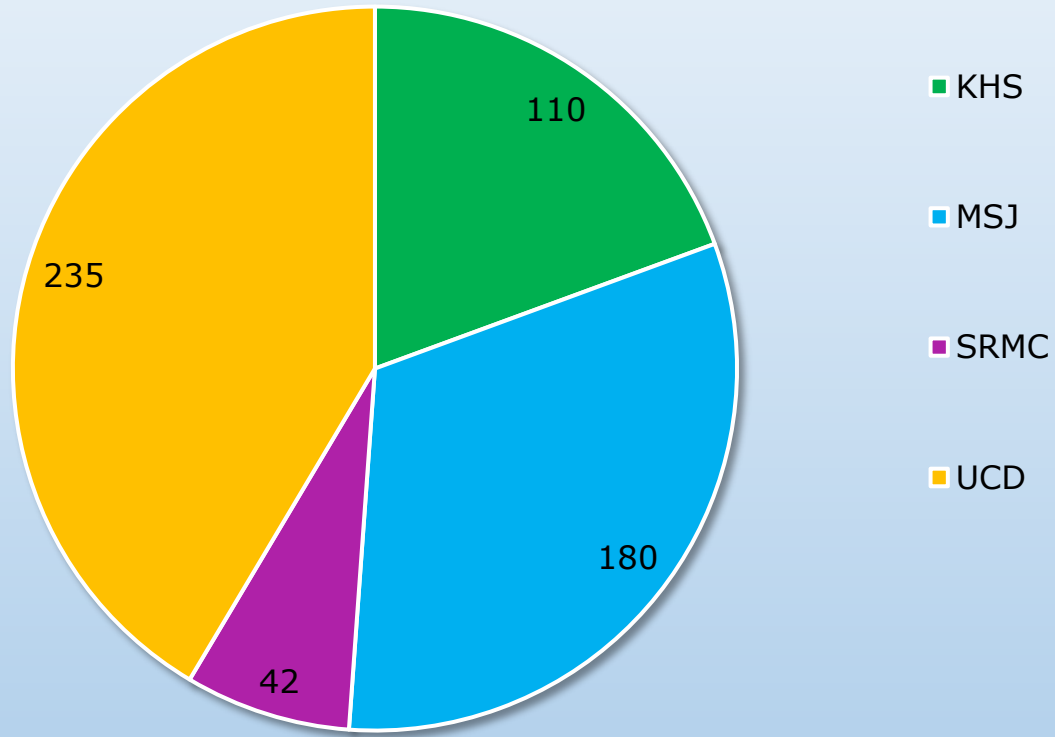


CEMSIS DATA

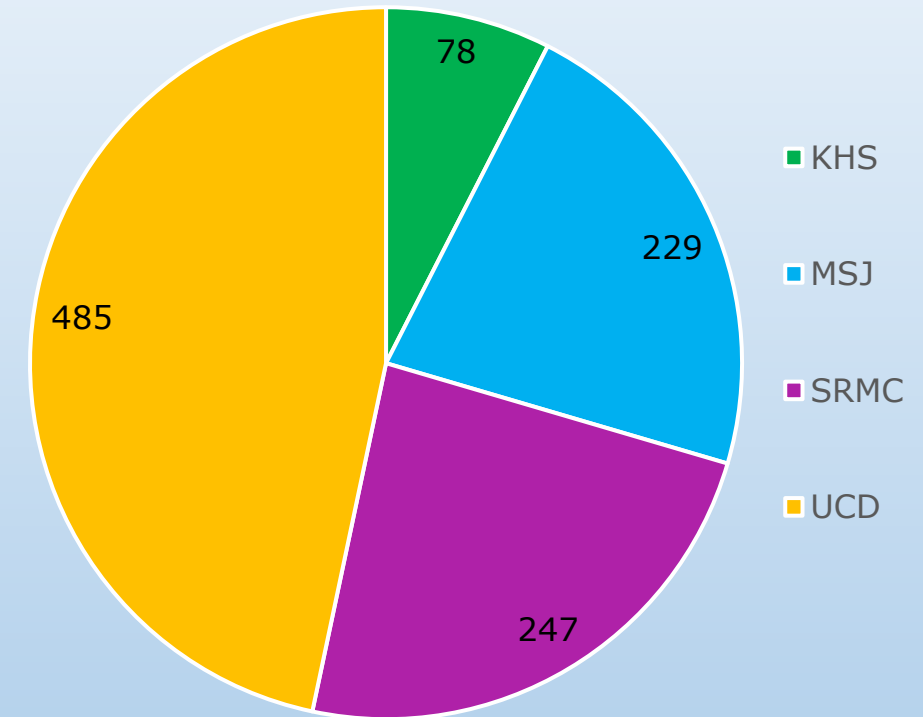


Transported Patients with a Positive Trauma Triage Criteria (TTC) 4Q 2023

CEMSIS - Transported by Sacramento County EMS



Patient Registry - Arrived by EMS



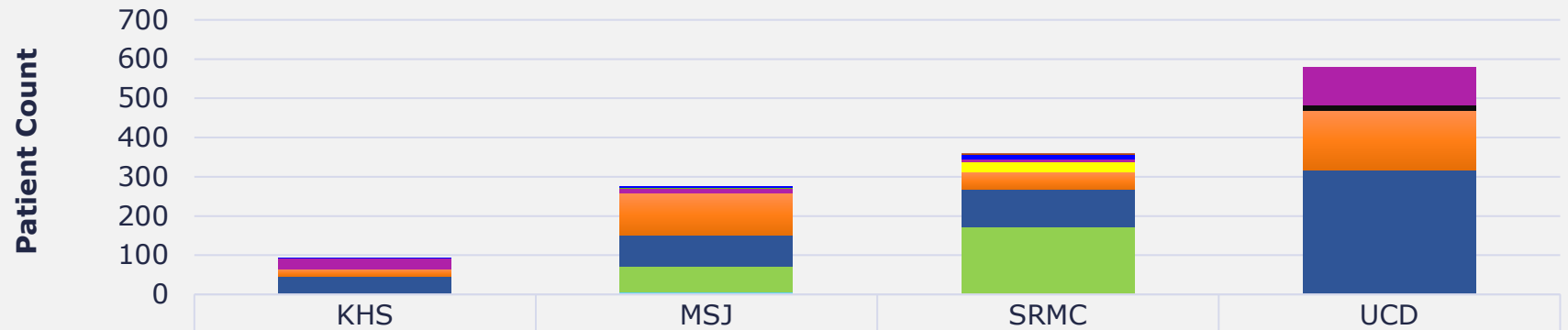
CEMSIS DATA

Patient Registry and Hospital Data

Trauma Improvement Committee



Hospital Emergency Room Disposition 4th Quarter 2023



	KHS	MSJ	SRMC	UCD
Unknown			4	
Transferred to another hospital	1	5	11	
Other (jail, institution, etc)	1	1	1	
Operating room	27	12	7	96
Observation			25	
Not Applicable (Direct Admit)		2		13
ICU	20	106	44	151
Floor bed (general admission, non specialty unit bed)	45	80	97	317
ED Discharge		64	169	
Deceased/Expired		5	2	1
AMA		2		

Patient Registry and Hospital Data



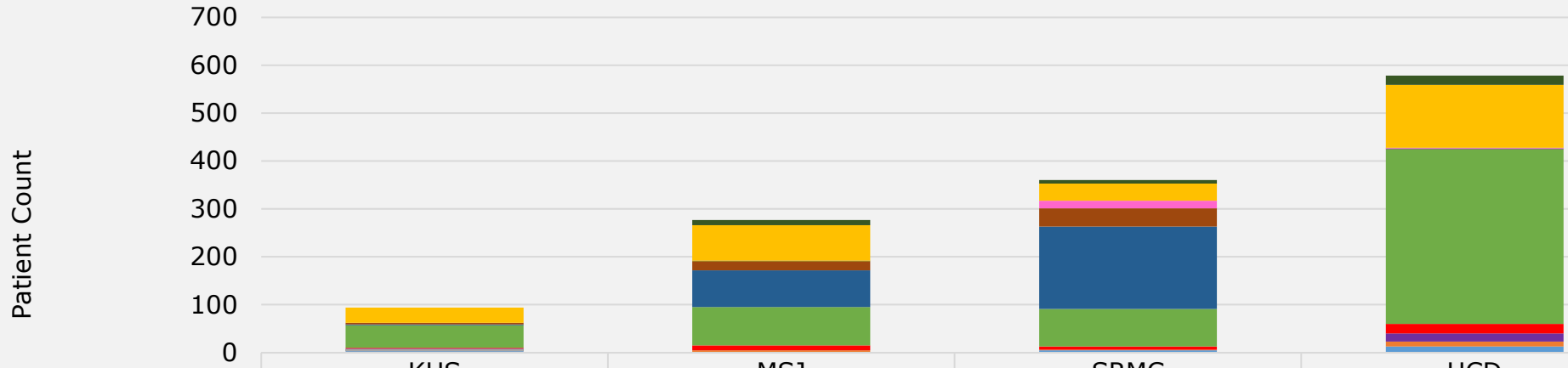
Emergency Room Disposition- Rolling 4 Quarters

Emergency Room Disposition	KHS				MSJ				SRMC				UCD				Grand Total
	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2023 1Q	2023 2Q	2023 3Q	2023 4Q	
AMA					1	2	1	2	1	1							8
Deceased/Expired	5	3	4		4	3	12	5				2	2	5		1	46
Floor bed (general admission, non specialty unit bed)	67	66	73	45	134	142	114	80	87	75	80	97	431	580	599	317	2987
ED Discharge					69	112	184	64	106	125	129	169					958
ICU	46	39	48	20	121	129	125	106	41	42	54	44	249	264	261	151	1740
Not Applicable (Direct Admit)	1				2	5	7	2	7	2			13	16	23	13	91
Observation									25	19	25	25					94
Operating room	27	42	36	27	12	15	22	12	13	8	5	7	157	231	184	96	984
Other (jail, institution, etc)		3		1	3	5	1	1		1	1	1					17
Transferred to another hospital	5	6	9	1	1	7	3	5	8	4	13	11					73
Grand Total	151	159	170	94	347	420	469	277	288	277	307	356	852	1096	1067	578	6908

*Patient Registry and Hospital Data
Note: Four Records not Documented 4Q



Hospital Discharge Disposition 4th Quarter 2023



	KHS	MSJ	SRMC	UCD
Long Term/Intermediate/Rehab Facility		11	7	19
Skilled Nursing Facility (SNF)	32	74	36	131
Psychiatric Visit		2		1
Hospice care			16	1
Home with Home Health Services	3	18	38	1
ED Disposition	2	77	172	1
Discharged to home or self-care (routine discharge)	47	80	78	364
Deceased/Expired	2	10	7	20
Correctional Facility or in Law Enforcement Custody	1			17
Another type of institution not defined elsewhere	3			
AMA	1	4	1	10
Acute care hospital	3	1	5	13

Patient Registry and Hospital Data



Hospital Discharge Disposition- Rolling 4 Quarters

Emergency Room Disposition	KHS				MSJ				SRMC				UCD				Grand Total
	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2023 1Q	2023 2Q	2023 3Q	2323 4Q	2023 1Q	2323 2Q	2023 3Q	2023 4Q	
Acute care hospital	3	6	4	3	5	8	11	1	16	6	3	5	9	17	21	13	131
AMA		2	2	1	5	9	7	4	6	3	1	1	19	37	29	10	136
Another type of institution not defined elsewhere	3	3	2	3									1	1	2		15
Correctional Facility or in Law Enforcement Custody	1		2	1	2	1	5				1		17	9	15	17	71
Deceased/Expired	13	5	5	2	15	14	13	10		1	1	7	31	33	37	20	207
Discharged to home or self-care (routine discharge)	72	64	80	47	111	147	140	80	82	66	78	78	582	790	726	364	3507
Home with Home Health Services	15	21	15	3	25	24	31	18	24	24	33	38	2	5	6	1	285
Hospice care	2	3	4		4	4	5		4	6	3	16	1	2	4	1	59
Long Term/ Intermediate/Rehab	3	4	4		17	11	13	11	7	4	7	7	28	30	42	19	207
Not Applicable (ED Disposition)	10	12	13	2	78	129	131	77	107	131	143	172	2	5		1	1013
Psychiatric Visit	2		3			1	3	2		1	1		4	7	2	1	27
Skilled Nursing Facility (SNF)	27	39	36	32	85	72	110	74	42	35	36	36	156	160	183	131	1254
Totals	151	159	170	94	347	420	469	277	288	277	307	360	852	1096	1067	578	6912

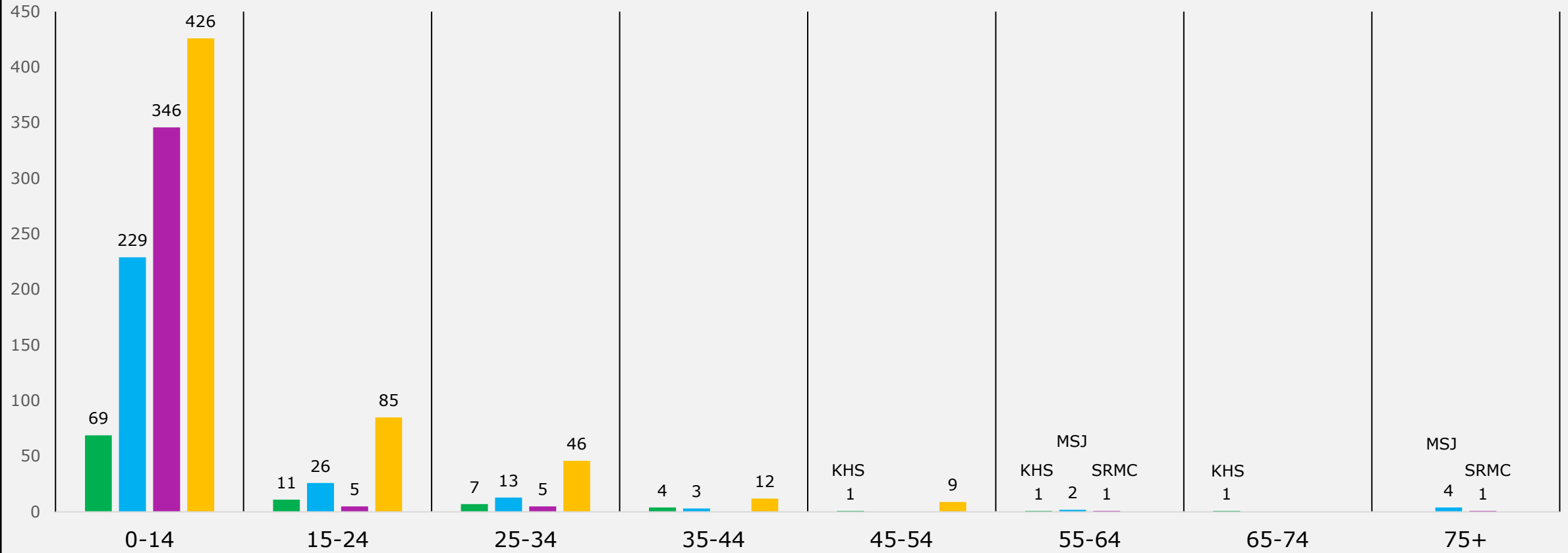
Patient Registry and Hospital Data

Trauma Improvement Committee



ISS Range per Hospital – 4Q 2023

■ KHS ■ MSJ ■ SRMC ■ UCD



Patient Registry and Hospital Data

Trauma Improvement Committee



IS Score per Hospital – Rolling 4 Quarters

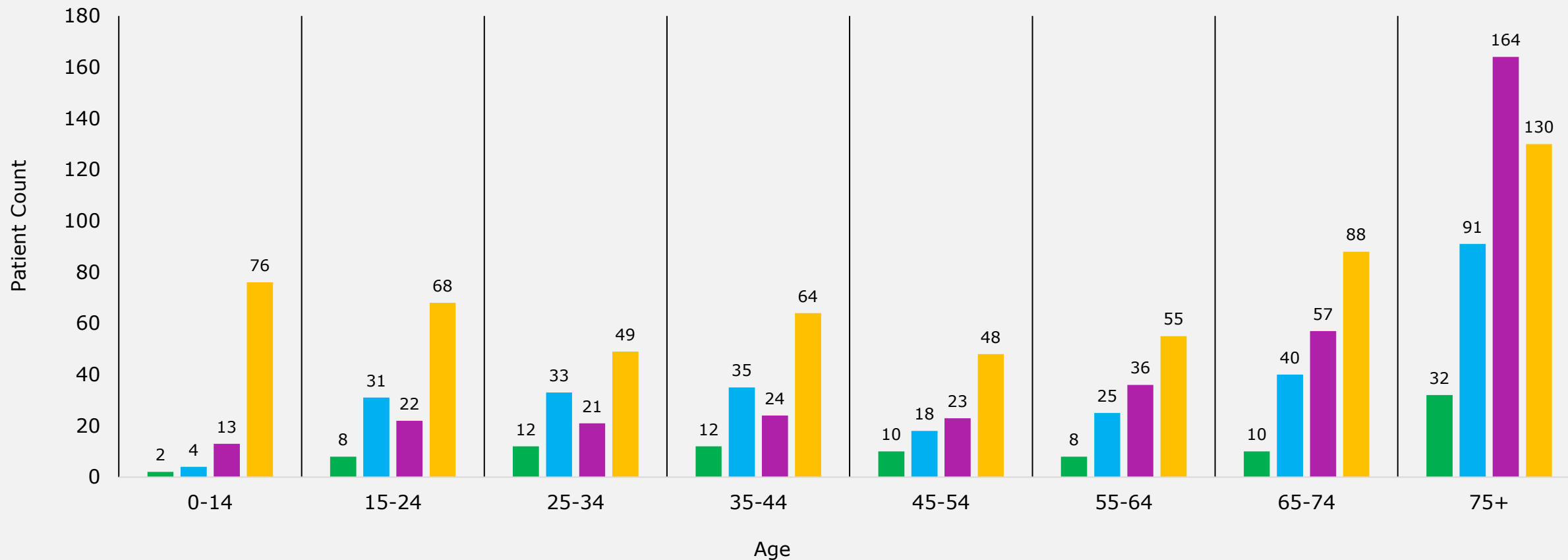
ISS Range	KHS				MSJ				SRMC				UCD				Grand Total
	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2023 1Q	2023 2Q	2023 3Q	2023 4Q	
0-14	99	108	116	69	292	355	405	229	273	268	295	346	638	846	849	426	5614
15-24	19	31	33	11	33	39	33	26	12	4	9	5	128	139	133	85	740
25-34	25	13	14	7	17	10	27	13	1	4	2	5	68	73	59	46	384
35-44	7	2	3	4	2	14	3	3	1				15	23	17	12	106
45-54		3	1	1	1	2			1				3	7	5	9	33
55-64			1	1				2			1	1		5			11
65-74	1		1	1										2			5
75+		2	1		2		1	4				1		1	4		16
Totals	151	159	170	94	347	420	469	277	288	276	307	358	852	1096	1067	578	6909

Patient Registry and Hospital Data
 *Note: Two Records ISS not Documented 4Q
 One Record ISS not Documented 2Q



Patient Age Range per Hospital – 4Q 2023

■ KHS ■ MSJ ■ SRMC ■ UCD



Patient Registry and Hospital Data

Trauma Improvement Committee



Patient Age Range per Hospital – Rolling 4 Quarters

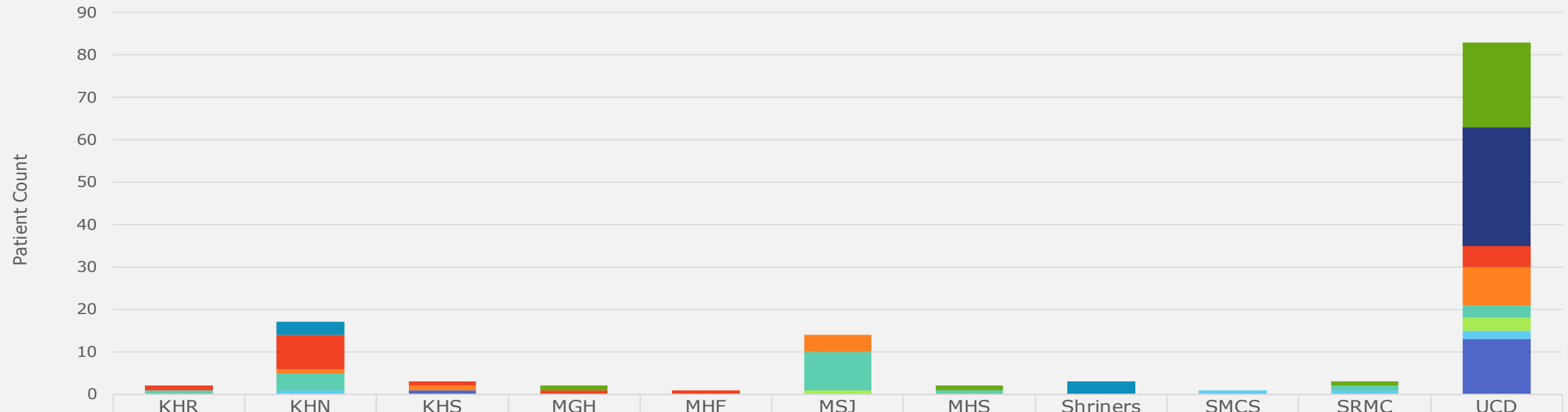
Age Range	KHS				MSJ				SRMC				UCD				Grand Total
	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2023 1Q	2023 2Q	2023 3Q	2323 4Q	2023 1Q	2023 2Q	2023 3Q	2320 4Q	2023 1Q	2023 2Q	2023 3Q	2323 4Q	
0-14	5	7	5	2	7	9	8	4	3	14	11	13	59	191	159	76	573
15-24	13	18	19	8	25	53	49	31	22	21	18	22	94	121	104	68	686
25-34	17	18	17	12	40	47	59	33	14	16	17	21	93	126	123	49	702
35-44	11	14	18	12	26	63	53	35	17	16	15	24	102	108	114	64	692
45-54	19	15	21	10	41	38	47	18	17	14	28	23	76	98	97	48	610
55-64	18	18	23	8	49	55	52	25	34	36	40	36	92	111	105	55	757
65-74	18	19	21	10	44	53	79	40	54	43	56	57	107	124	132	88	945
75+	50	50	46	32	114	98	121	91	127	117	122	164	229	217	233	130	1941
Not Recorded					1	4	1										6
Totals	151	159	170	94	347	420	469	277	288	277	307	360	852	1096	1067	578	6912

Patient Registry and Hospital Data

Trauma Improvement Committee



2023-1Q IFTs with Primary Impressions of Trauma - EMS Data



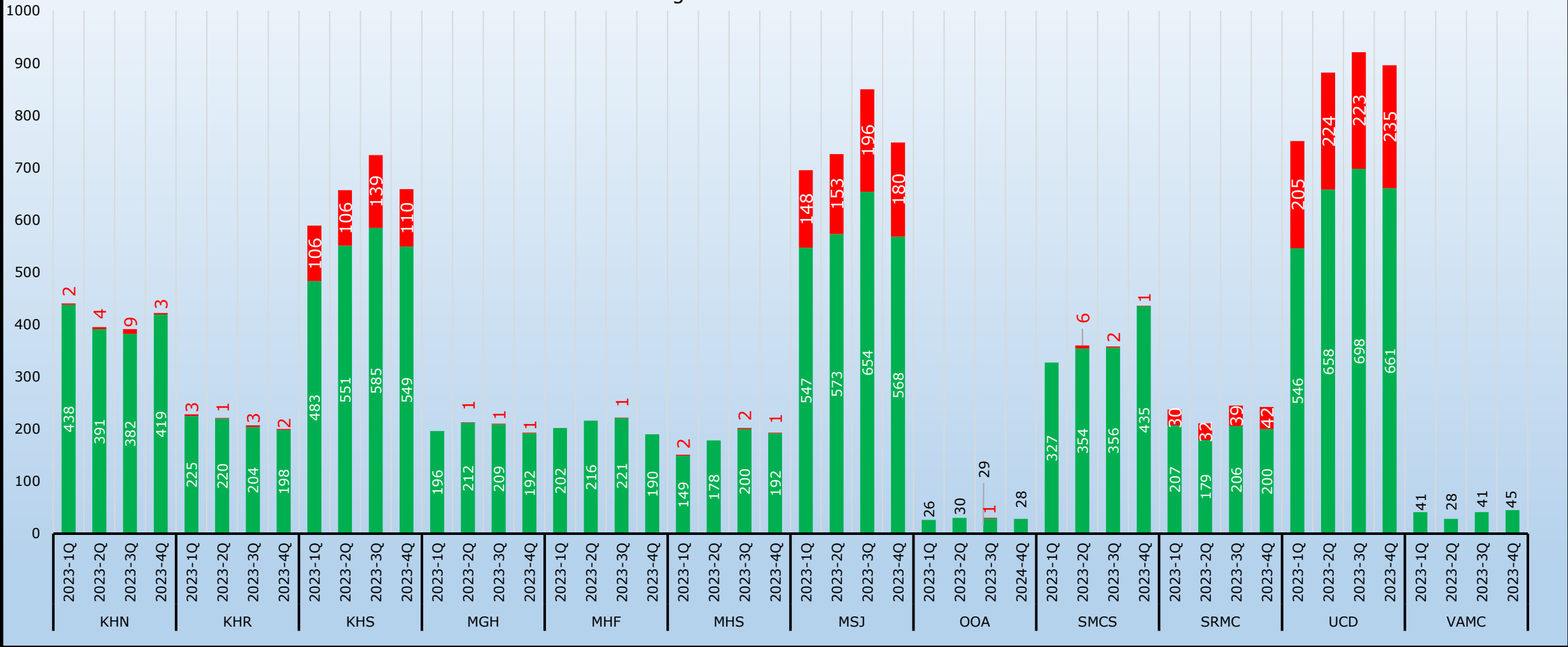
	KHR	KHN	KHS	MGH	MHF	MSJ	MHS	Shriners	SMCS	SRMC	UCD
VA - Send				1			1			1	20
UCD - Send		3						3			28
SMCS - Send											5
MSJ - Send	1	8	1	1	1						9
MHS - Send		1	1			4					3
MHF - Send	1	4				9	1			1	3
MGH - Send						1					3
KHS - Send		1							1	1	2
KHN - Send			1								13

CEMSIS Data



EMS Transported Patients with Primary Impression of Trauma Negative vs Positive Trauma Triage Criteria - Rolling 4 Quarters

■ Negative TTC ■ Positive TTC



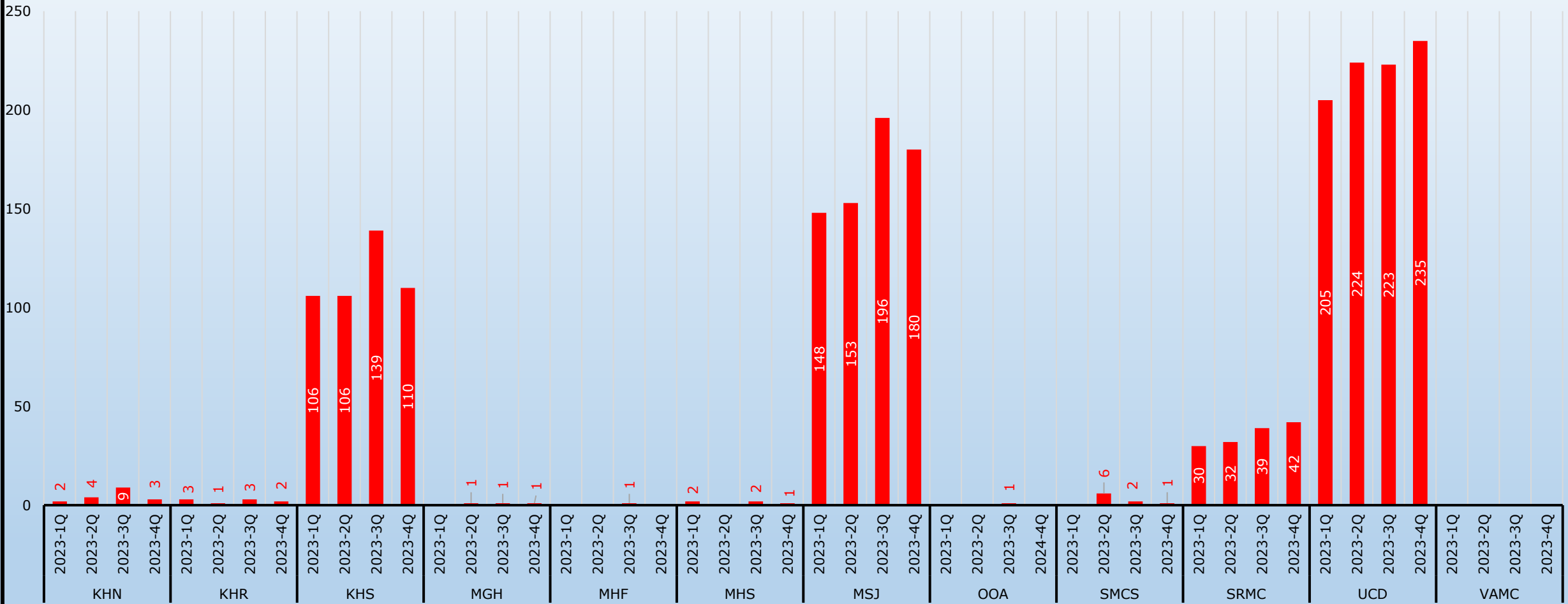
CEMSIS Data

Trauma Improvement Committee



EMS Transported Patients with Primary Impression of Trauma with Positive Trauma Triage Criteria - Rolling 4 Quarters

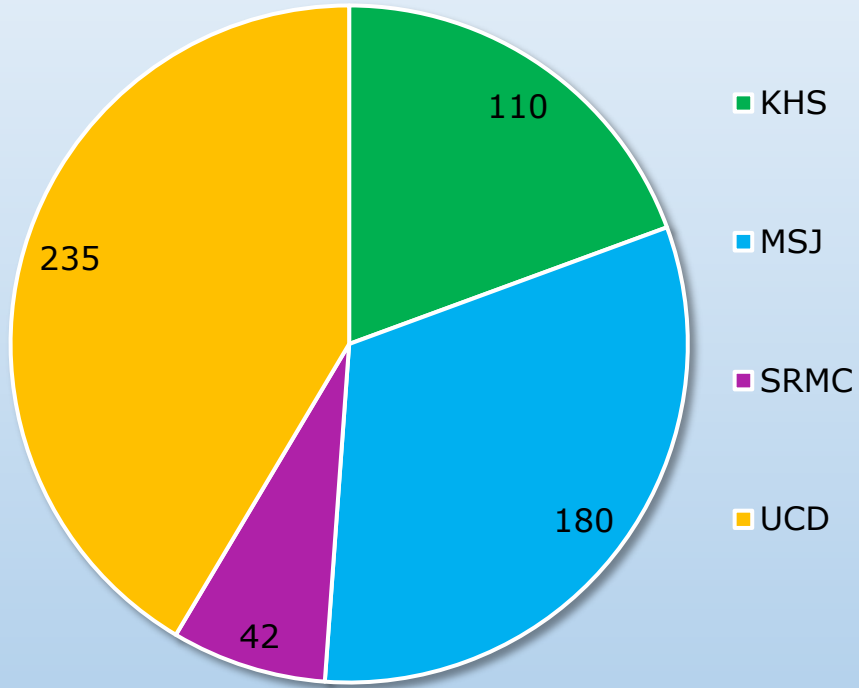
■ Positive TTC



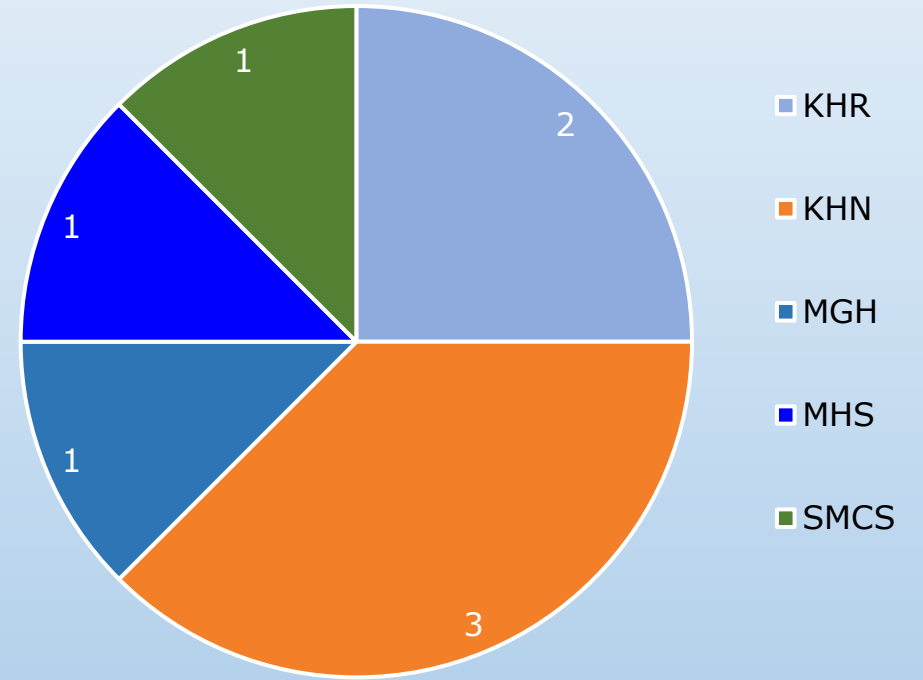
CEMSIS DATA

EMS Transported Patients with Positive Trauma Triage Criteria – 4Q 2023

Trauma Hospitals



Non – Trauma Hospitals



CEMSIS DATA



Review of Positive Trauma Triage Criteria to Non-Trauma Hospital – 4Q 2023

Documented Trauma Triage (Drop Down Box)	Documented Hospital Destination	Actual Hospital Destination	Findings (ePCR Narrative)
Auto v. Pedestrian/Bicyclist Thrown, Run Over, or > 20 MPH Impact	KHR	KHS	(+)TTC Auto v. Pedestrian/Bicyclist Thrown, Transported to KHS (Documentation Error)
Fall Adults: > 20 ft. (one story is equal to 10 ft.)	KHN	KHN	(+)TTC Low-Level Fall (age ≥ 65 years) with Significant Head Impact
Age ≥ 65 years: SBP < 110 mmHg	MGH	MGH	(+)TTC Low-Level Fall (age ≥ 65 years) with Significant Head Impact (Physician's Choice)
Motorcycle Crash > 20 MPH	KHN	MSJ	(+)TTC Motorcycle Crash > 20 MPH, Transported to MSJ (Documentation Error)
Pelvic fractures	KHR	KHR	(+)TTC Suspected Pelvic Fracture due to a Mechanical Fall
Auto v. Pedestrian/Bicyclist Thrown, Run Over, or > 20 MPH Impact	SMCS	SMCS	(-)TTC MVA with Brief Loss of Consciousness after impact
Crash Intrusion, including roof: > 12 in. occupant site; > 18 in. any site	MHS	MHS	(-)TTC MVA with Left Side Pain
Respiratory Rate <10 or >29 breaths per minute or need for ventilatory support	KHN	KHN	(-)TTC Blunt Force Trauma to Neck, Patient Requested Hospital Destination

CEMSIS DATA



Administered in the Field TXA Patients and Missed Opportunities - 4Q 2023

Administered in the Field

Hospital	Count
KHS	1
MSJ	1
UCD	3

Missed Opportunities to Administered TXA

Hospital	Count
MSJ	1
SRMC	3

CEMSIS Data

