Ambulance Patient Offload Delay (APOD)

- NOT A NEW PROBLEM
  - ED overcrowding
  - Ambulance diversion
  - APOD
- We have failed to move the needle

APOD

- ED utilization has gone up
- EMS utilization has gone up
- Mandatory nurse staffing ratios
- ED nursing shortage

California RN-to-Patient Safe Staffing Ratios

Operating Room Trauma Patients in the ER	1 to 1	
Intensive/Critical Care Neo-natal Intensive Care Post-anesthesia Recovery Labor and Delivery ICU Patients in the ER	1 to 2	
Step Down	1 to 3	
Antepartum Postpartum Couplets Pediatrics Emergency Room Telemetry Other Specialty Care	1 to 4	
Medical/Surgical	1 to 5	
Postpartum Women Only Psychiatric	1 to 6	

All ratios are minimums. Hospitals must increase staffing based upon individual patient needs.

Left screen:

☰ ReddiNet

STATUS MCI ASSESSMENT MESSAGES

Generator Status

(Generator)

● 2/07/2024 21:02

Ambulances

(Enroute) (At FAC - 5)

Diversion Status

(ED ALS) (ED BLS)

(Provider ALS) (CT) (PSC)

(CSC) (STEMI) (INT)

(Helipad)

Generator Status

(Generator)

● 2/09/2024 03:37

Ambulances

(Enroute) (At FAC - 4)

Right screen:

☰ ReddiNet

STATUS MCI ASSESSMENT MESSAGES

Arrived Time: 02/09/2024 12:27
Carrier: Falck Care Ambulance
Unit #: 341
Chief Complaint:
Elapsed Time: 25 minutes ago ⬅

Arrived Time: 02/09/2024 12:16
Carrier: Falck Care Ambulance
Unit #: 451
Chief Complaint:
Elapsed Time: 36 minutes ago ⬅

Arrived Time: 02/09/2024 12:05
Carrier: Falck Care Ambulance
Unit #: 449
Chief Complaint:
Elapsed Time: an hour ago ⬅

Arrived Time: 02/09/2024 12:00
Carrier: Falck Care Ambulance
Unit #: 446
Chief Complaint:
Elapsed Time: an hour ago ⬅

Arrived Time: 02/09/2024 11:13
Carrier: Falck Care Ambulance
Unit #: 561
Chief Complaint:
Elapsed Time: 2 hours ago ⬅

Screen 1

ReddiNet

STATUS   MCI   ASSESSMENT   MESSAGES

Generator

● 2/09/2024 20:26

Ambulances

Enroute   **At FAC - 11**

Diversion Status

ED ALS   ED BLS

Provider ALS   CT   PSC

STEMI   INT

Generator Status

Generator

● 2/08/2024 22:44

Ambulances

Enroute   At FAC

Diversion Status

ED ALS   ED BLS

Screen 2

ReddiNet

STATUS   MCI   ASSESSMENT   MESSAGES

‹ At FAC

Arrived Time: 02/12/2024 14:51
Carrier: Los Angeles Fire Department
Unit #: RA5
Chief Complaint: Breathing Difficulty (Ineffective) –
Immediate Dispatch
Elapsed Time: 11 minutes ago ⬅

Arrived Time: 02/12/2024 14:47
Carrier: McCormick/Westmed Ambulance
Unit #: SC982
Chief Complaint:
Elapsed Time: 15 minutes ago ⬅

Arrived Time: 02/12/2024 14:44
Carrier: McCormick/Westmed Ambulance
Unit #: BP990
Chief Complaint:
Elapsed Time: 18 minutes ago ⬅

Arrived Time: 02/12/2024 14:42
Carrier: McCormick/Westmed Ambulance
Unit #: GD228
Chief Complaint:
Elapsed Time: 20 minutes ago ⬅

Arrived Time: 02/12/2024 14:28
Carrier: McCormick/Westmed Ambulance
Unit #: HA218
Chief Complaint

Screen 3

ReddiNet

STATUS   MCI   ASSESSMENT   MESSAGES

Arrived Time: 02/12/2024 14:14
Carrier: Los Angeles Fire Department
Unit #: RA266
Chief Complaint: Chest Pain, age < 40 y/o
Elapsed Time: an hour ago ⬅

Arrived Time: 02/12/2024 14:14
Carrier: McCormick/Westmed Ambulance
Unit #: BP995
Chief Complaint:
Elapsed Time: an hour ago ⬅

Arrived Time: 02/12/2024 14:08
Carrier: McCormick/Westmed Ambulance
Unit #: CA272
Chief Complaint:
Elapsed Time: an hour ago ⬅

Arrived Time: 02/12/2024 14:07
Carrier: McCormick/Westmed Ambulance
Unit #: LH285
Chief Complaint:
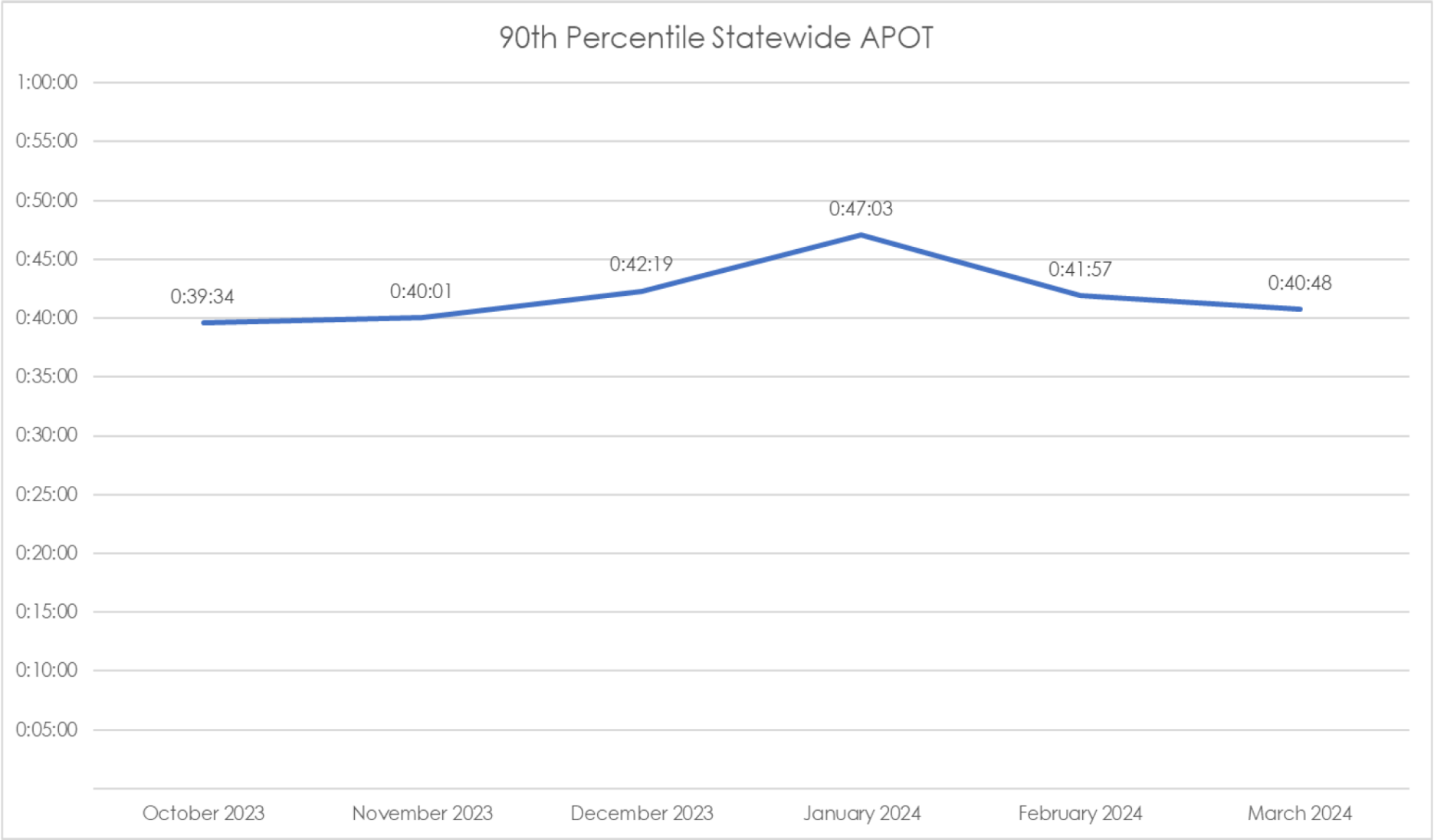Elapsed Time: an hour ago ⬅

Arrived Time: 02/12/2024 13:46
Carrier: McCormick/Westmed Ambulance
Unit #: SC980
Chief Complaint:
Elapsed Time: an hour ago ⬅

CEMSIS Sourced Statewide APOT Trend Graph (October 2023 – March 2024)

90th Percentile Statewide APOT

	October 2023	November 2023	December 2023	January 2024	February 2024	March 2024
Value	0:39:34	0:40:01	0:42:19	0:47:03	0:41:57	0:40:48

All data represented in this report is sourced from CEMSIS with a run date of April 30, 2024. CEMSIS records are populated by participating EMS providers documented care in the pre-hospital setting through direct transmission into CEMSIS or passed through their local EMS Agency (LEMSA). Not all EMS providers in all LEMSAs are CEMSIS participants, therefore this report does not reflect 100% of EMS interactions and records meeting APOT criteria.

California Counties with a LEMSA 90th Percentile APOT Greater than 30 minutes over A 6-Month Period (October 2023 – March 2024)

Who is Responsible for the Patient?

- "Hospitals that deliberately delay moving an individual from an EMS stretcher to an emergency department bed do not thereby delay the point in time at which their EMTALA obligation begins. Furthermore, such a practice of 'parking' patients arriving via EMS, refusing to release EMS equipment or personnel, jeopardizes patient health and adversely impacts the ability of the EMS personnel to provide emergency response services to the rest of the community."

CMS State Operations Manual, Appendix V, §489.24(a)(1)(i).

How Did This Come About?

- We didn't speak up

- Holding ambulances became a free tool ED's use during surge

- Pandemic became a tipping point

What Can Be Done

- Hospitals need to use proven throughput strategies
- Take a stand – Hospital problems cannot be allowed to crush the EMS system
- Ambulance diversion doesn't work
- Collect data and share it with stakeholders
- If an EMS EMT can watch the patient, a hospital EMT can watch the patient
- Advocate advocate advocate

Clayton.Kazan@fire.lacounty.gov

Offload Del-*eh's*: a Canadian Approach

David A. Obert, MD, MPP, FRCPC

Medical Director – Emergency Dispatch

June 14, 2024

Different System:

- Public healthcare system
  - Provincially administered
  - In British Columbia: 5 health authorities, 1 ambulance service
- No EMTALA-equivalent legislation
- No definitive Canadian case law related to offload delays/legal grey areas (to my knowledge)

Different Target:

- Our definition: **30 minutes**

- Common problem
- Common underlying drivers
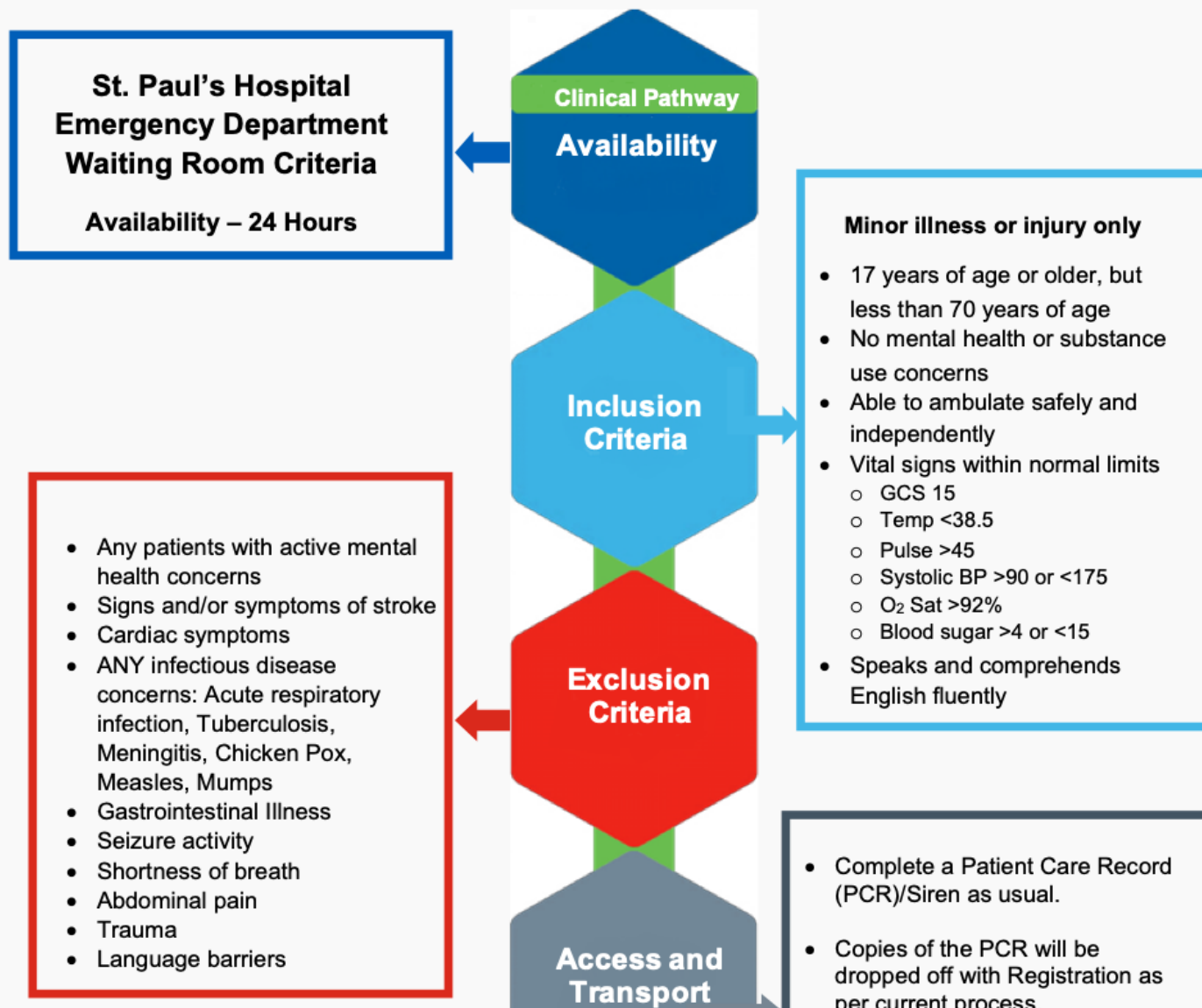
IMMEDIATE TRANSFER OF CARE PROTOCOL

Availability: 24 hrs

Dispatch MUST be able to contact crews on offload delay:

Portable radio/pager MUST be carried, on, and audible

One crew member MUST be carrying BCEHS car phone and audible

Operational Pathway

Availability

Inclusion Criteria

Time-sensitive events holding in community AND no car immediately available in community to respond AND ambulance crew(s) at hospital emergency in offload delay

Crew unable to locate PCC

PCC unable to assume care for patient

Requires immediate crew notification to Dispatch

Dispatch escalation to Supervisor as needed

Exclusion Criteria

Immediate Transfer of Care

Notes:
- **Crews to ensure all cohorting measures (up to 3/crew) have been considered**, dependent on:
  - Stretcher availability
  - Patient acuity
- PCCs/BCEHS Supervisors should maintain regular communications as needed for OLD management
- Refer to FH-BCEHS Offload Delay Decision Making Tool

Notes:

- **Crews to ensure all cohorting measures (up to 3/crew) have been considered**, dependent on:

  - Stretcher availability

  - Patient acuity

- PCCs/BCEHS Supervisors should maintain regular communications as needed for OLD management

- Refer to FH-BCEHS Offload Delay Decision Making Tool

FOLLOW-UP:

Supervisor/OCUC to be notified after protocol activated

Dispatch to note activation of protocols

ACTION:

1) Once notified by dispatch of protocol activation, one crew member to immediately seek out PCC

2) To PCC: 'We have a high acuity event holding in the community and no other cars are available to respond. Therefore, our Immediate Transfer of Care Protocol has been activated and we must hand over this patient's care immediately.'

3) Care transferred and crew immediately notifies dispatch and clears

4) Crew immediately assigned to respond to holding high priority call

PROCESS:

FH EDs should attempt to keep spare bed for emergent offload transfers

Triage RNs can assess patients on bed for suitability to transfer to chair

BCEHS may utilize spare Stryker stretcher in ED for immediate swap

Outcomes for Immediate Transfer of Care:

- Some initial hesitancy → ultimately reached hospital-level buy in

- Used approx. 1x/month (in a single Health Authority of ~2 million pop)

- No reported patient safety events with use of the protocol

- Offload delays have been improving

Take Homes:

- Different system, common challenges
- Patient-centred, collaborative approach
- Communicate early, communicate often

Questions?

david.obert@bcehs.ca

Global Budget for Care Cost – Yay Maryland!

- Well intentioned payor model: Quality not quantity

- Side effects – EMS bears the brunt

- We are DEAD LAST for ED wait times
  - CMS data 1/7/20-3/31/21

42. California: 164 minutes

43. Connecticut: 166 minutes

44. New Jersey: 173 minutes

45. Arizona: 176 minutes

46. New York: 184 minutes

47. Rhode Island: 185 minutes

48. Massachusetts: 189 minutes

49. Delaware: 195 minutes

50. Maryland: 228 minutes

Maryland Institute for Emergency Medical Services Systems

health services cost review commission
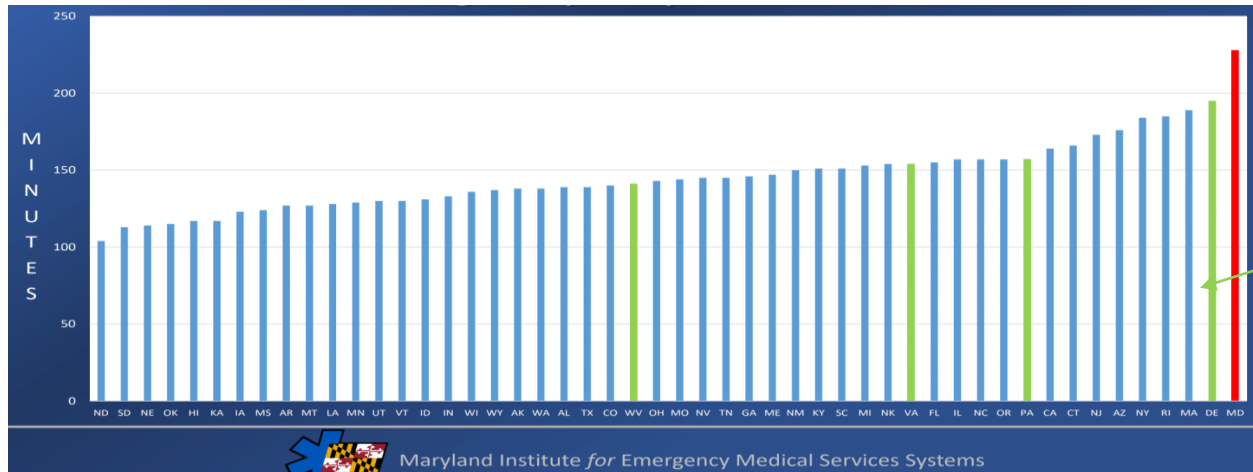
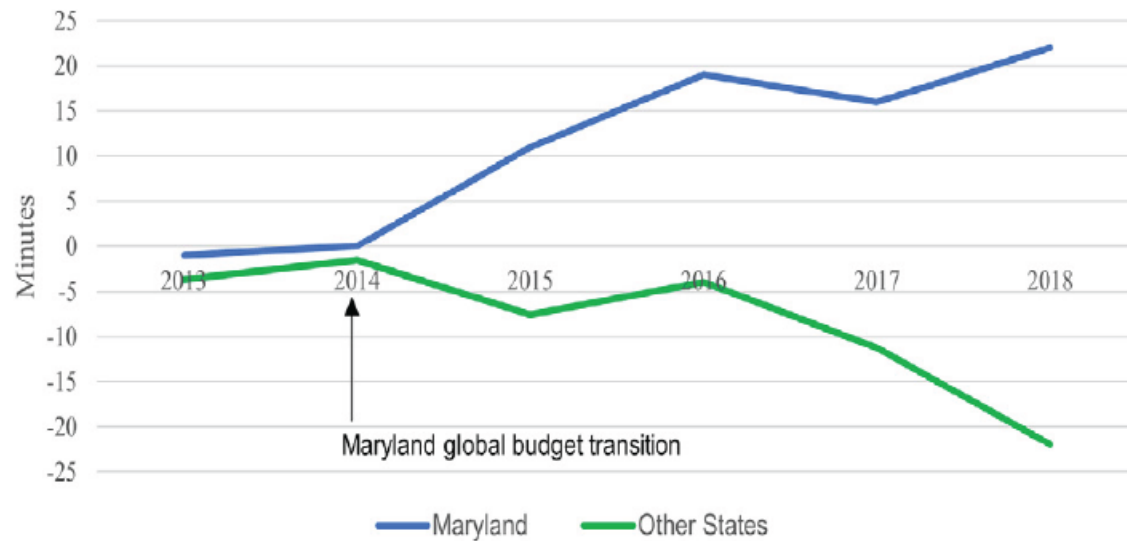# Balancing Efficiency and Access: Discouraging Emergency Department Boarding in a Global Budget System

Figure 1. Cumulative absolute change in time from emergency department (ED) arrival to ED departure for admitted ED patients since 2013.
Note. Emergency department boarding was 367 minutes in Maryland and 295 minutes in all other states, in 2012. Source: Hospital Compare.[9]

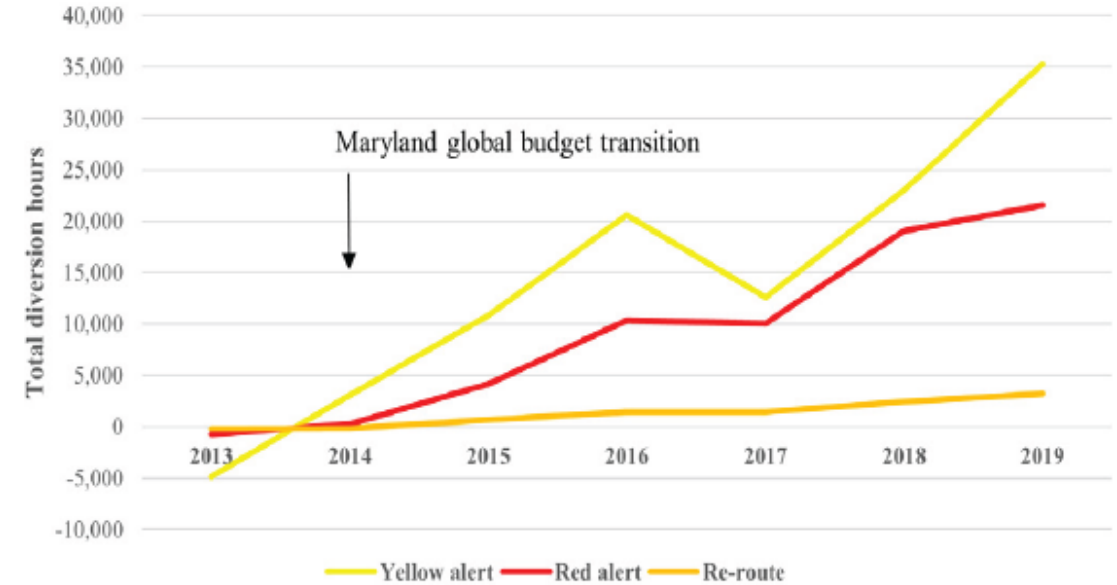**Figure 2.** Cumulative absolute change in ambulance diversion time by diversion type in Maryland since 2013.
Note. Diversion hours were yellow alert =17,377, red alert = 7648, and re-route = 1396 in 2012.
Source: Maryland Institute for Emergency Medical Services Systems.[13]

Author(s): Stryckman, Benoit; Kuhn, Diane; Gingold, Daniel B.; Fischer, Kyle R.; Gatz, J. David; Schenkel, Stephen M.; Browne, Brian J.

Why we care about this

- <u>Zero productivity</u> when EMS units on a wall at an ED

- If unchecked, we will need more ambulances to meet community needs

- It decreases patient satisfaction

What we do about it

- Disposition Officer: EMS 700

- Alternative Transport Destinations
  - Urgent Care
    – Limited success: 28 xports CY 2023
  - Hospice – Successful but low numbers
  - Stabilization Room – New

- Set boundaries with the EDs

- Share data - both ways

- Direct to triage

- Escalate after waiting 30 minutes

- -•Burns TA, Kaufman B, Stone RM. An EMS Transport Destination Officer is Associated with Reductions in Simultaneous Emergency Department Arrivals. Prehosp Emerg Care. 2023;27(7):941-945. doi: 10.1080/10903127.2022.2107126. Epub 2022 Sep 2. PMID: 35894867

Patient Turnover Time
at hospital to off cot *(eTimes.12 – eTimes.11)*
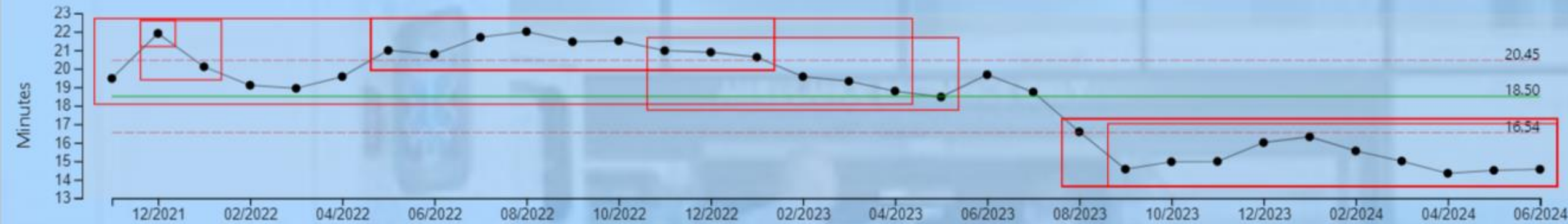Goal = 25 minutes

Day
Week
Month

Battalion

| 1 | 2 | 3 | 4 | 5 |

| Priority 1 | Priority 2 | Priority 3 |

Median Turnover Time by Month

Minutes

20.45
18.50
16.54

12/2021 02/2022 04/2022 06/2022 08/2022 10/2022 12/2022 02/2023 04/2023 06/2023 08/2023 10/2023 12/2023 02/2024 04/2024 06/2024

90th Percentile Turnover Time by Month

Minutes

45.15
38.80
32.45

12/2021 02/2022 04/2022 06/2022 08/2022 10/2022 12/2022 02/2023 04/2023 06/2023 08/2023 10/2023 12/2023 02/2024 04/2024 06/2024
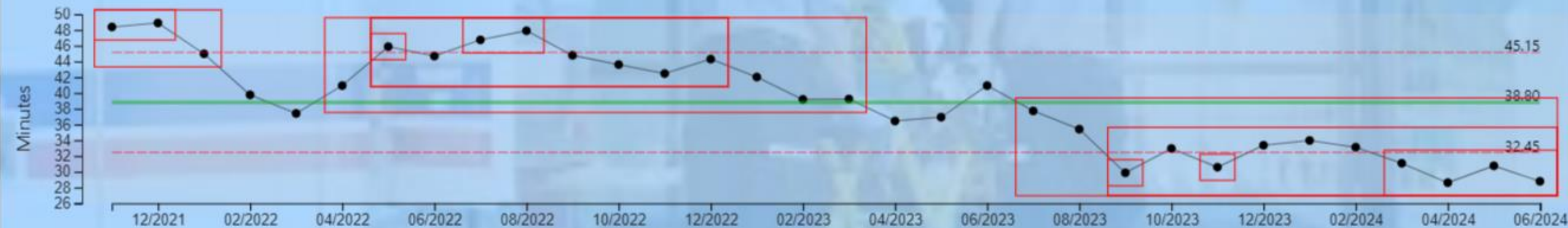
| FHH | GEC | HCGH | HCSSH | MMMC | SGMC | SIB | SUB | WAH/WOMC |

What we tell hospital leaders

- We will not normalize extended wait times

- EMS crews will not act as surrogates for ED staff

- Please send stable EMS patients to the waiting room
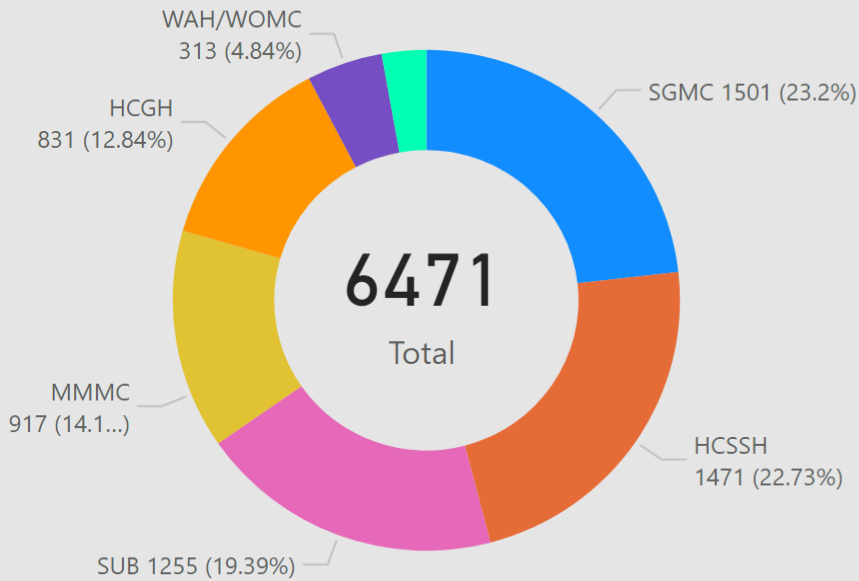
MCFRS Hospital Interface Report

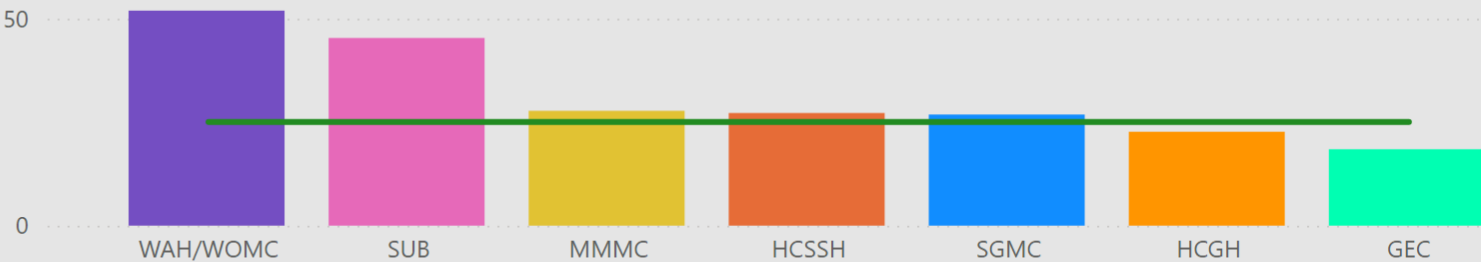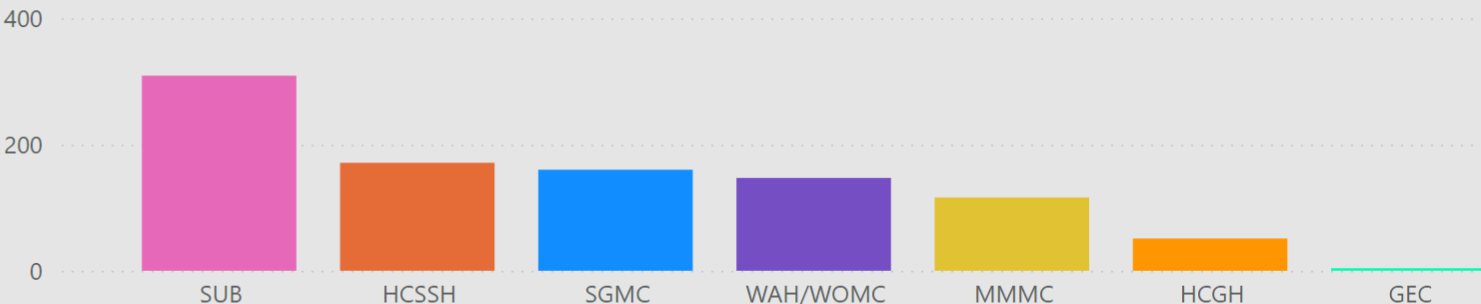| GEC | HCGH | HCSSH | MMMC | SGMC | SUB | WAH/WOMC |

Patient Distribution

Total: 6471

- SGMC 1501 (23.2%)
- HCSSH 1471 (22.73%)
- SUB 1255 (19.39%)
- MMMC 917 (14.1...)
- HCGH 831 (12.84%)
- WAH/WOMC 313 (4.84%)

90PCTL Turnover Time (at hospital to off cot) in minutes (GOAL=25min)

WAH/WOMC, SUB, MMMC, HCSSH, SGMC, HCGH, GEC

Count of patient turnovers >25 min

SUB, HCSSH, SGMC, WAH/WOMC, MMMC, HCGH, GEC

Lost unit hours by hospital

SUB	WAH/WOMC	SGMC	HCSSH	MMMC	HCGH	GEC
122	45	30	29	15	8	1
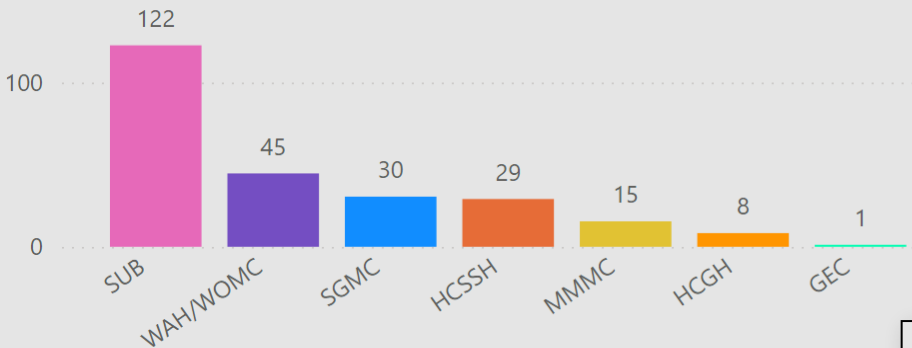
Unit productivity loss in dollars

$31,519.85

Countywide Lost Unit Hours

251

Lost units

0.35

Lost UH=Turnover Time - 25min (only when TT>25min)

Volume ● Median Turnover Time ● 10 day Rolling Median

Date: May 05, May 12, May 19, May 26
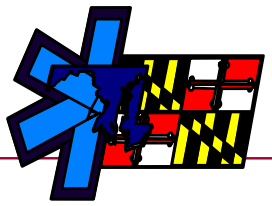
"Wall Time… Wall Time… ♪
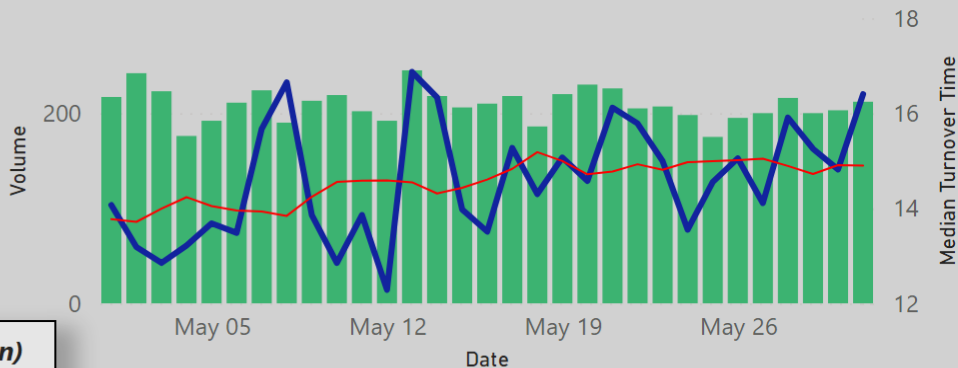## *Not Havin' a Ball Time ♫"*
Approaches to Crisis in Patient Handoffs

Roger M. Stone, MD, MS, FAAEM FAEMS

Asst Chief Ben Kaufman, BS, RN, NRP

EMIHS Section, Montgomery County Fire & Rescue (BK, RS)

Department of Emergency Medicine , University of Maryland SOM (RS)

with generous contributions by

Asst Chief Timothy Burns, MS, NRP

Formerly MCFRS QM Office

Eagles 2024

Ambulances Stuck in the Emergency Department

GLENN ASAEDA, MD, FACEP, FAAEM, DABEMS

CHIEF MEDICAL DIRECTOR

FIRE DEPARTMENT OF NEW YORK CITY

NYC EMS

▶ Approximately 4,500 EMS calls per day

▶ Equates to over 1.6 million calls per year

▶ Approximately 1 million patients transported

▶ 60 911-Receiving EDs

Ambulance Turn Around Times

- ▶ Ideally 20-25 minutes
- ▶ Realistically 40-45 minutes
- ▶ Severely problematic

HOW TO SOLVE

- NOT AT ALL EASY
- Alternate Destinations
- Treat-In-Place
- Redirection by EMS – when certain number of 911 ambulances are at an ED for >20 minutes – turned on
- Hospital Liason Officer Program (HLO) – EMS crew takes over patient at triage allowing units to go back into service

Results

- Successful when everything runs according to plans
- Crews are smarter than us
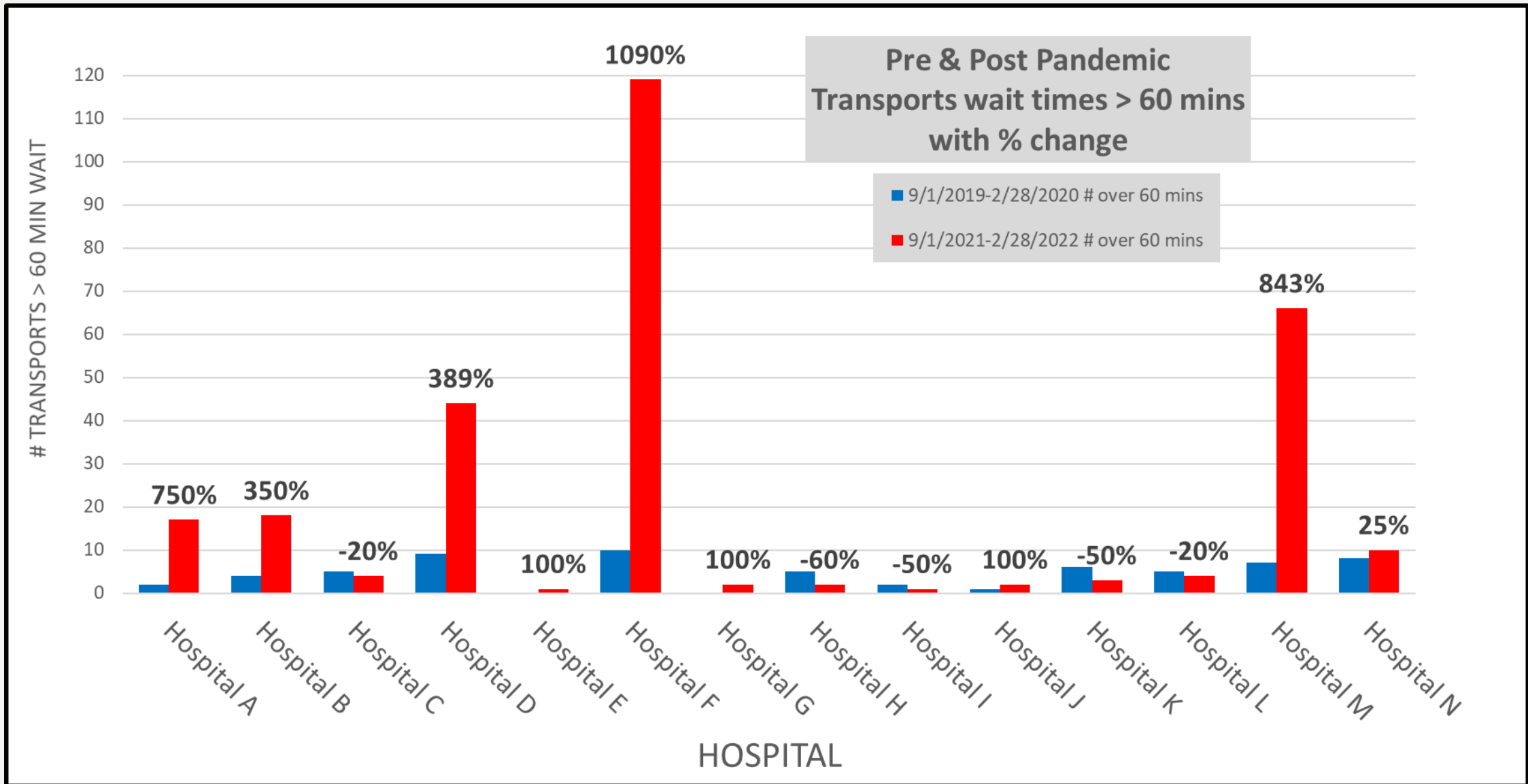
Thank You

QUESTIONS?

PATIENT PARKING ONLY

ATTENTION EMS:
WE'RE GONNA MAKE YOU WAIT IN THE HALLWAY UNTIL WE'RE GOOD AND READY TO DEAL WITH YOU.

SO JUST WAIT HERE AND BABYSIT THE PATIENT UNTIL WE DECIDE TO FREE UP YOUR STRETCHER.

AMBULANCE

STRATEGY NUMBER 2:

	# of Transports	# > 20:00	% > 20:00	# > 60:00	Avg Turnover Time:
Bethesda Hospital East	9	4	44.44%	3	00:36:30
		PBC21090216 R46 5:46:56PM 7:06:42PM			
		PBC21090194 R93 5:12:46PM 6:28:06PM			
		PBC21090099 R241 1:17:15PM 2:21:00PM			
Bethesda Hospital West	18	9	50.00%	1	00:26:35
		PBC21090308 R48 9:24:10PM 10:27:00PM			
Boca Raton Regional Hospital	20	0	0.00%		00:11:49
Delray Free Standing Lake Worth	6	0	0.00%		00:07:14
Delray Medical Center	34	3	8.82%		00:13:21
Good Samaritan Free Standing ED	4	0	0.00%		00:07:46
Good Samaritan Medical Center	7	3	42.86%		00:18:29
JFK Medical Center	44	7	15.56%		00:14:04
JFK Medical Center North Campus (formerly W	10	0	0.00%		00:11:18
Jupiter Medical Center	17	3	16.67%		00:13:36
Lakeside Medical Center	19	0	0.00%		00:10:56
Palm Beach Gardens Medical Center	2	0	0.00%		00:15:01
Palms West Hospital	14	1	7.14%		00:11:55
St. Mary's Medical Center	4	0	0.00%		00:10:51
St. Mary's Medical Center - Pediatric	2	0	0.00%		00:10:20
Wellington Regional Medical Center	20	7	35.00%		00:18:24
West Boca Medical Center	9	0	0.00%		00:10:23
Total number of Events: 239	241	38			

K:\CRYSTAL REPORTS\Safety Pad\Chief Coyle - Daily\TRANSPORTS - Hosp OOS.rpt

Palm Beach County Fire Rescue
Hospital out of Service Times
8/12/2021 to 8/12/2021

	# of Transports	# > 20:00	% > 20:00	# > 60:00	Avg Turnover Time:
Bethesda Hospital East	9	4	44.44%	3	00:36:30
		PBC21090216 R46	5:46:56PM	7:06:42PM	
		PBC21090194 R93	5:12:46PM	6:28:06PM	
		PBC21090099 R241	1:17:15PM	2:21:00PM	
Bethesda Hospital West	18	9	50.00%	1	00:26:35
		PBC21090308 R48	9:24:10PM	10:27:00PM	
Boca Raton Regional Hospital	20	0	0.00%		00:11:49
Delray Free Standing Lake Worth	6	0	0.00%		00:07:14

Palm Beach County Fire Rescue
Hospital out of Service Times
6/12/2024

	# of Transports	# > 20:00 < 30:00	% > 20:00 < 30:00	# > 30:00 < 45:00	# > 45:00 < 60:00	# > 60:00	Avg Turnover Time:
Bethesda Hospital East	13	1	8%	1	0	0	00:12:55
Bethesda Hospital West	16	0	0%	0	0	0	00:13:14
Boca Raton Regional Hospital	18	0	0%	0	0	0	00:10:07
Delray Free Standing Lake Worth	1	0	0%	0	0	0	00:04:33
Delray Medical Center	27	0	0%	0	0	0	00:11:11
Good Samaritan Medical Center	3	1	33%	0	0	0	00:14:26
JFK Medical Center	43	4	9%	0	0	0	00:13:30
JFK Medical Center North Campus	7	0	0%	0	0	0	00:10:57
Jupiter Medical Center	12	0	0%	0	0	0	00:10:42
Lakeside Medical Center	7	0	0%	0	0	0	00:09:01

Palm Beach County Fire Rescue
Hospital out of Service Times
6/12/2024

6/13/2024

	# of Transports	# > 20:00 < 30:00	% > 20:00 < 30:00	# > 30:00 < 45:00	# > 45:00 < 60:00	# > 60:00	Avg Turnover Time:
Bethesda Hospital East	13	1	8%		0	0	00:12:55
Bethesda Hospital West	16	0	0%	0	0	0	00:13:14
Boca Raton Regional Hospital	18	0	0%	0	0	0	00:10:07
Delray Free Standing Lake Worth	1	0	0%	0	0	0	00:04:33

Thank You!!