

# EMS Stat & Operations



# **Top 10 Box Areas with the Highest Number of EMS Incidents Q4 2021**

## **1. 33-50**

- Incidents – 345
- Neighborhood/s
  - McElderry Park – 162 Incidents
  - Milton-Montford – 113 Incidents
  - CARE – 20 Incidents
  - Patterson Place – 14 Incidents
  - Madison-Eastend – 14 Incidents
  - Middle East – 22 Incidents

## **2. 51-1**

- Incidents – 300
- Neighborhood/s
  - Ellwood Park/Monument – 203 Incidents
  - Baltimore Highlands – 45 Incidents
  - Patterson Park Neighborhood – 27 Incidents
  - Orangeville – 17 Incidents
  - Orangeville Industrial Area – 5 Incidents
  - Madison-Eastend – 2 Incidents

# **Top 10 Box Areas with the Highest Number of EMS Incidents Q4 2021**

## **3. 13-70**

- Incidents – 280
- Neighborhood/s
  - Upton – 201 Incidents
  - Druid Heights – 39 Incidents
  - Madison Park – 19 Incidents
  - Sandtown-Winchester – 21 Incidents

## **4. 14-50**

- Incidents – 278
- Neighborhood/s
  - Carrollton Ridge – 231 Incidents
  - New Southwest/Mount Clare – 47 Incidents

## **5. 45-40**

- Incidents – 254
- Neighborhood/s
  - Levindale – 206 Incidents
  - Mount Washington – 44 Incidents
  - Coldspring – 4 Incidents

# **Top 10 Box Areas with the Highest Number of EMS Incidents Q4 2021**

## **6. 23-1**

- Incidents – 235
- Neighborhood/s
  - Downtown – 214 Incidents
  - Downtown West – 11 Incidents
  - Inner Harbor – 10 Incidents

## **7. 13-40**

- Incidents – 230
- Neighborhood/s
  - Upton – 198 Incidents
  - Madison Park – 28 Incidents
  - Bolton Hill – 2 Incidents
  - Heritage Crossing – 2 Incidents

## **8. 27-30**

- Incidents – 230
- Neighborhood/s
  - Frankford – 230 Incidents

# **Top 10 Box Areas with the Highest Number of EMS Incidents Q4 2021**

## **9. 13-10**

- Incidents – 226
- Neighborhood/s
  - Bolton Hill – 143 Incidents
  - Druid Heights - 1 Incidents
  - Madison Park – 82 Incidents

## **10. 6-62**

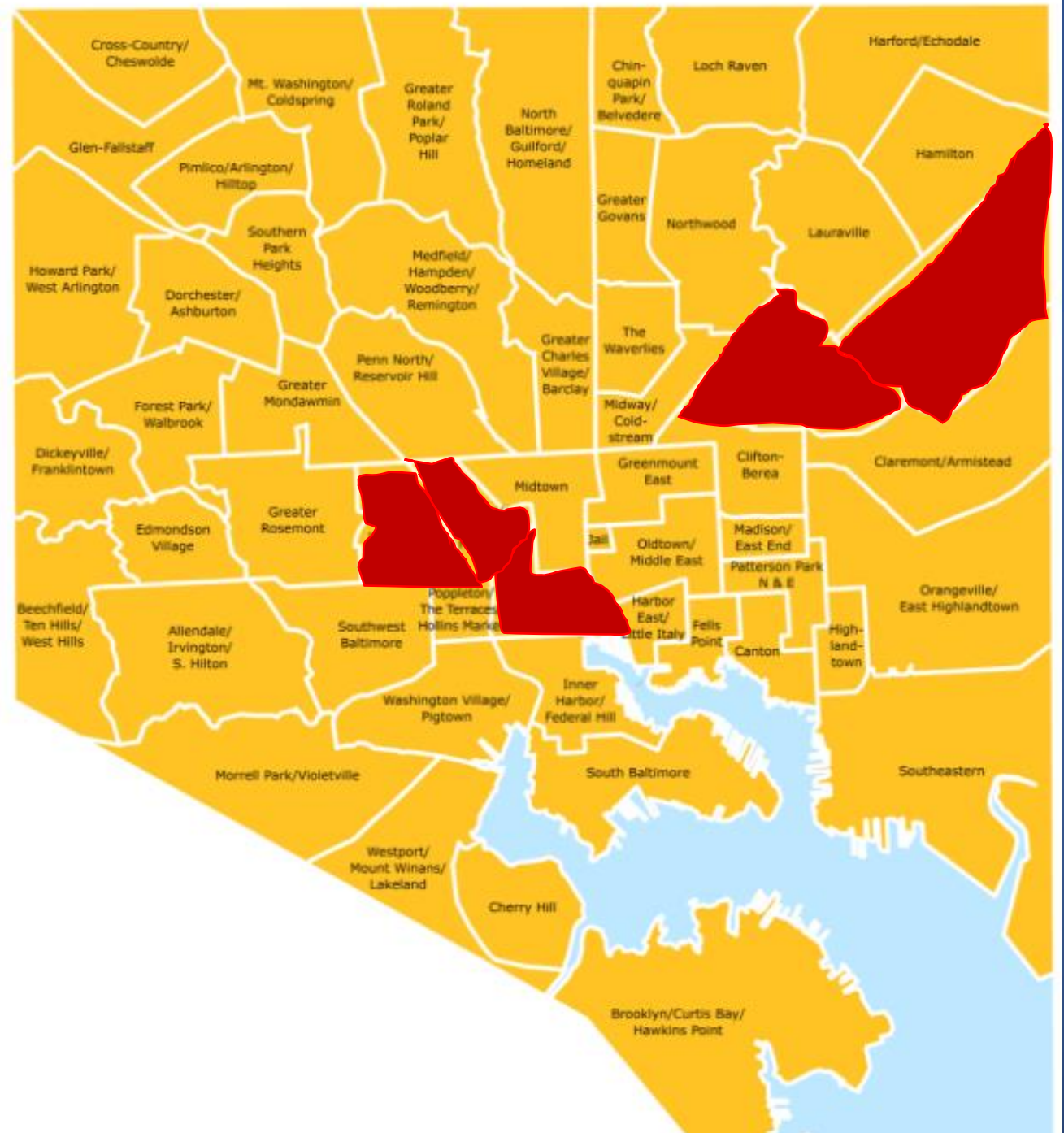
- Incidents – 225
- Neighborhood/s
  - Downtown – 138 Incidents
  - Mount Vernon – 87 Incidents



# Top 5 Neighborhoods



# Top 5 Neighborhoods



**Top 10  
Neighborhoods  
with the Highest  
Number of EMS  
Incidents  
Q4 2021**

Neighborhood	Incidents Q4 2021	Incidents FY21
Downtown	1211	4822
Sandtown-Winchester	915	3547
Frankford	904	3635
Belair-Edison	788	2932
Upton	766	3194
Brooklyn	655	2344
Cherry Hill	530	1934
Carrolton Ridge	442	2029
Broadway East	433	2086
Coldstream Homestead Montebello	423	1731



# EMS Call Volume

## Q4 2021

### Average calls for service: Daily, weekly and monthly

- Daily – 427 Incidents (FY21 = 427)
- Weekly – 3,000 Incidents (FY21 = 2,997)
- Monthly – 13,100 Incidents (FY21 = 12,987)

### Peak call volume: Time of day, day of the week, time of the month

- Time of Day – 12:00-17:59
- Day of Week – Friday
- Time of Month – End of month
- Month of Quarter - December

# EMS Call Volume

## Q4 2021 Average calls for service: Daily, weekly and monthly

- Daily – 427 Incidents
- Weekly – 3,000 Incidents
- Monthly – 13,100 Incidents

## Q3 2021 Average calls for service: Daily, weekly and monthly

- Daily – 451 Incidents
- Weekly – 3,169 Incidents
- Monthly – 13,837 Incidents

## Q4 2020 Average calls for service: Daily, weekly and monthly

- Daily – 398
- Weekly – 2,796
- Monthly – 12,211

# Most frequent advanced life support calls for service Q4 2021 - TOP 5

06D02 (Difficulty  
speaking between  
breaths) – 2142  
Incidents (FY21 = 7619)

31D02 (Overdose  
Unconscious) – 917  
Incidents (FY21 = 4371)

31D04 (Overdose  
Changing Color) – 599  
Incidents (FY21 = 2393)

10D02 (Chest Pain with  
Difficulty Speaking  
between Breaths) – 540  
Incidents (FY21 = 2120)

06D01 (Breathing  
problems, not alert) –  
532 Incidents (FY21 =  
1874)

# Most frequent low acuity calls for service Q4 202 - TOP 5

**26A10 (Unwell / Ill )**  
**133 Incidents**

**26A11 (Vomiting)**  
**70 Incidents**

**26A02 (Abnormal Blood Pressure  
/ Asymptomatic)**  
**63 Incidents**

**26A01 (Sick No  
Priority Symptoms)**  
**63 Incidents**

**26A07 (New Onset  
Immobility)**  
**56 Incidents**



**EMS Unit  
Response Time  
on EMS Calls for  
Service  
Q4 2021**

**Total Average – 10min 22sec**

**Medic Average – 10min 19sec**

**Ambo Average – 10min 30sec**

# Fire Suppression Response Time to EMS Calls for Service Q4 2021

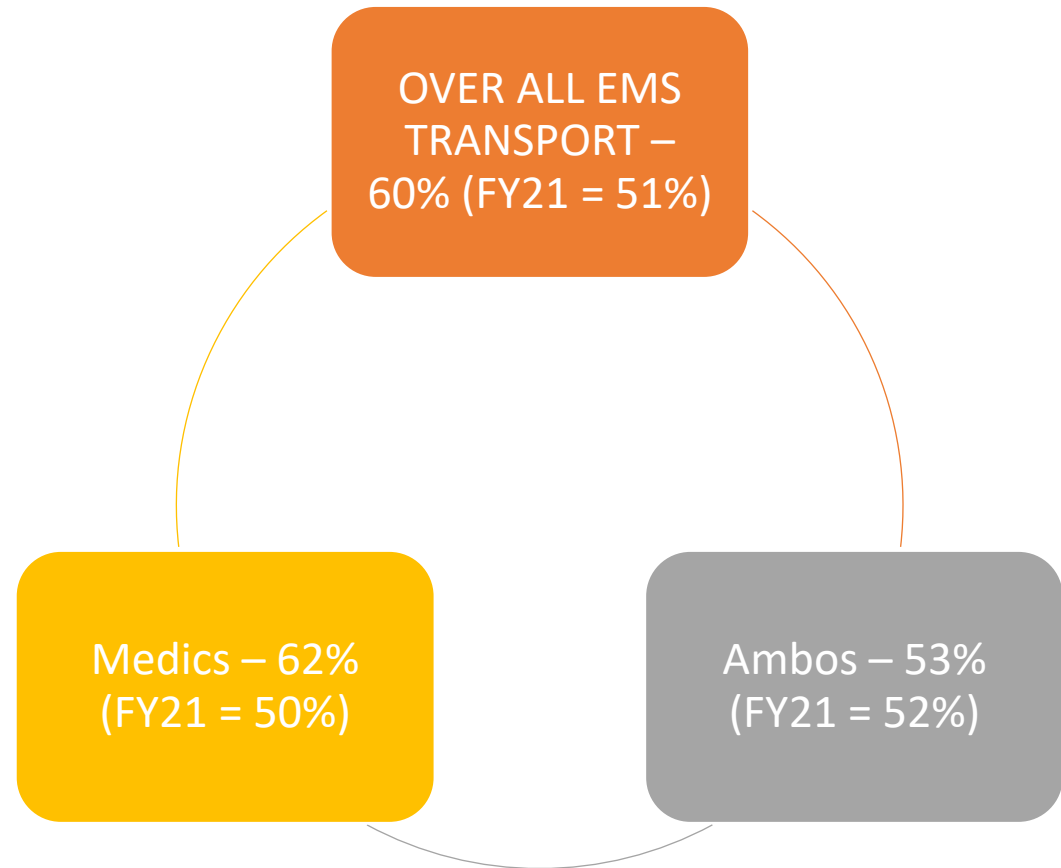
**Suppression Response Time to EMS Calls - 6 Minutes and 35 Seconds (FY21 = 6min 3sec)**

- *Definition: the difference in time between the first arriving suppression unit's time of dispatch and time of arrival on the scene*

**Average Wait Time for EMS arrival - 15 Minutes and 46 Seconds (FY21 = 8min 26sec)**

- *Definition: the difference in time between the first arriving suppression unit's time of arrival and the time of arrival of the first EMS transport unit*

# EMS Fleet Utilization (UHU) Q4 2021



- ***Definition: the % of time in which a unit is assigned on an incident***

# EMS Fleet

**28 First Line**

**4 Critical Alert**

**Up to 4 Peak  
Time Transport  
Units (9a-9p)**



# EMS Fleet – 1<sup>st</sup> Line OOS



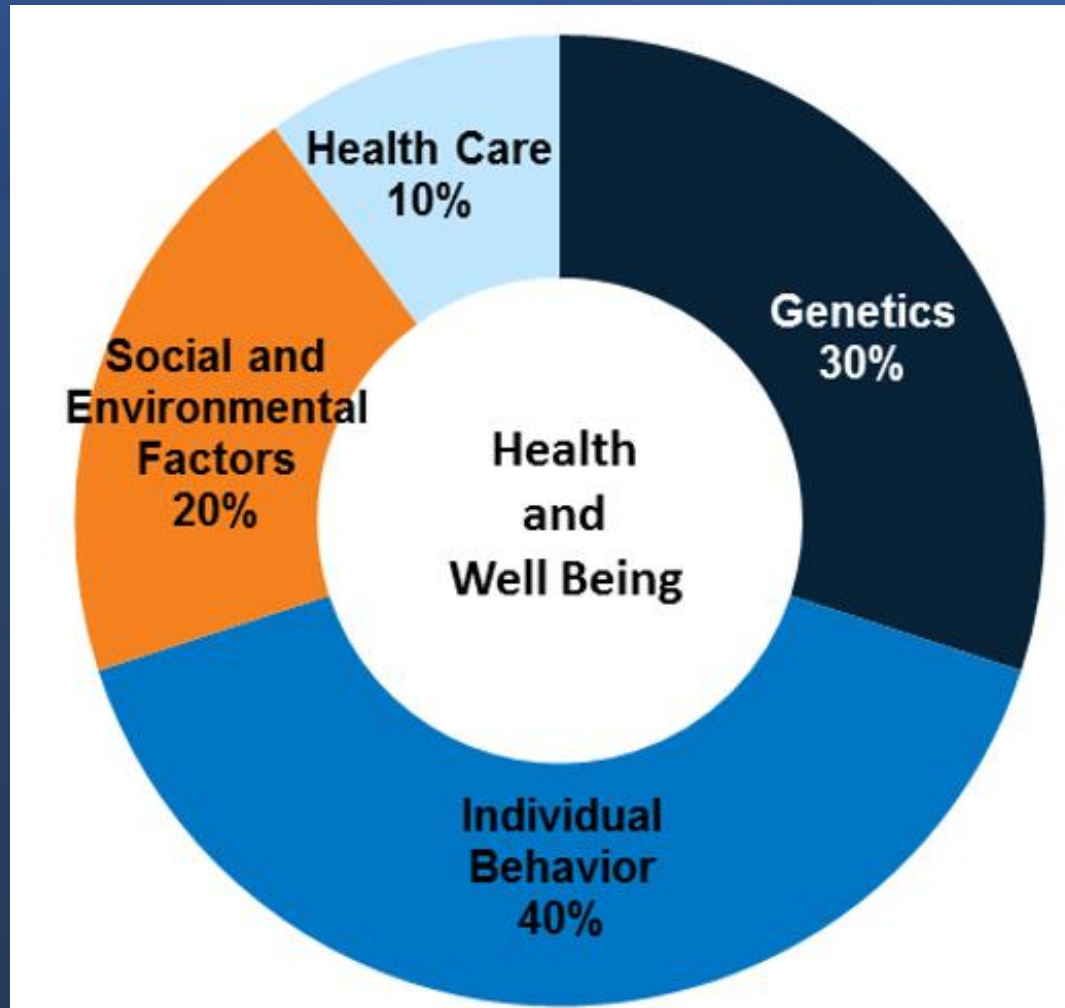
**This is a statistic generated by DGS  
Fleet Maintenance.**



**1<sup>st</sup> line unit OOS**

**2<sup>nd</sup> line unit is available**

# What Defines Health?



## Impact of Different Factors on Risk of Premature Death

SOURCE: Schroeder, SA. (2007). We Can Do Better – Improving the Health of the American People. *NEJM*. 357: 1221-8.

# Social Determinants of Health



Source: HealthyPeople2020.gov

# Weakness in Primary Care Infrastructure

## High rates of healthcare utilization

- ↑ EMS Responses
- ↑ ED Usage

## Complexity of Patients

- Comorbidities
- Substance use, mental illness
- Low health care literacy

## Lack of access to treatment

- Chronic conditions
- Homelessness
- Missed appointments
- Lack of medications



# EMS Population Health Programs



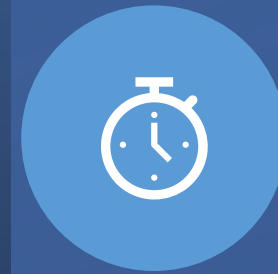
**POSITIVE IMPACT  
ON SDOH**



**REDUCED EMS  
CALL VOLUME**



**BETTER PATIENT  
OUTCOMES**



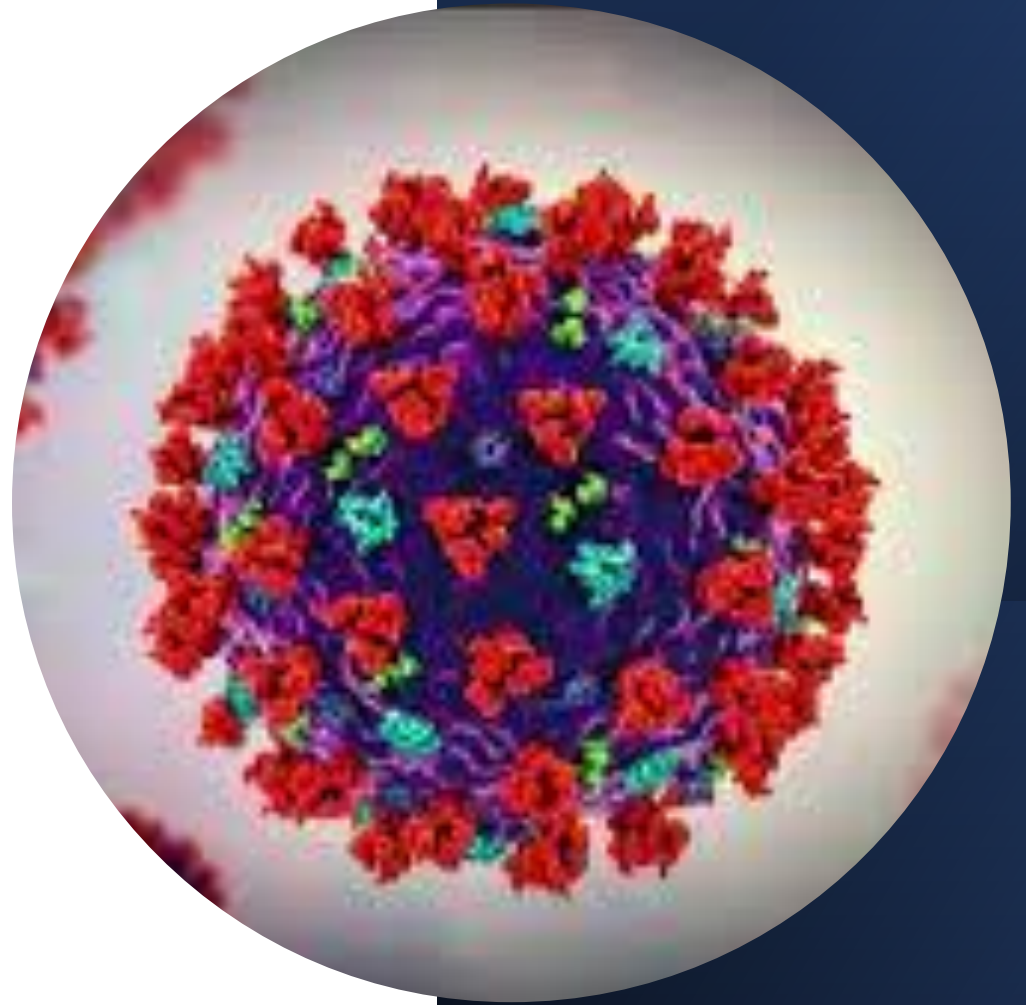
**IMPROVED  
RESPONSE TIMES**

# Background (NYT Article December 2014)

- ED crowding
- Ambulance offload delay
- Rising call volumes
- Increased burden on EDs
- Decreased access to primary care

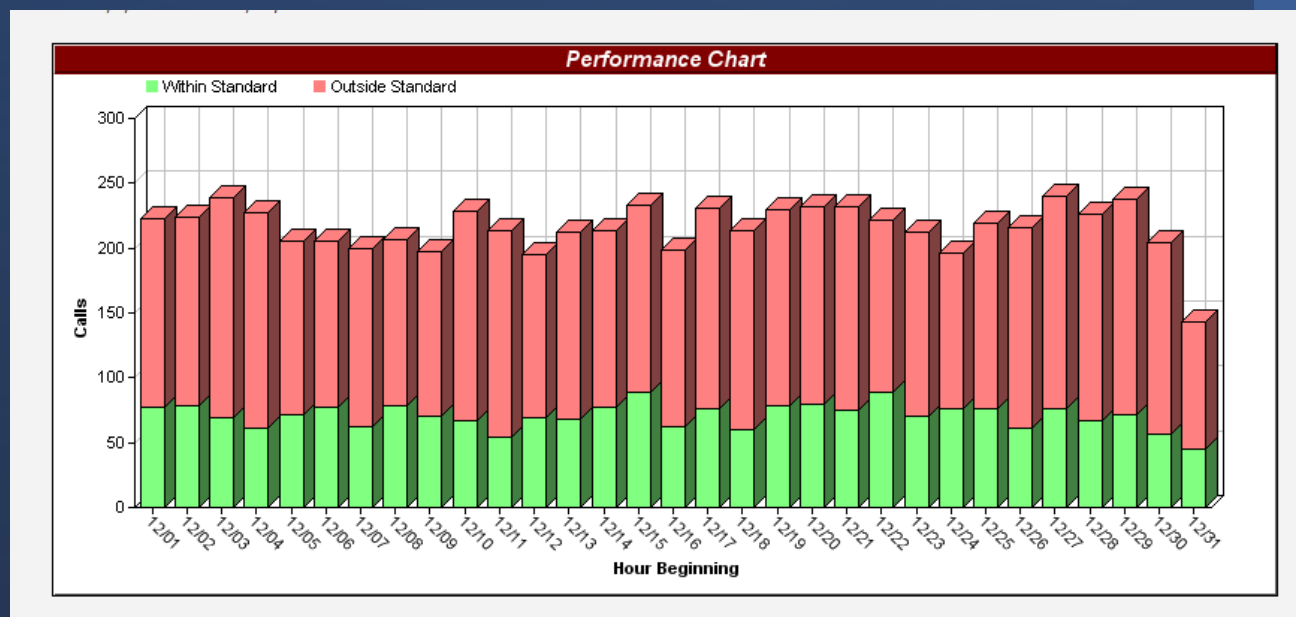


# COVID-19 Resurgence



# Current State

Hospital	Yellow Alert	Red Alert	Mini Disaster	ReRoute
Anne Arundel Medical Center	00:29			
Baltimore Washington Medical Center	00:29	00:29		
Carroll Hospital Center (LifeBridge)	00:29	00:29		
Franklin Square (MedStar)	00:29	00:29		
Good Samaritan Hospital (MedStar)	00:29	00:29		
Grace Medical Center (LifeBridge)	00:29	00:29		
Greater Baltimore Medical Center	00:29	00:29		
Harbor Hospital (MedStar)	00:29	00:29		
Harford Memorial Hospital (UMUCH)	00:29	00:29		
Howard County General Hospital (JHM)	00:29	00:29		
Johns Hopkins Bayview	00:29	00:29		
Johns Hopkins Hospital (Adult ED)	00:29	00:29		
Johns Hopkins Hospital (Pediatric ED)				
Mercy Medical Center	00:29			
Midtown (UM)	00:29	00:29		00:29
Northwest Hospital (LifeBridge)	00:29	00:29		
R Adams Cowley Shock Trauma Center				
Sinai Hospital (LifeBridge)	00:29			
St. Agnes Hospital (Ascension)	00:29	00:29		
St. Joseph Medical Center (UM)	00:29	00:29		
Union Memorial Hospital (MedStar)	00:29			
University of Maryland Medical Center	00:29	00:29		
Upper Chesapeake Medical Center (UMUCH)	00:29	00:29		



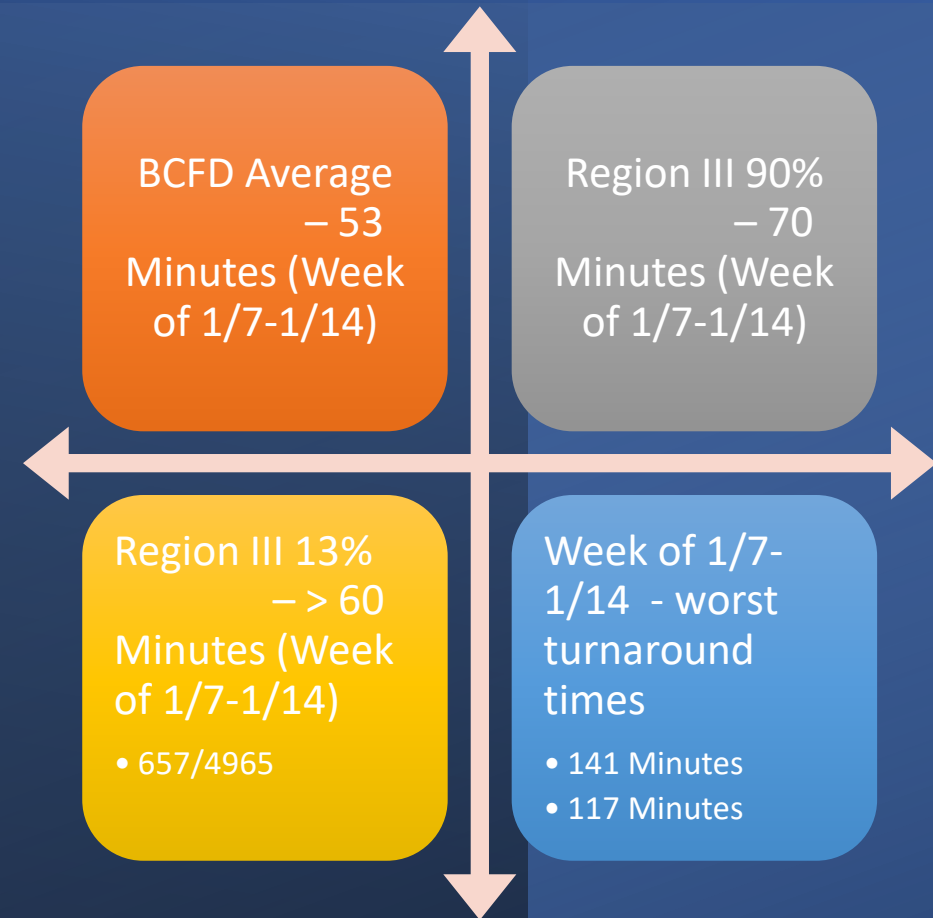
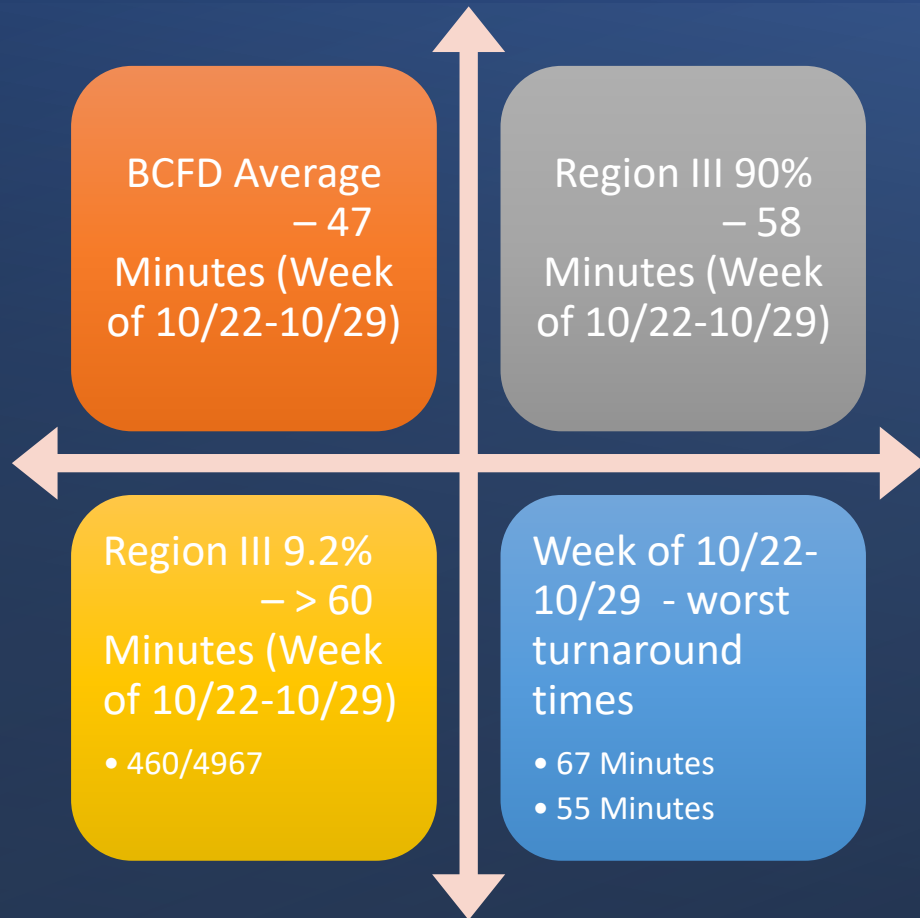




# Hospital Offload Delays



# Ambulance Offload Time



# Ambulance Offload Time

Date	1/7/2022	1/8/2022	1/9/2022	1/10/2022	1/11/2022	1/12/2022	1/13/2022	1/14/2022
<b>Total Transports</b>	<b>201</b>	<b>191</b>	<b>213</b>	<b>236</b>	<b>212</b>	<b>196</b>	<b>229</b>	<b>205</b>
<b># of In Hosp Times Between 60 &amp; 90 Min</b>	<b>41</b>	<b>34</b>	<b>52</b>	<b>47</b>	<b>39</b>	<b>40</b>	<b>55</b>	<b>41</b>
<b># of In Hosp Times Between 90 &amp; 120 Min</b>	<b>9</b>	<b>8</b>	<b>12</b>	<b>2</b>	<b>11</b>	<b>5</b>	<b>6</b>	<b>9</b>
<b># of In Hosp Times 120 Min or Greater</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>13</b>	<b>1</b>	<b>5</b>	<b>11</b>	<b>2</b>
<b>Total Time in Hours when at Hosp is greater than 60 min.</b>	<b>68</b>	<b>66</b>	<b>96</b>	<b>98</b>	<b>64</b>	<b>67</b>	<b>100</b>	<b>69</b>

# What is EMTALA?

- The Emergency Medical Treatment and Active Labor Act is a FEDERAL statute which governs when and how a patient may be (1) refused treatment or (2) transferred from one hospital to another when he/she is in an unstable medical condition.
- EMTALA was passed as part of the Consolidated Omnibus Budget Reconciliation Act of 1986, and it is sometimes referred to as "the COBRA law". In fact, a number of different laws come under that general name. Another very familiar provision, also referred to under the COBRA name, is the statute governing continuation of medical insurance benefits after termination of employment.
- EMTALA applies only to hospitals that participate in the Medicare Program.

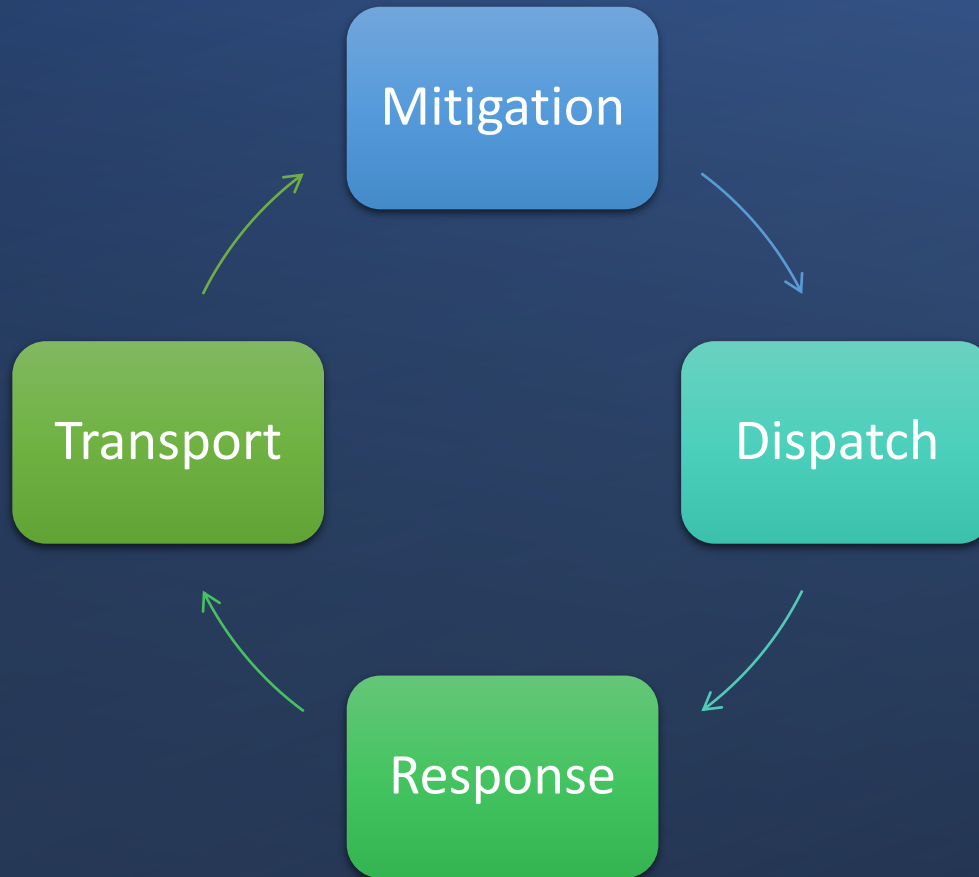


# The Medical Duty Officer (MDO)





# Cycle of an EMS Call



# Components of a Comprehensive EMS Plan

- Evidence based
- Patient focused
- Scalable
- Flexible



# Mitigation strategies

- Public education
- Meeting expectations about service delivery
- Appropriate messaging about 911 utilization
- Integration across city service lines
- Interdepartmental collaboration



**911 FOR EMERGENCIES**

**CALL 911 FOR:**

-  SYMPTOMS OF HEART ATTACK OR STROKE
-  DIFFICULTY BREATHING OR CHOKING
-  DIFFICULTY SPEAKING, WALKING OR SEEING
-  AN ALLERGIC REACTION
-  CONFUSION, DIZZINESS OR DISORIENTATION
-  SUDDEN, SEVERE PAIN

**DO NOT call 911 for:**

-  Info about COVID-19
-  A ride to the doctor's office
-  COVID-19 testing
-  Mild symptoms

For more information, visit: [MyEscambia.com/covid19](https://MyEscambia.com/covid19)

**EMERGENCY MANAGEMENT**  
ESCAMBIA COUNTY





# DISPATCH

911 communications



Fire Communications



Limited triage







# DISPATCH

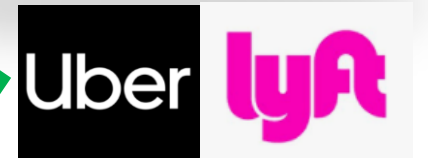
911 communications



Fire Communications



Medically informed dispatch





# Alternative response strategies

- Preserve ambulance resources
- “No send”
- Non emergency
- Contracted providers / ambulance services



# Alternative transport strategies

- ALS ambulance
- BLS ambulance
- Wheelchair van
- Uber/lyft/taxi



# Recruitment

**Paramedic**

**EMT**

**Continuously  
Posted**

**July 8, 2021 -  
October 8,  
2021**

# Recruitment - Marketing

- All local news stations
- AFRO American Newspaper
- The Baltimore Sun
- MOED
- City Hall
- City Council Members
- E-Blast to all community partners and those on job interest list
- Community Associations
- Placed on BCFD Social Platforms (Twitter, Facebook , Instagram and the BCFD Website)

Questions?

