Healthcare Resilience Task Force: EMS/911

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Agenda

- Emergency Medical Services (EMS) Environment
- COVID-19: Threats, Impacts and Next Steps for EMS
- EMS and Fire Impacts on Community Lifelines

ems.gov
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911.gov

Emergency Medical Services and 911 | Introduction

EMS and 911 Quick Facts

- There are more than 23,000 licensed EMS agencies in the U.S.
- EMS agencies can be private non-profit, municipal third-service fire-based, hospital-based, and private for-profit.
- The majority of ambulance services are small non-governmental agencies that respond to fewer than 650 calls for service each year.

- EMS agencies respond to more than 40 million calls for service combined each year.
- 20% of EMS agencies answer 80% of the calls for service in the U.S.

- About 60% of fire departments provide emergency medical services.
- About 40% of EMS agencies are fire-based.

- There are more than 5,000 911 Public Safety Answering Points (PSAP)/Emergency Communication Centers (ECC) in the U.S.
- 911 centers can be run by law enforcement, information technology departments, emergency management agencies, or be independently operated.
- The majority of 911 centers operate with 2-5 telecommunicators on duty at any given time.

- Between 33-50% of 911 centers provide pre-arrival medical instructions to callers to provide care while waiting for EMS to arrive.

- 911 centers refer callers for non-emergency information and service.
- 911 centers refer non-acute calls for medical service to the appropriate levels of medical care, preserving healthcare system resources.

Emergency Medical Services and 911 | Introduction

Emergency Medical Services (EMS) and 911 are an integral part of healthcare, public health, public safety, and emergency management

Healthcare Delivery

EMS agencies provide emergency medical care to patients on the scene of a call, during transport to the hospital, as well as during transfers from hospitals and other healthcare facilities.

Public Health

EMS agencies support local public health systems through the provision of preventative care through community paramedic programs, point-of-care testing, and the delivery of vaccinations.

EMS systems are especially critical in rural areas that often have limited access to other healthcare resources.

911 can refer non-emergency callers to public health resources.

Public Safety

EMS agencies are an integral part of public safety, responding to the full range of all-hazards 911 emergencies alongside police and fire agencies.

Emergency Management

EMS agencies provide crucial support to emergency management by serving as a backstop for other healthcare providers and stepping up to provide care in nursing homes and hospitals when they are overwhelmed.

EMS and 911 centers can also preserve healthcare system capacity by triaging patients, treating them on the scene, and referring them to non-acute resources.

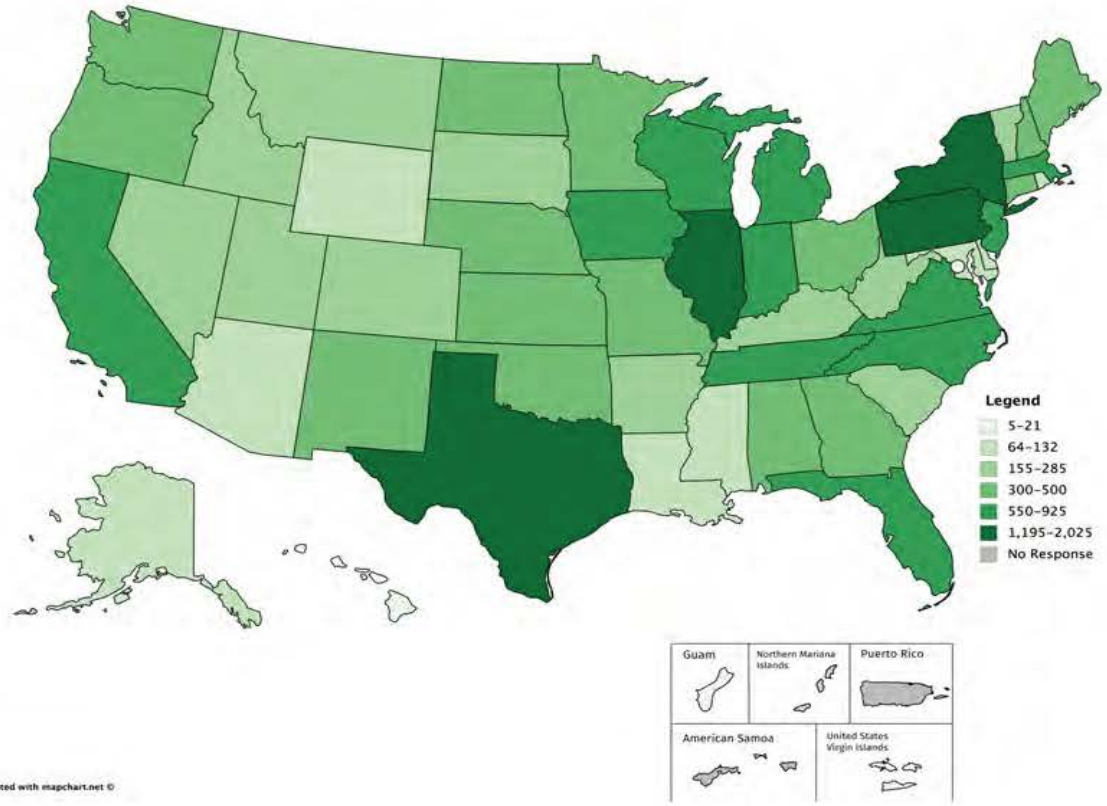
2020 Assessment Total Number of EMS Agencies by State

Totals by State

Table 1

# of Responding States	Mean	Median	Min	Max	Total
54	431	336	5	2,024	23,272

Figure 8



Legend

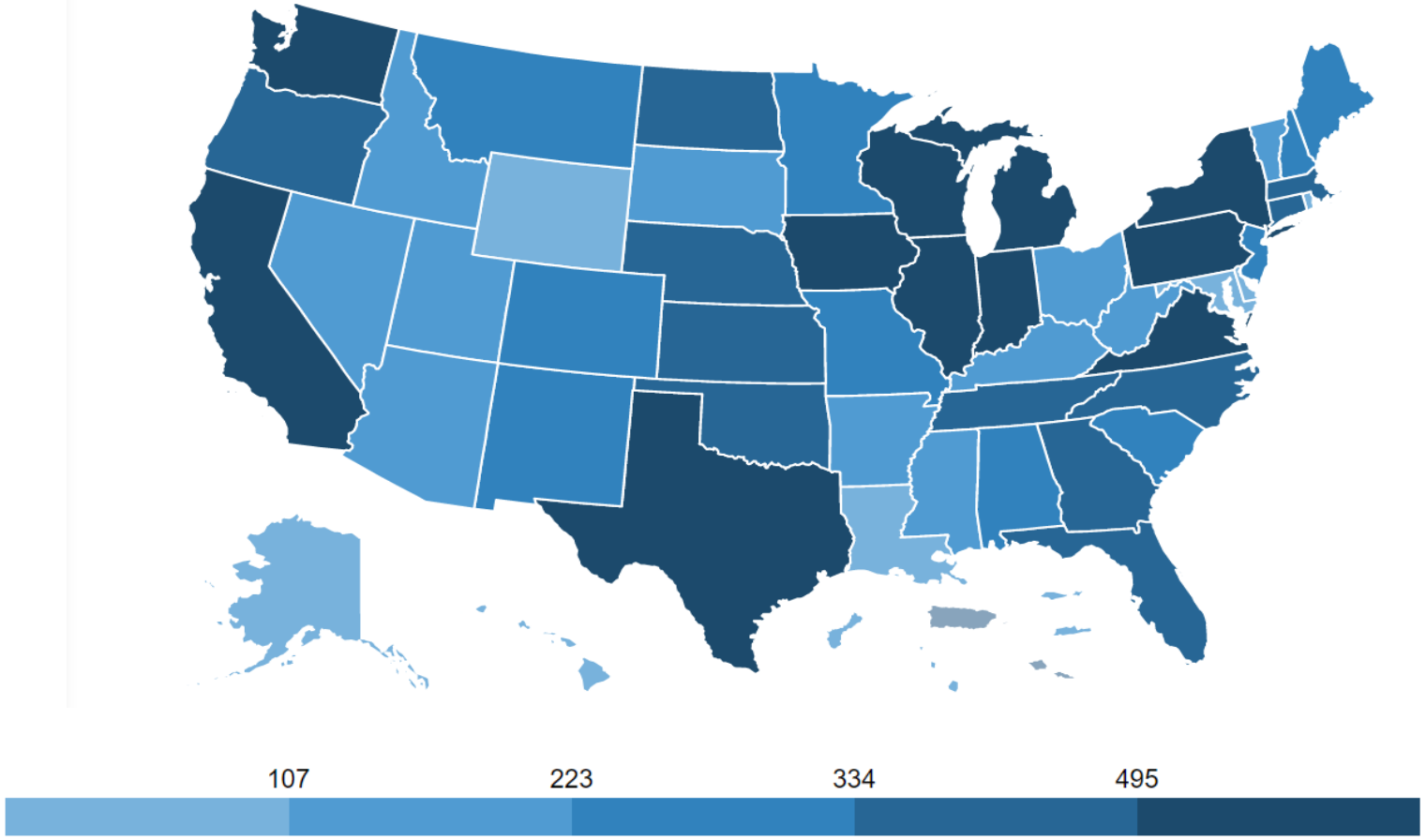
- 5-21
- 64-132
- 155-285
- 300-500
- 550-925
- 1,195-2,025
- No Response

Source: National Association of State EMS Officials (NASEMSO) National EMS Assessment, April 2020

EMS Agency Heat Map

This EMS Agency Heat Map tool from the National Association of State EMS Officials (NASEMSO) shows counts of EMS agencies and can be accessed here.

Licensed Ambulance Services and Other EMS Agencies by State and Territory

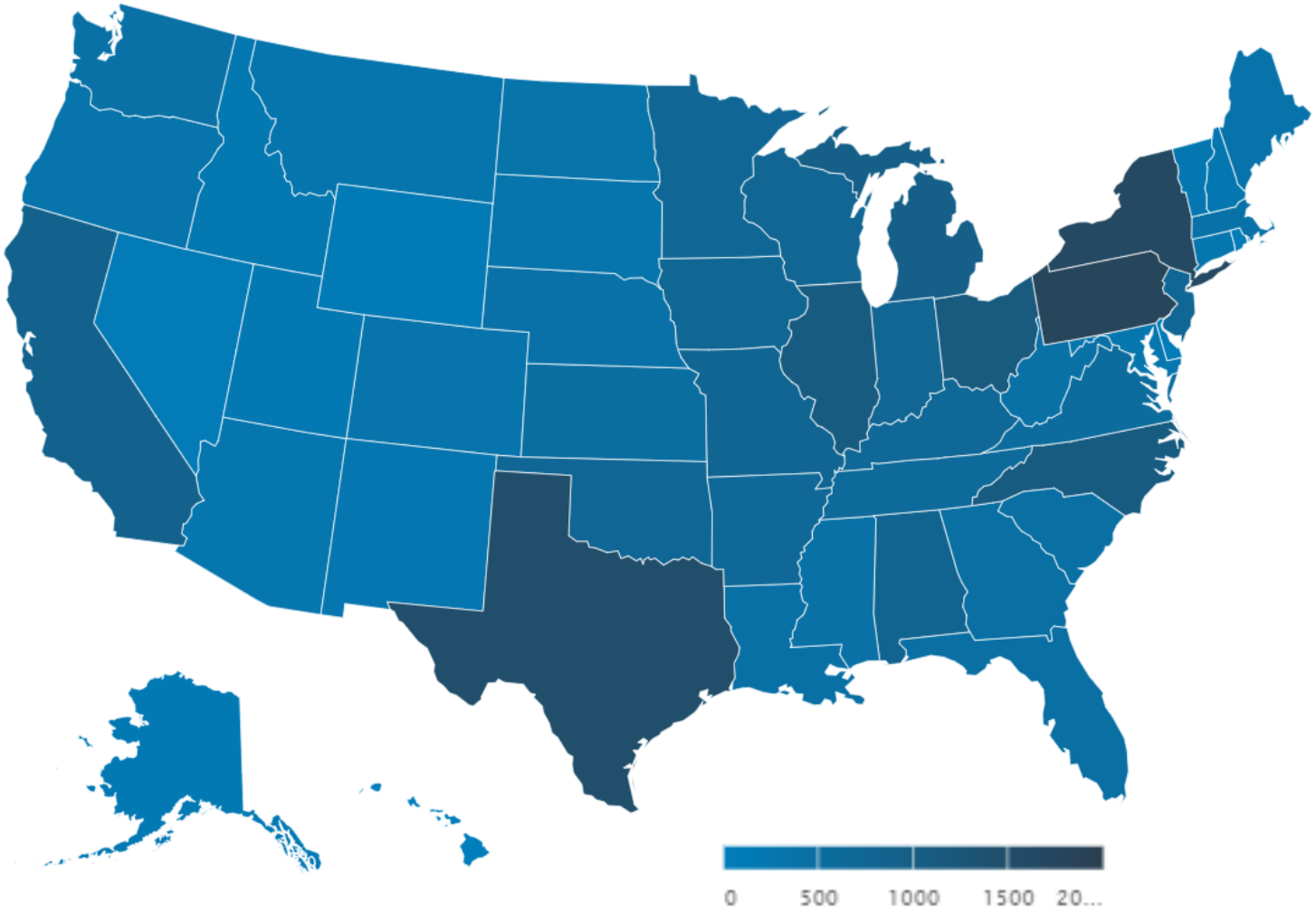


Source: National Association of State EMS Officials (NASEMSO) EMS Agency Heat Map

Fire Department Agencies Map

Number of registered fire departments by state and territories

This tool shows the number of registered fire departments by state and territories and can be accessed here.



Source: U.S. Fire Administration (USFA) National Fire Department Registry Quick Facts

Emergency Medical Services and 911 | Threats

EMS/911 and COVID-19 Response

- **EMS professionals and 911 telecommunicators have been on the front lines of the nation's response** to the COVID-19 pandemic while continuing to perform their usual essential services.
- COVID-19 response is having a serious impact on EMS and 911 systems across the country and these **issues threaten to destabilize the Health & Medical and Safety & Security lifelines**.
- A number of EMS agencies have already shut down, while others are reducing personnel and response capabilities.

Community Lifeline Threats

Funding

- **Agency closures due to loss of revenue**
- **Difficulty accessing relief funding**
- **911 center staff being furloughed**

PPE

- **Challenges in obtaining necessary PPE**
- **Lack of access to major distributors**

Workforce

- **High level of attrition**
- **Anticipated staffing shortages**
- **Education programs shut down**

Emergency Medical Services and 911 | Threats

EMS systems across the country are facing issues that threaten to destabilize the Health & Medical and Safety & Security lifelines

Funding | **PPE** | **Workforce**

EMS agencies are at risk of shutting down due to lost revenue and increased operational costs associated with the COVID-19 pandemic

- 71% of EMS agencies are experiencing financial strain due to the COVID-19 response[1]
- 36% of agencies reported that they **may cease operations by the end of June**, and many had **less than 30 days cash on hand**[1]

Loss of Revenue

- A substantial decline in calls for service across the country has resulted in **significant lost revenue** for EMS agencies
- This has been exacerbated by **increased costs related to COVID-19** preparedness and response

Access to Relief Funding

- EMS agencies have had **difficulty accessing emergency relief funding** under the Stafford Act and CARES Act
- This is **especially true for private non-profit and private for-profit services**, which may not have a direct relationship with state EMS and health officials

1. NAEMT Survey of EMS Managers on COVID-19 Impact conducted in mid-April.

Emergency Medical Services and 911 | Impact & Next Steps

EMS systems across the country are facing issues that threaten to destabilize the Health & Medical and Safety & Security lifelines

Funding | **PPE** | **Workforce**

Impact

- **EMS agencies have begun to shut down** due to loss of revenue and increased operating costs
- When someone calls 911, **help may arrive late or not at all, and pre-arrival instructions may not be provided**
- The **financial burden of ensuring EMS may be shifted to local governments** that are facing their own resource challenges

Next Steps:

- ✓ **Identify issues** relating to the ability of EMS and 911 agencies in their communities to continue to finance operations
- ✓ **Provide technical assistance** on how to access emergency relief funding
- ✓ **Begin contingency planning** in case EMS agencies begin to close or reduce service
- ✓ **Collaborate and encourage state officials** to explicitly include EMS and 911 agencies as essential services
- ✓ Work with state EMS officials to **monitor, track, and report EMS agency closures**

Emergency Medical Services | Threats

EMS systems across the country are facing issues that threaten to destabilize the Health & Medical and Safety & Security lifelines

Funding | **PPE** | **Workforce**

EMS agencies have experienced persistent challenges obtaining necessary PPE, including N95 masks and surgical gowns

- EMS agencies have relied on **contingency and crisis standards for PPE preservation**:
  - More than 80% of EMS agencies have adopted alternative procedures for PPE use[2]
  - Many EMS agencies are reusing N95 masks as a contingency strategy
  - Several EMS agencies have adopted a crisis strategy: reserving N95 masks for aerosol-generating procedures

PPE Access Issues

- EMS agencies **rely on secondary distributors to obtain PPE supplies**
- Some secondary distributors are unable to obtain reliable sources of PPE
- Bound Tree, **a major secondary distributor for EMS has stopped accepting PPE orders until at least June 1, 2020**

2. IAFC dashboard available here.

Emergency Medical Services | Impact & Next Steps

EMS systems across the country are facing issues that threaten to destabilize the Health & Medical and Safety & Security lifelines

Funding | **PPE** | **Workforce**

Impact

- **EMS agencies may have no recourse but to request PPE supplies from their local and state emergency management chains**
- It may be difficult for certain EMS agencies, including private non-profit and private for-profit services, to communicate their needs to state and local emergency managers
- **A lack of PPE will place responders in a position of undue risk, and threatens to further stress staffing and response capabilities**

Next Steps:

- **Identify issues regarding EMS agency access to PPE supplies** from their regular distribution channels
- **Ensure that state emergency management and public health officials have visibility** on the PPE needs of EMS agencies
- **Develop contingency plans** to ensure that unmet needs of EMS agencies are being addressed

Emergency Medical Services and 911 | Threats

EMS systems across the country are facing issues that threaten to destabilize the Health & Medical and Safety & Security lifelines

Funding

PPE

Workforce

The COVID-19 pandemic may result in staffing shortfalls later this year due to increased attrition and training program closures

- There are more than 1 million licensed EMS personnel and 95,000 Public Safety Telecommunicators in the U.S.
- The **typical annual turnover for EMS personnel ranges from 20-30%**[4]
- Extended pandemic operations, provider illness and mortality, and mental health impacts of **the COVID-19 response will likely increase the attrition of EMS and 911 personnel**

Training Programs

- Backfilling the increased EMS workforce vacancies will require an influx of new EMS personnel
- **EMS and 911 training programs have been delayed or cancelled** due to COVID-19
- These delays and cancellations will reduce the number of licensed personnel available to fill future staffing vacancies

Emergency Medical Services and 911 | Impact & Next Steps

EMS systems across the country are facing issues that threaten to destabilize the Health & Medical and Safety & Security lifelines

Funding

PPE

Workforce

Impact

- Increased attrition and decreased onboarding may result in an **unmet staffing requirements for EMS and 911 personnel later this year**
- Staffing shortages may result in a **reduced capability of EMS agencies to provide pre-hospital medical care and transport in the future**
- 911 center staffing shortages may **prolong call wait times and limit pre-arrival instructions**

Next Steps:

- **Identify any existing issues** regarding EMS and 911 staffing and training
- **Coordinate with state EMS officials** on potential actions to mitigate the closure of EMS and 911 training programs
- **Develop contingency plans** to address potential staffing shortages in the future

FEMA

Emergency Medical Services (EMS) and Fire Impacts on Community Lifelines

Health and Medical

PPE Supply for 10 Days or Less

35%

IAFC Fire & EMS Force Protection PPE Needs Dashboard
as of 5/19/20

Daily 911 Responses with N95 Mask Reuse

55%

ESO COVID-19 EMS Surveillance Data
as of 5/19/20

Financial Strain

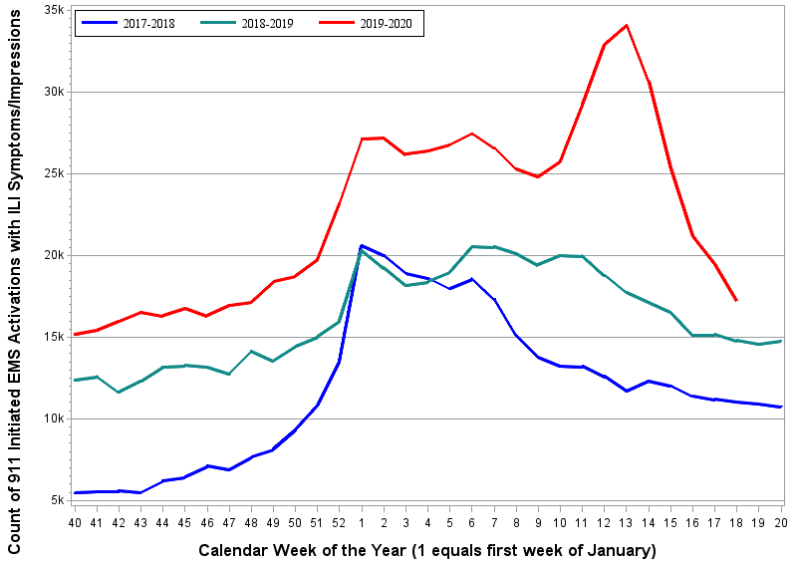
71% **(624 of 882 agencies responding)**

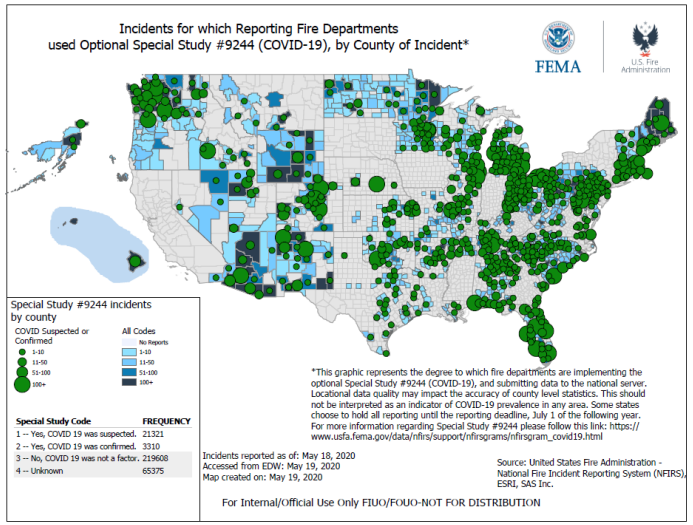
NAEMT Survey of EMS Managers on COVID-19 Impact
4/21/20

May Cease Operations in 2 Months

36% **(223 of 617 agencies responding)**

NAEMT Survey of EMS Managers on COVID-19 Impact
4/21/20





Safety and Security

Quarantined

12,475

IAFC COVID-19 Fire & EMS Personnel Impact Dashboard
as of 5/19/20

Exposures

14,140

IAFC COVID-19 Fire & EMS Personnel Impact Dashboard
as of 5/19/20

Diagnosed

710

IAFC COVID-19 Fire & EMS Personnel Impact Dashboard
as of 5/19/20

Fatalities

>60

USFA Firefighter Fatality Data and Open Media Sources
as of 5/19/20

Back-up slides and Contact Information

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EMS Funding – Selected Examples

- The "EMS National Survey" conducted by the National Association of Emergency Medical Technicians (NAEMT) noted that thirty six percent (36%) of responding agencies reported they would be forced to cease operations within 60 days due to revenue losses caused by the COVID-19 pandemic unless conditions change. Seventy-one percent (71%) of EMS agencies responding to the survey would be forced to cease operations within 120 days due to revenue losses caused by the COVID-19 pandemic unless conditions change.

- A survey of 80 Texas EMS agencies reported that 91 percent of the agencies suffered significant financial losses due to the COVID-19 pandemic. One respondent quoted in the report noted, "It is very hard to maintain a costly response-ready profile when standard utilization is down. People are not healthier, they just are not accessing emergency care at a standard rate. There very well may be a total wave of calls coming at a time when revenue is down and costs are up."

- The Pennsylvania Department of Health reports a 50 percent decline in total 911 EMS transports per day from 2,700 daily calls in mid-March to 1,000 in mid-April.

- Major EMS agencies in Cincinnati, OH, Alameda, CA, and Portland, OR all report potential layoffs of EMS providers due to the pandemic.

"Pennsylvania Volume Report" Provided by Pennsylvania to DOT/NHTSA on April 17, 2020. Report available upon request.

EMS Funding – Remediation Beyond Emergency Financial Relief

- We have had multiple discussions with CMS requesting modifications or waivers to CMS reimbursement requirements to allow for reimbursement of treatment in place.
  - This will require a statutory change at the federal level.
  - States may be able to reimburse for treatment in place as part of state Medicaid.

- Longer term, EMS agencies (including non-government entities) would benefit from a dedicated grant program to fund their readiness costs, in addition to reimbursement from patient transports.

FEMA

Pre-Hospital (EMS/911) Team Documents (with links)

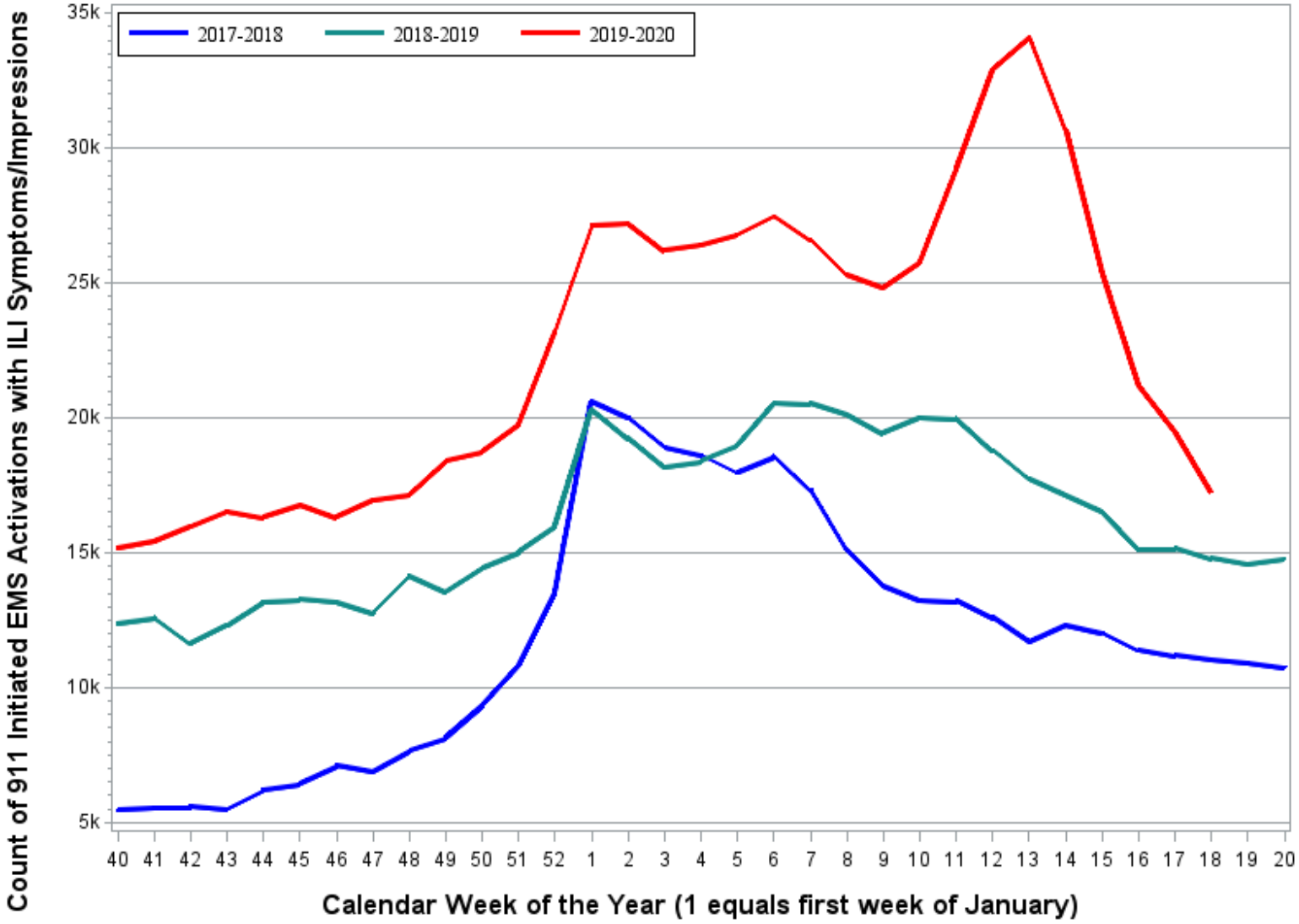
- Redirecting 911 Calls for Information & Low Acuity Medical Complaints (EMS.gov)
- Mitigate Absenteeism by Protecting 911 Telecommunicators' Psychological Health and Well-being during the COVID-19 Pandemic (911.gov)
- Managing Patient and Family Distress Associated with COVID-19 in the Pre-hospital Care Setting (EMS.gov)
- Mitigate Absenteeism by Protecting Emergency Medical Service (EMS) Clinicians' Psychological Health and Well-being during the COVID-19 Pandemic (EMS.gov)
- Personal Protective Equipment Supply (EMS.gov)
- Considerations for State EMS Offices in Response to COVID-19 (EMS.gov)
- 911 and EMS algorithms (EMS.gov)
- Best Practices for COVID-19 Call Screening and Response (911.gov)
- COVID-19: Considerations, Strategies, and Resources for Emergency Medical Services Crisis Standards of Care (EMS.gov)
- Emergency Medical Services and 911 Resource Guide (EMS.gov)
- Burnout, Self-Care & COVID-19 Exposure for First Responders (EMS.gov)
- Burnout, Self-Care & COVID-19 Exposure for Families of First Responders (EMS.gov)
- Guidance for Preventing Disease Spread During Transport of Patients at High Risk for COVID-19 Illness (EMS.gov)
- Guidance for First Responder Interactions with Suspected/Confirmed COVID-19 Patients (EMS.gov)
- COVID-19: Supplemental Funding for Emergency Medical Services (EMS.gov)
- Epidemiology for COVID-19 Emergency Medical Service Providers: What You Need to Know (EMS.gov)
- COVID-19 Literature and Research Resources for Emergency Medical Services (EMS) (EMS.gov)
- COVID-19 – Disinfection of Structural Firefighting Personal Protective Equipment (EMS.gov)
- COVID-19 Behavioral Health Resources for First Responders (EMS.gov)
- EMS Patient Contact Algorithm (EMS.gov)
- EMS Personnel Support for Population Testing, Screening, and Vaccination (EMS.gov)
- Safe Preservation of Personal Protective Equipment by EMS (EMS.gov)

Data Definitions

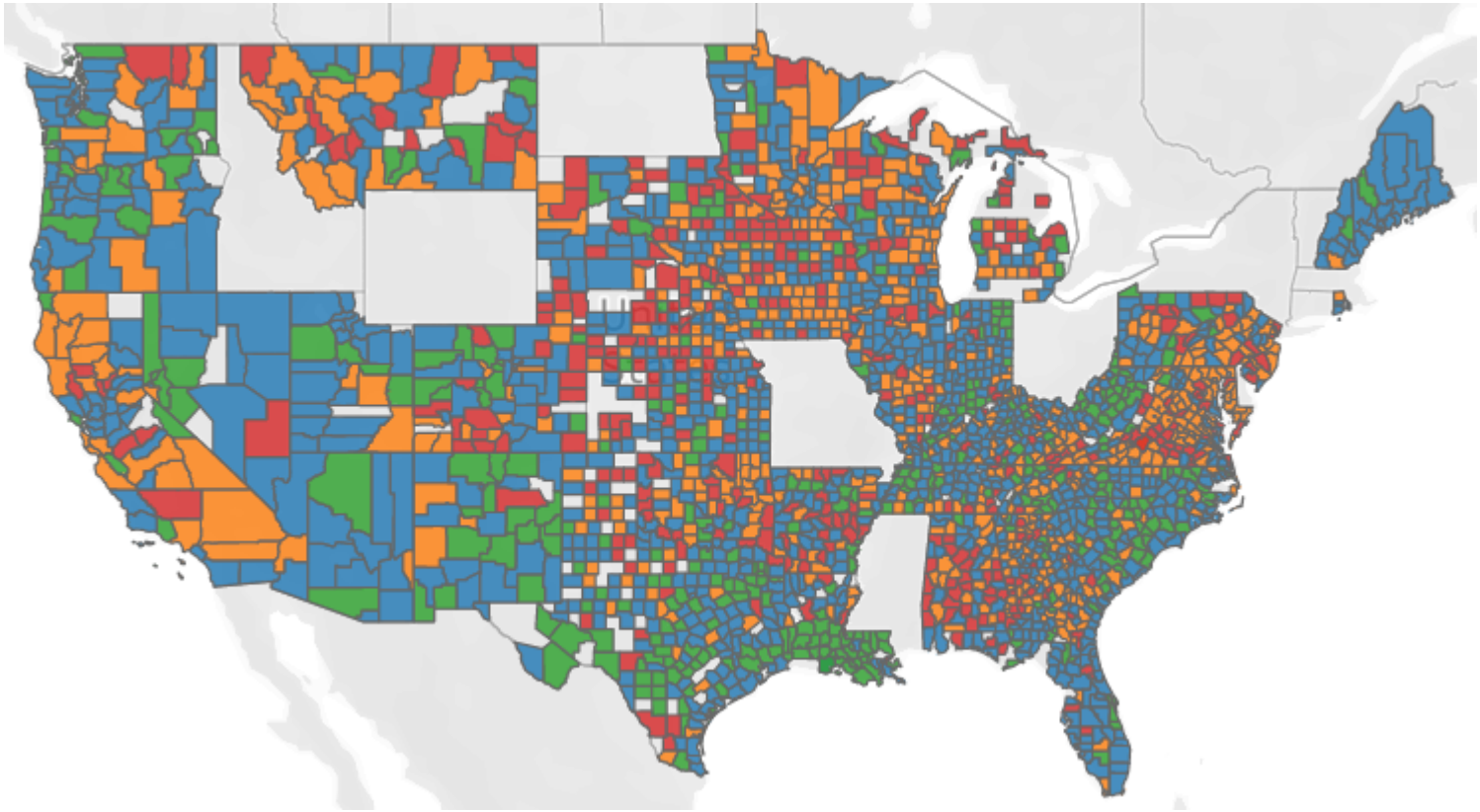
- **HEALTH and MEDICAL Lifeline: These indicators reflect threats to the ability of EMS agencies (both fire and EMS) to provide prehospital emergency medical care and transport to the community.**
  - PPE Supply for 10 Days or Less: % of EMS agencies that responded to the questionnaire that have 10 days or fewer of PPE supplies on hand. (Source: IAFC dashboard of agency survey submissions)
  - Daily 911 Responses with N95 Mask Reuse: % of 911 response records each day that document the reuse of an N95 respirator. (Source: ESO database of EMS electronic health records)
  - Financial Strain: Of the EMS agencies that responded to a national survey, the % of EMS agencies experiencing financial strain due to the COVID-19 pandemic. (Source: NAEMT survey of EMS managers conducted on April 21, 2020)
  - May Cease Operations in 2 Months: Of the EMS agencies that responded to a national survey, the % of EMS agencies that may cease operations within two months due to loss of revenue from the COVID-19 pandemic. (Source: NAEMT survey of EMS managers conducted on April 21, 2020)
  - Heat Map of ILI-Related Activations: Graphical representation of responses for influenza-like illness (ILI) as a percentage of total EMS responses; baseline is 1.7% (Source: NEMSIS database of EMS electronic health records)
  - COVID-19 Incidents (NFIRS Map): Graphical representation of the number of incidents for which reporting fire departments indicated that a patient was “confirmed” or suspected” to have COVID-19. (Source: NFIRS database of Fire/EMS incident reports)

- **SAFETY and SECURITY Lifeline: The metrics listed below threaten Workforce Resiliency and the ability of emergency responders to continue supporting the needs of their communities.**
  - Quarantined: Number of fire/EMS personnel currently quarantined due to exposure to COVID-19. (Source: IAFC dashboard of agency survey submissions)
  - Exposures: Total number of fire/EMS personnel that have been exposed to COVID-19. (Source: IAFC dashboard of agency survey submissions)
  - Diagnosed: Total number of fire/EMS personnel that have been diagnosed with COVID-19. (Source: IAFC dashboard of agency survey submissions)
  - Fatalities: Total number of fire/EMS personnel that have died from COVID-19. (Source: USFA firefighter fatality data and open media sources)

Disclaimer: The data represented here reflect available data sources for pre-hospital EMS agencies, fire departments, and 911 incident responses. Not all agencies or states report their data and/or report COVID-19 incidents. Data from external sources have not been reviewed or validated. This information is for internal, official use only.


2017-2018
2018-2019
2019-2020
35k
30k
25k
20k
15k
10k
5k
Count of 911 Initiated EMS Activations with ILI Symptoms/Impressions
40 41 42 43 44 45 46 47 48 49 50 51 52 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Calendar Week of the Year (1 equals first week of January)

Heat Map of Flu-related Activations Rate by Incident County



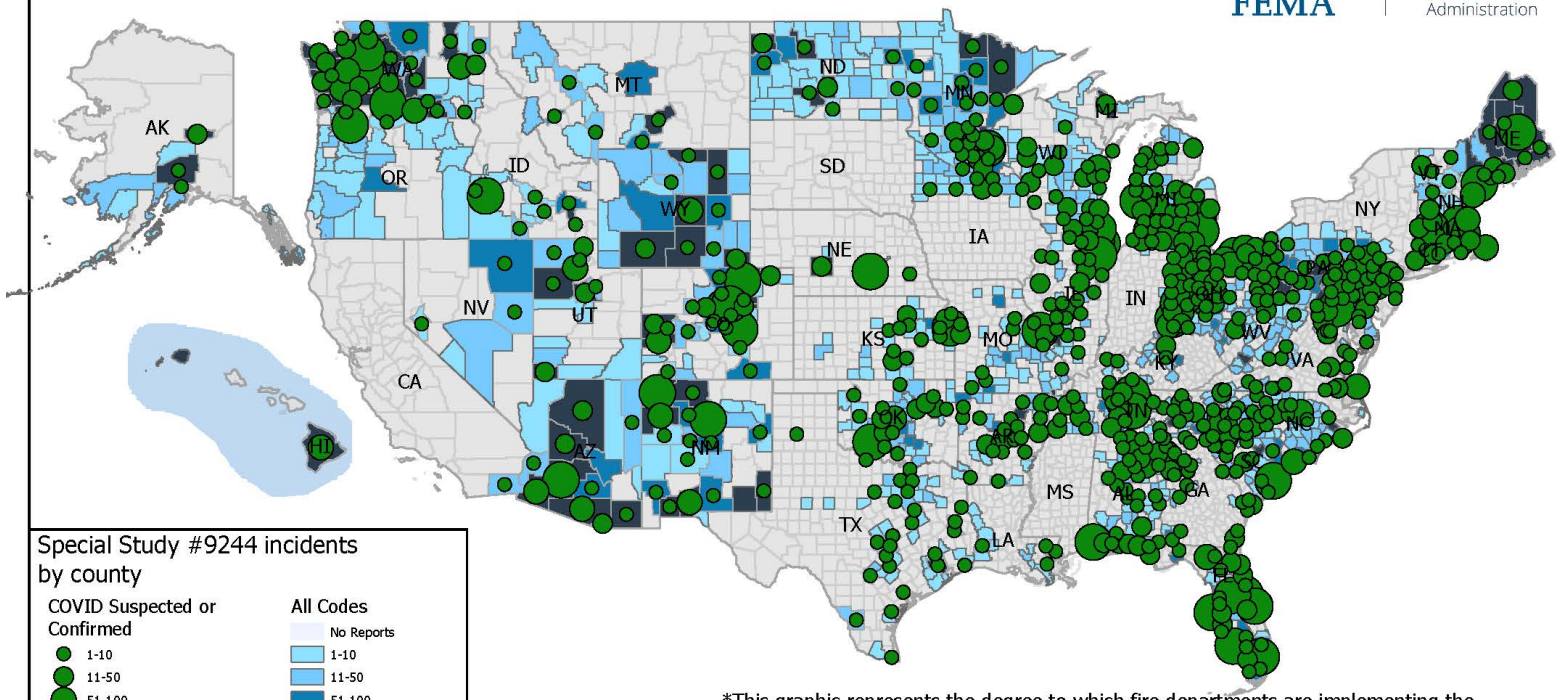
Less than 6% | Between 6% and 11% | Between 11.1% and 15% | Greater than 15%

Source: National EMS Information System (NEMSIS) National Influenza-Like Illness (ILI) Surveillance Dashboard, May 20, 2020

NFIRS Dashboard

Incidents for which Reporting Fire Departments
used Optional Special Study #9244 (COVID-19), by County of Incident*

FEMA | U.S. Fire Administration



Special Study #9244 incidents by county

COVID Suspected or Confirmed
- 1-10
- 11-50
- 51-100
- 100+

All Codes
- No Reports
- 1-10
- 11-50
- 51-100
- 100+

Special Study Code	FREQUENCY
1 -- Yes, COVID 19 was suspected.	21321
2 -- Yes, COVID 19 was confirmed.	3310
3 -- No, COVID 19 was not a factor.	219608
4 -- Unknown	65375

*This graphic represents the degree to which fire departments are implementing the optional Special Study #9244 (COVID-19), and submitting data to the national server. Locational data quality may impact the accuracy of county level statistics. This should not be interpreted as an indicator of COVID-19 prevalence in any area. Some states choose to hold all reporting until the reporting deadline, July 1 of the following year. For more information regarding Special Study #9244 please follow this link: https://www.usfa.fema.gov/data/nfirs/support/nfirsgrams/nfirsgram_covid19.html

Incidents reported as of: May 18, 2020
Accessed from EDW: May 19, 2020
Map created on: May 19, 2020

Source: United States Fire Administration - National Fire Incident Reporting System (NFIRS), ESRI, SAS Inc.

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