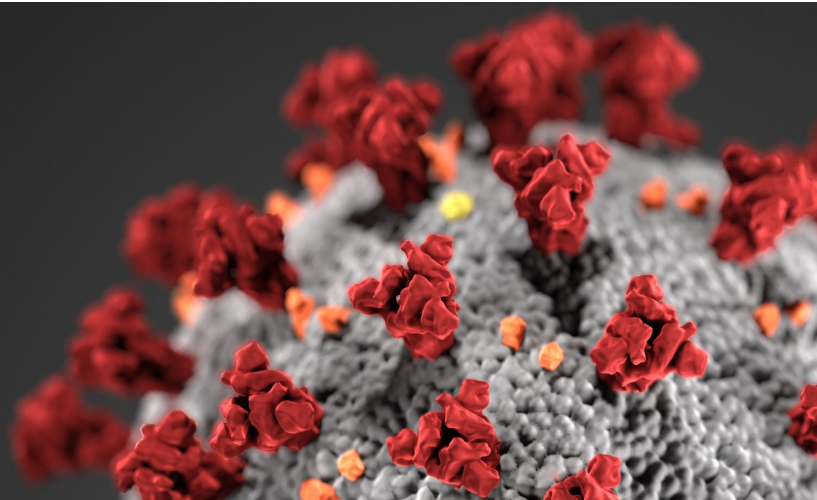


QUALITY IMPROVEMENT NEWSLETTER



A publication from the Maine EMS Quality Improvement Committee

SARS-CoV-2 VIRUS AND COVID-19 DISEASE



OVERVIEW

Since the outbreak of novel coronavirus (SARS-CoV-2) and the subsequent disease process (COVID-19), Maine EMS has been working collaboratively with local, regional, state, and federal partners to mount a robust response to the global pandemic and its effects within the State of Maine. The Maine Board of EMS, Medical Direction and Practices Board, Maine EMS Office, and the regional EMS offices, in partnership with EMS services throughout the state have worked to build out protocols, procedures, and best practices that minimized the negative impacts of this virus on the health and well-being of the individuals in our system. In response, the Maine EMS Quality Improvement Committee elected to modify their newsletter publication schedule to add a COVID-19-related Quality Assurance Newsletter to this year's publications to provide clinicians, quality improvement leaders, service leaders, and stakeholders of the EMS system insight into opportunities where we may improve our clinical and/or operational response to the ongoing COVID-19 pandemic.

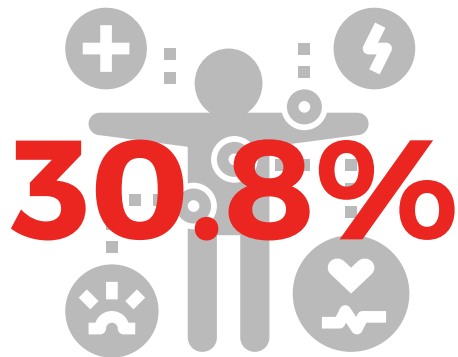
TAKE AWAYS:

- Documentation is critical to managing outbreaks of this virus including:
 - Documenting that a patient is a positive person under investigation (PUI) should be supported by corresponding signs, symptoms, or exposure history.
 - The Maine EMS Pandemic Response Protocols are designed to help prevent clinician exposure to COVID-19; familiarity with the protocols can help reduce the need for aerosol generating procedures.
 - COVID-19 adds another layer of complexity to a patient refusal, remember, Pandemic Response Protocol allows for a patient to be left at home, but only after online medical control consult, and a follow-up plan is agreed upon.

Quality Improvement Leaders should think about:

Are clinicians documenting patient interactions appropriately and do they need just-in-time refresher training?

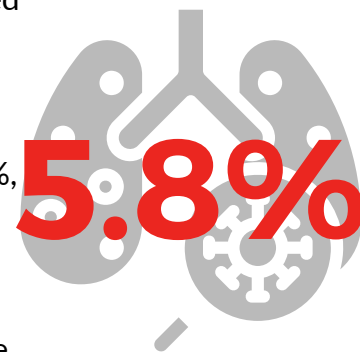
Patient Presentation and Person Under Investigation (PUI) Documentation



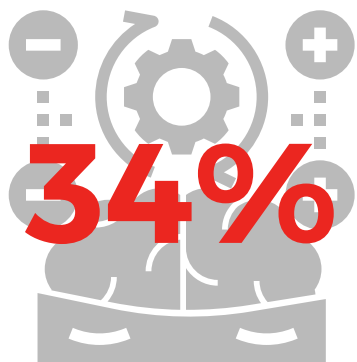
Between June 16, 2020 and July 16, 2020 there were 14,331 911 patient interactions by Maine EMS clinicians that were documented in the electronic patient care reporting system. Of those encounters, 1,819 of the patients were documented as having a primary symptom consistent with COVID-19 based on the contemporary clinical bulletin. Only 560, or 30.8% of those individuals were subsequently documented as persons under investigation (PUI) in the patient care report. This suggests that either there is a documentation error or that the clinician did not correctly identify the sign and/or symptom as being consistent with COVID-19.¹

Management of Acute Respiratory Symptoms and Use of Phase One Pandemic Response Protocols

In late March 2020, the Maine Medical Direction and Practices Board released the Pandemic Response Phase One Protocol aimed at managing COVID-19-suspected patients and minimizing exposure of COVID-19 disease to the responding EMS clinicians. Since its implementation and update on March 26th and through July 19, 2020, respectively, 225 patients have been identified as a person under investigation (PUI) and received a nebulizer treatment. However, only 13, or 5.8%, of those patients were given EPINEPHrine 1 mg/1 mL (1:1,000) prior to the administration of the nebulizer treatment. Phase 1 Protocols specifically indicate the administration of IM EPINEPHrine prior to the administration of nebulizer treatment or CPAP. For paramedics, it is also indicated that magnesium sulfate be administered prior to use of nebulizers and CPAP. Recall, procedures such as nebulization of medications or use of CPAP may cause aerosolization of virus particles and place the clinician at risk of contracting COVID-19 should the patient be shedding the virus.²



Should I Stay or Should I Go? Clinically Ill Patients Not Being Transported



Maine EMS implemented the Pandemic Response Phase 2 Protocols on April 10, 2020. The protocol contains a screening tool that assists EMS clinicians in determining if patients presenting with symptom(s) consistent with COVID-19 are “clinically ill.” Since the most recent update to the list of applicable symptoms, June 16, 2020, there have been 658 patients who had symptom(s) consistent with COVID-19 and were not transported to the hospital. Of those individuals, 224 or 34% had a documented vital sign that indicated they were clinically ill and should have been transported to the closest, most appropriate emergency department.³

1. Novel Coronavirus (COVID-19) Pneumonia Update Clinical Bulletin (No. 2020-01-24-01U7) Issued June 16, 2020. Available at: <https://www.maine.gov/ems/sites/maine.gov/ems/files/inline-files/2020-06-16%20COVID-19%20Clinical%20Bulletin%20Update.pdf>

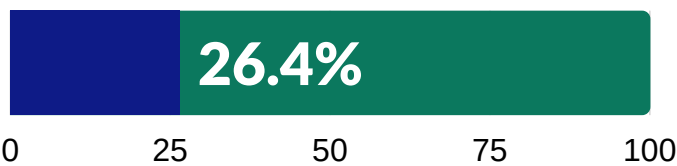
2. Release of Response to Pandemic, Phase 1 Protocol Clinical Bulletin (No. 2020-03-26-01) Issued March 26, 2020. Available at: <https://www.maine.gov/ems/sites/maine.gov/ems/files/inline-files/2020-03-26-01-Pandemic-Protocol-Phase-1-Clinical-Bulletin.pdf>

3. Release of Response to Pandemic, Phase 2 Protocols and Provider Education Material Clinical Bulletin (No. 2020-04-08-01) Issued April 8, 2020. Available at: <https://www.maine.gov/ems/sites/maine.gov/ems/files/inline-files/2020-04-08%20Pandemic%20Protocol%20Phase%20Two%20Bulletin.pdf>

DOCUMENTED PERSONAL PROTECTIVE EQUIPMENT (PPE) COMPLIANCE BY THE NUMBERS

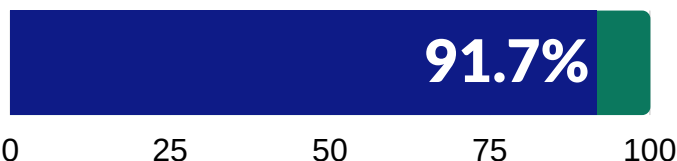
Did you know that Maine CDC considers your PPE documentation when they are making quarantine recommendations?

Percentage of Cases of Documented Compliance with Full Aerosol PPE Recommendations



Since June 17, 2020, in cases where the patient was identified as a PUI, presented with symptom(s) consistent with COVID-19, or an aerosol-generating procedure was performed, only 26.4% of those cases had documentation indicating that all crew members involved with direct patient care were wearing full aerosol PPE (N-95 or better, eye protection, gown, and gloves)

Compliance with Universal Masking of EMS Clinicians



Since June 17, 2020, 91.7% of crew members documented as being involved in patient care were wearing at least a surgical mask.

Number of EMS Clinicians Placed on Quarantine Since Implementation of the Universal Masking Guidance



Since Universal Masking became required in late June 2020, the Maine Center for Disease Control and Prevention has placed only two (2) EMS clinicians out on quarantine following exposure to a confirmed COVID-19 patient without proper PPE. Prior to implementation, there were a total of 17 individuals who were placed in quarantine by Maine CDC.

A CASE FOR UNIVERSAL MASKING:

Recently in the State of Maine, there was an individual who suffered a traumatic injury that resulted in an open tibia/fibula fracture. The patient did not have any other symptoms not associated with their acute musculoskeletal injury. Based on the nature of the call, the EMS clinicians did not wear full droplet precautions to treat the patient. Following evaluation by orthopedics, the patient was administratively screened for COVID-19 as part of the surgical consultation. The screening revealed that the patient was positive for COVID-19. All four (4) EMS crew members on scene as well as crews that assisted with the interfacility transfer were required to quarantine for 14 days.

The U.S. Centers for Disease Control and Prevention (U.S. CDC) estimates that approximately 40% of those who are infected with COVID-19 are asymptomatic, meaning that they will never experience symptoms of the disease. While estimates suggest that these individuals may be slightly less infectious, studies identified by the U.S. CDC suggest that they are still 75% as infectious as being around someone who is wholly symptomatic.

A risk that EMS clinicians should not take -- *wear PPE, protect yourself!*⁴

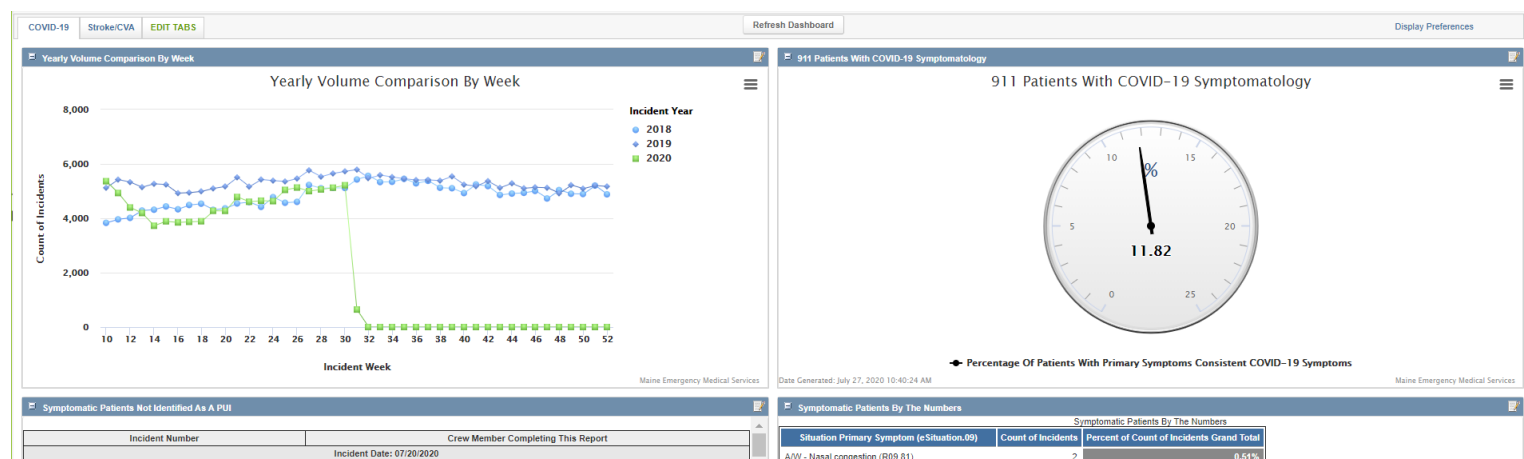
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4. 2019 Coronavirus Disease 2019: Pandemic Planning Scenarios (Updated July 10, 2020). Table 1. Accessed on July 20, 2020 from: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/planning-scenarios.html>

HOW TO SEE YOUR OWN DATA ON OUR NEW COVID-19 DASHBOARD

This dashboard will provide you with a seven-day look back for all 911 patients. The dashboard provides insight into EMS' response to COVID-19-related calls by detailing PPE and PUI documentation for individuals presenting with signs and/or symptoms consistent with COVID-19. Additionally, it also displays call volume information to allow services to better understand the impact of the disease on their service.

This report is available in Report Writer, by going to *Tools, Report Writer*, and selecting, *Load Dashboard*



Notes on the Data:

The data included in this report is retrospective and originates from the 276 EMS agencies and the approximately 5,600 EMS providers in the state of Maine who provide data to the EMS Run Reporting system. This newsletter covers varying date ranges due to the rapidly evolving nature of the COVID-19 guidance; date ranges are referenced for each measure.

Maine EMS QA/QI Committee

For more information on continuous quality improvement (CQI) and the tools within MEFIRS, feel free to attend a Maine EMS QA/QI Committee Meeting which are held on the third Wednesday of every month at 1:30 P.M. Meetings are held at the Maine EMS Office located at 45 Commerce Drive; Augusta, Maine 04333 as well as virtually.

The Maine EMS Quality Improvement Committee is a standing committee of the Maine EMS Board and is comprised of 15 members representing the medical director's community, regions, EMS agencies, and at-large representatives. The Committee is focused on continuous quality improvement of the EMS system. As part of their charge, they review statewide, de-identified information to better understand a variety of topics affecting EMS including, but not limited to: naloxone administration, strokes, out-of-hospital cardiac arrest, airway management, and chest pain.

Disclaimer: The purpose of this newsletter is informational only and is not intended to be a comprehensive review of the entire EMS system, nor is it intended to be a scientific review. Rather, this is intended to offer a snapshot of the performance surrounding specific EMS run types.