



The ultimate goal of emergency medical service (EMS) is to save patient lives. Analyzing EMS performance measures is an important problem, since performance measures are used to determine how EMS resources are used, and hence, they ultimately determine patient survival. Nearly all EMS systems have performance measures based on the response time interval, the time from when an ambulance is dispatched until it arrives at the scene, rather than explicitly measuring patient survival or the resources they used when serving patients.

How will we be able to improve our emergency medical services to help people in need?

THE CHALLENGE

PROBLEM SETTING

Fire Department across the country provides fire protection and first responder emergency medical services to their specific geographic areas. The variety of emergencies can include medical emergencies, natural disasters, electrical hazards, and many more. An exhaustive list of emergencies services provided by the Fire Department can be found in [IncidentType.docx](#). The availability of fire department to attend to emergency services depends heavily on their location, as well as severe weather condition. While previous literatures have looked into different types of performance measures of emergency medical services, the same measures may not be useful for Fire Department Agencies due to the an overwhelming variety of services provided.

OBJECTIVE

Using the variables provided, develop metrics representing the important variables to determine fire department's performance measures when it comes to emergency medical services (ems) incidents. When defining the metrics and performance measures, conclude your results by determining fire department(s) you think is the most effective. It is important to note that you need to use your visualization to tell us a story on how do you come to your solution, before presenting the solution. Remember, no matter how attractive your visualizations are, if you cannot tell us the story, you will not impress us.

EVALUATION CRITERIA

The judges will evaluate the results based on:

- Solution Addressed: Novel ideas to define effectiveness of the EMS, evaluation of factors included in the solution process
- Creativity: Innovative way to present the story to get to the solution in visualization manner
- Usefulness: Present ways on how visualization can help the community
- Originality: Any code, visualization, interpretation is developed by the team during the hackathon day. Change in interpretation will resulted in score deduction
- Learning: New methods or applications for visualization
- Presentation Skills: Quality and clarity to present the visualization within allocated time

SUBMISSION

Team **must include INFORMS 2019 Data Visualization Hackathon logo** in their final visualization results, regardless of the application used to prepare the visualization.

Submissions must include:

1. Code written to analyze the data along with the visualization results. If the visualization is presented in PowerPoint template, use the template provided by INFORMS.
2. Written document to support the code and visualization results based on the template provided by INFORMS

Submit your submission using the folder "TeamName_INFORMS_DV_Hackathon_2019". Zip the folder and email to informsnu@gmail.com by 6:00 pm on hackathon day.