

# Automating fire department data to inform treatment of cardiac arrests

"Innovation & Performance provides a one-stop shop for a growing number of data sources, allowing easy analysis, visualization, and export. We are already seeing the benefits of this system as it reduces manual, repetitive data analysis and provides a window for department leadership into trends and hotspots."

- Jon Ehrenfeld, SFD Mobile Integrated Health Program Manager

## THE NEED

The Seattle Fire Department (SFD) identified an opportunity to review the treatment of out-of-hospital cardiac arrest incidents and increase the survivability of these incidents using their own operational data, but they faced a series of obstacles:

- *Separate and inaccessible data sets:* Operational data was stored in two different systems – one on-premises, the other in a vendor hosted solution, in different formats.
- *Reporting tools that did not meet the need:* The vendor hosted storage solution did not have a way to filter for diagnosed cardiac arrests (versus patients presenting as a cardiac arrest) and could not process complex filtering.
- *Manual data errors:* Data for this kind of problem-solving is expected to be 99% accurate. Manual data entry created a greater error rate, requiring a minimum of a week of review and correction by multiple staff members.

## OUR APPROACH

Innovation & Performance (IP) worked with SFD and Medic One to expand the SFD data warehouse built in a previous project to incorporate electronic health record (eHR) data from the vendor system. The project delivered new infrastructure to automate and transform eHR data and provided a workflow to produce the specific data needed for cardiac arrests. This allowed SFD Medic One to analyze the data by treatments, medications, and other categories.

## THE RESULTS

The project resulted in a self-serve system that reduced the amount of time required to assemble cardiac arrest data from 3 months to 1 working day. It also automated the workflow, increasing the accuracy of the data and removing the need for manual review of individual records. Beyond saving staff, the new solution is supporting identifying insights in the treatment of out-of-hospital cardiac arrest, which can lead to increased survivability.

## DEPARTMENT PARTNERS

Seattle Fire Department  
Medic One  
Seattle IT

## PROJECT DURATION

November 2023 – January 2024

## IMPACT

Enables SFD to identify insights in the treatment of cardiac arrests

## KEY DEPARTMENT CONTACTS

- Dr. Catherine Counts (SFD / UW)

## FOR MORE INFORMATION CONTACT

- Mike Wypyszinski (IP)
- Kenneth Wong (IP)