

# The Incipient Phase: Developing A Fire-Based EMS Quality Improvement Program



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## Overview

The Indianapolis Fire Department (IFD) recently implemented an EMS Quality Management program to measure performance to identify training needs and opportunities for improvement. With ESO guidance, we were able to utilize and understand analytics to establish a performance baseline. Follow along as we go through the process of creating, developing and implementing a quality improvement program from documenting a strategic plan to identifying key performance indicators that are most beneficial to our agency's deployment model. This improvement process will help IFD become a preeminent player in the field of EMS.

## Purpose

This presentation is to offer insight during the development and implementation of an EMS quality improvement program within the Indianapolis Fire Department (IFD). There is no formal blueprint to follow and the outcome of this process gives a fire agency the ability to measure system performance and identify training needs and opportunities for improving EMS care, service delivery, and marketing to the community.

## Methods

After researching best practices for quality improvement, IFD decided to implement the Institute for Health Improvement (IHI) PDSA model – Plan, Do, Study, Act. The process involved:

- 6 months of training project managers and 2 months to train 1,200 firefighters to use a new records management system (ESO)
- Drafted an EMS Quality Improvement Strategic Plan that includes overview of department, organization, deployment, QI/QA process, education/training, audit and review, QI committee and annual review of improvement process.
- Updated policies to better reflect new documentation standards
- Determined which key performance indicators (KPIs) to measure
- Established EMS benchmarks to fire departments that are comparable in size
- Garnered support from labor management, administration and firefighters
- Developed working relationships with information technology services and local hospitals
- Created performance reports to identify trends utilizing ESO Analytics software
- Implemented electronic healthcare records (EHR) for the first time in IFD history with peer documentation reviews and audits
- Requested purchase of cardiac monitors that use a cloud-based system to import EKG rhythms and vital trends into EHR and facilitate QI/QA process
- Established monthly reporting and reviewing KPIs to decide course of action to improve
- Participating as a member of EMS related committees and task groups
- Serving as a liaison between IFD, Indianapolis EMS (IEMS), hospitals, state, and other outside agencies

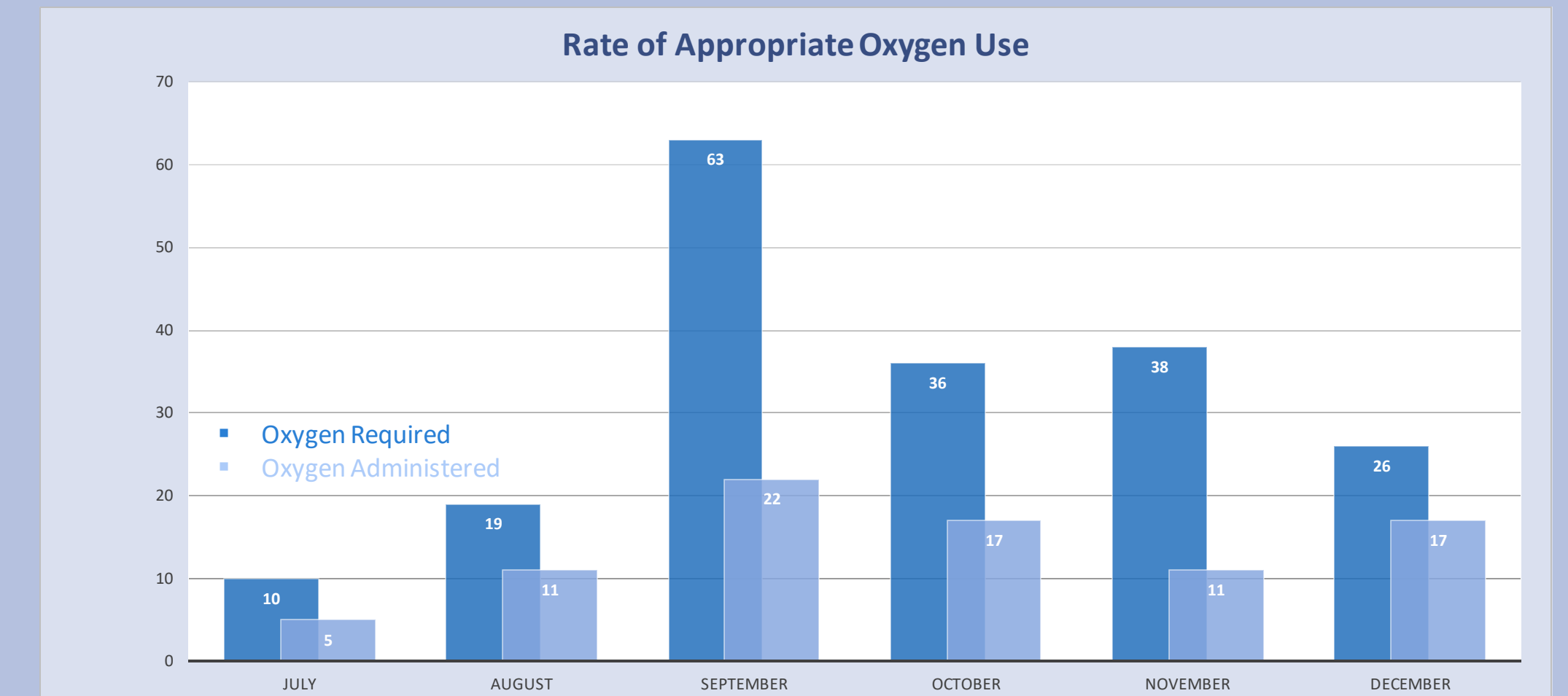


## Results

Within 6 months of deployment of EHR, we identified trends to improve patient care and targeted training to the needs of the firefighter providers based on data received. The set metrics will be continually analyzed and reviewed at a monthly meeting with our EMS Division and department medical director.

Initial results indicated our crews were below average on providing oxygen when required, therefore the Rate of Appropriate Oxygen Use performance measure from the National EMS Quality Alliance (NEMSQA) was added as a KPI and firefighters received airway management training.

Indianapolis EMS is the ambulance transport in our jurisdiction and is often continued to obtain a transport refusal with our crews on scene. We have started tracking transport refusal frequency and are currently working on an initiative to increase transport refusal documentation from firefighters to keep ambulances available for other 911 requests.



## Limitations

Challenges encountered include:

- Priority given to implementation of a new patient care reporting system within a large multi-disciplinary agency
- Documenting on PCs and not tablets
- Training a large metropolitan department
- Acceptance of EHR from firefighters and labor management
- Establishing accountability
- Limited staffing and resources
- Loss of project support manager

## Conclusions

IFD has determined the following KPIs to improve patient care and delivery of service:

- Charts Completed Per Month
- Transport Refusals Completed Per Month
- Acquisition of Blood Glucose When Indicated
- Charts with Vital Signs
- ETCO2 Monitored on Advanced Airways
- Suspected Stroke Patient Receiving Prehospital Stroke Care
- 12-Lead Performance Rate
- Aspirin Administration for Chest Pain/Discomfort Rate
- Rate of Appropriate Oxygen Use
- Amount of Narcan Administered
- Return of Spontaneous Circulation (ROSC) Rate

IFD is currently in the Center for Public Safety Excellence (CPSE) accreditation process and a quality improvement program is highly recommended for accreditation. This data information will prove IFD's commitment to continuously improve its EMS services and maintain accreditation.

We have identified several opportunities to share this data with the community, including high level meetings with other city representatives & labor management, distribution on social media, and scholarly publications. Marketing shows the public how the added costs will maintain the service as it adds value.

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