Better Data Can Result in Better Policy and Operational Decisions

Data Collection May Not Be Exciting, But the Issue Is Critical to the Fire Service

It's been interesting to read about the recent publicity major fire departments from the East Coast to the West Coast have been receiving concerning the reliability of their response data. There have been accusations that fire department data may have been manipulated to support policy decisions related to reductions in force, such as staffing levels and response times.

In some cases, fire chiefs and other officials have had a great deal of difficulty publicly explaining their data-collection and data-management systems. They have been accused of intentionally providing confusing data to elected officials who then used that data to make significant budget decisions. Once again in the American fire service, the issue of quality data management moves to the forefront. Perhaps this time we should finally pay attention and seize the opportunity to improve in this critical area.

I've been fortunate over the years to moderate many summits and planning sessions. One of those opportunities involved the National Fire Service Data Summit conducted in Tempe, AZ, in January 2011. The Data Summit was an output of the Multiphase Study on Firefighter Safety and Deployment Team. This study has been a joint effort between the National Institute of Standards and Technology (NIST) from the U.S. Department of Commerce, the Commission on Fire Accreditation International-RISK, and the International Association of Fire Chiefs (IAFC), the International Association of Fire Fighters (IAFF), the Urban Institute and Worcester Polytechnic Institute. For several years, the study team has been working to provide science-based tools to assist decision-makers in matching resources to risk.

Obviously, a major element of the decision-making process is the availability of quality data at the local and national levels. The Data Summit was an opportunity to share the findings of the study team and get input from stakeholders concerning the need for more and improved data.

It can be difficult to make the subject of data collection and use exciting, but this issue is critical to the fire service and deserves a lot more attention than it has traditionally gotten. Fire department leaders (management and labor) are constantly scrutinized by elected officials and other policy-makers concerning decisions related to expenditures, performance measures and outcomes. Defending the fire department's resource needs using accurate and pertinent data is a critical part of determining staffing levels, crew sizes and the deployment of those crews. Data also drives decisions related to evaluating and predicting the likely type of emergency events encountered, appropriate asset configuration, response timeframes, necessary training levels, the effectiveness of fire prevention programs and others.

A National Fire Service Data Summit proceedings document (NIST Technical Note 1698) was published in May 2011. This document goes into great detail concerning the content of the summit and is a must read for decision-makers. The objectives of the Data Summit were as follows:

1. Gather information on data needs from a broad range of participants.
2. Share the research experience of the Multiphase Study on Firefighter Safety and Deployment Project, with particular focus on availability, collection and interpretation of basic resource deployment data.
3. Discuss the need for, and the potential utility of, a national fire service data-collection reporting system, with a focus on the stakeholders.
4. Develop recommendations for data-collection processes, as well as data elements that can be consistently collected and analyzed by a fire department to enable measurement of its availability, capability and operational effectiveness.

To meet these objectives, the Data Summit was designed around the following five sessions:

1. Identification of obstacles to fire service data collection, performance measures and data elements.
2. Presentation by the Multi-Phase Study Team covering the results of its work completed to date, including findings from scientific literature, firefighting experiments and an ongoing survey.
3. Discussion of the gaps and defi-
ciencies in existing data-collection efforts, including the usefulness of the data, the motivation for entering quality data and the accuracy of the data.

4. Participants were divided into three work groups. A group was assigned to each of the following activities — the development of candidate data elements or metrics; the identification of research needs; and recommendations going forward. Each group completed its work independently and then reported back to the full summit.

5. Identification of the key steps along the path toward a national fire service data set. Nine action-oriented steps were identified during this session.

We must continue to emphasize the importance of quality data and create better systems for managing it.

The importance of data cannot be overstated in the decision-making process. Good data helps leaders do a better job of identifying, using and measuring the effectiveness of fire department resources in all areas of performance, but especially firefighter injury and death, civilian injury and death and property loss. We must be able to more accurately predict, and later measure, the effectiveness of decisions that impact these critical outcomes. Bottom line, we want fire chiefs, union officials, city managers and elected officials to have the accurate data and information they need to drive good decisions. With that said, it’s incumbent on the fire service to have quality data available to provide to decision-makers at the appropriate level and at the appropriate time. The ability to do so might have avoided some of the embarrassing public attention fire department data management has recently received.

We must continue to emphasize the importance of quality data and create better systems for managing it. The report published from the National Data Summit would be a great platform to work from. ■

Dennis Compton will present “Creating and Inspir-