

CRITICAL ISSUE C:

ROBUST USE OF DATA



Initiative 1: Utilize quality data for evidence-based decision making to assess and produce the best outcomes.

Strategies:

1. Educate and develop accountability for company officers, field inspectors, educators, and others deployed to capture the appropriate data at the incident to provide information that can be analyzed to achieve the organization's desired outcomes.
2. Champion a federal requirement that all fire and emergency services agencies regardless of size and structure be required to complete a National Fire Incident Reporting Systems (NFIRS) report for each call and submit to the state or federal government.
3. Champion a substantial update to NFIRS to become a more relevant and technologically robust system or replace it with another system capable of integrating with new innovative data systems to provide advance analytics, and support evidence-based decision making, built upon the receipt of quality data for local agencies.
4. Leverage technology(s) to assure real-time data capture and analytics that provide insights for use by fire departments at the local level.
5. Assure a process is in place to track physical and traumatic event exposure(s) for all response personnel.

Initiative 2: Implement advanced data analytics to make informed decisions.

Strategies:

1. Employ advanced analytics to assist in making predictive and prescriptive decisions that are focused on the outcomes the agency is trying to achieve.
2. Cultivate a data-driven culture that utilizes data insights to modify strategies, deployment models, and programs.
3. Ensure departmental personnel are aware of public disclosure laws, rules, and best practices in providing data to other organizations, the media, and the general public.
4. Establish best practices for data cleansing and for tracking data access to safeguard its integrity.
5. Establish clear roles and responsibilities among city data managers, private-sector data collection entities, and records management software (RMS) companies.
6. Establish a clear definition of the data ownership the agency produces.

Initiative 3: Develop comprehensive records management systems (RMS) to collect and analyze data effectively.

Strategies:

1. Urge RMS vendors to design systems that bring together all data needs in the agency into an integrated platform, that can provide analytical evaluation for the data collected toward the outcomes trying to be achieved by the agency.
2. Establish data warehousing best practices for collecting data from multiple data sources, including RMS, for complete and faster data analysis.
3. Require department IT managers to use best practices and transmission law(s) relevant to cybersecurity, data collection, and storage.

Initiative 4: Focus on developing outcome-based data for all measurable operations and functions within the organization.

Strategies:

1. Develop an outcome-based performance measurement system consisting of four elements:
 - The goals of the agency to support the health and welfare of the community.
 - The performance metrics relevant to the goals the agency is trying to achieve
 - The benchmark level of performance the agency is striving to achieve.
 - The consequences for the agency and the community being served if the goals are not met.
2. Use aggregated data to inform and improve system performance.
3. Champion legislative changes to allow for sharing of patient data between hospitals and responding agencies and encourage interagency cooperation to promote the evaluation of patient outcomes based upon the entirety of the response to that patient.

Case Study: Edmonton Fire Rescue Service (EFRS)

Location: Edmonton, AB

Coverage Area: 972,000 residents over 303 square miles

No. of Employees: 1,300

Annual Calls for Service: 55,000

Combining incident data with non-fire databases (such as census and other demographic information) EFRS has harnessed insights to guide planning, development, and community risk reduction. EFRS conducted longitudinal analysis of river rescue operations before and after the closure of a station located along the North Saskatchewan River. Highlighting the negative impact on the outcomes of the rescues following the closure compelled the City Council to reopen the previously closed station. Cross referencing of response data with fire investigator's data has determined the locations for EFRS' smoke alarm program. EFRS robust use of data has aided other governmental entities namely the geocoding of overdose events and naloxone administration by firefighters for the provincial government showing the impact of recently opened supervised consumption services.

