

WORKPLACE HEALTH AND SAFETY DATA MANAGEMENT GUIDE



Data management is a key factor in the development and maintenance of successful EHS programs. Effective data management can help you gain valuable insight into the current state of health and safety within your business, as well as assist in making informed decisions towards improving health and safety outcomes. Navigate through this simple guide for tips and relevant resources related to five key aspects of data management for your health and safety programs: data collection, tracking and storage, governance, analysis and quality management.

COLLECTION

- Businesses are likely already collecting essential health and safety data (e.g. hazard reports, near misses, injury reports, training records, medical surveillance, employee engagement/participation). Take inventory of the data you are already collecting and consider its usefulness, as well as gaps that might exist. Is there additional data that you could be collecting to help provide insight into your health and safety program(s)?
- The data you are collecting should help you understand the current state of health and safety throughout your business, as well as drive the development of leading indicators. Think about the characteristics of robust leading indicators when developing targeted data collection efforts. Leading indicators should be actionable, achievable, meaningful, transparent, explainable, valid, useful and timely.
- Benchmarking can be useful towards evaluating data collection efforts and establishing quality leading indicators. Consider benchmarking with your peers to understand the data they collect and the leading indicators they establish to measure and improve health and safety outcomes.

For a deeper dive into data collection best practices, to include a list of recommended data metrics and leading indicators, download the following white papers published by the Campbell Institute, the center of EHS excellence at the National Safety Council: [An Implementation Guide to Leading Indicators](#) and [Beyond Safety: Leading Indicators for Health and Wellbeing](#).

TRACKING AND STORAGE

- Successful workplace health and safety programs are driven by quality data. Take inventory of all sources in which you are acquiring and tracking data and consider whether these sources are producing consistent and accurate information (e.g., written reports/forms, images, video/audio, technology).
- Effective data management should account for the importance of a secure centralized database where data is stored and organized in an intentional and meaningful way. Think about how and where your data is being stored and consider improvements that can be made.
- Discuss data storage and access with your IT department to better understand how your data is being secured and protected, to include what measures are in place to mitigate the risk of social engineering. Consider whether there is a need to improve security and/or train essential workers in IT security and compliance.
- Technology (e.g., EHS software and mobile applications) can be used to help streamline and organize data tracking and storage. Explore technology solutions and consider the impact these tools could have on your data tracking and storage efforts.

To learn more about the use of software and mobile applications in workplace health and safety risk management, to include software and application types, use cases, benefits and barriers, check out the NSC Work to Zero white paper, [Managing Risks with EHS Software and Mobile Applications](#).

GOVERNANCE

- With the rapid advancement of digital technology, data privacy has become increasingly important and depending on where you do business, data privacy regulations can vary. To responsibly manage health and safety data, ensure you understand and comply with all applicable global, federal and state regulations. Make sure to consult with your human resources, IT, and legal/compliance departments.
- Consistency and clarity are key to responsible data management. Collaborate with departments and leaders across your business to align data management practices. Develop a robust business-wide data management policy addressing topics like data collection, storage, security, access, roles, responsibilities, communication, and retention.
- Effective workplace health and safety programs are not only supported by leadership but are also embraced by employees. Consider the importance of transparency in generating trust and buy-in from the workforce and ensure that your employees know what data you are collecting, how you are using it (and how you are *not* using it), as well as how you are protecting it.

For more information on data privacy, check out this article published by Forbes, [U.S. Data Privacy Protection Laws: A Comprehensive Guide](#), and the following global data privacy resources: [International Association of Privacy Professionals](#) and [General Data Protection Regulation \(GDPR\)](#).

ANALYSIS

- EHS professionals may take different approaches towards analyzing data, but the common goal is to gain valuable insight into the state of workplace health and safety, as well as assist in the development of an actionable improvement plan. Take a comprehensive approach towards data analysis that considers both lagging and leading indicators, as well as descriptive, predictive and prescriptive analytics.
- Collecting and analyzing data both before and after implementing health and safety initiatives allows for organizations to assess for intervention effectiveness. Ensure that you develop processes that account for pre- and post- data analysis to track improvements in health and safety outcomes over time.
- As digital advances expand the volume and accessibility of data and best practice analytic techniques improve over time, think about your EHS team's skills and whether they are equipped and prepared to conduct an effective health and safety data analysis. Is there a need and opportunity for training?
- Technology (e.g., software and artificial intelligence) can be used to help make analyzing health and safety data more effective and efficient. Explore technology solutions and consider the impact these tools could have on your data analysis processes and overall health and safety outcomes.

To better understand EHS analytics, technology solutions and use cases, check out the [Best Practices for EHS Analytics](#) paper published by Verdantix, the NSC Work to Zero [Using Data and AI to Gain Safety Program Insights](#) white paper and [Data Analytics and Wearables](#) case study and the NSC Campbell Institute [New Concepts for a Big Data Safety Strategy](#) case study. Also, consider revisiting the Campbell Institute white papers on leading indicators.

QUALITY MANAGEMENT

- Successful health and safety data management hinges on the commitment of the entire business, not just the EHS team. Ensure that you have support and representation from leaders and departments throughout your business, unifying and aligning data management goals.
- Progressive continuous improvement is essential for sustaining quality data management. Plan for periodic review and enhancement towards your data management efforts and include these plans within your data management policy and/or strategic planning efforts.
- Ongoing research plays a crucial role in shaping data management best practices. Businesses should actively seek insights from experts, leverage current research findings and draw from firsthand experience to continuously refine and improve health and safety data management.

For a comprehensive overview of EHS management best practices, to include the role data management plays in achieving and maintaining overall workplace health and safety success, download the Campbell Institute paper, [Defining EHS Excellence: Best Practices from Campbell Award Winners](#).