Leading Indicators that Improve Workplace Health and Safety

Audience – Small and Medium Sized Employers in General Industry and Construction

Formative Data Collections for DOL Research

1290 - 0043

Supporting Statement

Part A

June 2023

A1. Necessity for the Data Collection

The Chief Evaluation Office (CEO) for the U.S. Department of Labor (DOL) seeks approval for the Occupational Safety and Health Administration's (OSHA) Generic Clearance entitled "Leading Indicators that Improve Workplace Health and Safety."

This proposed information collection meets the following goals of DOL's generic clearance for formative data collections (1290-0043) and is designed to:

- Inform the development of DOL research
- Maintain a research agenda that is rigorous and relevant
- Ensure that research products are as current as possible
- Inform the provision of technical assistance; and
- Provide guidance and assistance to medium and small sized employers in developing safety and health metrics.

Study Background

DOL's Occupational Safety and Health Administration (OSHA) believes as part of their mission there is an on-going need to improve employer understanding of how to improve safety and health outcomes in the workplace. Many employers track their injury or illness rates using lagging indicators such as the OSHA Days Away, Restricted or Transferred (DART) or Total Case Incident Rate (TCIR) metrics. Lagging indicators however should not be used as the sole metric as they track injuries and illnesses that have already occurred. Lagging indicators can be useful to an employer as a safety and health program failure that may be causing injuries or illnesses. Unfortunately, lagging indicators identify safety and health hazards after an injury or illness occurs. Employers should consider the use of lagging indicators with leading indicators. Leading indicators are proactive, preventive, and predictive measures. A good safety and health program uses both measures - leading indicators to drive change, identify potential hazards before an incident can occur, and lagging indicators to measure effectiveness. OSHA would like to highlight and illustrate the value of leading indicators to employers and believes researching, collecting, and publishing leading indicators coupled with how to use them will help employers determine their own relevant leading indicators and improve their overall safety and health management system.

Legal or Administrative Requirements that Necessitate the Collection

There are no legal or administrative requirements that necessitate the collection. CEO is undertaking the collection at the discretion of the agency and for the ultimate benefit to the regulated community.

A2. Purpose of Survey and Data Collection Procedures

Overview of Purpose and Approach

OSHA is planning on performing a convenience information collection in the form of surveys, focus groups, and/or site visits, in order to gain initial understanding of if/how employers are using leading indicators or metrics in their safety and health management programs to improve worker health safety. Once the data has been collected and reviewed, OSHA intends to use this data to inform the creation of and direction for guidance materials for employers and employees around leading indicators, which could take the form of a white paper, a reference database, educational materials, OSHA website postings, and/or other guidance products. This initial formative research may also inform future, more rigorous, studies on leading and lagging indicators in safety and health programs. This current information collection is not for policy or rulemaking purposes, but to gain an understanding of if/how leading indicators are currently being used in industry.

The agency has contracted the National Safety Council (NSC), a US nonprofit public service organization that has promoted workplace safety and health since 1913, to assist in collecting and evaluating information on leading indicators. Since NSC is a membership organization, they have the ability to utilize their network of industry partners and representatives to aid in the data gathering efforts. With this effort, OSHA is not seeking to stratify industry, but trying to gain an initial concept of what is currently being done to inform future actions the agency could take to assist employers in improving safety and health outcomes. Additionally, our understanding is that small employers do not have the knowledge nor the capability for the implementation of leading indicators and other metrics to guide their safety and health decision making process. The development of useful leading indicators under this data collection should ultimately serve and benefit these employers as well as others.

Research Questions

OSHA has created a question databank to utilize with industry representatives and employers to assess their understanding and/or use of leading indicators and any improvement they have seen in their safety and health programs from the use of leading indicators.

OSHA will conduct multiple surveys, hold focus groups, and attend site visits as part of this data collection. A master list of questions has been developed (Appendix A). The surveys and interview questions will be created using a subset of questions from that master list – or analogous questions, as appropriate. The specific instruments will be tailored to employers based on industry sector, business size, or other appropriate classification. Utilizing the question databank to tailor surveys will reduce overall burden on the respondents by removing unnecessary and unrelated questions.

In general, OSHA is looking to collect information on the following:

- Are leading indicators being used in industry to help predict safety improvements or make safety changes in the facility?
- If so, what industries use leading indicators?
- To what extent are leading indicators being used?
- Are small and medium sized employers using leading indicators?
- What leading indicators are being used by employers?
- Of the leading indicators employers are using, which ones actually guide their program metrics?
- Are there key leading indicators that are the most beneficial to the selected industry groups selected by OSHA for the surveys?
- Have the employers observed safety and health improvements in their businesses from the use of leading indicators?
- Are there any data trends we can see from the provided answers about similar indicators being used in given industry groups/business size/etc.?
- What information can OSHA provide to businesses on leading indicators to assist them in improving their future safety outcomes?

Study Design

OSHA will use convenience sampling to select interested stakeholders from various industries. Surveys will be sent and received in a secure manner through an electronic survey service, such as Qualtrics. Surveys or some survey questions may also be filled out on hard copies or discussed via in-person or virtual focus groups and during in-person site visits. Since these surveys and discussions serve as initial fact-finding research, OSHA will utilize loose thematic analysis -- identifying themes in the data. These themes will help OSHA develop initial recommendations of leading indicators for various industries/employers depending on yet-to-be-determined factors (industry sector, size, process type, predominant hazard(s), etc.).

If the data allows, OSHA will identify relationships between certain leading indicators and their corresponding safety outcomes.

Universe of Data Collection Efforts

The survey will commence by starting with our contractor's and OSHA's existing industry connections and networks. Recipients will include groups such as: NSC membership networks and NSC Network membership, NSC delegates, the Campbell Institute, and so forth. Additional data collection points may include:

- OSHA Safe + Sound Partners
- OSHA's Voluntary Protection Program (VPP) relationships
- OSHA Partnership and Alliance program participants
- OSHA On-Site Consultation consultants/participants
- NIOSH Nora Sector Councils
- Trade Organizations OSHA has an existing relationship with

A3. Improved Information Technology to Reduce Burden

OSHA and its contractors will employ information technology as appropriate to reduce the burden of respondents who agree to participate. Some examples of the technology that may be used are listed below.

- Online survey tool such as Qualtrics
- Electronic response submissions
- Teleconferencing tools such as Teams, Webex, Zoom, etc.
- OSHA website to host information about surveys and leading indicators

A4. Efforts to Identify Duplication

This research will not duplicate any other work being done by DOL. DOL program offices collaborate regularly and will continue to collaborate to prevent any duplication of information collection efforts. The purpose of this clearance is to better inform and improve the quality of DOL's research and evaluation. Data gathering under this request would not be feasible without this generic clearance due to the time constraints of seeking clearance for each individual data collection. To the maximum extent possible, we will make use of existing data sources before we attempt to utilize the additional fieldwork sought under this clearance. An extensive literature review is also being performed to understand the existing research that has been done in this field.

The NSC contractors additionally hold monthly meetings with OSHA and provide updates and information on the project status.

A5. Involvement of Small Organizations

OSHA is hoping to elicit responses from a variety of business sizes including small and medium size businesses as well as selected industries. By utilizing connections such as the OSHA On-Site Consultation and NSC membership that works with and includes small and medium size businesses to offer no-cost safety and health services (NSC cost includes NSC membership. Most NSC materials are available at no cost to the members), and smaller organizations that are members of the previously discussed networks

OSHA aims to have engagement from these smaller entities. While OSHA aims to receive responses from small and medium sized organizations, there will not be an additional or undue burden on these entities as all responses are all voluntary.

A6. Consequences of Less Frequent Data Collection

As discussed in the statement of work from the information collection package, there are no consequences for less frequent data collection as this is not an ongoing or repeated collection. There could be consequences, if this project were not carried out, the quality of the research and its relevance to public policy and practitioner concerns among a variety of projects would likely suffer.

A7. Special Circumstances

There are no special circumstances for the proposed data collection efforts.

A8. Federal Register Notice and Consultation

No public comments are requested for this generic information collection.

Consultation with Experts Outside of the Study

No planned consultations with experts outside of the study are planned for this information collection.

A9. Incentives for Respondents

No incentives for respondents are proposed for this information collection.

A10. Privacy of Respondents

Information collected will be kept private to the extent permitted by law. Respondents will be informed of all planned uses of data, that their participation is voluntary, and that their information will be kept private to the extent permitted by law.

As specified in the contract, the Contractor shall protect respondent privacy to the extent permitted by law and will comply with all Federal and Departmental regulations for private information. The NSC Contractor has developed a Data Safety and Monitoring Plan that assesses all protections of respondents' personally identifiable information. The Contractor shall ensure that all of its employees, subcontractors (at all tiers), and employees of each subcontractor, who perform work under this contract/subcontract, are trained on data privacy issues and comply with the above requirements.

As specified in the evaluator's contract, the Contractor shall use Federal Information Processing Standard compliant encryption (Security Requirements for Cryptographic Module, as amended) to protect all instances of sensitive information during storage and transmission. The Contractor shall securely generate and manage encryption keys to prevent unauthorized decryption of information, in accordance with the Federal Processing Standard. The Contractor shall: ensure that this standard is incorporated into the Contractor's property management/control system; establish a procedure to account for all laptop computers, desktop computers, and other mobile devices and portable media that

store or process sensitive information. Any data stored electronically will be secured in accordance with the most current National Institute of Standards and Technology (NIST) requirements and other applicable Federal and Departmental regulations. In addition, the Contractor must submit a plan for minimizing to the extent possible the inclusion of sensitive information on paper records and for the protection of any paper records, field notes, or other documents that contain sensitive or personally identifiable information that ensures secure storage and limits on access.

Information will not be maintained in a paper or electronic system from which data are actually or directly retrieved by an individuals' personal identifier.

A11. Sensitive Questions

There are no sensitive questions in this data collection.

A12. Estimation of Information Collection Burden

Wage Rate Determinations:

Table 1 – Estimated Wage Rates

Occupation	SOC Code	Wages	Fringe Benefits Factor (29.5%)	Loaded Wages
Occupational Health and Safety Specialists	19-5011	$37.86	1.418439716	$53.70
Industrial Production Managers	11-3051	$56.62	1.418439716	$80.31

OSHA is planning on conducting surveys to collect data to help determine leading indicators or metrics in their safety and health management programs to improve worker health safety. Under this Gen IC request, OSHA will be collecting data from 500 participants conducting surveys on leading indicators.

OSHA is also planning on collecting data via direct observation groups (i.e. focus groups, and/or site visits) to help determine leading indicators or metrics in their safety and health management programs to improve worker health safety. OSHA will be collecting data from approximately 16 individuals during multiple direct observation groups.

Table 2 - Total Estimated Annualized Burden Hours and Costs

Instrument	Type of Respondents	Total Number of Respondents	Number of Responses Per Respondent	Time per Response (In hrs.)	Total Burden Hours	Loaded Hourly Wage	Total Burden Cost
Surveys of Lead Indicators							

Surveys	Industrial Production Managers	250	1	15/60	62.5	$80.31	$5,019
Surveys	Occupational Health and Safety Specialists	250	1	15/60	62.5	$53.70	$3,356
Totals		500			125		$8,375
Direct Observation Groups							
Direct Observation Groups	Industrial Production Managers	8	1	8	64	$80.31	$5,140
Direct Observation Groups	Occupational Health and Safety Specialists	8	1	8	64	$53.70	$3,437
Totals		16			128		$8,577
				Estimated Burden Totals	**253**		**$16,952**

A13. Cost Burden to Respondents or Record Keepers
There are no additional cost to the respondents other than the costs under A12.

A14. Estimate of Cost to the Federal Government

The total cost for the data collection activities under this current request will be approximately $313,000. This estimate includes contractor labor (40-50% of $600,000 contract; approx. $300,000) and time of two government FTEs (GS-14, 4 $69.77/hr & GS-13,3 $57.25 X 100 hrs $12,702; approx. $13,000).

A15. Change in Burden

This is for an individual information collection under the umbrella formative generic clearance for DOL research (1290-0043). OSHA is requesting approval for a burden of 253 hours for this data collection.

A16. Plan and Time Schedule for Information Collection, Tabulation and Publication

OSHA intends for the surveys to be conducted during late summer or early fall of 2023.

A17. Reasons Not to Display OMB Expiration Date

All instruments will display the expiration date for OMB approval.

A18. Exceptions to Certification for Paperwork Reduction Act Submissions

OSHA does not expect there to be any exceptions necessary for this information collection. However, based on the survey responses additional questions for use in site visits and/or focus groups may need to be developed and submitted to OMB for approval.