
Injury and Violence Prevention

Data Science Demonstration Project

**Request for
Proposal 2023**



Overview

Data science is a multidisciplinary approach that blends techniques from computer science, statistics, epidemiology, and other domains. It often focuses on large or novel data sources and the application of mathematical methods such as machine learning or natural language processing. This particular focus on large and complex data sources has the intention to improve the measurement and prevention of a host of public health issues including injury and violence¹.

With a dedicated focus on this emerging field we can continue to uncover ways to improve public health assessments, interventions, and other mechanisms to improve health, safety, and well-being for our communities.

Opportunity

To elevate the utility of data science in advancing public health practice, the Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, in partnership with the American Public Health Association, has developed the Injury and Violence Prevention Data Science Demonstration Project. The overarching aim of this initiative is to enhance public health capacity and provide support to organizations engaged in data science work.

For this iteration of the program, we are seeking responses from organizations with existing data science projects looking to expand their efforts. This may include projects to improve the timeliness of health information, responding to public health threats in a more efficient manner, increasing the effectiveness of prevention programs/campaigns, or other topics.

Goals

- Enhance the data science workforce and capacity
- Strengthen data science partnerships
- Increase awareness of the public health benefits from data science

Program Components

Access to Data Science Subject Matter Experts

Each site will be assigned a CDC subject matter liaison and meet monthly to address support needed or other issues related to the implementation of the project.

Funding

Each site will be awarded up to \$200,000 to assist with project implementation. Final award amount will be determined by an internal team and in some instances may be less than the amount requested.

Community of Practice

There will be opportunities for sites to engage with one another to share any lessons learned and best practices throughout the duration of the data science demonstration project program period.

Learning Labs

Sites will be able to participate in professional development opportunities related to data science.

Eligibility Criteria

This opportunity is open to organizations or institutions currently working on data science projects focused on injury and violence prevention. If various groups representing multiple organizations are partnering on a collective effort, they are also eligible to apply.

The main area of focus for this RFP is using natural language processing or machine learning to improve the timeliness, efficiency, and automation of injury surveillance systems or programs. For example, major injury mortality data systems, such as the National Violent Death Reporting System (NVDRS) and the State Unintentional Drug Overdose Reporting System (SUDORS), experience significant delays because information must be manually abstracted, entered, or curated. Furthermore, often the information needed to complete these surveillance systems comes from multiple data sources (health, law enforcement, laboratory, etc.) which are not linked or even sometimes available in standard electronic formats.

Opportunities exist to use machine learning, natural language processing, or other data science approaches to automate and streamline processes. For example, natural language processes approaches may help to identify and abstract certain variables in a semi-automated or automated way. Applicants should propose a data science focused approach to improve injury mortality data surveillance systems such as NVDRS, SUDORS, and the state and local systems and processes which compile and abstract information for NVDRS/SUDORS. Data science based improvements to other injury surveillance systems may also be proposed.

This RFP also solicits proposals for local public health surveillance of emerging health concerns. Data science projects may also explore cannabis and polysubstance use (e.g., linkage between national/state data surveillance and EHR, use of machine learning to process photos of products [such as online or other collections] containing cannabis or other substances). Proposals may also explore methods to identify health symptoms that could be experienced as a result of consuming novel cannabinoid products and other emerging substances using novel data sources such as online, social media, or other data repositories

Other potential topics of interest include:

- Use of predictive modeling or machine learning to improve service delivery
- Technology based interventions to address injury or violence
- Data linkage for injury prevention
- Data science work related to advancing health equity

It is recommended that all proposed projects include collaboration with state or local health departments or a relevant local public health entity. Content areas of the proposed work should focus on **violence, adverse childhood experiences, suicide, and/or drug overdose.**

Scope of Work/Program Requirements

At the conclusion of this program, it is expected that participants will demonstrate enhanced capacity in data science and disseminate project findings.

Program participants are committing to the following:

- Participate in monthly meetings with the CDC/APHA project team
- Submit Interim Report
- Respond to Bi-monthly brief surveys
- Participate in Learning Labs
- Produce a final deliverable (e.g. report, case study, training, etc.)
- Submit final report

Timeline

Program Component	Date
Application Opens	January 20, 2023
Submission Deadline	February 24, 2023
Application Acceptances and Regrets Disseminated	March 10, 2023
Demonstration Project Kick-off Meeting (Virtual)	March 20, 2023
Program Period <ul style="list-style-type: none">• Monthly meetings with CDC/APHA• Bi-monthly Surveys• Final Deliverable	March 20, 2023–April 1, 2024
Interim Report Due Date	September 15, 2023
Final Report Due Date	April 1, 2024

Incurred Expenses

APHA will not be responsible for any costs incurred by any Offeror in preparing and submitting a proposal or in performing any other activities relative to this solicitation.

Proposal Submission

Application

Contact Information

Lead Organization	
Primary Point Contact (Include CV/Resume as an attachment)	
Name	
Title	
Email	
Phone	

Proposal Response

Applicants must provide clear and concise responses to the following prompts and questions:

Current Data Science Project Overview (2000 words)

Include the following components in your response.

- Project start date
- Data source(s) being used
- Project Goals
- Project Objectives
- The injury or violence prevention issue being addressed
- Collaboration (if applicable)
- Key Activities
- Techniques
- Expected results
- Proposed plan for showcasing the findings
- Evaluation Plan or Strategy
- Any successes/challenges

Innovation (300 words)

What is the potential scientific contribution of this work?

Organization Capacity (300 words)

Describe the lead organization's capacity to facilitate this project?

Technical Assistance Needs (300 words)

What are some potential capacity building assistance needs?

Demonstration Project Participation (300 words)

How will your team benefit from participating in this initiative?

Proposed Budget

Indirect rate cannot exceed 10%

Fiscal Agent information:

Name	
Title	
Organization	
Email	
Phone	

Activity	Brief Description/Justification	Cost/Rate

Proposal Overview

- Current Data Science Project Overview (2000 words)
- Innovation (300 words)
- Organization Capacity (300 words)
- Technical Assistance Needs (300 words)
- Demonstration Project Participation (300 words)
- Technical Assistance Needs (300 words)

Evaluation Criteria

Proposals will be reviewed and objectively evaluated based on how the respondent's current data science project aligns with the overall goals and purpose of this initiative.

Proposal Submissions

Applications must be submitted by logging into the application portal: <https://smr.to/p87124>
Late submissions will not be accepted.

Questions

Questions from prospective respondents can be sent to yeatoe.mcintosh@apha.org and should be submitted by February 13, 2023.