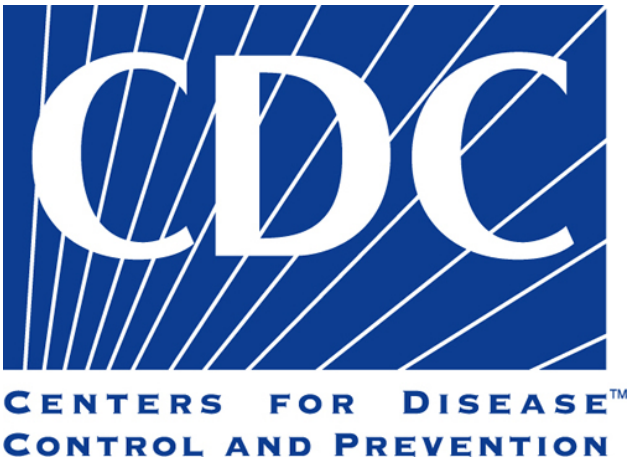

Centers for Disease Control and Prevention

Center for Forecasting and Outbreak Analytics

Centers for Outbreak Analytics and Disease Modeling

CDC-RFA-FT-23-0069

07/14/2023

Table of Contents

Part I. Overview

Applicants must go to the synopsis page of this announcement at www.grants.gov and click on the "Subscribe" button link to ensure they receive notifications of any changes to CDC-RFA-FT-23-0069. Applicants also must provide an e-mail address to www.grants.gov to receive notifications of changes.

A. Federal Agency Name:

Centers for Disease Control and Prevention (CDC)

B. Notice of Funding Opportunity (NOFO) Title:

Centers for Outbreak Analytics and Disease Modeling

C. Announcement Type: New - Type 1:

This announcement is only for non-research activities supported by CDC. If research is proposed, the application will not be considered. For purposes of this NOFO, research is defined as set forth in 45 CFR 75.2 and, for further clarity, as set forth in 42 CFR 52.2 (see eCFR :: 45 CFR 75.2 -- Definitions and *https://www.gpo.gov/fdsys/pkg/CFR-2007-title42-vol1/pdf/CFR-2007-title42-vol1-sec52-2.pdf*. In addition, for purposes of research involving human subjects and available exceptions for public health activities, please see 45 CFR 46.102(l) (*https://www.ecfr.gov/current/title-45/subtitle-A/subchapter-A/part-46/subpart-A/section-46.102#p-46.102(l)*).

Please note that for this particular NOFO, CDC-RFA-FT23-0069, notwithstanding the language above, research activities involving human subjects are **ALLOWABLE** subject to all applicable laws, regulations and policy requirements. Note research and human subjects' protection requirements inserted throughout this NOFO. All instructions related to research should be

addressed and followed as indicated in this NOFO. Please refer to Strategies and Activities for more details.

D. Agency Notice of Funding Opportunity Number:

CDC-RFA-FT-23-0069

E. Assistance Listings Number:

93.823

F. Dates:

1. Due Date for Letter of Intent (LOI):
06/17/2023
Required

2. Due Date for Applications:
07/14/2023
11:59 p.m. U.S. Eastern Standard Time, at www.grants.gov.

3. Due Date for Informational Conference Call
An informational webinar is scheduled for Monday, May 22nd from 1 - 2:30 EST

Register in advance for this webinar:
https://cdc.zoomgov.com/webinar/register/WN_U9aiVnLZRVmT6eogsOC8rg

Frequently asked questions (FAQs) and more information can be found at CFA's website:

https://www.cdc.gov/forecast-outbreak-analytics/nofo.html

F. Executive Summary:

Summary Paragraph
This NOFO includes five components, one Mandatory and four Optional. The underlying objective of the Centers for Outbreak Analytics and Disease Modeling (OADM) NOFO is to develop a network of innovators to design, prototype, test, refine, evaluate, and implement new and enhanced capabilities to improve disease modeling and analytics that enhance decision support during outbreaks of infectious diseases. Partnership and collaboration between academia, public health organizations, and the private sector is at the core of this NOFO. The OADM network is intended to enable the United States public health system to better respond to infectious disease threats by enabling a pipeline of research and development for novel data sources, modeling methods, and analytical tools that tests promising innovations in real-world settings and then supports the scale-up of successful innovations into routine practice. The network is also intended to enhance communication and collaboration among innovators, integrators, and implementors in analytic methods and public health partners in federal, state, tribal, local, and territorial governments to improve outbreak response and enhance the ability to better control epidemics and pandemics.

a. Eligible Applicants:
Open Competition

b. NOFO Type:
CA (Cooperative Agreement)

c. Approximate Number of Awards
13
Up to 13 total awards

- Mandatory Component 1 (Outbreak Analytics and Disease Modeling Public Health Response): 13 awards
- Optional Component 2 (Innovations in Outbreak Analytics and Disease Modeling): 5 awards
- Optional Component 3 (Integration of Outbreak Analytics and Disease Modeling into Practice): 5 awards
- Optional Component 4 (Centers for Implementation in Outbreak Analytics and Disease Modeling): 3 awards
- Optional Component 5 (Coordinator for the Outbreak Analytics and Disease Modeling Network): 1 award

d. Total Period of Performance Funding:
$262,500,000

e. Average One Year Award Amount:
$5,500,000
Depending on optional components applied for—range could be from $3,500,000 to $6,500,000

- Mandatory Component 1 (Outbreak Analytics and Disease Modeling Public Health Response) - $500,000
- Optional Component 2 (Centers for Innovation in Outbreak Analytics and Disease Modeling) - $3,000,000
- Optional Component 3 (Centers for Integration of Outbreak Analytics and Disease Modeling into Practice) - $3,000,000
- Optional Component 4 (Centers for Implementation of Outbreak Analytics and Disease Modeling) - $5,000,000
- Optional Component 5 (Coordinator of the Outbreak Analytics and Disease Modeling Network) - $1,000,000

f. Total Period of Performance Length:
5 year(s)

g. Estimated Award Date:
September 15, 2023

h. Cost Sharing and / or Matching Requirements:
No

Part II. Full Text

A. Funding Opportunity Description

1. Background

a. Overview

The COVID-19 pandemic highlighted the importance of timely evidence for decision-making during outbreak responses and the challenge of providing actionable insights with existing data sources and analytical tools. Disease modeling and forecasting has become a critical tool for guiding decision-making in outbreaks and during the COVID-19 pandemic. However, disease modeling and forecasting within the U.S. public health system has not been broadly resourced and systematically operationalized. This NOFO intends to help fill those gaps by developing a network of performers that will build, evaluate, and scale methods, tools, and technologies to apply and communicate modeling and forecasting before, during, and post a public health emergency. This NOFO intends to build capabilities in collaboration with state, tribal, local, and territorial public health partners and aims to strengthen the outbreak and pandemic response capabilities in the U.S. public health system. This includes training and workforce development for the public health workforce and public health emergency response decision makers. This NOFO intends to support four sets of performers – innovators, integrators, implementors, and a network coordinator. This network intends to build new capabilities, test those capabilities in collaboration with practicing public health professionals, and scale successful capabilities among jurisdictions. This network intends to advance operational disease modeling and forecasting capabilities among federal, state, local, territorial, and tribal partners so that the nation is better prepared to respond to outbreaks and pandemics.

b. Statutory Authorities

Section 301 of the Public Health Service Act (42 U.S.C. section 241)

Section 317(k)(2) of the PHS Act (42 U.S.C. section 247b(k)(2))

c. Healthy People 2030

Emergency Preparedness: https://health.gov/healthypeople/objectives-and-data/browse-objectives/emergency-preparedness

Public Health Infrastructure: https://health.gov/healthypeople/objectives-and-data/browse-objectives/public-health-infrastructure

Health IT: https://health.gov/healthypeople/objectives-and-data/browse-objectives/health-it

Global Health: https://health.gov/healthypeople/objectives-and-data/browse-objectives/global-health

d. Other National Public Health Priorities and Strategies

National Biodefense Strategy and Implementation Plan: Goal 1 Objective 1, Goal 3 Objective 4

https://www.whitehouse.gov/wp-content/uploads/2022/10/National-Biodefense-Strategy-and-Implementation-Plan-Final.pdf

e. Relevant Work

In this NOFO, outbreak analytics is defined as described in Polonsky JA, Baidjoe A, Kamvar ZN, Cori A, Durski K, Edmunds WJ, Eggo RM, Funk S, Kaiser L, Keating P, de Waroux OLP, Marks M, Moraga P, Morgan O, Nouvellet P, Ratnayake R, Roberts CH, Whitworth J, Jombart T. Outbreak analytics: a developing data science for informing the response to emerging pathogens. Philos Trans R Soc Lond B Biol Sci. 2019 Jul 8;374(1776):20180276. doi: 10.1098/rstb.2018.0276. PMID: 31104603; PMCID: PMC6558557

Other useful references include:

Pollett S, Johansson MA, Reich NG, Brett-Major D, Del Valle SY, Venkatramanan S, et al. (2021) Recommended reporting items for epidemic forecasting and prediction research: The EPIFORGE 2020 guidelines | PLOS Medicine. PLoS Med 18(10): e1003793.

Daniel B. Jernigan, Dylan George, Marc Lipsitch, Learning From COVID-19 to Improve Surveillance for Emerging Threats | AJPH | Vol. 113 Issue 5 (aphapublications.org)

2. CDC Project Description

a. Approach

Bold indicates period of performance outcome.

CDC-RFA-FT-23-0069 Logic Model: Centers for Outbreak Analytics and Disease Modeling			
Strategies and Activities	Short-Term Outcomes	Intermediate Outcomes	Long-Term Outcomes
Strategy 1 (Mandatory Component 1) Plan, prepare and respond	**Established foundational infrastructure for response activities, such as staffing plans, protocols and data use agreements** **Improved identification of key areas of focus in a public health emergency (e.g., model development, contribution of model output, data standardization, field applications,**	Improved relationships between the recipients and decision makers that could be activated in a public health emergency and provide technical assistance Increased quantity and quality of analytic support provided to decision makers in the context of a public health emergency including greater flexibility to address emerging issues	Development of a network of organizations, systems, and subject matter experts who are response ready to support STLT jurisdictional partners with advanced outbreak analytics, disease modeling and technical support during a public health emergency Improved ability to contribute analytic and decision support to a global, national, regional, state or local public health

	deployment of technical experts) **Established connections with potential state, tribal, local, and territorial (STLT) jurisdictions that would benefit from support during a public health emergency**		emergency response in an agile manner
Strategy 2 (Optional Component 2) Develop new (or enhance existing) analytic tools and platforms by applying new technologies	**Identification of end user/decision maker needs for new tools or enhancements of existing tools** **Identification and testing of new technologies, or use of existing technology in new ways to support modeling and outbreak analytics** **Developed, calibrated, and validated models and outbreak analytics specific to a disease and/or route of transmission**	**Increased evaluation of new tools to determine suitability for testing in real world settings** **Documentation of lessons learned from both successful and unsuccessful development**	Establish and maintain a platform for ongoing innovation and exploration of new models and analytic tools at the cutting edge New analytic tools and platforms created and enhanced for disease modeling and outbreak analytics
Strategy 3 (Optional Component 2) Produce innovative analytic products and output by using novel data or synthesizing diverse data	**Identification of and access gained to novel data sources with potential to inform model development and outbreak analytics**	**Increased availability of new analytic products that use novel data sources or syntheses of data from multiple sources**	Improved speed, representativeness, completeness and accuracy of data collection needed to power outbreak analytics and disease modeling output

Strategy 4 (Optional Component 2) Train and develop pipeline of infectious disease modelers	**Increased availability and accessibility of disease modeling and outbreak analytics training at the masters, doctoral and post-doctoral levels, with an emphasis on diversity, equity and inclusion**	**Established mechanisms for career development opportunities and job placement of qualified students and graduates within the Federal, state, local, territorial and tribal public health system, with an emphasis on diversity, equity, inclusion and accessibility** **Increased capacity in the public health workforce for carrying out disease modeling and outbreak analytics (strategy 4 and 7)**	Increased diversity, equity, inclusion and accessibility in the disease modeling and outbreak analytics workforce
Strategy 5 (Optional Component 3) Pilot test disease modeling and outbreak analytics in real world settings	**Increased integration of partnerships across sectors that support decision makers in a variety of settings with data collection and analytic output to guide actions during a public health emergency** **Increased identification and availability of promising data collection, analytic, decision support and data visualization approaches for testing in real world settings**	**Increased integration of disease modeling, outbreak analytics into practice in public health, health care, and private sector settings** **Increased innovative modeling and analytic approaches rigorously tested in real world settings, with success and failures carefully documented**	Improved decision-making in public health emergencies among identified integration partners Increased access to promising modeling, analytic and data collection approaches for potential scale-up across organizations, jurisdictions or sectors New approaches for visualization or communication of modeling and analytic results identified
Strategy 6 (Optional Component 4) Bring proven/tested approaches to scale across	**Increased access to promising modeling, forecasting, outbreak analytic and decision support tools, methods, and practices with**	**Increased partnerships established with decision makers across jurisdictions and sectors to tailor analytic output, tools and technical assistance to effectively meet real-time**	Identification of approaches that have been rigorously tested in real world settings are brought to scale across

organizations and jurisdictions	**potential for scale-up at the regional, national or international level**	**needs to support action at scale during public health emergencies**	organizations, jurisdictions and sectors
Strategy 7 (Optional Component 4) Outbreak analytics and disease modeling upskilling and continuing education for public health professionals	**Increased identification of the needs and gaps in knowledge, skills, and abilities in disease modeling, forecasting and outbreak analytics for public health professionals across jurisdictions and sectors** **Developed curriculum and training modalities to address challenges and opportunities**	**Implementation of practical approaches to provide training in disease modeling, forecasting and outbreak analytics to public health professionals** **Increased identification of approaches for maintaining skills, integrating new technology and continuing education established**	Increased availability of disease modeling, forecasting and outbreak analytics training for public health professionals Increased capacity of decision makers to use output from disease models, forecasts and outbreak analytics to support public health action in public health emergencies
Strategy 8 (Optional Component 5) Develop a network of innovators in disease modeling and forecasting in active collaboration with practitioners	**Regular and ad hoc meetings convened to support information exchange and collaboration among Centers including sharing tools and methods being developed** Increased collaboration with practitioners to continue to inform the activities of the network	**Promotion of high-quality outbreak analytics and modeling through initiatives such as standards development, collaborative development, and evaluation of tools and methods** Increased engagement with other networks developing or implementing disease modeling, outbreak analytics, disease surveillance, data or laboratory modernization initiatives, or other related activities	Increased use of common analytic tools and applications across network sites and among public health practitioners Improved national level capacity and coordination of public health emergency responses Reduced morbidity and mortality associated with public health emergency responses

i. Purpose

The purpose of this NOFO is to 1) integrate novel data sources, methods, or technology into outbreak analytic tools, pipelines, or enterprise capabilities; 2) create, enhance, and/or integrate

analytical tools and trained workforce for outbreak response; and 3) develop or enhance approaches for visualization or communication of analytic results to decision makers.

ii. Outcomes

The overall outcomes will focus on:

- Established foundational infrastructure for response activities, such as staffing plans, protocols and data use agreements
- Improved identification of key areas of focus in a public health emergency (e.g., model development, contribution of model output, data standardization, field applications, deployment of technical experts)
- Established connections with potential STLT jurisdictions that would benefit from support during a public health emergency
- Identification of end user/decision maker needs for new tools or enhancements of existing tools
- Identification and testing of new technologies, or use of existing technology in new ways to support modeling and outbreak analytics
- Developed, calibrated, and validated models and outbreak analytics specific to a disease and/or route of transmission
- Increased evaluation of new tools to determine suitability for testing in real world settings
- Documentation of lessons learned from both successful and unsuccessful development
- Identification of and access gained to novel data sources with potential to inform model development and outbreak analytics
- Increased availability of new analytic products that use novel data sources or syntheses of data from multiple sources
- Increased availability and accessibility of disease modeling and outbreak analytics training at the masters, doctoral and post-doctoral levels, with an emphasis on diversity, equity and inclusion
- Established mechanisms for career development opportunities and job placement of qualified students and graduates within the Federal, state, local, territorial and tribal public health system, with an emphasis on diversity, equity, inclusion and accessibility
- Increased capacity in the public health workforce for carrying out disease modeling and outbreak analytics (strategy 4 and 7)
- Increased integration of partnerships across sectors that support decision makers in a variety of settings with data collection and analytic output to guide actions during a public health emergency
- Increased identification and availability of promising data collection, analytic, decision support and data visualization approaches for testing in real world settings
- Increased integration of disease modeling, outbreak analytics into practice in public health, health care, and private sector settings
- Increased innovative modeling and analytic approaches rigorously tested in real world settings, with success and failures carefully documented
- Increased access to promising modeling, forecasting, outbreak analytic and decision support tools, methods, and practices with potential for scale-up at the regional, national or international level

- Increased partnerships established with decision makers across jurisdictions and sectors to tailor analytic output, tools and technical assistance to effectively meet real-time needs to support action at scale during public health emergencies
- Increased identification of the needs and gaps in knowledge, skills, and abilities in disease modeling, forecasting and outbreak analytics for public health professionals across jurisdictions and sectors
- Developed curriculum and training modalities to address needs and gaps
- Implementation of practical approaches to provide training in disease modeling, forecasting and outbreak analytics to public health professionals
- Increased identification of approaches for maintaining skills, integrating new technology and continuing education established
- Regular and ad hoc meetings convened to support information exchange and collaboration among Centers including sharing tools and methods being developed
- Promotion of high-quality outbreak analytics and modeling through initiatives such as standards development, collaborative, development, and evaluation of tools and methods

iii. Strategies and Activities

Applicants are required to respond to the Mandatory Component 1 and only one of the Optional Components 2-4 (Centers for Innovation, Integration, or Implementation), for a total of two components. Applicants may also choose to respond to the Optional Component 5 (Coordinator for Outbreak Analytics and Disease Modeling Network, for a total of three components. Separate Narratives and Budgets are required as follows:

a. Mandatory Component 1 - Outbreak Analytics and Disease Modeling Public Health Response (one narrative and one budget)
b. Optional Components 2 - 4 - for one of the three optional components 2-4 selected (one narrative and one budget)
c. Optional Component 5 - Coordinator for the Outbreak Analytics and Disease Modeling Network (one narrative and one budget)

All recipients supported by this NOFO are expected to address the Mandatory Component and one other Optional Component. One recipient is also expected to address the Optional Component (Coordinator for Outbreak Analytics and Disease Modeling Network).

In order to achieve the objectives and strategies of this award, all code and tools developed under this award must be available for sharing within the network and made publicly available to the largest extent feasible, including through the use of open-source code, licensing, and similar platforms. Applicants may consider developing no-code (i.e., user-friendly) versions of tools for use by stakeholders without programming backgrounds. See applicable regulations found at 45 CFR 75, including subpart 75.322 concerning intangible property

Innovation and translation are the main ongoing objectives of the Outbreak Analytics and Disease Modeling Network, and is directed toward identifying, developing, testing, evaluating, and implementing new technology, analytic and decision support approaches that improve the effectiveness of U.S. public health responses.

The public health response strategy relies on contributing to a national, regional, state or local public health response in a flexible and rapid manner. This may include, for example, assisting

with producing modeling and forecasting results, collection or synthesis of data from a variety of sources, producing reports, supporting decision makers in the interpretation of results and providing insights based on qualitative or quantitative risk assessments.

Mandatory Component 1—Outbreak Analytics and Disease Modeling Public Health Response

Strategy 1. Plan, prepare and respond

Applications should describe foundational activities such as preparing data use agreements as needed to access relevant data, memoranda of understanding and institutional review board (IRB) protocols where required to allow rapid scale-up of efforts across the network. In addition, applications should describe an approach to surging staff as needed in the context of a large-scale emergency. During an emergency, these staff and others identified throughout the application will perform modeling, forecasting and other analytics.

With initial funding, recipients should plan the types of research studies and non-research activities that could be done in the event of an infectious threat, including analyzing and synthesizing data to inform public health action. *Applications should include working with funded partners in the network to create ensemble forecasts and/or prepare informational reports.* The network is expected to make informational reports public in a timely way. These reports will provide an objective overview of recent information for use by local, state, and federal public health agencies. These reports are not intended to provide recommendations. Applications should describe response implementation activities in **one or more of these areas**:

1. Development, calibration, and validation of models and outbreak analytics specific to a disease and/or route of transmission
2. Contribution of model output to ensembles and production of forecasts of cases, hospitalizations, deaths and other priority outcome
3. Data standardization/data security/data stewardship/data integration and reporting/data linkage/data science/data analytics/data visualization including of genomic, epidemiologic, clinical, biological, environmental, geospatial, behavioral, social and other types of data together
4. Critical data collection and analyses to gather new or emerging data and create evidence for inclusion in existing or new models
5. Field applications and investigations in support of state, local, territorial, tribal jurisdictional needs
6. Identification of human resources for deployment to CDC or other public health partners in the context of an emergency response, as well as the timely mechanisms to do so

Response implementation consistent with the terms of this cooperative agreement may be funded via post-award supplements should infectious threat conditions warrant. Specific activities, consistent with the terms of this cooperative agreement, may include but are not limited to the following:

- In collaboration with relevant subject-matter groups from CDC, develop or adapt analytic and modeling methods for new or emerging disease threats
- Address analytic requirements specific to a response

- Develop and integrate outbreak analytics to rapidly analyze, interpret, visualize, integrate, and support public health decision making
- Expand networks of partnerships across public health, academia and the private sector that can be rapidly engaged for infectious threats.
- Provide decision support and interpretation of analytic output related to their implications for public health
- Provide regular and timely reports to public health and, as appropriate, relevant third parties, including advisory committees (e.g., CDC Board of Scientific Counselors), in response to infectious threats.

These activities should provide coordinated, rapid, and scalable actions in responding to infectious threats. Following initial award, a Network Response Plan will be developed collaboratively across the network. Applicants should describe how they would use their expertise in areas that may be useful during responses to infectious threats.

Optional Component 2 (Centers for Innovation in Outbreak Analytics and Disease Modeling)

Funded recipients of this optional component are expected to function as a technology and innovation "incubator" for outbreak analytics and disease modeling in public health. To this end, recipients are expected to establish and maintain a research and evaluation "platform" that allows them to readily identify, develop, adapt, and evaluate new models, analytic approaches, novel data, and technological tools at the cutting edge.

The proposed approach is expected to involve a team of innovators (scientists, engineers, developers, and others) and public health partners (non-profit, federal and STLT leaders), led by an individual with a strong background in outbreak response and analytics. Applicants should identify a lead with this background as well as key supporting innovation team members with the combined expertise to accomplish the innovation activities in this component. Curriculum vitae for these key personnel that document their qualifications should be uploaded as a PDF to www.grants.gov.

Applications should include a well-defined plan for evaluating the impact of their innovations on the public health practice of the implementing partners. Documentation of both promising approaches with the potential for scale up, and those that were tried and failed are both considered key deliverables from these activities. Promising innovations generated through the work of recipients for this optional component may be pilot tested or implemented by other members of the Outbreak Analytics and Disease Modeling Network in future funding cycles.

Strategy 2 Develop new (or enhance existing) analytic tools and platforms by applying new technologies

Applicants should describe how they propose to improve outbreak response modeling and analytics by creating new tools and/or developing enhancements to existing tools. These proposals should have a clear link to improving decision-making and have considered how they would be employed by federal and/or STLT end-users. Example innovations could include:

- Creating improved nowcasting models that can handle common real-world data defects

- Developing and testing novel inference methods for high-dimensional problems with applications to transmission model fitting
- Designing and testing improved forecasting ensembling techniques
- Testing the use of artificial intelligence and/or machine learning (AI/ML) techniques for efficient calibration of large-scale simulation models through surrogates
- Developing simulation-based decision support tools for targeting interventions or setting intervention decision thresholds from real-world indicators

Strategy 3 Produce innovative analytic products and output by using novel data or synthesizing diverse data

Applicants should describe how they propose to leverage novel data sources or synthesize multiple sources to create new analytic products. These techniques should consider the timeliness, reliability, and robustness of analytic insight derived from these approaches as compared to existing methods and applicants should have plans for demonstrating real-world improvement. These techniques should also address ethical concerns associated with novel data sources including strategies for reducing bias and protecting privacy. Examples of these approaches could include:

- Integrating wastewater, genomic, and/or mobility data and other laboratory-derived data into forecasts or analyses
- Applying multi-sensor data fusion techniques to combine internet-derived data with existing public health data streams to develop nowcasts that reduce latency
- Developing novel survey approaches, particularly related to behavior around preventative measures during infectious disease epidemics (e.g., mobility, work-from-home frequency, compliance with other non-pharmaceutical interventions such as masks, and vaccine behavior/hesitancy)

Data collection may not encompass more than 1/3 of this optional component's budget, as the primary focus should be on the development of new approaches for using data as opposed to its collection.

Strategy 4 Train and develop pipeline of infectious disease modelers

All centers will be expected, in collaboration with the Coordinator for the Outbreak Analytics and Disease Modeling network and with CDC, to contribute to the development of training materials, resources and other training activities. Specifically, applicants for this optional component (Centers for Innovation in Outbreak Analytics and Disease Modeling) should include narrative:

- Description of training opportunities to be provided at the masters, doctorate and post-doctorate levels
- Identification of mechanisms for enabling students and trainees to participate in public health emergency responses or develop analytic projects with collaborators in the Federal, state, local, territorial and tribal public health systems
- Outlining approaches and mechanisms for job placement of qualified graduates with advanced training in infectious disease modeling in the Federal, state, local, territorial and tribal public health systems

All activities should speak to including and supporting a diverse and inclusive workforce.

Optional Component 3 (Centers for Integration of Outbreak Analytics and Disease Modeling into Practice)

Strategy 5 Pilot test innovations in real world settings

Recipients of the Optional Component 3 (Integration of Outbreak Analytics and Disease Modeling into Practice) are expected to include the organization in which the identified approaches will be tested, which could be either the recipient themselves or as a sub-recipient. These partners could include a STLT health department, health care organization (purchaser, provider, payor), large employer, or other relevant entity identified in the application. Applicants should describe the extent of current collaboration with the implementing partner(s). Applicants must file a letter of support from the implementing partner(s), name the file "Implementing Partner Letter of Support", and upload it as a PDF file at www.grants.gov

Applicants for this optional component are expected to have identified a portfolio of candidate innovative analytic approaches or tools that they intend to test with their identified implementing partner. Applicants should describe how these pilot testing efforts, if successful, would be expected to support improved decision-making for their implementing partner in future public health emergencies. Applicants for this optional component should also describe how they will work, with their identified implementing partner to address activities, including but not limited to:

- Refining, implementing and evaluating analytic approaches for use by the implementing partner
- Enabling availability of tools and practices for use in real-world settings
- Implementing methods, tools and practices through developing tailored approaches that support implementing partner decision requirements
- Transitioning outbreak analytic and disease modeling innovations to operations of the implementing partner
- Establishing mechanisms that support "always on" or response-ready data collection in the context of the implementing partner's data system and infrastructure
- Evaluating and documenting the process and results of the integration effort in supporting public health emergency response decision making and effectiveness
- Developing or enhancing approaches for visualization or communication of analytic results to meet the unique needs of the implementing partner
- Implementing publicly available, user-friendly analytic or communication tools that will improve the ability of the implementing partner to make key decisions in a public health emergency

Optional Component 4 (Centers for Implementation of Outbreak Analytics and Disease Modeling)

Strategy 6 Bring proven/tested approaches to scale across organizations and jurisdictions

- Identifying, developing, refining, disseminating, scaling, and supporting the implementation of promising outbreak analytic and decision support tools and practices across geographically diverse and varied U.S. public health jurisdictions

- Partnering with decision makers across jurisdictions and sectors to tailor analytic output, tools and technical assistance to effectively meet the real-time needs to support action during public health emergencies

Applicants for this optional component are expected to have identified candidate innovative analytic approaches or tools that have already been demonstrated in pilot settings to improve decision-making during public health emergencies and that they plan to scale across organizations and/or jurisdictions. Applicants should detail these approaches and describe how they have been successfully applied. Applicants should also describe their approach to scaling these innovations and indicate how this scaling, if successful, would clearly demonstrate that the approach can be used across a wide range of jurisdictions or organizations throughout the nation. Applicants should also describe how they will manage scale-up risk.

Strategy 7 Outbreak analytics and disease modeling up-skilling and continuing education

- Developing practical training in outbreak analytics, modeling, and forecasting for current public health professionals

Applicants for this optional component should describe how they will contribute to the development of online training resources and other training activities in collaboration with the OADM Network Coordinator and with CDC. Applicants should propose online courses or training activities, provide a high-level outline of the curriculum, and describe how the proposed activities are relevant to public health practice. Applicants should also describe expertise among the proposed team that would enable the identification of training needs and the development and delivery of training materials.

Optional Component 5 (Coordinator of the Outbreak Analytics and Disease Modeling Network)

Strategy 8 Develop a network of innovators in disease modeling and forecasting in active collaboration with practitioners

In order to apply for the Coordinator for Outbreak Analytics and Disease Modeling Network, an applicant must apply for the mandatory component and one additional optional component for a total of 3 components.

The work plan for Optional Component (Coordinator for the Outbreak Analytics and Disease Modeling Network) must address the following activities:

- Leading the network by convening regular and ad hoc meetings, supporting information and personnel exchange
- Coordinating communication activities related to work of all the recipients
- Engage with CDC along with National organizations representing various public health groups to expand awareness, training, and sharing of best practices
- Promoting high-quality outbreak analytics and modeling through initiatives such as standards development and collaborative sharing of analytic tools and modeling

1. Collaborations

a. With other CDC programs and CDC-funded organizations:

Recipients are expected to collaborate with CDC programs that are relevant to the projects the network is pursuing. This may include leaders within CDC's Incident Management Structure, Pathogen Genomics Centers of Excellence, the Centers of Excellence in Vector-Borne Diseases, or program specific subject matter experts. Recipients should collaborate with each other to function with other recipients funded through this NOFO as a network.

Applicants should describe their knowledge and experience in outbreak analytics or modeling, innovative methodologies, and collaborations with federal and STLT partners on infectious disease outbreak response.

Recipients of the Optional Component (Integration of Outbreak Analytics and Disease Modeling into Practice) are expected to include the organization in which the identified approaches will be tested, which could be either the recipient themselves or as a sub-recipient. These partners could include a STLT health department, health care organization (purchaser, provider, payor), large employer, or other relevant entity identified in the application. Applicants should describe the extent of current collaboration with the implementing partner(s). Applicants must file a letter of support from the implementing partner(s), name the file "Implementing Partner Letter of Support", and upload it as a PDF file at www.grants.gov.

b. With organizations not funded by CDC:

The network will function as a platform for innovation, integration and implementation of outbreak analytics and disease modeling and recipients will be expected to collaborate with organizations such as other Federal agencies; state, local, territorial and tribal governments, health care systems, non-governmental organizations and academic institutions. Recipients are also expected to engage with National organizations representing various public health groups and other health departments and academic institutions to expand training, cross-appointments, sharing of best practices and uses of outbreak analytics and disease modeling in public health responses

2. Population(s) of Focus

The NOFO doesn't have a pre-determined focus on a specific target population, but rather asks recipients to consider those populations at greatest risk for adverse outcomes related to a public health emergency or emergencies. Existing modeling and analytic approaches often rely on data sources that aren't fully representative of the entire population and may not include groups that experience higher risk. This might include essential workers, people experiencing homelessness, and those without access to health care.

This NOFO, including funding and eligibility, is not limited based on, and does not discriminate on the basis of race, color, national origin, disability, age, sex (including gender identity, sexual orientation, and pregnancy) or other constitutionally protected statuses.

a. Health Disparities

The goal of health equity is for everyone to have a fair and just opportunity to attain their highest level of health. Achieving this requires focused and ongoing societal efforts to address historical and contemporary injustices; overcome economic, social, and other obstacles to health and healthcare; and eliminate preventable health disparities.

Broadly defined, social determinants of health are non-medical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces (e.g., racism,

climate) and systems include economic policies and systems, development agendas, social norms, social policies, and political systems. See content below and in other sections (e.g., Approach, Collaborations, Populations of Focus) for information on how this specific NOFO affects social determinants of health.

A health disparity is a preventable difference in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by populations that have been socially, economically, geographically, and environmentally disadvantaged. Health disparities are inextricably linked to a complex blend of social determinants that influence which populations are most disproportionately affected by these diseases and conditions.

The ability to apply mathematical methods to answer health equity questions in infectious disease outbreak and emergency settings is of great interest to the Center for Forecasting and Outbreak Analytics, as is the ability to collect data on the social determinants of health (SDOH) for use in transmission models and forecasting. Applications that address these issues and focus on incorporating social determinants mechanistically into mathematical models are welcomed. This NOFO also welcomes the application of social epidemiological concepts that recognize that race is not an independent exposure variable, but serves as a proxy for other social determinants, including stigma and racism. Important social determinants for consideration include but are not limited to: geography (rural/urban), household crowding, employment status, occupation, income, and mobility/access to transportation.

iv. Funding Strategy

This NOFO intends to fund recipients that have the necessary technical expertise, infrastructure, partnerships and management capabilities to make substantial contributions to the activities and outcomes of the logic model. This NOFO has one Mandatory Component and four Optional Components. Applicants are required to respond to the Mandatory Component 1 and only one of the Optional Component 2-4 (Centers for Innovation, Integration, or Implementation), for a total of two components. Applicants may also choose to respond to the Optional Component 5 (Coordinator for Outbreak Analytics and Disease Modeling Network), for a total of three components. CDC intends to fund one recipient as the Coordinator for the network of centers. An applicant must receive an award for Component 1 and one Optional Component (Component 2, 3, or 4) to receive an award for Component 5. Separate Narratives and Budgets are required as follows:

a. Mandatory Component 1—Outbreak Analytics and Disease Modeling Public Health Response (one narrative and one budget)
b. Optional Component 2 - 4—for one of the three optional components 2-4 selected (one narrative and one budget)
c. Optional Component 5—Coordinator of the Outbreak Analytics and Disease Modeling Network (one narrative and one budget)

Applicants must clearly state in the Project Abstract Summary for which Optional Component(s) they are applying. When including this information in the Project Abstract Summary, please indicate one of the following: a) “This application is for the Mandatory Component 1 and Optional Component 2, 3 or 4 (select the appropriate single Optional component) or b) This application is for the Mandatory Component, Optional Component 2, 3, 4 (select the appropriate single Optional component and Optional Component 5 (Coordinator of the Outbreak Analytics and Disease Modeling Network)".

Applications must address all of the strategies included in the relevant components in the Project Narratives, Work Plans and Budget Narratives as described below. The Project Narratives, Work Plans and Budget narratives should address the strategies specified for each component in the Project Abstract Summary.

Work proposed by an applicant can be complementary to, but must not be duplicative of, work funded through any other mechanism or source during the period of performance.

Component Funding: A component is a set of activities with an associated budget. CDC will use component funding for activities proposed in an application that received merit review but were not selected for funding in the initial award but may be funded at a later point in the budget period as programmatically necessary and as funding becomes available. This is particularly relevant for the Mandatory Component 1 where response implementation activities, consistent with the terms of this cooperative agreement may be funded via post-award supplements should infectious disease threats warrant. This would be in addition to a base level of funding for the Mandatory Component 1 that supports foundational activities. Please review the following key points about component funding:

Each component must be a discrete set of activities with an associated budget. Distinguishable component budget narratives are required, in addition to the budget for the base level of funding for the Mandatory Component.

Applicants should submit the anticipated components on an SF-424A form as part of their application which shows all components for the budget period.

Any component which is not funded at the time of a new award may be deemed "Approved but Unfunded (ABU). There is no guarantee that all components will be funded in a budget period as ABU components are subject to availability of funds and public health threats that warrant the component.

Coronavirus Disease 2019 (COVID-19) Funds: A recipient of a grant or cooperative agreement awarded by the Department of Health and Human Services (HHS) with funds made available under the Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020 (P.L. 116-123); the Coronavirus Aid, Relief, and Economic Security Act, 2020 (the "CARES Act") (P.L. 116-136); the Paycheck Protection Program and Health Care Enhancement Act (P.L. 116-139); the Consolidated Appropriations Act and the Coronavirus Response and Relief Supplement Appropriations Act, 2021 (P.L. 116-260) and/or the American Rescue Plan of 2021 [P.L. 117-2] agrees, as applicable to the award, to: 1) comply with existing and/or future directives and guidance from the Secretary regarding control of the spread of COVID-19; 2) in consultation and coordination with HHS, provide, commensurate with the condition of the individual, COVID-19 patient care regardless of the individual's home jurisdiction and/or appropriate public health measures (e.g., social distancing, home isolation); and 3) assist the United States Government in the implementation and enforcement of federal orders related to quarantine and isolation.

In addition, to the extent applicable, Recipient will comply with Section 18115 of the CARES Act, with respect to the reporting to the HHS Secretary of results of tests intended to detect SARS–CoV–2 or to diagnose a possible case of COVID–19. Such reporting shall be in accordance with guidance and direction from HHS and/or CDC. HHS laboratory reporting

guidance is posted at: https://www.hhs.gov/sites/default/files/covid-19-laboratory-data-reporting-guidance.pdf.

Further, consistent with the full scope of applicable grant regulations (45 C.F.R. 75.322), the purpose of this award, and the underlying funding, the recipient is expected to provide to CDC copies of and/or access to COVID-19 data collected with these funds, including but not limited to data related to COVID-19 testing. CDC will specify in further guidance and directives what is encompassed by this requirement.

This award is contingent upon agreement by the recipient to comply with existing and future guidance from the HHS Secretary regarding control of the spread of COVID-19. In addition, recipient is expected to flow down these terms to any subaward, to the extent applicable to activities set out in such subaward.

b. Evaluation and Performance Measurement

i. CDC Evaluation and Performance Strategy

Applicants should propose an evaluation plan, data analysis plan (if relevant) and timeline for their specific activities. CDC will provide technical assistance on the selection of overall performance measures and implementation of the performance measures across the network. CDC and the recipients will finalize the performance measures and identify feasible data sources for those measures within the first 9 months of the project period. Recipients are responsible for gathering and analyzing data for performance measures, which will included both qualitative and quantitative measures. Performance measures may include, but are not limited to, measures that indicate progress towards the following outcomes. Applicants are not required to use the examples provided below and are welcome to propose measures that indicate progress towards other outcomes described in their work plan and in the logical model included in this NOFO.

PROCESS MEASURES for strategies and activities:

Strategy 1: Plan, prepare and respond

- Preparation of agreements, processes, and staffing plans for activation in emergencies due to infectious threats

Strategy 2: Develop new (or enhance existing) analytic tools and platforms by applying new technologies

- Description of new tools or enhancement to existing tools to improve outbreak response modeling and analytics

Strategy 3: Produce innovative analytic products and output by using novel data or synthesizing diverse data

- Plan for leveraging novel or synthesized data sources to create new analytic products

Strategy 4: Train and develop pipeline of infectious disease modelers

- Plan for increased training opportunities at masters, doctorate, and post-doctorate levels

Strategy 5: Pilot test disease modeling and outbreak analytics in real world settings

- Evaluation of pilot test

Strategy 6: Bring proven/tested approaches to scale across organizations and jurisdictions

- Plan for scaling proven analytic approaches

Strategy 7: Outbreak analytics and disease modeling up-skilling and continuing education for public health professionals

- Assessment to determine gaps and developmental needs for the public health workforce

Strategy 8: Develop a network of innovators in disease modeling and forecasting in active collaboration with practitioners

- Participation in coordinating group meetings and calls

OUTCOME MEASURES: short-term outcomes

Established foundational infrastructure for response activities, such as staffing plans, protocols and data use agreements

- Completion of data use agreements, memoranda of understanding, and staffing plans

Improved identification of key areas of focus in a public health emergency (e.g., model development, contribution of model output, data standardization, field applications, deployment of technical experts)

- Gap analyses report that documents which areas of focus require the most focus for outside technical assistance during responses

Established connections with potential STLT jurisdictions that would benefit from support during a public health emergency

- Report describing the recipients' efforts to identify and establish communication with state or local public health decision makers who could use their expertise during a public health emergency

Identification of end user/decision maker needs for new tools or enhancements of existing tools

- Landscape analysis report that documents decision maker needs for modeling tool development

Identification and testing of new technologies, or use of existing technology in new ways to support modeling and outbreak analytics

- Report describing the new applications of technologies to support modeling and outbreak analytics developed by Centers of Innovation

Developed, calibrated, and validated models and outbreak analytics specific to a disease and/or route of transmission

- Number of models developed, calibrated, and validated by Centers of Innovation during the period of performance

Identification of and access gained to novel data sources with potential to inform model development and outbreak analytics

- Number of new data sources identified and/or utilized by Centers of Innovation to develop modeling and outbreak analytics tools

Increased availability and accessibility of disease modeling and outbreak analytics training at the masters, doctoral and post-doctoral levels, with an emphasis on diversity, equity and inclusion

- Number and diversity of students entering or completing training programs at the masters, doctoral, and/or post-doctoral levels

Increased integration of partnerships across sectors that support decision makers in a variety of settings with data collection and analytic output to guide actions during a public health emergency

- Report describing the pilot testing efforts of the Centers of Integration, how they have been integrated into implementation partner workstreams, and the expected utility in future public health emergencies

Increased identification and availability of promising data collection, analytic, decision support and data visualization approaches for testing in real world settings

- Number of promising approaches developed by Centers of Integration during the period of performance

Increased access to promising modeling, forecasting, outbreak analytic and decision support tools, methods, and practices with potential for scale-up at the regional, national or international level

- Report assessing promising approaches developed by Centers of Integration, identifying those for appropriate use at the regional, national, and international level and describing approaches to increase access to them

Increased identification of the needs and gaps in knowledge, skills, and abilities in disease modeling, forecasting and outbreak analytics for public health professionals across jurisdictions and sectors

- Report summarizing identified gaps in knowledge, skills, and abilities, segmented by jurisdiction type and sector

Developed curriculum and training modalities to address needs and gaps

- Number of online courses or other training materials developed

Regular and ad hoc meetings convened to support information exchange and collaboration among Centers

- Meetings held regularly with wide participation across the Centers

OUTCOME MEASURES: intermediate outcomes

Increased evaluation of new tools rigorously evaluated to determine suitability for testing in real world settings

- Report documenting tools developed by Centers of Innovation that are suitable for testing in Centers of Integration in future periods of performance

Documentation of lessons learned from both successful and unsuccessful development

- Report on lessons learned from integration activities that documents both successful and unsuccessful approaches

Increased access to novel data sources or synthesis of data from multiple sources leveraged to create new analytic products, tools or pipelines

- Report documenting novel data sources or syntheses that have been leveraged by Centers of Innovation to create new products or tools.

Established mechanisms for career development opportunities and job placement of qualified students and graduates within the Federal, state, local, territorial and tribal public health system, with an emphasis on diversity, equity, inclusion and accessibility

- Number of new training programs and job placement mechanisms developed by Centers of Innovation during the period of performance

Increased capacity in the public health workforce for carrying out disease modeling and outbreak analytics (strategy 4 and 7)

- Number of participants who have completed online training courses and other activities to improve disease modeling and outbreak analytics skills

Increased integration of disease modeling, outbreak analytics into practice in public health, health care, and private sector settings

- Number of integration and implementation partners who have used methods developed under this effort during the period of performance

Increased availability of innovative modeling and analytic approaches rigorously tested in real world settings, with success and failures carefully documented

- Report on lessons learned from implementation activities that documents both successful and unsuccessful approaches

Increased partnerships established with decision makers across jurisdictions and sectors to tailor analytic output, tools and technical assistance to effectively meet real-time needs to support action at scale during public health emergencies

- Report identifying the types and numbers of jurisdictions and sectors engaged, over time, and that summarizes partner input, including recommendations by jurisdiction and sector type

Implementation of practical approaches to provide training in disease modeling, forecasting and outbreak analytics to public health professionals

- Report on the growth in the number of public health professionals who have completed training in disease modeling, forecasting, and outbreak analytics

Increased identification of approaches for maintaining skills, integrating new technology and continuing education established

- Report detailing the new training or other educational activities developed during the period of performance by Centers of Integration

Promotion of high-quality outbreak analytics and modeling through initiatives such as standards development

- Number of cross-Center initiatives to improve modeling or analytical quality developed through the OADM Coordinator

Resource Sharing Plans:

HHS and CDC policy require that recipients of grant awards make research resources and data, including tools and analytic methods developed under this award, readily available for research purposes to qualified individuals within the scientific community after publication. Please see https://www.cdc.gov/grants/additional-requirements/ar-25.html for Additional Requirement-25 (AR-25).

As indicated in the Additional Requirement above, CDC requires recipients with activities and projects that involve data collection or generation of data with federal funds to develop and submit a Data Management Plan (DMP) for each collection or generation of public health data.

Applicants responding to this NOFO should include a detailed DMP in the Resource Sharing Plan(s) section of the application. The AR-25 outlines the components of a DMP and provides additional information for applicants regarding the requirements for data accessibility, storage and preservation.

Applicants must propose a DMP in their applications, for finalization within 6 months after the award. The DMP should be developed during the project planning phase prior to the initiation of data collection/generation activities and submitted for review. In the DMP, applicants will describe how they intend to manage, preserve, and make data generated or collected with CDC funding accessible. To the extent allowed under grant award and applicable under grant award and applicable regulations, CDC may request a copy of data produced under the award. Applicants may also consider the EpiForge guidelines for further considerations specific to disease modeling. See https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1003793

The DMP may be in narrative or table form and must include:

- A description of the data to be collected or generated in the proposed project;
- The standards to be used for the collected or generated data;
- Mechanisms for, or limitations to, providing access to the data, including a description for the provisions for the protection of privacy, confidentiality, security and intellectual property, or other rights;

- Statement of the use of data standards that ensure all documentation that describes the method of collection, what the data represent, and
- Plans for archiving and long-term preservation of the data, or explaining why long-term preservation and access are not justified.

The DMP will be evaluated for quality and completeness at the time of submission.

ii. Applicant Evaluation and Performance Measurement Plan

Applicants must provide an evaluation and performance measurement plan that demonstrates how the recipient will fulfill the requirements described in the CDC Evaluation and Performance Measurement and Project Description sections of this NOFO. At a minimum, the plan must describe:

- How applicant will collect the performance measures, respond to the evaluation questions, and use evaluation findings for continuous program quality improvement, including, as applicable to the award, how findings will contribute to reducing or eliminating health disparities and inequities.
- How key program partners will participate in the evaluation and performance measurement planning processes.
- Available data sources, feasibility of collecting appropriate evaluation and performance data, and other relevant data information (e.g., performance measures proposed by the applicant).
- How evaluation findings will be disseminated to communities and populations of interest in a manner that is suitable to their needs.
- Plans for updating the Data Management Plan (DMP) as new pertinent information becomes available. If applicable, throughout the lifecycle of the project. Updates to DMP should be provided in annual progress reports. The DMP should provide a description of the data that will be produced using these NOFO funds; access to data; data standards ensuring released data have documentation describing methods of collection, what the data represent, and data limitations; and archival and long-term data preservation plans. For more information about CDC's policy on the DMP, see https://www.cdc.gov/grants/additional-requirements/ar-25.html.

Where the applicant chooses to, or is expected to, take on specific evaluation studies, the applicant should be directed to:

- Describe the type of evaluations (i.e., process, outcome, or both).
- Describe key evaluation questions to be addressed by these evaluations.
- Describe other information (e.g., measures, data sources).

Recipients will be required to submit a more detailed Evaluation and Performance Measurement plan, including a DMP, if applicable, within the first 6 months of award, as described in the Reporting Section of this NOFO.

Rigorous evaluation of analytic approaches, decision support methodologies and tools is at the core of this NOFO. For each analytic or decision support tool or approach that is being

developed, refined, piloted, integrated or implemented, the applicant should have a plan for quantitative and qualitative evaluation that includes careful documentation of both successful and unsuccessful efforts. Evaluations should be defined prospectively, with input from stakeholders, end users and implementers. Not all details of the evaluation approach will be able to be specified at the time of application, and recipients will be required to submit a more detailed evaluation plan within 12 months of initial award, including any relevant modifications to the DMP.

Given the wide range of approaches, activities and tools to be developed through this NOFO and because there may be a benefit for collaboration across the network and planned in collaboration with implementing partners and CDC, evaluation plans will be tailored after recipients are selected and refined in yearly workplan development. Additional guidance may be provided by CDC at a later date, as needed.

d. Work Plan

A Work Plan template (see example below) must be provided for the Mandatory Component and as applicable, for the Optional Components 2, 3, 4, and 5. Work plans must be divided by strategy. Activities proposed under the respective work plans must align with the approach (logic model, strategies, activities, outcomes, and evaluation/performance measures) outlined throughout this funding announcement.

The applicant must provide a detailed work plan for the first budget period (24 months) and a high-level work plan for subsequent years. Post-award, the proposed work plan and activities may be adjusted within the scope and terms of this NOFO in collaboration with CDC to ensure compliance with applicable grant regulations and policies, to avoid duplicative work within the network and to prioritize the highest priority efforts to address the objectives of this NOFO.

Period of Performance Outcome: *[from Outcomes section and/or logic model]*		**Outcome Measure:** *[from Evaluation and Performance Measurement section]*	
Strategies and Activities	**Process Measure** *[from Evaluation and Performance Measurement section]*	**Responsible Position / Party**	**Completion Date**
1.			
2.			
3.			
4.			
5.			

c. Organizational Capacity of Recipients to Implement the Approach

Applications must describe the organizational capacity and technical expertise that enables the applicant to successfully implement the award. Applicants must describe how they are staffed, organized and managed to implement the activities in their work plan and contribute to the

achievements of the outcomes defined in the logic model, with a focus on those in bold and to be achieved in the NOFO period of performance. Applicants should describe their partnership approach across sectors and within the network. A strong ability to work across sectors is critical to the success of the program. Applicants for Optional Component 3 (Integration of Outbreak Analytics and Disease Modeling into Practice) must describe the capacity of the implementing organization to carry out the activities to be piloted or demonstrated in their organizational context, including necessary staffing, administrative requirements and procedures, technological infrastructure and physical environment/facilities. As previously indicated, a letter of support from the implementing partner identified in applications for Optional Component 3 must be provided.

Key components of organizational capacity that must be provided include:

Personnel: Curriculum vitae for key personnel should be provided in a file named "CVs/Resumes" and this file should be uploaded to www.grants.gov with the application. Collectively these key personnel should have clear and demonstrated experience and expertise that covers the range of proposed activities.

Management: Applicants must describe sufficient project management structure and experience to achieve the project outcomes, including having appropriate policies and procedures in place. This includes, but is not limited to, program and staffing management, financial reporting systems, communication, technological and data systems required to implement activities in an effective and expedited manner, physical infrastructure and equipment, and workforce capacity.

e. CDC Monitoring and Accountability Approach

Monitoring activities include routine and ongoing communication between CDC and recipients, site visits, and recipient reporting (including work plans, performance, and financial reporting). Consistent with applicable grants regulations and policies, CDC expects the following to be included in post-award monitoring for grants and cooperative agreements:

- Tracking recipient progress in achieving the desired outcomes.
- Ensuring the adequacy of recipient systems that underlie and generate data reports.
- Creating an environment that fosters integrity in program performance and results.

Monitoring may also include the following activities deemed necessary to monitor the award:

- Ensuring that work plans are feasible based on the budget and consistent with the intent of the award.
- Ensuring that recipients are performing at a sufficient level to achieve outcomes within stated timeframes.
- Working with recipients on adjusting the work plan based on achievement of outcomes, evaluation results and changing budgets.
- Monitoring performance measures (both programmatic and financial) to assure satisfactory performance levels.

Monitoring and reporting activities that assist grants management staff (e.g., grants management officers and specialists, and project officers) in the identification, notification, and management of high-risk recipients.

For all work plans supported through this funding opportunity, recipients should strive to collaborate with CDC project officers and technical monitors to align work consistent with the scope of the NOFO and terms of the cooperative agreement. Additional CDC routine monitoring and accountability activities may include:

- Reviewing and approving the recipient's annual work plan and detailed budget
- Providing administrative support to help the recipient meet U.S. Government financial and reporting requirements
- Organizing regular calls and meetings with the recipient to monitor project implementation progress
- Organizing regular calls and meetings with the recipient to assess expenditure in relation to approved work plan and to modify as necessary
- Ensuring all human subjects research protocols have been approved by an Office of Human Research Protections-registered IRB in accordance with the requirements of the Common Rule before human subjects work is initiated, and that IRB approvals are maintained throughout the study period, when applicable
- Ensuring all OMB-Paperwork Reduction Act (PRA) approvals have been obtained, as necessary, throughout the lifespan of the NOFO
- Ensuring all animal use protocols are reviewed by the CDC Animal Care and Use Program Office and Institutional Animal Care and Use Committee per CDC policies

f. CDC Program Support to Recipients

In a cooperative agreement, CDC staff are substantially involved in the program activities, above and beyond routine grant monitoring.

CDC activities may include, but are not limited to:

- Provide general coordination for all Centers and the overall network
- Develop, facilitate, and participate in collaborative multi-site relationships as needed to support the successful completion of network activities
- Provide consultation, scientific, and technical assistance as necessary in the operation of the network

This may include:

- Assisting in the design and development of tools, methods, and other projects
- Assisting in the developing of Data Management Plans to include tools and methods
- Assisting in analysis and interpretation of data
- Assisting in disseminating results, including but not limited to, tools and methods

B. Award Information

1. Funding Instrument Type:
CA (Cooperative Agreement)

CDC's substantial involvement in this program appears in the CDC Program Support to Recipients Section.

2. Award Mechanism:
U38 Cooperative Agreements to Develop Facets of the Public Health Information

3. Fiscal Year:
2023
Estimated Total Funding:
$262,500,000

4. Approximate Total Fiscal Year Funding:
$52,500,000
This amount is subject to the availability of funds.

5. Approximate Period of Performance Funding:
$262,500,000

6. Total Period of Performance Length:
5 year(s)

7. Expected Number of Awards:
13
Up to 13 total awards

- Mandatory Component 1 (Outbreak Analytics and Disease Modeling Public Health Response): 13 awards
- Optional Component 2 (Innovations in Outbreak Analytics and Disease Modeling): 5 awards
- Optional Component 3 (Integration of Outbreak Analytics and Disease Modeling into Practice): 5 awards
- Optional Component 4 (Centers for Implementation in Outbreak Analytics and Disease Modeling): 3 awards
- Optional Component 5 (Coordinator for the Outbreak Analytics and Disease Modeling Network): 1 award

8. Approximate Average Award:

$5,500,000
Per Budget Period

Depending on optional components applied for—range could be from $3,500,000 to $6,500,000

- Mandatory Component 1 (Outbreak Analytics and Disease Modeling Public Health Response) - $500,000
- Optional Component 2 (Centers for Innovation in Outbreak Analytics and Disease Modeling) - $3,000,000

- Optional Component 3 (Centers for Integration of Outbreak Analytics and Disease Modeling into Practice) - $3,000,000
- Optional Component 4 (Centers for Implementation of Outbreak Analytics and Disease Modeling) - $5,000,000
- Optional Component 5 (Coordinator of the Outbreak Analytics and Disease Modeling Network) - $1,000,000

9. Award Ceiling:
$0
Per Budget Period

10. Award Floor:
$0
Per Budget Period

11. Estimated Award Date:
September 15, 2023

12. Budget Period Length:
24 month(s)

Throughout the period of performance, CDC will continue the award based on the availability of funds, the evidence of satisfactory progress by the recipient (as documented in required reports), and the determination that continued funding is in the best interest of the federal government. The total number of years for which federal support has been approved (period of performance) will be shown in the "Notice of Award." This information does not constitute a commitment by the federal government to fund the entire period. The total period of performance comprises the initial competitive segment and any subsequent non-competitive continuation award(s).

Base funding will be provided for a 2-year (24 month) initial budget period, in years 3-5 budget periods will be 1 year (12 months).

13. Direct Assistance
Direct Assistance (DA) is available through this NOFO.

Direct Assistance (DA) is available through this NOFO for eligible awardees, but not for profit entities. Applicants may request federal personnel, equipment, or supplies, including software licenses, as Direct Assistance (DA) to support any of the approved strategies and activities in lieu of a portion of financial assistance (FA). To address staffing and/or program expertise deficits, applicant may convert FA to DA to hire staff with the requisite training, experience, expertise. For information on Direct Assistance for Assigning CDC Staff to State, Tribal, Local, and Territorial Health Agencies, refer to:
https://www.cdc.gov/publichealthgateway/grantsfunding/direct_assistance.html

If you are successful and receive a Notice of Award, in accepting the award, you agree that the award and any activities thereunder are subject to all provisions of 45 CFR Part 75, currently in effect or implemented during the period of the award, other Department regulations and policies in effect at the time of the award, and applicable statutory provisions.

C. Eligibility Information

1. Eligible Applicants

Eligibility Category:
00 (State governments)

01 (County governments)

02 (City or township governments)

04 (Special district governments)

05 (Independent school districts)

06 (Public and State controlled institutions of higher education)

07 (Native American tribal governments (Federally recognized))

08 (Public housing authorities/Indian housing authorities)

11 (Native American tribal organizations (other than Federally recognized tribal governments))

12 (Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education)

13 (Nonprofits without 501(c)(3) status with the IRS, other than institutions of higher education)

20 (Private institutions of higher education)

22 (For profit organizations other than small businesses)

23 (Small businesses)

99 (Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled "Additional Information on Eligibility")

Additional Eligibility Category:

Government Organizations:

State (includes the District of Columbia)

Local governments or their bona fide agents

Territorial governments or their bona fide agents in the Commonwealth of Puerto Rico, the Virgin Islands, the Commonwealth of the Northern Marianna Islands, American Samoa, Guam, the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Palau

State controlled institutions of higher education

American Indian or Alaska Native tribal governments (federally recognized or state-recognized)

American Indian or Alaska native tribally designated organizations

Other:

Private colleges and universities

Community-based organizations

Faith-based organizations

2. Additional Information on Eligibility

Eligible applicants are permitted to apply jointly for funding across multiple jurisdictions (e.g., multiple states, multiple local jurisdictions, border areas, Tribes and state/local jurisdictions).

Bona fide agents are eligible to apply. For more information about bona fide agents, please see the CDC webpage on Expediting the Federal Grant Process with an Administrative Partner located at https://www.cdc.gov/publichealthgateway/grantsfunding/expediting.html#Q2.

3. Justification for Less than Maximum Competition

4. Cost Sharing or Matching

Cost Sharing / Matching Requirement:
No

5. Maintenance of Effort

D. Required Registrations

1. Required Registrations

An organization must be registered at the three following locations before it can submit an application for funding at www.grants.gov.

PLEASE NOTE: Effective April 4, 2022, applicants must have a Unique Entity Identifier (UEI) at the time of application submission (SF-424, field 8c). The UEI is generated as part of SAM.gov registration. Current SAM.gov registrants have already been assigned their UEI and can view it in SAM.gov and Grants.gov. Additional information is available on the GSA website, SAM.gov, and Grants.gov- Finding the UEI.

a. Unique Entity Identifier (UEI):

All applicant organizations must obtain a Unique Entity Identifier (UEI) number by registering in SAM.gov prior to submitting an application. A UEI number is a unique twelve-digit identification number assigned to the registering organization.

If funds are awarded to an applicant organization that includes sub-recipients, those sub-recipients must provide their UEI numbers before accepting any funds.

b. System for Award Management (SAM):

The SAM is the primary registrant database for the federal government and the repository into which an entity must submit information required to conduct business as a recipient. All applicant organizations must register with SAM, and will be assigned a SAM number and a Unique Entity Identifier (UEI). All information relevant to the SAM number must be current at all times during which the applicant has an application under consideration for funding by CDC. If an award is made, the SAM information must be maintained until a final financial report is submitted or the final payment is received, whichever is later. The SAM registration process can require 10 or more business days, and registration must be renewed annually. Additional information about registration procedures may be found at SAM.gov and the SAM.gov Knowledge Base.

c. Grants.gov: The first step in submitting an application online is registering your organization atwww.grants.gov, the official HHS E-grant Web site. Registration information is located at the "Applicant Registration" option atwww.grants.gov.

All applicant organizations must register at www.grants.gov. The one-time registration process usually takes not more

than five days to complete. Applicants should start the registration process as early as possible.

Step	System	Requirements	Duration	Follow Up
1	System for Award Management (SAM)	1. Go to SAM.gov and create an Electronic Business Point of Contact (EBiz POC) (You will need to have an active SAM account before you can register on grants.gov). The UEI is generated as part of your registration.	7-10 Business Days but may take longer and must be renewed once a year	For SAM Customer Service Contact https://fsd.gov/fsd-gov/home.do Calls: 866-606-8220
2	Grants.gov	1. Set up an account in Grants.gov, then add a profile by adding the organization's new UEI number. 2. The EBiz POC can designate user roles, including Authorized Organization Representative (AOR). 3. AOR is authorized to submit applications on behalf of the organization in their workspace.	Allow at least one business day (after you enter the EBiz POC name and EBiz POC email in SAM) to receive a UEI (SAM) which will allow you to register with Grants.gov and apply for federal funding.	Register early! Applicants can register within minutes.

2. Request Application Package

Applicants may access the application package at www.grants.gov. Additional information about applying for CDC grants and cooperative agreements can be found here: https://www.cdc.gov/grants/applying/pre-award.html

3. Application Package

Applicants must download the SF-424, Application for Federal Assistance, package associated with this funding opportunity at www.grants.gov.

4. Submission Dates and Times

If the application is not submitted by the deadline published in the NOFO, it will not be processed. Office of Grants Services (OGS) personnel will notify the applicant that their application did not meet the deadline. The applicant must receive pre-approval to submit a paper application (see Other Submission Requirements section for additional details). If the applicant is authorized to submit a paper application, it must be received by the deadline provided by OGS.

a. Letter of Intent Deadline (must be emailed)

06/17/2023

b. Application Deadline

07/14/2023

11:59 pm U.S. Eastern Time, at www.grants.gov. If Grants.gov is inoperable and cannot receive applications, and circumstances preclude advance notification of an extension, then applications must be submitted by the first business day on which Grants.gov operations resume.

Due Date for Informational Conference Call

An informational webinar is scheduled for Monday, May 22nd from 1 - 2:30 EST

Register in advance for this webinar:
https://cdc.zoomgov.com/webinar/register/WN_U9aiVnLZRVmT6eogsOC8rg

Frequently asked questions (FAQs) and more information can be found at CFA's website:

https://www.cdc.gov/forecast-outbreak-analytics/nofo.html

5. Pre-Award Assessments

Risk Assessment Questionnaire Requirement

CDC is required to conduct pre-award risk assessments to determine the risk an applicant poses to meeting federal programmatic and administrative requirements by taking into account issues such as financial instability, insufficient management systems, non-compliance with award conditions, the charging of unallowable costs, and inexperience. The risk assessment will include an evaluation of the applicant's CDC Risk Questionnaire, located at https://www.cdc.gov/grants/documents/PPMR-G-CDC-Risk-Questionnaire.pdf, as well as a review of the applicant's history in all available systems; including OMB-designated repositories of government-wide eligibility and financial integrity systems (see 45 CFR 75.205(a)), and other

sources of historical information. These systems include, but are not limited to: FAPIIS (https://www.fapiis.gov/), including past performance on federal contracts as per Duncan Hunter National Defense Authorization Act of 2009; Do Not Pay list; and System for Award Management (SAM) exclusions.

CDC requires all applicants to complete the Risk Questionnaire, OMB Control Number 0920-1132 annually. This questionnaire, which is located at https://www.cdc.gov/grants/documents/PPMR-G-CDC-Risk-Questionnaire.pdf, along with supporting documentation must be submitted with your application by the closing date of the Notice of Funding Opportunity Announcement. If your organization has completed CDC's Risk Questionnaire within the past 12 months of the closing date of this NOFO, then you must submit a copy of that questionnaire, or submit a letter signed by the authorized organization representative to include the original submission date, organization's EIN and UEI.

When uploading supporting documentation for the Risk Questionnaire into this application package, clearly label the documents for easy identification of the type of documentation. For example, a copy of Procurement policy submitted in response to the questionnaire may be labeled using the following format: Risk Questionnaire Supporting Documents _ Procurement Policy.

Duplication of Efforts

Applicants are responsible for reporting if this application will result in programmatic, budgetary, or commitment overlap with another application or award (i.e. grant, cooperative agreement, or contract) submitted to another funding source in the same fiscal year. Programmatic overlap occurs when (1) substantially the same project is proposed in more than one application or is submitted to two or more funding sources for review and funding consideration or (2) a specific objective and the project design for accomplishing the objective are the same or closely related in two or more applications or awards, regardless of the funding source. Budgetary overlap occurs when duplicate or equivalent budgetary items (e.g., equipment, salaries) are requested in an application but already are provided by another source. Commitment overlap occurs when an individual's time commitment exceeds 100 percent, whether or not salary support is requested in the application. Overlap, whether programmatic, budgetary, or commitment of an individual's effort greater than 100 percent, is not permitted. Any overlap will be resolved by the CDC with the applicant and the PD/PI prior to award.

Report Submission: The applicant must upload the report in Grants.gov under "Other Attachment Forms." The document should be labeled: "Report on Programmatic, Budgetary, and Commitment Overlap."

6. Content and Form of Application Submission

Applicants are required to include all of the following documents with their application package at www.grants.gov.

7. Letter of Intent

Is a LOI:
Required

The purpose of an LOI is to allow CDC program staff to estimate the number of and plan for the review of submitted applications.

LOI must include which components the applicant will be applying to. LOI must be sent via email to:

Saraine Ross at SRoss@CDC.GOV

8. Table of Contents

(There is no page limit. The table of contents is not included in the project narrative page limit.): The applicant must provide, as a separate attachment, the “Table of Contents” for the entire submission package.

Provide a detailed table of contents for the entire submission package that includes all of the documents in the application and headings in the "Project Narrative" section. Name the file "Table of Contents" and upload it as a PDF, Word, or Excel file format under "Other Attachment Forms" at www.grants.gov.

9. Project Abstract Summary

A project abstract is included on the mandatory documents list and must be submitted at www.grants.gov. The project abstract must be a self-contained, brief summary of the proposed project including the purpose and outcomes. This summary must not include any proprietary or confidential information. Applicants must enter the summary in the "Project Abstract Summary" text box at www.grants.gov.

Applicants must clearly state in the Project Abstract Summary which components they are applying to (Mandatory + which Optional Component).

10. Project Narrative

Multi-component NOFOs may have a maximum of 15 pages for the “base” (subsections of the Project Description that the components share with each other, which may include target population, inclusion, collaboration, etc.); and up to 4 additional pages per component for

Project Narrative subsections that are specific to each component.

Text should be single spaced, 12 point font, 1-inch margins, and number all pages. Page limits include work plan; content beyond specified limits may not be reviewed.

Applicants should use the federal plain language guidelines and Clear Communication Index to respond to this Notice of Funding Opportunity Announcement. Note that recipients should also use these tools when creating public communication materials supported by this NOFO. Failure to follow the guidance and format may negatively impact scoring of the application.

a. Background

Applicants must provide a description of relevant background information that includes the context of the problem (See CDC Background).

b. Approach

i. Purpose

Applicants must describe in 2-3 sentences specifically how their application will address the problem as described in the CDC Background section.

ii. Outcomes

Applicants must clearly identify the outcomes they expect to achieve by the end of the period of performance. Outcomes are the results that the program intends to achieve. All outcomes must indicate the intended direction of change (e.g., increase, decrease, maintain). (See the logic model in the Approach section of the CDC Project Description.)

iii. Strategies and Activities

Applicants must provide a clear and concise description of the strategies and activities they will use to achieve the period of performance outcomes. Applicants must select existing evidence-based strategies that meet their needs, or describe in the Applicant Evaluation and Performance Measurement Plan how these strategies will be evaluated over the course of the period of performance. (See CDC Project Description: Strategies and Activities section.)

1. Collaborations

Applicants must describe how they will collaborate with programs and organizations either internal or external to CDC. Applicants must address the Collaboration requirements as described in the CDC Project Description.

2. Population(s) of Focus and Health Disparities

Applicants must describe the specificpopulation(s) of focus in their jurisdiction and explain how to achieve the goals of the award and/or alleviate health disparities. The applicants must also address how they will include specific populations that can benefit from the program that is described in the Approach section. Applicants must address the Population(s) of Focus and Health Disparities requirements as described in the CDC Project Description, including (as applicable to this award) how to address health disparities in the design and implementation of the proposed program activities.

c. Applicant Evaluation and Performance Measurement Plan

Applicants must provide an evaluation and performance measurement plan that demonstrates how the recipient will fulfill the requirements described in the CDC Evaluation and Performance Measurement and Project Description sections of this NOFO. At a minimum, the plan must describe:

- How applicant will collect the performance measures, respond to the evaluation questions, and use evaluation findings for continuous program quality improvement. The Paperwork Reduction Act of 1995 (PRA): Applicants are advised that any activities involving information collections (e.g., surveys, questionnaires, applications, audits, data requests, reporting, recordkeeping and disclosure requirements) from 10 or more individuals or non-Federal entities, including State and local governmental agencies, and funded or sponsored by the

Federal Government are subject to review and approval by the Office of Management and Budget. For further information about CDC's requirements under PRA see https://www.cdc.gov/os/integrity/reducepublicburden/index.htm.

- How key program partners will participate in the evaluation and performance measurement planning processes.
- Available data sources, feasibility of collecting appropriate evaluation and performance data, data management plan (DMP), and other relevant data information (e.g., performance measures proposed by the applicant).

Where the applicant chooses to, or is expected to, take on specific evaluation studies, they should be directed to:

- Describe the type of evaluations (i.e., process, outcome, or both).
- Describe key evaluation questions to be addressed by these evaluations.
- Describe other information (e.g., measures, data sources).

Recipients will be required to submit a more detailed Evaluation and Performance Measurement plan (including the DMP elements) within the first 6 months of award, as described in the Reporting Section of this NOFO.

d. Organizational Capacity of Applicants to Implement the Approach

Applicants must address the organizational capacity requirements as described in the CDC Project Description.

11. Work Plan

(Included in the Project Narrative's page limit)

Applicants must prepare a work plan consistent with the CDC Project Description Work Plan section. The work plan integrates and delineates more specifically how the recipient plans to carry out achieving the period of performance outcomes, strategies and activities, evaluation and performance measurement.

12. Budget Narrative

Applicants must submit an itemized budget narrative. When developing the budget narrative, applicants must consider whether the proposed budget is reasonable and consistent with the purpose, outcomes, and program strategy outlined in the project narrative. The budget must include:

- Salaries and wages
- Fringe benefits
- Consultant costs
- Equipment
- Supplies
- Travel
- Other categories

- Contractual costs
- Total Direct costs
- Total Indirect costs

Indirect costs could include the cost of collecting, managing, sharing and preserving data.

Indirect costs on grants awarded to foreign organizations and foreign public entities and performed fully outside of the territorial limits of the U.S. may be paid to support the costs of compliance with federal requirements at a fixed rate of eight percent of MTDC exclusive of tuition and related fees, direct expenditures for equipment, and subawards in excess of $25,000. Negotiated indirect costs may be paid to the American University, Beirut, and the World Health Organization.

If applicable and consistent with the cited statutory authority for this announcement, applicant entities may use funds for activities as they relate to the intent of this NOFO to meet national standards or seek health department accreditation or reaccreditation through the Public Health Accreditation Board (see: http://www.phaboard.org). Applicant entities to whom this provision applies include state, local, territorial governments (including the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, the Commonwealth of the Northern Marianna Islands, American Samoa, Guam, the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Palau), or their bona fide agents, political subdivisions of states (in consultation with states), federally recognized or state-recognized American Indian or Alaska Native tribal governments, and American Indian or Alaska Native tribally designated organizations. Activities include those that enable a public health organization to deliver public health services such as activities that ensure a capable and qualified workforce, up-to-date information systems, and the capability to assess and respond to public health needs. Use of these funds must focus on achieving a minimum of one national standard that supports the intent of the NOFO. Proposed activities must be included in the budget narrative and must indicate which standards will be addressed.

Vital records data, including births and deaths, are used to inform public health program and policy decisions. If applicable and consistent with the cited statutory authority for this NOFO, applicant entities are encouraged to collaborate with and support their jurisdiction's vital records office (VRO) to improve vital records data timeliness, quality and access, and to advance public health goals. Recipients may, for example, use funds to support efforts to build VRO capacity through partnerships; provide technical and/or financial assistance to improve vital records timeliness, quality or access; or support vital records improvement efforts, as approved by CDC.

Applicants must name this file "Budget Narrative" and can upload it as a PDF, Word or Excel file format at www.grants.gov. If requesting indirect costs in the budget, a copy of the indirect cost-rate agreement is required. If the indirect costs are requested, include a copy of the current negotiated federal indirect cost rate agreement or a cost allocation plan approval letter for those Recipients under such a plan. Applicants must name this file "Indirect Cost Rate" and upload it at www.grants.gov.

Additional budget instructions:

For the application, provide one single file entitled “Budget Narrative” that includes individual and complete line-item budgets and detailed justification narratives for each:

- Mandatory Component 1—Outbreak Analytics and Disease Modeling Public Health Response
- Optional Component 2—Centers for Innovation in Outbreak Analytics and Disease Modeling
- Optional Component 3—Centers for Integration of Outbreak Analytics and Disease Modeling into Practice
- Optional Component 4—Centers for Implementation of Outbreak Analytics and Disease Modeling
- Optional Component 5—Coordinator for the Outbreak Analytics and Disease Modeling Network

All applicants MUST apply for the Mandatory Component 1 (Outbreak Analytics and Disease Modeling Public Health Response) AND one of three Optional Components 2 - 4 (Centers for Innovation, Integration, or Implementation) for a total of two components.

Applicants MAY also apply for the Optional Component 5 (Coordinator of Outbreak Analytics and Disease Modeling Network). The recipient of this optional component will have a total of three components.

The applicant must provide a detailed budget for the first budget period (24 months) and high-level budgets for subsequent years.

13. Employee Whistleblower Rights and Protections

Employee Whistleblower Rights and Protections: All recipients of an award under this NOFO will be subject to a term and condition that applies the requirements set out in 41 U.S.C. § 4712, “Enhancement of contractor protection from reprisal for disclosure of certain information” and 48 Code of Federal Regulations (CFR) section 3.9 to the award, which includes a requirement that recipients and subrecipients inform employees in writing (in the predominant native language of the workforce) of employee whistleblower rights and protections under 41 U.S.C. § 4712. For more information see: https://oig.hhs.gov/fraud/whistleblower/.

13a. Funds Tracking

Proper fiscal oversight is critical to maintaining public trust in the stewardship of federal funds. Effective October 1, 2013, a new HHS policy on subaccounts requires the CDC to set up payment subaccounts within the Payment Management System (PMS) for all new grant awards. Funds awarded in support of approved activities and drawdown instructions will be identified on the Notice of Award in a newly established PMS subaccount (P subaccount). Recipients will be required to draw down funds from award-specific accounts in the PMS. Ultimately, the subaccounts will provide recipients and CDC a more detailed and precise understanding of financial transactions. The successful applicant will be required to track funds by P-accounts/sub accounts for each project/cooperative agreement awarded.

Applicants are encouraged to demonstrate a record of fiscal responsibility and the ability to provide sufficient and effective oversight. Financial management systems must meet the requirements as described 45 CFR 75 which include, but are not limited to, the following:

- Records that identify adequately the source and application of funds for federally-funded activities.
- Effective control over, and accountability for, all funds, property, and other assets.
- Comparison of expenditures with budget amounts for each Federal award.
- Written procedures to implement payment requirements.
- Written procedures for determining cost allowability.
- Written procedures for financial reporting and monitoring.

13b. Copyright Interests Provisions

This provision is intended to ensure that the public has access to the results and accomplishments of public health activities funded by CDC. Pursuant to applicable grant regulations and CDC's Public Access Policy, Recipient agrees to submit into the National Institutes of Health (NIH) Manuscript Submission (NIHMS) system an electronic version of the final, peer-reviewed manuscript of any such work developed under this award upon acceptance for publication, to be made publicly available no later than 12 months after the official date of publication. Also at the time of submission, Recipient and/or the Recipient's submitting author must specify the date the final manuscript will be publicly accessible through PubMed Central (PMC). Recipient and/or Recipient's submitting author must also post the manuscript through PMC within twelve (12) months of the publisher's official date of final publication; however the author is strongly encouraged to make the subject manuscript available as soon as possible. The recipient must obtain prior approval from the CDC for any exception to this provision.

The author's final, peer-reviewed manuscript is defined as the final version accepted for journal publication, and includes all modifications from the publishing peer review process, and all graphics and supplemental material associated with the article. Recipient and its submitting authors working under this award are responsible for ensuring that any publishing or copyright agreements concerning submitted articles reserve adequate right to fully comply with this provision and the license reserved by CDC. The manuscript will be hosted in both PMC and the CDC Stacks institutional repository system. In progress reports for this award, recipient must identify publications subject to the CDC Public Access Policy by using the applicable NIHMS identification number for up to three (3) months after the publication date and the PubMed Central identification number (PMCID) thereafter.

13c. Data Management Plan

As identified in the Evaluation and Performance Measurement section, applications involving data collection or generation must include a Data Management Plan (DMP) as part of their evaluation and performance measurement plan unless CDC has stated that CDC will take on the responsibility of creating the DMP. The DMP describes plans for assurance of the quality of the public health data through the data's lifecycle and plans to deposit the data in a repository to preserve and to make the data accessible in a timely manner. See web link for additional information: https://www.cdc.gov/grants/additional-requirements/ar-25.html.

14. Funding Restrictions

Restrictions that must be considered while planning the programs and writing the budget are:

- Recipients may not use funds for research.
- Recipients may not use funds for clinical care except as allowed by law.

- Recipients may use funds only for reasonable program purposes, including personnel, travel, supplies, and services.
- Generally, recipients may not use funds to purchase furniture or equipment. Any such proposed spending must be clearly identified in the budget.
- Reimbursement of pre-award costs generally is not allowed, unless the CDC provides written approval to the recipient.
- Other than for normal and recognized executive-legislative relationships, no funds may be used for:
    - publicity or propaganda purposes, for the preparation, distribution, or use of any material designed to support or defeat the enactment of legislation before any legislative body
    - the salary or expenses of any grant or contract recipient, or agent acting for such recipient, related to any activity designed to influence the enactment of legislation, appropriations, regulation, administrative action, or Executive order proposed or pending before any legislative body
- See Additional Requirement (AR) 12 for detailed guidance on this prohibition and additional guidance on anti-lobbying restrictions for CDC recipients.
- The direct and primary recipient in a cooperative agreement program must perform a substantial role in carrying out project outcomes and not merely serve as a conduit for an award to another party or provider who is ineligible.

Please note that notwithstanding the language above, for this particular NOFO, CDC-RFA-FT23-0069, research activities involving human subjects are **ALLOWABLE** subject to all applicable laws, regulations and policy requirements. Note research and human subjects' protection requirements inserted throughout this NOFO. All instructions related to research should be addressed and followed as indicated in this NOFO. Please refer to Strategies and Activities for more details.

15. Other Submission Requirements

a. Electronic Submission: Applications must be submitted electronically by using the forms and instructions posted for this notice of funding opportunity atwww.grants.gov. Applicants can complete the application package using Workspace, which allows forms to be filled out online or offline. Application attachments can be submitted using PDF, Word, or Excel file formats. Instructions and training for using Workspace can be found at www.grants.gov under the "Workspace Overview" option.

b. Tracking Number: Applications submitted through www.grants.gov are time/date stamped electronically and assigned a tracking number. The applicant's Authorized Organization Representative (AOR) will be sent an e-mail notice of receipt whenwww.grants.gov receives the application. The tracking number documents that the application has been submitted and initiates the required electronic validation process before the application is made available to CDC.

c. Validation Process: Application submission is not concluded until the validation process is completed successfully. After the application package is submitted, the applicant will receive a "submission receipt" e-mail generated by www.grants.gov. A second e-mail message to applicants will then be generated bywww.grants.gov that will either validate or reject the

submitted application package. This validation process may take as long as two business days. Applicants are strongly encouraged to check the status of their application to ensure that submission of their package has been completed and no submission errors have occurred. Applicants also are strongly encouraged to allocate ample time for filing to guarantee that their application can be submitted and validated by the deadline published in the NOFO. Non-validated applications will not be accepted after the published application deadline date.

If you do not receive a "validation" e-mail within two business days of application submission, please contact www.grants.gov. For instructions on how to track your application, refer to the e-mail message generated at the time of application submission or review the Applicants section on www.grants.gov.

d. Technical Difficulties: If technical difficulties are encountered at www.grants.gov, applicants should contact Customer Service atwww.grants.gov. The www.grants.gov Contact Center is available 24 hours a day, 7 days a week, except federal holidays. The Contact Center is available by phone at 1-800-518-4726 or by e-mail at support@grants.gov. Application submissions sent by e-mail or fax, or on CDs or thumb drives will not be accepted. Please note thatwww.grants.gov is managed by HHS.

e. Paper Submission: If technical difficulties are encountered at www.grants.gov, applicants should call thewww.grants.gov Contact Center at 1-800-518-4726 or e-mail them

at support@grants.gov for assistance. After consulting with the Contact Center, if the technical difficulties remain unresolved and electronic submission is not possible, applicants may e-mail CDC GMO/GMS, before the deadline, and request permission to submit a paper application.

Such requests are handled on a case-by-case basis.

An applicant's request for permission to submit a paper application must:

1. Include the www.grants.gov case number assigned to the inquiry
2. Describe the difficulties that prevent electronic submission and the efforts taken with the www.grants.gov Contact Center to submit electronically; and
3. Be received via e-mail to the GMS/GMO listed below at least three calendar days before the application deadline. Paper applications submitted without prior approval will not be considered. If a paper application is authorized, OGS will advise the applicant of specific instructions for submitting the application via email.

E. Review and Selection Process

1. Review and Selection Process: Applications will be reviewed in three phases

a. Phase 1 Review

All applications will be initially reviewed for eligibility and completeness by the Office of Grants Services. Complete applications will be reviewed for responsiveness by Grants Management Officials and Program Officials. Non-responsive applications will not advance to Phase II review. Applicants will be notified that their applications did not meet eligibility and/or published submission requirements.

b. Phase II Review
A review panel will evaluate complete, eligible applications in accordance with the criteria below.

i. Approach

ii. Evaluation and Performance Measurement

iii. Applicant's Organizational Capacity to Implement the Approach

Not more than thirty days after the Phase II review is completed, applicants will be notified electronically if their application does not meet eligibility or published submission requirements.

i. Approach **Maximum Points:** 50

All applications will be evaluated based on the extent to which the application's technical approach describes an overall strategy and activities consistent with the approach outlined in project description and logic model based on the extent to which:

- Applicant presents an overall strategy and work plan that are aligned with the strategies/activities, outcomes, and performance measures in the approach and is consistent with the content and format proposed by CDC.
- Applicant describes strategies and activities that are achievable, appropriate to achieve the outcomes of the project, and evidence-based (to the degree practicable, e.g., previous experience with similar projects)
- Applicant's approach identifies potential roadblocks to accomplishment of project objectives and the strategies to overcome such roadblocks within the period of performance and estimated cost

As described above, applicants must apply for Mandatory Component 1 and only one of Optional Components 2, 3, or 4. Out of the total 50 points, applications will be scored a maximum of 10 points for Mandatory Component 1 and the remaining 40 points will be allotted to the applicant's selected Optional Component 2, 3, or 4. Specifically, applications will be evaluated for their proposed approach by assessing:

Mandatory Component 1 (10 points)

Strategy 1 (10 points)

- The extent to which the applicant describes foundational activities such as preparing memoranda of understanding, data use agreements, and other administrative preparedness activities that will enable rapid surge of outbreak analytics and disease modeling support in the event of a public health emergency
- The extent to which the applicant describes their approach to surging staff as needed in the context of a large-scale emergency to perform modeling, forecasting, and other analytical activities
- The extent to which the applicant describes how they will plan research studies and/or non-research activities that could be done in the event of an infectious threat

- The extent to which the applicant describes planned response implementation activities in one or more of the 6 areas listed in Strategy 1

Optional Component 2 (40 points)

Strategy 2 (15 points)

- The extent to which the applicant proposes new tools and/or enhancements to existing tools to improve outbreak response modeling and analytics
- The extent to which the applicant describes how tools will improve decision-making and how these tools would be employed by federal and/or STLT end-users

Strategy 3 (15 points)

- The extent to which the applicant proposes to leverage novel data sources or synthesize multiple sources to create new analytic products
- The extent to which the applicant describes how these novel data sources or syntheses of multiple data sources will improve the timeliness, reliability, and/or robustness of analytic insights as compared to existing sources

Strategy 4 (10 points)

- The extent to which the applicant describes training opportunities that they will provide at the masters, doctorate, and post-doctorate levels
- The extent to which the applicant identifies mechanisms for enabling students and trainees to participate in public health emergency responses or develop analytic projects with collaborators in Federal or STLT public health systems
- The extent to which the applicant outlines approaches and mechanisms for placing qualified infectious disease modeling graduates in the Federal or STLT public health systems

Optional Component 3 (40 points)

Strategy 5 (40 points)

- The extent to which the applicant has identified an implementing partner and describes a portfolio of candidate innovative analytic approaches or tools that they intend to test operationally with that partner
- The extent to which the applicant clearly identifies how these pilot testing efforts, if successful, would be expected to support improved decision-making for their implementing partner in future public health emergencies
- The extent to which the applicant describes how they will implement, refine, and evaluate analytic approaches for use by their implementing partner and develop tailored approaches that support implementing partner decision requirements
- The extent to which the applicant describes how they will establish mechanisms to support “always on” or response-ready data collection in the context of their implementing partner’s data system and infrastructure
- The extent to which the applicant describes how they will evaluate and document the process and results of their pilot testing and integration efforts

- The extent to which the applicant describes how they will develop or enhance approaches for visualizing and communicating analytic results to meet their implementing partner needs, especially using publicly available, user-friendly tools that improve decision making during public health emergencies

Optional Component 4 (40 points)

Strategy 6 (30 points)

- The extent to which the applicant describes candidate innovative analytic approaches or tools that they plan to scale across organizations and/or jurisdictions
- The extent to which the applicant clearly identifies how these candidate analytic approaches have been successfully applied to support decision-making during public health emergencies
- The extent to which the applicant describes their approach to scaling these innovations across a wide range of jurisdictions and organizations and identifies how they will address diverse stakeholder needs and manage scale-up risk
- The extent to which the applicant clearly identifies how their scaling efforts will demonstrate that the approach can be used across a wide range of jurisdictions or organizations throughout the nation

Strategy 7 (10 points)

- The extent to which the applicant describes how they will collaborate with the OADM Network Coordinator and CDC to contribute to the development of online training resources and other training activities
- The extent to which the applicant proposes online courses or training activities, provides a high-level outline of the curriculum, and describes how the proposed activities are relevant to public health practice

ii. Evaluation and Performance Measurement **Maximum Points:** 25

All applications will be evaluated based on the extent to which the application's plans address the requirements of Part II, A.2.(b) "Evaluation and Performance Management" and subpart (i) "CDC Evaluation and Performance Strategy," specifically:

- The extent to which the applicant demonstrates the ability to measure progress in implementation of the key activities and the achievement of relevant outcomes as noted in the logic model both in terms of short and long term perspectives
- The extent to which the applicant describes monitoring and evaluation procedures and how evaluation and performance measurement will be incorporated into planning, implementation, and reporting of associated project activities
- The extent to which the applicant describes how performance measurement and evaluation findings will be reported and used to demonstrate outcomes of the NOFO
- The extent to which the applicant describes how performance measures will be used to adjust/direct resources to meet project deadlines

As described above, applicants must apply for Mandatory Component 1 and only one of Optional Components 2, 3, or 4. Out of the total 25 points, applications will be scored a maximum of 6 points for Mandatory Component 1 and the remaining 19 points will be allotted to the applicant's selected Optional Component 2, 3, or 4.

iii. Applicant's Organizational Capacity to Implement the Approach **Maximum Points:** 25

All applications will be evaluated based on the extent to which the application reflects an organization with the necessary experience, expertise, and administrative and technical capacity to design, prototype, test, refine, evaluate, and implement new capabilities to improve disease modeling and analytics that enhance decision support during outbreaks of infectious diseases as outlined in Part II, A.2.(e) "Organizational Capacity of Recipients to Implement the Approach," specifically:

- The extent to which the applicant describes previous experience that is relevant to the NOFO
- The extent to which CVs of key personnel demonstrate applicable experience for the proposed activities
- The extent to which the applicant demonstrates sufficient project management and administrative structures and experience to achieve project outcomes

Mandatory Component 1 (6 points)

- The extent to which the applicant describes their experience and capacity to surge staff in the event of an emergency to perform modeling, forecasting, and other analytical activities
- The extent to which the applicant describes their experience and expertise for accomplishing their proposed response implementation activities

Optional Component 2 (19 points)

- The extent to which the applicant an innovation team lead who has an ongoing record of innovating in outbreak response and analytics and who has advanced their field
- The extent to which the applicant provides a team of innovators with complementary and integrated scientific, engineering, and/or development expertise
- The extent to which the applicant has experience developing and/or providing the type of training that they propose as well as enabling both collaborations of trainees with, and placement of qualified graduates within, federal/STLT jurisdictions and public health organizations

Optional Component 3 (19 points)

- The extent to which the applicant provides evidence of support from an appropriate public health implementing partner by way of a Letter of Support that clearly articulates the nature of the partnership and the partner's commitment to participate in the proposed activities
- The extent to which the applicant describes a track record of collaborating with their identified implementing partner or otherwise describes the ways they will be able to

collaborate successfully as well as the capacity of the implementing organization to carry out the proposed activities

- The extent to which the applicant has staff and processes that will support the full range of implementation activities including transitioning outbreak analytic innovations into operations, supporting 'always on' and/or response-ready data collection, developing or enhancing visualization approaches, and implementing publicly available and user-friendly analytic or communication tools

Optional Component 4 (19 points)

- The extent to which the applicant has a track record of scaling innovative analytical or technological approaches across geographically diverse and varied U.S. public health jurisdictions
- The extent to which the applicant has staff and processes that will support the full range of scaling activities including identifying, developing, refining, disseminating, and supporting the implementation of promising outbreak analytic and decision support tools
- The extent to which the applicant has experience developing practical training in outbreak analytics, modeling, and forecasting for public health professionals

Budget **Maximum Points:** 0

The budget will be reviewed but not scored.

c. Phase III Review

Applications will be evaluated during the objective review process, by component, on the strength and capacity of the applicant and how well they address the intent of the NOFO, the strength of the proposed design and approach to accomplish the program priorities, and the feasibility of completing the proposed effort within the time frame of the period of performance and within the proposed budget, among other scored objective review criteria as described in Section E. Review and Selection Process 1.b. Phase II Review, above.

Following phase II objective review, recommended applications will receive an additional level of review (phase III). During phase III review, the following will be considered in making funding recommendations in priority order:

Optional Component 2 (Centers for Innovation)

- Geographic diversity: In order to ensure maximum U.S. coverage, no more than three applications will be funded from the same Census Bureau Region (Northeast, Southeast, Midwest, and West).

Optional Component 3 (Centers for Integration)

- Organizational diversity: In order to foster a diversity of approaches to implementation, if possible, at least one funded application will be from a private, for-profit recipient.
- Geographic diversity: In order to ensure maximum U.S. coverage, no more than one application will be funded from the same state. Additionally, if possible, at least one funded application will have integration partners who serve urban, rural, and frontier populations.

- Diversity of approach: In order to ensure that a diversity of tools, methodologies, and data sources are being pilot tested by Centers of Integration, we may fund proposals out of rank order.

Optional Component 4 (Centers for Implementation)

- Organizational diversity: In order to foster a diversity of approaches to implementation, if possible, at least one funded application will be from a private for-profit recipient.

Optional Component 5 (Coordinator)

- Optional Component 5 will be awarded after recipients of Optional Components 2, 3, and 4 have been identified. Applications to Optional Component 5 will be scored out of a maximum of 10 points (based on demonstrated past performance managing / coordinating a network of diverse partners (e.g. public and private sector, academia)) and awarded to the Optional Component 2, 3, or 4 recipient with the highest score.

CDC will provide justification for any decision to fund otherwise qualified applicants out of rank order based solely on the programmatic diversity priorities listed above for each component.

The review process for non-competitive continuation and supplemental applications will be outlined in future guidance for those proposed activities, consistent with applicable grant regulations and policies.

Review of risk posed by applicants.
Prior to making a Federal award, CDC is required by 31 U.S.C. 3321 and 41 U.S.C. 2313 to review information available through any OMB-designated repositories of government-wide eligibility qualification or financial integrity information as appropriate. See also suspension and debarment requirements at 2 CFR parts 180 and 376.

In accordance 41 U.S.C. 2313, CDC is required to review the non-public segment of the OMB-designated integrity and performance system accessible through SAM (currently the Federal Recipient Performance and Integrity Information System (FAPIIS)) prior to making a Federal award where the Federal share is expected to exceed the simplified acquisition threshold, defined in 41 U.S.C. 134, over the period of performance. At a minimum, the information in the system for a prior Federal award recipient must demonstrate a satisfactory record of executing programs or activities under Federal grants, cooperative agreements, or procurement awards; and integrity and business ethics. CDC may make a Federal award to a recipient who does not fully meet these standards, if it is determined that the information is not relevant to the current Federal award under consideration or there are specific conditions that can appropriately mitigate the effects of the non-Federal entity's risk in accordance with 45 CFR §75.207.

CDC’s framework for evaluating the risks posed by an applicant may incorporate results of the evaluation of the applicant's eligibility or the quality of its application. If it is determined that a Federal award will be made, special conditions that correspond to the degree of risk assessed may be applied to the Federal award. The evaluation criteria is described in this Notice of Funding Opportunity.

In evaluating risks posed by applicants, CDC will use a risk-based approach and may consider any items such as the following:

(1) Financial stability;

(2) Quality of management systems and ability to meet the management standards prescribed in this part;

(3) History of performance. The applicant's record in managing Federal awards, if it is a prior recipient of Federal awards, including timeliness of compliance with applicable reporting requirements, conformance to the terms and conditions of previous Federal awards, and if applicable, the extent to which any previously awarded amounts will be expended prior to future awards;

(4) Reports and findings from audits performed under subpart F 45 CFR 75 or the reports and findings of any other available audits; and

(5) The applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on non-Federal entities.

CDC must comply with the guidelines on government-wide suspension and debarment in 2 CFR part 180, and require non-Federal entities to comply with these provisions. These provisions restrict Federal awards, subawards and contracts with certain parties that are debarred, suspended or otherwise excluded from or ineligible for participation in Federal programs or activities.

2. Announcement and Anticipated Award Dates

Awards are expected to be announced by September 1, 2023 at the earliest and awarded by September 30, 2023.

F. Award Administration Information

1. Award Notices

Recipients will receive an electronic copy of the Notice of Award (NOA) from CDC OGS. The NOA shall be the only binding, authorizing document between the recipient and CDC. The NOA will be signed by an authorized GMO and emailed to the Recipient Business Officer listed in application and the Program Director.

Any applicant awarded funds in response to this Notice of Funding Opportunity will be subject to annual SAM Registration and Federal Funding Accountability And Transparency Act Of 2006 (FFATA) requirements.

Unsuccessful applicants will receive notification of these results by e-mail with delivery receipt.

2. Administrative and National Policy Requirements

Recipients must comply with the administrative and public policy requirements outlined in 45 CFR Part 75 and the HHS Grants Policy Statement, as appropriate.

Brief descriptions of relevant provisions are available at https://www.cdc.gov/grants/additional-requirements/index.html.

The HHS Grants Policy Statement is available at http://www.hhs.gov/sites/default/files/grants/grants/policies-regulations/hhsgps107.pdf.

The full text of the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for HHS Awards, 45 CFR 75, can be found at: https://www.ecfr.gov/cgi-bin/text-idx?node=pt45.1.75

Should you successfully compete for an award, recipients of federal financial assistance (FFA) from HHS will be required to complete an HHS Assurance of Compliance form (HHS 690) in which you agree, as a condition of receiving the grant, to administer your programs in compliance with federal civil rights laws that prohibit discrimination on the basis of race, color, national origin, age, sex and disability, and agreeing to comply with federal conscience laws, where applicable. This includes ensuring that entities take meaningful steps to provide meaningful access to persons with limited English proficiency; and ensuring effective communication with persons with disabilities. Where applicable, Title XI and Section 1557 prohibit discrimination on the basis of sexual orientation, and gender identity. The HHS Office for Civil Rights provides guidance on complying with civil rights laws enforced by HHS. See https://www.hhs.gov/civil-rights/for-providers/provider- obligations/index.html and https://www.hhs.gov/civil-rights/for- individuals/nondiscrimination/index.html.

- For guidance on meeting your legal obligation to take reasonable steps to ensure meaningful access to your programs or activities by limited English proficient individuals, see https://www.hhs.gov/civil-rights/for-individuals/special-topics/limited-english-proficiency/fact-sheet-guidance/index.html and https://www.lep.gov.
- For information on your specific legal obligations for serving qualified individuals with disabilities, including providing program access, reasonable modifications, and to provide effective communication, see http://www.hhs.gov/ocr/civilrights/understanding/disability/index.html.
- HHS funded health and education programs must be administered in an environment free of sexual harassment, see https://www.hhs.gov/civil-rights/for-individuals/sex-discrimination/index.html.
- For guidance on administering your project in compliance with applicable federal religious nondiscrimination laws and applicable federal conscience protection and associated anti-discrimination laws, see https://www.hhs.gov/conscience/conscience-protections/index.html and https://www.hhs.gov/conscience/religious-freedom/index.html.

3. Reporting

Reporting provides continuous program monitoring and identifies successes and challenges that recipients encounter throughout the period of performance. Also, reporting is a requirement for recipients who want to apply for yearly continuation of funding. Reporting helps CDC and recipients because it:

- Helps target support to recipients;
- Provides CDC with periodic data to monitor recipient progress toward meeting the Notice of Funding Opportunity outcomes and overall performance;
- Allows CDC to track performance measures and evaluation findings for continuous quality and program improvement throughout the period of performance and to determine

applicability of evidence-based approaches to different populations, settings, and contexts; and

- Enables CDC to assess the overall effectiveness and influence of the NOFO.

The table below summarizes required and optional reports. All required reports must be sent electronically to GMS listed in the "Agency Contacts" section of the NOFO copying the CDC Project Officer.

Report	When?	Required?
Recipient Evaluation and Performance Measurement Plan, including Data Management Plan (DMP)	6 months into award	Yes
First Year Performance Report	12 months into award	Yes
Annual Performance Report (APR)	No later than 120 days before end of budget period. Serves as yearly continuation application.	Yes
Data on Performance Measures	N/A	No
Federal Financial Reporting Forms	90 days after the end of the budget period	Yes
Final Performance and Financial Report	90 days after end of period of performance	Yes
Payment Management System (PMS) Reporting	Quarterly reports due January 30; April 30; July 30; and October 30	Yes

a. Recipient Evaluation and Performance Measurement Plan (required)

With support from CDC, recipients must elaborate on their initial applicant evaluation and performance measurement plan. This plan must be no more than 20 pages; recipients must submit the plan 6 months into the award. HHS/CDC will review and approve the recipient's monitoring and evaluation plan to ensure that it is appropriate for the activities to be undertaken as part of the agreement, for compliance with the monitoring and evaluation guidance established by HHS/CDC, or other guidance otherwise applicable to this Agreement.

Recipient Evaluation and Performance Measurement Plan (required): This plan should provide additional detail on the following:

Performance Measurement

• Performance measures and targets

• The frequency that performance data are to be collected.

• How performance data will be reported.

• How quality of performance data will be assured.

• How performance measurement will yield findings to demonstrate progress towards achieving NOFO goals (e.g., reaching specific populations or achieving expected outcomes).

• Dissemination channels and audiences.

• Other information requested as determined by the CDC program.

Evaluation

• The types of evaluations to be conducted (e.g. process or outcome evaluations).

• The frequency that evaluations will be conducted.

• How evaluation reports will be published on a publicly available website.

• How evaluation findings will be used to ensure continuous quality and program improvement.

• How evaluation will yield findings to demonstrate the value of the NOFO (e.g., effect on improving public health outcomes, effectiveness of NOFO, cost-effectiveness or cost-benefit).

• Dissemination channels and audiences.

HHS/CDC or its designee will also undertake monitoring and evaluation of the defined activities within the agreement. The recipient must ensure reasonable access by HHS/CDC or its designee to all necessary sites, documentation, individuals and information to monitor, evaluate and verify the appropriate implementation the activities and use of HHS/CDC funding under this Agreement.

b. Annual Performance Report (APR) (required)
The recipient must submit the APR via www.Grantsolutions.gov no later than120 days prior to the end of the budget period. This report must not exceed 45 pages excluding administrative reporting. Attachments are not allowed, but web links are allowed.

This report must include the following:

- **Performance Measures:** Recipients must report on performance measures for each budget period and update measures, if needed.
- **Evaluation Results:** Recipients must report evaluation results for the work completed to date (including findings from process or outcome evaluations).
- **Work Plan:** Recipients must update work plan each budget period to reflect any changes in period of performance outcomes, activities, timeline, etc.
- **Successes**
    - Recipients must report progress on completing activities and progress towards achieving the period of performance outcomes described in the logic model and work plan.
    - Recipients must describe any additional successes (e.g. identified through evaluation results or lessons learned) achieved in the past year.
    - Recipients must describe success stories.
- **Challenges**
    - Recipients must describe any challenges that hindered or might hinder their ability to complete the work plan activities and achieve the period of performance outcomes.

- Recipients must describe any additional challenges (e.g., identified through evaluation results or lessons learned) encountered in the past year.

- **CDC Program Support to Recipients**
    - Recipients must describe how CDC could help them overcome challenges to complete activities in the work plan and achieving period of performance outcomes.

- **Administrative Reporting** (No page limit)
    - SF-424A Budget Information-Non-Construction Programs.
    - Budget Narrative – Must use the format outlined in "Content and Form of Application Submission, Budget Narrative" section.
    - Indirect Cost Rate Agreement.

The recipient must submit the Annual Performance Report via https://www.grantsolutions.gov 120 days prior to the end of the budget period.

c. Performance Measure Reporting (optional)
CDC programs may require more frequent reporting of performance measures than annually in the APR. If this is the case, CDC programs must specify reporting frequency, data fields, and format for recipients at the beginning of the award period.

d. Federal Financial Reporting (FFR) (required)
The annual FFR form (SF-425) is required and must be submitted 90 days after the end of the budget period through the Payment Management System (PMS). The report must include only those funds authorized and disbursed during the timeframe covered by the report. The final FFR must indicate the exact balance of unobligated funds, and may not reflect any unliquidated obligations. There must be no discrepancies between the final FFR expenditure data and the Payment Management System's (PMS) cash transaction data. Failure to submit the required information by the due date may adversely affect the future funding of the project. If the information cannot be provided by the due date, recipients are required to submit a letter of explanation to OGS and include the date by which the Grants Officer will receive information.

e. Final Performance and Financial Report (required)
The Final Performance Report is due 90 days after the end of the period of performance. The Final FFR is due 90 days after the end of the period of performance and must be submitted through the Payment Management System (PMS). CDC programs must indicate that this report should not exceed 40 pages. This report covers the entire period of performance and can include information previously reported in APRs. At a minimum, this report must include the following:

- Performance Measures – Recipients must report final performance data for all process and outcome performance measures.
- Evaluation Results – Recipients must report final evaluation results for the period of performance for any evaluations conducted.

- Impact/Results/Success Stories – Recipients must use their performance measure results and their evaluation findings to describe the effects or results of the work completed over the period of performance, and can include some success stories.
- A final Data Management Plan that includes the location of the data collected during the funded period, for example, repository name and link data set(s)
- Additional forms as described in the Notice of Award (e.g., Equipment Inventory Report, Final Invention Statement).

No additional requirements

4. Federal Funding Accountability and Transparency Act of 2006 (FFATA)

Federal Funding Accountability and Transparency Act of 2006 (FFATA), P.L. 109–282, as amended by section 6202 of P.L. 110–252 requires full disclosure of all entities and organizations receiving Federal funds including awards, contracts, loans, other assistance, and payments through a single publicly accessible Web site, http://www.USASpending.gov.

Compliance with this law is primarily the responsibility of the Federal agency. However, two elements of the law require information to be collected and reported by applicants: 1) information on executive compensation when not already reported through the SAM, and 2) similar information on all sub-awards/subcontracts/consortiums over $30,000.

For the full text of the requirements under the FFATA and HHS guidelines, go to:

- https://www.gpo.gov/fdsys/pkg/PLAW-109publ282/pdf/PLAW-109publ282.pdf,
- https://www. fsrs.gov/documents /ffata_legislation_ 110_252.pdf
- http://www.hhs.gov/grants/grants/grants-policies-regulations/index.html#FFATA.

5. Reporting of Foreign Taxes (International/Foreign projects only)

A. Valued Added Tax (VAT) and Customs Duties – Customs and import duties, consular fees, customs surtax, valued added taxes, and other related charges are hereby authorized as an allowable cost for costs incurred for non-host governmental entities operating where no applicable tax exemption exists. This waiver does not apply to countries where a bilateral agreement (or similar legal document) is already in place providing applicable tax exemptions and it is not applicable to Ministries of Health. Successful applicants will receive information on VAT requirements via their Notice of Award.

B. The U.S. Department of State requires that agencies collect and report information on the amount of taxes assessed, reimbursed and not reimbursed by a foreign government against commodities financed with funds appropriated by the U.S. Department of State, Foreign Operations and Related Programs Appropriations Act (SFOAA) (“United States foreign assistance funds”). Outlined below are the specifics of this requirement:

1) Annual Report: The recipient must submit a report on or before November 16 for each foreign country on the amount of foreign taxes charged, as of September 30 of the same year, by a foreign government on commodity purchase transactions valued at 500 USD or more financed with United States foreign assistance funds under this grant during the prior United States fiscal

year (October 1 – September 30), and the amount reimbursed and unreimbursed by the foreign government. [Reports are required even if the recipient did not pay any taxes during the reporting period.]

2) Quarterly Report: The recipient must quarterly submit a report on the amount of foreign taxes charged by a foreign government on commodity purchase transactions valued at 500 USD or more financed with United States foreign assistance funds under this grant. This report shall be submitted no later than two weeks following the end of each quarter: April 15, July 15, October 15 and January 15.

3) Terms: For purposes of this clause:
"Commodity" means any material, article, supplies, goods, or equipment;
"Foreign government" includes any foreign government entity;
"Foreign taxes" means value-added taxes and custom duties assessed by a foreign government on a commodity. It does not include foreign sales taxes.

4) Where: Submit the reports to the Director and Deputy Director of the CDC office in the country(ies) in which you are carrying out the activities associated with this cooperative agreement. In countries where there is no CDC office, send reports to VATreporting@cdc.gov.

5) Contents of Reports: The reports must contain:

a. recipient name;
b. contact name with phone, fax, and e-mail;
c. agreement number(s) if reporting by agreement(s);
d. reporting period;
e. amount of foreign taxes assessed by each foreign government;
f. amount of any foreign taxes reimbursed by each foreign government;
g. amount of foreign taxes unreimbursed by each foreign government.

6) Subagreements. The recipient must include this reporting requirement in all applicable subgrants and other subagreements.

6. Termination

CDC may impose other enforcement actions in accordance with 45 CFR 75.371- Remedies for Noncompliance, as appropriate.

The Federal award may be terminated in whole or in part as follows:

(1) By the HHS awarding agency or pass-through entity, if the non-Federal entity fails to comply with the terms and conditions of the award;

(2) By the HHS awarding agency or pass-through entity for cause;

(3) By the HHS awarding agency or pass-through entity with the consent of the non-Federal entity, in which case the two parties must agree upon the termination conditions, including the effective date and, in the case of partial termination, the portion to be terminated; or

(4) By the non-Federal entity upon sending to the HHS awarding agency or pass-through entity written notification setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated. However, if the HHS awarding agency or pass-through entity determines in the case of partial termination that the reduced or modified portion of the Federal award or subaward will not accomplish the purposes for which the Federal award was made, the HHS awarding agency or pass-through entity may terminate the Federal award in its entirety.

G. Agency Contacts

CDC encourages inquiries concerning this NOFO.

Program Office Contact

For programmatic technical assistance, contact:

First Name:
Saraine
Last Name:
Ross
Project Officer
Department of Health and Human Services
Centers for Disease Control and Prevention

Address:

Telephone:

Email:
SRoss@CDC.GOV

Grants Management Office Information

For **financial, awards management, or budget assistance,** contact:

First Name:
Rhonda
Last Name:
Latimer
Grants Management Specialist
Department of Health and Human Services
Office of Grants Services

Address:

Telephone:

Email:
RDLatimer@CDC.GOV

For assistance with **submission difficulties related to** www.grants.gov, contact the Contact Center by phone at 1-800-518-4726.

Hours of Operation: 24 hours a day, 7 days a week, except on federal holidays.

CDC Telecommunications for persons with hearing loss is available at: TTY 1-888-232-6348

H. Other Information

Following is a list of acceptable attachments **applicants** that can be uploaded as a PDF, Word, or Excel file format as part of their application at www.grants.gov. Applicants may not attach documents other than those listed; if other documents are attached, applications will not be reviewed.

- Project Abstract
- Project Narrative
- Budget Narrative
- Report on Programmatic, Budgetary and Commitment Overlap
- Table of Contents for Entire Submission

For international NOFOs:

- SF424
- SF424A
- Funding Preference Deliverables

Optional attachments, as determined by CDC programs:
Resumes / CVs

Letters of Support

If applying to Optional Component 3 (Centers for Integration of Outbreak Analytics and Disease Modeling into Practice) component, applicants must file a letter of support from the implementing partner(s), name the file "Implementing Partner Letter of Support", and upload it as a PDF file at www.grants.gov

All applicants must include resumes/curriculum vitae (CV)s of key personnel provided in a file named "CVs/Resumes" and this file should be uploaded to www.grants.gov with the application. Collectively these key personnel should have clear and demonstrated experience and expertise that covers the range of proposed activities.

I. Glossary

Activities: The actual events or actions that take place as a part of the program.

Administrative and National Policy Requirements, Additional Requirements (ARs): Administrative requirements found in 45 CFR Part 75 and other requirements mandated by

statute or CDC policy. All ARs are listed in the Template for CDC programs. CDC programs must indicate which ARs are relevant to the NOFO; recipients must comply with the ARs listed in the NOFO. To view brief descriptions of relevant provisions, see https://www.cdc.gov/grants/additional-requirements/index.html. Note that 2 CFR 200 supersedes the administrative requirements (A-110 & A-102), cost principles (A-21, A-87 & A-122) and audit requirements (A-50, A-89 & A-133).

Approved but Unfunded: Approved but unfunded refers to applications recommended for approval during the objective review process; however, they were not recommended for funding by the program office and/or the grants management office.

Assistance Listings: A government-wide collection of federal programs, projects, services, and activities that provide assistance or benefits to the American public.

Assistance Listings Number: A unique number assigned to each program and NOFO throughout its lifecycle that enables data and funding tracking and transparency

Award: Financial assistance that provides support or stimulation to accomplish a public purpose. Awards include grants and other agreements (e.g., cooperative agreements) in the form of money, or property in lieu of money, by the federal government to an eligible applicant.

Budget Period or Budget Year: The duration of each individual funding period within the period of performance. Traditionally, budget periods are 12 months or 1 year.

Carryover: Unobligated federal funds remaining at the end of any budget period that, with the approval of the GMO or under an automatic authority, may be carried over to another budget period to cover allowable costs of that budget period either as an offset or additional authorization. Obligated but liquidated funds are not considered carryover.

Community engagement: The process of working collaboratively with and through groups of people to improve the health of the community and its members. Community engagement often involves partnerships and coalitions that help mobilize resources and influence systems, improve relationships among partners, and serve as catalysts for changing policies, programs, and practices.

Competing Continuation Award: A financial assistance mechanism that adds funds to a grant and adds one or more budget periods to the previously established period of performance (i.e., extends the “life” of the award).

Continuous Quality Improvement: A system that seeks to improve the provision of services with an emphasis on future results.

Contracts: An award instrument used to acquire (by purchase, lease, or barter) property or services for the direct benefit or use of the Federal Government.

Cooperative Agreement: A financial assistance award with the same kind of interagency relationship as a grant except that it provides for substantial involvement by the federal agency funding the award. Substantial involvement means that the recipient can expect federal programmatic collaboration or participation in carrying out the effort under the award.

Cost Sharing or Matching: Refers to program costs not borne by the Federal Government but by the recipients. It may include the value of allowable third-party, in-kind contributions, as well as expenditures by the recipient.

Direct Assistance: A financial assistance mechanism, which must be specifically authorized by statute, whereby goods or services are provided to recipients in lieu of cash. DA generally involves the assignment of federal personnel or the provision of equipment or supplies, such as vaccines. DA is primarily used to support payroll and travel expenses of CDC employees assigned to state, tribal, local, and territorial (STLT) health agencies that are recipients of grants and cooperative agreements. Most legislative authorities that provide financial assistance to STLT health agencies allow for the use of DA. https://www.cdc.gov/grants/additional-requirements/index.html.

Equity: The consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment (from Executive Order 13985).

Evaluation (program evaluation): The systematic collection of information about the activities, characteristics, and outcomes of programs (which may include interventions, policies, and specific projects) to make judgments about that program, improve program effectiveness, and/or inform decisions about future program development.

Evaluation Plan: A written document describing the overall approach that will be used to guide an evaluation, including why the evaluation is being conducted, how the findings will likely be used, and the design and data collection sources and methods. The plan specifies what will be done, how it will be done, who will do it, and when it will be done. The NOFO evaluation plan is used to describe how the recipient and/or CDC will determine whether activities are implemented appropriately and outcomes are achieved.

Federal Funding Accountability and Transparency Act of 2006 (FFATA): Requires that information about federal awards, including awards, contracts, loans, and other assistance and payments, be available to the public on a single website at www.USAspending.gov.

Fiscal Year: The year for which budget dollars are allocated annually. The federal fiscal year starts October 1 and ends September 30.

Grant: A legal instrument used by the federal government to transfer anything of value to a recipient for public support or stimulation authorized by statute. Financial assistance may be money or property. The definition does not include a federal procurement subject to the Federal Acquisition Regulation; technical assistance (which provides services instead of money); or assistance in the form of revenue sharing, loans, loan guarantees, interest subsidies, insurance, or direct payments of any kind to a person or persons. The main difference between a grant and a cooperative agreement is that in a grant there is no anticipated substantial programmatic involvement by the federal government under the award.

Grants.gov: A "storefront" web portal for electronic data collection (forms and reports) for federal grant-making agencies at www.grants.gov.

Grants Management Officer (GMO): The individual designated to serve as the HHS official responsible for the business management aspects of a particular grant(s) or cooperative agreement(s). The GMO serves as the counterpart to the business officer of the recipient

organization. In this capacity, the GMO is responsible for all business management matters associated with the review, negotiation, award, and administration of grants and interprets grants administration policies and provisions. The GMO works closely with the program or project officer who is responsible for the scientific, technical, and programmatic aspects of the grant.

Grants Management Specialist (GMS): A federal staff member who oversees the business and other non-programmatic aspects of one or more grants and/or cooperative agreements. These activities include, but are not limited to, evaluating grant applications for administrative content and compliance with regulations and guidelines, negotiating grants, providing consultation and technical assistance to recipients, post-award administration and closing out grants.

Health Disparities: Preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by populations that have been socially, economically, geographically, and environmentally disadvantaged.

Health Equity: The state in which everyone has a fair and just opportunity to attain their highest level of health. Achieving this requires focused and ongoing societal efforts to address historical and contemporary injustices; overcome economic, social, and other obstacles to health and healthcare; and eliminate preventable health disparities.

Health Inequities: Particular types of health disparities that stem from unfair and unjust systems, policies, and practices and limit access to the opportunities and resources needed to live the healthiest life possible.

Healthy People 2030: National health objectives aimed at improving the health of all Americans by encouraging collaboration across sectors, guiding people toward making informed health decisions, and measuring the effects of prevention activities.

Inclusion: The act of creating environments in which any individual or group can be and feel welcomed, respected, supported, and valued to fully participate. An inclusive and welcoming climate embraces differences and offers respect in words and actions for all people.

Indirect Costs: Costs that are incurred for common or joint objectives and not readily and specifically identifiable with a particular sponsored project, program, or activity; nevertheless, these costs are necessary to the operations of the organization. For example, the costs of operating and maintaining facilities, depreciation, and administrative salaries generally are considered indirect costs.

Letter of Intent (LOI): A preliminary, non-binding indication of an organization’s intent to submit an application.

Lobbying: Direct lobbying includes any attempt to influence legislation, appropriations, regulations, administrative actions, executive orders (legislation or other orders), or other similar deliberations at any level of government through communication that directly expresses a view on proposed or pending legislation or other orders, and which is directed to staff members or other employees of a legislative body, government officials, or employees who participate in formulating legislation or other orders. Grass roots lobbying includes efforts directed at inducing or encouraging members of the public to contact their elected representatives at the federal, state, or local levels to urge support of, or opposition to, proposed or pending legislative proposals.

Logic Model: A visual representation showing the sequence of related events connecting the activities of a program with the programs' desired outcomes and results.

Maintenance of Effort: A requirement contained in authorizing legislation, or applicable regulations that a recipient must agree to contribute and maintain a specified level of financial effort from its own resources or other non-government sources to be eligible to receive federal grant funds. This requirement is typically given in terms of meeting a previous base-year dollar amount.

Memorandum of Understanding (MOU) or Memorandum of Agreement (MOA): Document that describes a bilateral or multilateral agreement between parties expressing a convergence of will between the parties, indicating an intended common line of action. It is often used in cases where the parties either do not imply a legal commitment or cannot create a legally enforceable agreement.

Nonprofit Organization: Any corporation, trust, association, cooperative, or other organization that is operated primarily for scientific, educational, service, charitable, or similar purposes in the public interest; is not organized for profit; and uses net proceeds to maintain, improve, or expand the operations of the organization. Nonprofit organizations include institutions of higher educations, hospitals, and tribal organizations (that is, Indian entities other than federally recognized Indian tribal governments).

Notice of Award (NoA): The official document, signed (or the electronic equivalent of signature) by a Grants Management Officer that: (1) notifies the recipient of the award of a grant; (2) contains or references all the terms and conditions of the grant and Federal funding limits and obligations; and (3) provides the documentary basis for recording the obligation of Federal funds in the HHS accounting system.

Objective Review: A process that involves the thorough and consistent examination of applications based on an unbiased evaluation of scientific or technical merit or other relevant aspects of the proposal. The review is intended to provide advice to the persons responsible for making award decisions.

Outcome: The results of program operations or activities; the effects triggered by the program. For example, increased knowledge, changed attitudes or beliefs, reduced tobacco use, reduced morbidity and mortality.

Performance Measurement: The ongoing monitoring and reporting of program accomplishments, particularly progress toward pre-established goals, typically conducted by program or agency management. Performance measurement may address the type or level of program activities conducted (process), the direct products and services delivered by a program (outputs), or the results of those products and services (outcomes). A "program" may be any activity, project, function, or policy that has an identifiable purpose or set of objectives.

Period of performance –formerly known as the project period - : The time during which the recipient may incur obligations to carry out the work authorized under the Federal award. The start and end dates of the period of performance must be included in the Federal award.

Period of Performance Outcome: An outcome that will occur by the end of the NOFO's funding period

Plain Writing Act of 2010: The Plain Writing Act of 2010 requires that federal agencies use clear communication that the public can understand and use. NOFOs must be written in clear, consistent language so that any reader can understand expectations and intended outcomes of the funded program. CDC programs should use NOFO plain writing tips when writing NOFOs.

Program Official: Person responsible for developing the NOFO; can be either a project officer, program manager, branch chief, division leader, policy official, center leader, or similar staff member.

Program Strategies: Strategies are groupings of related activities, usually expressed as general headers (e.g., Partnerships, Assessment, Policy) or as brief statements (e.g., Form partnerships, Conduct assessments, Formulate policies).

Public Health Accreditation Board (PHAB): A nonprofit organization that works to promote and protect the health of the public by advancing the quality and performance of public health departments in the U.S. through national public health department accreditation http://www.phaboard.org.

Social Determinants of Health: The non-medical factors that influence health outcomes. The conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces (e.g., racism, climate) and systems include economic policies and systems, development agendas, social norms, social policies, and political systems. https://www.cdc.gov/about/sdoh/index.html

Statute: An act of the legislature; a particular law enacted and established by the will of the legislative department of government, expressed with the requisite formalities. In foreign or civil law any particular municipal law or usage, though resting for its authority on judicial decisions, or the practice of nations.

Statutory Authority: Authority provided by legal statute that establishes a federal financial assistance program or award.

System for Award Management (SAM): The primary vendor database for the U.S. federal government. SAM validates applicant information and electronically shares secure and encrypted data with federal agencies' finance offices to facilitate paperless payments through Electronic Funds Transfer (EFT). SAM stores organizational information, allowing www.grants.gov to verify identity and pre-fill organizational information on grant applications.

Technical Assistance: Advice, assistance, or training pertaining to program development, implementation, maintenance, or evaluation that is provided by the funding agency.

UEI: The Unique Entity Identifier (UEI) number is a twelve-digit number assigned by SAM.gov. When applying for Federal awards or cooperative agreements, all applicant organizations must obtain a UEI number as the Universal Identifier. UEI number assignment is free. If an organization does not know its UEI number or needs to register for one, visit www.sam.gov.

Work Plan: The summary of period of performance outcomes, strategies and activities, personnel and/or partners who will complete the activities, and the timeline for completion. The work plan will outline the details of all necessary activities that will be supported through the approved budget.