

# Public-Private Partnerships to Improve Population Health Using AI/ML (P4)

### Application Preparation Webinar May 15, 2025

# Bettina M. Beech, DrPH, MPH and Spero Manson, PhD

South-Central and North and Midwest Hubs

AIM-AHEAD Coordinating Center is funded by NIH, Agreement No.: 10T20D032581-01



# **Application Preparation Webinar**

- Overview of AIM-AHEAD
- Introduction to P4
- AIM-AHEAD Application Process
- Q&A

# **AIM-AHEAD Coordinating Center**



The **AIM-AHEAD Coordinating Center** was established to foster broad participation in the field of artificial intelligence and machine learning (AI/ML), with an emphasis on promoting health for all Americans.

We hope to achieve this objective by engaging in a fair and transparent process of building a consortium of AI/ML to advance health across all American communities and broaden participation in the AI/ML workforce. Many communities have untapped potential to contribute new expertise, data, recruitment strategies, and cutting-edge science to the AI/ML field.

To promote health for all, AIM-AHEAD Coordinating Center (A-CC) seeks to increase participation and engagement in AI/ML through mutually beneficial partnerships, stakeholder engagement, and outreach.

# **AIM-AHEAD Consortium**





# **AIM-AHEAD Hubs**

The AIM-AHEAD Consortium spans seven geographical regions (hubs) comprising the United States and U.S. territories:





Hubs	U.S.	States & Territories	
Central Hub	American Sa	imoa, Guam, Hawaii	
North/Midwest Hub	Alaska, Colo Montana, Ne Dakota, Utah	rado, Idaho, Iowa, Kansas, Minnesota, braska, North Dakota, Oregon, South n, Washington, Wisconsin, Wyoming	
Northeast Hub	Connecticut, Massachuse Pennsylvania	, Delaware, Maine, Maryland, etts, New Hampshire, New Jersey, New Ye a, Rhode Island, Vermont, Washington D.(	ork, C.
South Central Hub	Louisiana, M	lississippi, Oklahoma, Texas	
Southeast - Meharry Hub	Arkansas, Illi North Carolir	nois, Indiana, Kentucky, Michigan, Misso na, Ohio, Tennessee, Virginia, West Virgin	uri, ia
Southeast - Morehouse Hub	Alabama, Flo U.S. Virgin Is	orida, Georgia, Puerto Rico, South Carolin slands	a,
West Hub	Arizona, Cali Mariana Isla	ifornia, Nevada, New Mexico, Northern nds	
AIM-AHE Regional H	AD lubs	AIM-AHEAD Cores	
Central Hub		Leadership Core	
North/Midwest H	lub	O Data and Research Core	
South Central Hu	b arry Hub	Infrastructure Core	
Southeast - More West Hub	house Hub	Data Science Training Core	

# **Leadership Core Hub MPIs**





# **AIM-AHEAD Program Objectives**



- **Objective 1:** Develop a representative AI/ML workforce with broad participation.
- Objective 2: Increase knowledge, awareness and national-scale community engagement and empowerment in AI/ML.
- **Objective 3:** Use AI/ML to improve behavioral health, cardiometabolic health and cancer outcomes for all.
- **Objective 4:** Build community capacity and infrastructure in AI/ML to address community-centric health needs and challenges.

# **Join AIM-AHEAD Connect**



- AIM-AHEAD's community, networking, mentoring and careerdevelopment platform
- Virtual space to engage with the entire AIM-AHEAD Consortium and build community!
- Custom tools available to the AIM-AHEAD Coordinating Center:
  - Connect with experts, learners, stakeholders etc.
  - Mentoring, Q&A, Video calls, Groups, Jobs Board, etc.
  - Sign-up: Event registration & information solicitation
  - Surveys: Request feedback for various activities
  - HelpDesk: Respond to topic-specific questions
  - Programs: Exclusive space, content, and mentor matching

Scan QR Code to Join AIM-AHEAD Connect





# Introduction to the Public-Private Partnerships Program (P4)

AIM-AHEAD Coordinating Center is funded by NIH, Agreement No.: 10T20D032581-01



# **P4 Program**

- Meet the Team
- Overview of the P4 Program
- Background
- Current Awardees
- Application Process

# **Public-Private Partnership Program Team**



Bettina M. Beech, DrPH, MPH MPI & P4 Co-Lead



Spero Manson, PhD MPI & P4 Co-Lead (CO)



Kiara Spooner, DrPH, MPH P4 Program Director



Catalina Gonzales-Uribe, PhD P4 Operations Coordinator



Amanda Slezsak, MS AIM-AHEAD Partner Manager (CO)



Marino A. Bruce, PhD P4 Co-Investigator



Nomita Bajwa, PharmD, EdD SC Hub Project Director



Nada Haboudal, MS SC Hub Data Systems Manager



# **P4 Overview**

- Partnerships among public health department professionals, academic researchers, and data-science/AI/ML experts can:
  - further leverage data-driven insights that contribute to more effective and efficient public health strategies to improve community health outcomes
  - significantly advance AI/ML research by leveraging expertise, provide access to real-world healthcare data, technical proficiency for data analysis using advanced algorithms, and clinical expertise to interpret results and translate them into meaningful applications leading to more impactful and relevant AI/ML solutions in health and healthcare settings.

# **Significance of Public Health Departments**



- Public health departments are crucial for community well-being, focusing on proactive disease prevention and health promotion rather than just treating individual illnesses.
- They play a vital role in monitoring health status, investigating outbreaks, and implementing policies to improve health outcomes for everyone. Their work extends to educating the public, advocating for healthy environments, and ensuring access to essential health services

### PUBLIC HEALTH SYSTEMS

### **Public Health System Includes**

Public health agencies at state and local levels

#### **Healthcare** Providers

#### **Public Safety Agencies**

Human service and charity organizations Environmental agencies and organizations

Economic & philanthropic organizations

Recreation and artsrelated organizations

Education and youth development organizations

Source: Unique features, values,

# Accredited Public Health Departments





### Six Key Priorities for Successful Use of Artificial Intelligence by Public Health Organizations AIM



Fisher S, Rosella LC. Priorities for successful use of artificial intelligence by public health organizations: a literature review. BMC Public Health 2022; 22:2146.

### **Barriers to Advance AI/ML in Public Health Departments**



- Data quality and availability: AI/ML models heavily rely on high-quality and comprehensive data. Health departments often encounter challenges related to data quality, completeness, and interoperability. Data may be fragmented across different systems, inconsistent, or missing key variables. Additionally, privacy regulations and concerns may limit access to certain datasets. Ensuring data quality and establishing robust data sharing mechanisms can be a significant barrier.
- Technical expertise and resources: Health departments may face a shortage of data scientists, AI engineers, and other technical experts who can design, develop, and maintain AI/ML models. Acquiring the necessary computational resources, such as high-performance computing infrastructure, can also be a barrier.
- Ethical and privacy considerations: Health departments must ensure that AI/ML models are fair, unbiased, and transparent. They need to address concerns related to data privacy, security, and informed consent when collecting and analyzing sensitive health data

Collaboration among health departments, academic institutions, and technology partners can play a crucial role in addressing these barriers and promoting the successful implementation of AI/ML capabilities.

### LEARNING PRODUCT

Public-Private Partnerships in Health

World Bank Group Engagement in Health PPPs

An IEG Synthesis Report



# Key Elements of Public-Private Partnerships

- Collaboration between a government agency and a private company to deliver a project or service.
- Can be a valuable tool for public health departments, allowing them to leverage private sector expertise, resources, and innovation to improve public health services and address challenges.
  - These partnerships can address issues like funding, technology, workforce development, and outreach.
- Involves sharing risks, responsibilities, and benefits between the public and private sectors.
  - clear contract, transparent processes, and a focus on achieving public good



# **P4 Funding Opportunity**



The AIM-AHEAD P4 Program is designed to support mutually beneficial **dyad** or **triad** partnerships between a **local**, **state**, **and/or tribal public health department** and a:

- 1. higher education institution and/or
- 2. data-science-oriented organization with an accessible data library.

### Anticipated benefits will include:

- Enhancement of the data infrastructure of accredited health departments
- Strengthening the public health infrastructure
- Creation of AIM-AHEAD new stakeholders
- Enhancement of the public health workforce
- Expanded literacy in public health and population health

Visit the AIM-AHEAD website for updates: https://www.aim-ahead.net/

**Important Dates** 

Solicitation Release: April 23, 2025

Application Deadline: June 23, 2025

Funding Decisions: August 1, 2025

Award Start Date: September 2, 2025

# **P4 Funding Opportunity**

### **Program Duration**

18 months

### **Budget Estimates**

- The budget limit for each application is **\$612,500 in total costs**.
- Projects will include a <u>6-month Planning Phase</u> (maximum budget of \$87,500) and a <u>12-month Implementation Phase</u> (maximum budget of \$525,000).

#### **Number of Awards**

• The AIM-AHEAD Consortium anticipates supporting up to 12 projects in the Planning Phase. Of these, up to 7 projects will be selected for further funding in the Implementation Phase, contingent on the progress and completion of the Planning Phase.



#### **Important Dates**

Solicitation Release: April 23, 2025

Application Deadline: June 23, 2025

Funding Decisions: August 1, 2025

Award Start Date: September 2, 2025

# **P4 Funding Opportunity**



Studies that can help advance public health research in high priority areas aligned with the AIM-AHEAD Program Objectives are strongly encouraged.

### **Research topics of interest for this CFP** include, but are not limited to:

- Use of predictive modeling in enhancing the accuracy, efficiency, and actionable insights in public health decision-making
- Studies that employ AI-driven disease forecasting
- Novel studies that develop new analytical tools and methods
- Studies that use AI methods, including machine learning and natural language processing to enhance risk prediction approaches
- Machine learning algorithms for EHRs in public health departments
- Use of AI in public health diagnostics to increase the speed and precision of diagnostic procedures

# **P4 Enrichment Program**



**GOAL:** To enhance awardees' program experience through provision of tools and resources to support successful achievement of the P4 program expectations.

#### SCOPE / KEY COMPONENTS:

- 1. Monthly informational webinars and/or virtual workshops (60 minutes/each)
- 2. Resource recommendations (e.g., readings, websites, templates)
- 3. Concierge support from the P4 leadership team (e.g., standing weekly office hours for questions/answers, one-on-one meetings)
- 4. Evaluation (e.g., baseline, mid-point, end and post-grant period assessments)

#### OBJECTIVES

Upon completion of the enrichment program, P4 awardees will be able to:

- Enhance and maintain effective partnerships that will leverage data-driven insights to improve community health outcomes.
- Prepare scientific abstracts, manuscripts and presentations for dissemination of findings focused on AI-driven health initiatives.
- Develop grant applications responsive to AI/ML- and population health-focused requests for proposals/funding priorities.



# **Current Awardees**

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# P4 Awardees (Cohort 1)

Al-Driven Insights on Risk Factors from Economic, Behavioral, and Social Determinants for Predicting Lung Cancer in Guam (AIRE) (Central Hub)

The University of Guam, Guam Department of Public Health & Social Services, Guam Radiology Consultants, and MedCognetics, are **utilizing AI/ML to develop more accurate predictive models for lung cancer risk assessment and detection.** 

- Grazyna Badowski, PhD, University of Guam
- Grace Bordallo, MPA, Guam Department of Public Health and Social Services
- Lakshman Tamil, PhD, MedCognetics

Reducing Health Disparities in Severe Maternal Morbidity and Mortality using Machine Learning (Southeast-Morehouse Hub)

Morehouse School of Medicine, The Georgia Department of Public Health and The Urban Institute, are **combining machine learning with community-based research to develop, validate and implement a predictive model with a high accuracy for SMM.** 

- Muhammed Idris, PhD, Morehouse School of Medicine
- Carla Willis, PhD, Georgia Department of Community Health
- Kristen Brown, PhD, Urban Institute



# P4 Awardees (Cohort 1)

### Unstable Housing and Mental Health: A Predictive Approach (South-Central Hub)

The University of Houston, Fort Bend County Department of Health & Human Services and PolicyMap are using housing-related, demographic and community-derived data inputs, along with spatial and multilevel modeling to create a diagnostic tool that will enhance the understanding of how unstable housing impacts mental health.

- Jeronimo Cortina, MPA, MPhil, PhD, University of Houston
- Shannon Gore, MSW, MPH, Fort Bend County Health & Human Services
- Jason Linderman, MPP, PolicyMap

The Colorado Health and Education for American Indian and Latino communities (HEAL) system (North/Midwest Hub)

Fort Lewis College, Colorado Department of Public Health & Environment, and Clinic Chat, are collaborating to develop the HEAL system which will address data biases and develop predictive models for morbidity and mortality.

- Mario Martinez, PhD, Fort Lewis College
- Ned Calonge, MD, MPH, Colorado Department of Public Health and Environment
- Sheana Salyers Bull, PhD, MPH, Clinic Chat, LLC



# **Application Process**

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# **Tips for Application Preparation**

- Read the Call for proposal multiple times
- Check Eligibility criteria
- Read the FAQs multiple times
- Start the application ASAP
- Ask questions: Zoom chat right now



# **Application Timeline**

Monday, April 23, 2025	CFP public / Application Process Open
Thurs. May 15, 2025, 12N – 1PM, CT	Application Preparation Webinar
Wednesday, June 23, 2025, 11:59 pm ET	Application Deadline
Friday, August 1, 2025 (approximately)	Funding Decisions
Monday, September 2, 2025	P4 Cycle 2 Program Begins
Monday, March 1, 2027	P4 Cycle 2 Program Ends



# **Eligibility Criteria**

AIM-AHEAD Coordinating Center is funded by NIH, Agreement No.: 10T20D032581-01

# **Eligible Organizations**

### **Higher Education Institutions**

- Public/State Controlled Institutions of Higher Education
- Private Institutions of Higher Education

### **Nonprofits Other Than Institutions of Higher Education**

- Nonprofits with 501(c)(3) IRS Status
- Nonprofits without 501(c)(3) IRS Status

### **For-Profit Businesses/Organizations**

- Small Businesses
- For-Profit Organizations (Other than Small Businesses)





### **Eligible Organizations - Important**

Public-Private <u>dyad or triad applicant teams</u> are eligible to apply for this CFP; however, teams **must include** a local, state, and/or tribal **public health department**. The second (dyad) or third (triad) partner must include a private higher education institution or data science-oriented organization.



# **Eligible Organizations**

• The primary applicant organization must be a domestic institution/organization located in the United States and its territories.

### **Foreign Institutions**

- Non-domestic (non-U.S.) Entities (Foreign Institutions) **are not** eligible to apply
- Non-domestic (non-U.S.) components of U.S. Organizations **are not** eligible to apply.
- Foreign components, as defined in the <u>NIH Grants Policy Statement</u>, **are not** allowed.
- Before applying, these organizations must be registered with System for Award Management (SAM; see <u>https://sam.gov/content/home</u>) and must maintain active SAM registration throughout the award period.

## **Required Registrations for Primary Applicant Institutions/Organizations**



- Applicant organizations must complete and maintain registrations as described in the SF 424 (R&R) Application Guide to be eligible to apply for or receive an award. Registrations are required to receive federal grant awards.
- Primary applicants must have the following registrations in place at the time of the application:
  - System for Award Management (SAM)
  - Unique Entity Identifier (UEI)
  - eRA Commons
  - Grants. Gov registration
- Registration can take 6 weeks or more, so applicants should begin the registration process as soon as possible.
- Federally recognized tribes and their derivatives are exempt from this requirement.



## **AIM-AHEAD CFP Multi-Award Considerations**

Individuals may <u>NOT</u> hold multiple AIM-AHEAD awards at the same time. Consequently, the following limitations apply:

- An applicant who applies to more than one AIM-AHEAD program, and is recommended for more than one award, should be aware that AIM-AHEAD will determine which award the applicant will receive. The applicant can only receive one award at a time.
- An applicant currently participating as an awardee, trainee, fellow, or PI in an AIM-AHEAD program, and whose current award is still active at the start of the second program, is not eligible to receive the second award.
- An applicant serving as PI on a current AIM-AHEAD award is not eligible to hold multiple AIM-AHEAD awards at the same time.

# **Application Components**



- Applicant Information
- Biosketch/Resume
- Letter(s) of support from public health departments
- Proposal Summary (300-word max.)
- Title and Specific Aims (1 page)
- Significance (1 page)
- Approach and Timeline (4 pages)
- Investigative Team (1 page)
- Partnership Plan (1 page)
- References (1 page)
- Budget and Budget Justification (7 pages)

NOTE: The proposal should be submitted in PDF format and should not exceed **16 pages** (11 pt. Arial font, singlespaced lines and margins of at least 0.5 inches).



# Application Process in InfoReady

AIM-AHEAD Coordinating Center is funded by NIH, Agreement No.: 10T20D032581-01



### **Register or Login to your AIM-AHEAD Connect Account**

**Pre-Step:** You need an AIM-AHEAD Connect Account to submit your InfoReady Application

Link to sign up: <u>https://connect.aim-</u> <u>ahead.net/</u>

Join All	I-AHEAD Connect today!
Email:	
Institution email preferred	
Password:	Confirm Password:
Full Name:	
First Name	Last Name
Current Title: Optional	
Research & Career Interests: Optic	
Current Institution:	
Start typing your institution	
Current Zip Code:	



**Step 1:** Click on the *InfoReady Platform* link to apply.

This link can be found on the AIM-AHEAD website, Public-Private Partnerships Call for Proposals page.

It will take you to the InfoReady Application.

**Call for Proposals** 

### Public-Private Partnerships to Improve Population Health Using Artificial Intelligence and Machine Learning (AI/ML)

#### Year 4

The objective of this funding opportunity is for public health departments to co-design and co-lead Al/ML research projects with their partners by leveraging health department data resources, further supporting informed decisions and interventions to improve population health, particularly in areas like disease surveillance, outbreak detection, and health education.

Funding Cycle	2025-2026
Release Date	April 23, 2025
Application Due Date	June 23, 2025, 11:59 p.m. Eastern Time
Notification of Award	Shortly after the review period, which begins Jun 30, 2025
Program Start Date	Earliest start date is September 2, 2025
Informational Webinar Schedule	There will be an informational webinar on May 15, 2025 – 1 p.m. Eastern Time
Informational Webinar Recording	Currently there are no webinar recordings
Application Link	Applications can be submitted on the InfoReady platform



**Step 2:** Click on "Apply" and login using your AIM-AHEAD Connect Account.

If you do not have an AIM-AHEAD Connect Account, you will need to create one.

Click on the <u>supporting</u> <u>documents link</u> to download and read the full Call for Proposal in its entirety.

#### AIM-AHEAD HOME CALENDAR Public-Private Partnerships to Improve Population Health Using Artificial Intelligence and Machine Learning (Al/ML) Details Apply Public-Private Partnerships to Improve Population Health Using Artificial Intelligence and Machine Learning (AI/ML) AIM-AHEAD ✓ Dates Internal Submission Deadline: HOME CALENDAR ✓ Details Login for All Users Administrator(s): Use your AIM-AHEAD user name and password to log into InfoReady, Category: Cycle: IM-AHEAD Log Number of Applications Allowed Per Applicant: Number of Possible Awardees: Supporting Documents: Public-Private Partnerships Call for Proposals



**Step 3:** Fill out the application to the best of your ability.

Items marked with a red asterisk (\*) are required.

Proposal Title & Summary

Proposal Title \*

Provide the full title of your proposal

Proposal Summary \*

Provide a summary of your project

Maximum 2,000 characters

All P4 project proposals and titles must comply with the <u>US White House</u> <u>Executive Order</u>

A



**Step 3:** The application requires use of the NIH R&R Budget Form.

The form is available for downloading within the InfoReady Application site.

The total budget must not exceed \$612,500:

6-month Planning Phase (max budget of \$87,500) and 12-month Implementation Phase (max budget of \$525,000)





# Step 3: Continued for Other Uploads Required - Biosketch

Biographical Sketch of the applicant and other participating investigators

- NIH Biosketch (not to exceed 5 pages) is required.
  - <u>https://grants.nih.gov/grants/forms/biosketch.htm</u>
  - <u>https://grants.nih.gov/grants/forms/biographical-sketch-format-page-non-fellowship-forms-h</u>
  - Template: <u>Non-fellowship Biosketch</u>





### Step 4: Submit your application

Review your entire application. Scroll down and click on "Submit" when you are ready!



**TIP:** If you are not quite ready to submit yet, click here so save your progress and come back to your application later.



# What to Expect Post-Application Submission



# **Application Timeline**

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Wednesday, June 23, 2025, 11:59 pm ET	Application Deadline
Monday, August 1, 2025 (approximately)	Funding Decisions
Monday, September 2, 2025	Public-Private Partnerships Program Begins
Monday, March 1, 2027	Cohort 2 Public-Private Partnerships Program Ends

1) Applications will be sent back for corrections after the application deadline. You will have 48 hours to revise your application and resubmit

2) Scientific scoring and comments of all applications will also be released.

# **Review Process**



### I. Administrative review

- Applications are reviewed administratively when they are submitted for inclusion of required documents are included.
- Applications not meeting these requirements will be returned for corrections.
- Corrected proposals must be resubmitted within 48 hours of receiving administrative review correction requests. No extensions will be given.

#### **II. Scientific review**

- Applications submitted to the AIM-AHEAD Coordinating Center will be reviewed for scientific and technical merit through modified NIH peer review process.
- The standard NIH scoring range (1-9) will be used to assess the strengths and weaknesses of the application regarding the following criteria:
  - Overall Impact
  - Significance
  - Innovation
  - Approach

#### **III. Programmatic Review**

- The AIM-AHEAD MPIs will conduct a programmatic review of applications, using the application evaluation by the scientific reviewers as the primary criterion.
- Additional consideration will be given to alignment with AIM-AHEAD North Stars, stakeholder composition and geographical distribution of the overall cohort consistent with AIM-AHEAD program goals.
- Results of the programmatic review will be submitted to NIH for approval of awardees.

### **AIM-AHEAD Connect Help Desk**

AIM-AHEAD · CONNECT



All questions related to the call for proposal and InfoReady application Support may be submitted online to the **Public-Private Partnerships HelpDesk** 

https://helpdesk.aimahead.net/ticket/creat e/0635C34E01

### **Call for Proposals are Live!**

AIM-AHEAD.net Project/Information Portal, including the FAQs

https://aim-ahead.net





AIM-AHEAD Public-Private Partnerships InfoReady Application

https://shorturl.at/kDkBP





# Questions ?

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