National Institutes of Health
Office of Data Science Strategy

AIM-AHEAD Council of Councils Working Group Report

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Council of Councils Meeting

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Overview of AIM-AHEAD

- A large, coordinated **network of institutions and organizations** with a **focus:**

  - **Build AI talents and technology** to improve the health of all Americans
  - **Bring AI tools to** impact patients and support under-resourced hospitals

- Led out of the **University of North Texas Health Science Center** in Fort Worth, AIM-AHEAD spans the entire country through the coordination of the **Regional Hubs**.

- Uniquely designed to provide **tailored concierge services**, **regulatory compliance** assistance for investigators from under-resourced institutions

- **Matches computing infrastructure and datasets** to each stakeholder's unique research needs
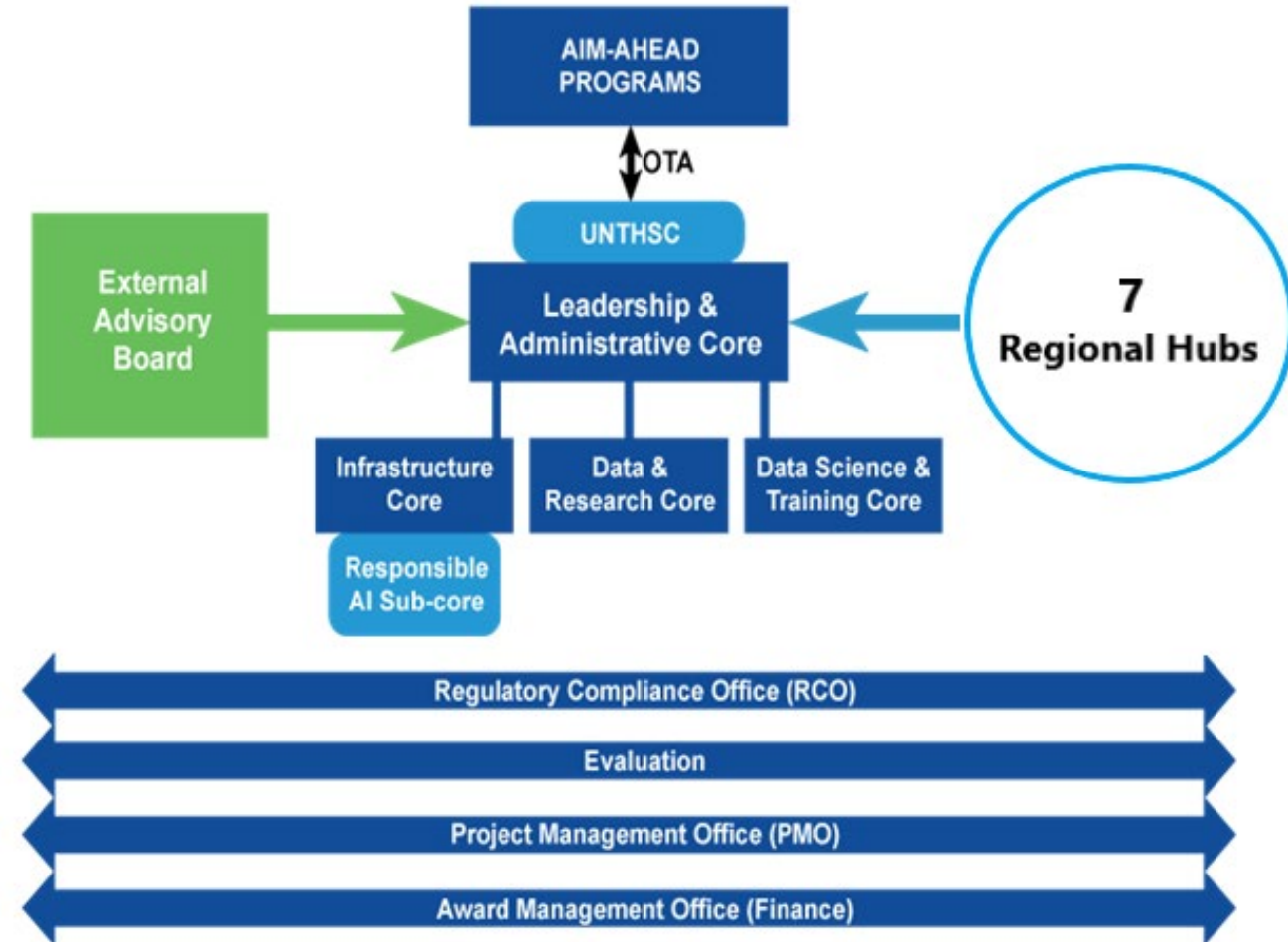
AIM-AHEAD Program Goals and North Stars

GOALS

1. Broaden the **participation** of researchers and communities in AI

2. Address health challenges and disparities in behavioral/mental, cardiometabolic, and cancer outcomes using AI/ML

3. Improve the capabilities of this emerging technology across the US

North Stars

NS1: Training	Develop a broad talent of the AI/ML workforce
NS2: Partnerships	Increase knowledge, awareness, and national-scale community engagement/empowerment in AI
NS3: Research	Use AI/ML to improve behavioral health, cardiometabolic health, and cancer for all
NS4: Infrastructure	Build community capacity and infrastructure in AI/ML to address community-centric health needs.

AIM-AHEAD Programs and Activities (2021- 2024)

AIM-AHEAD supported over **650** researchers and institutions in many different domains to develop AI talents and improve the health of Americans

AI Workforce Development (NS1)

- **Clinician Fellowship (25)**
- **Research Fellowship (72)**
- **Leadership Fellowship (50)**
- **Collaboration Training with All of Us, NCATS (N3C), Bridge2AI, SCHARE (237)**

Stakeholders Engagement (NS2)

- **Hub-Specific Pilot projects (38)**
- **Private-Public Partnership (4)**

AI Health Research (NS3)

- **Pilot Projects (21)**
- **Consortium Projects (21)**
- **AI Ethics in Biomedical Research and Clinical Practice (10)**
- **AI/ML in Healthcare Settings (6)**

AI Capacity Building (NS4)

- **Federated Research Network (4)**
- **Program for Artificial Intelligence Readiness (15)**
- **Data and Infrastructure Capacity (7)**
- **AIHEC AI Capacity in TCUs (22)**

AIM-AHEAD CoCs Working Group

Working Group Charge: Established by DPCPSI's Council of Councils in April 2024 to

- **Review the current scope and goals** of AIM-AHEAD as well as **progress** to date
- Based on progress, provide **recommendations to enhance the future** of the program objectives and goals
- Provide recommendations on potential **future success measures** for the program

Working Group Process and Methodology
- Monthly sessions: October 2024 - May 2025
- Reviewed comprehensive materials
- Engaged 18 AIM AHEAD leaders, 14 Trainees, 16 Awardees, 9 Organizational stakeholders, and 7 Advisory Panel members
- Identified key successes, challenges, and recommendations

Deliverable
- Report that lays the groundwork for shaping the next iteration of AIM-AHEAD

Thank You to the AIM-AHEAD CoC WG Members

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Working Group Findings: Mentor and Mentee Distribution Across the Nation
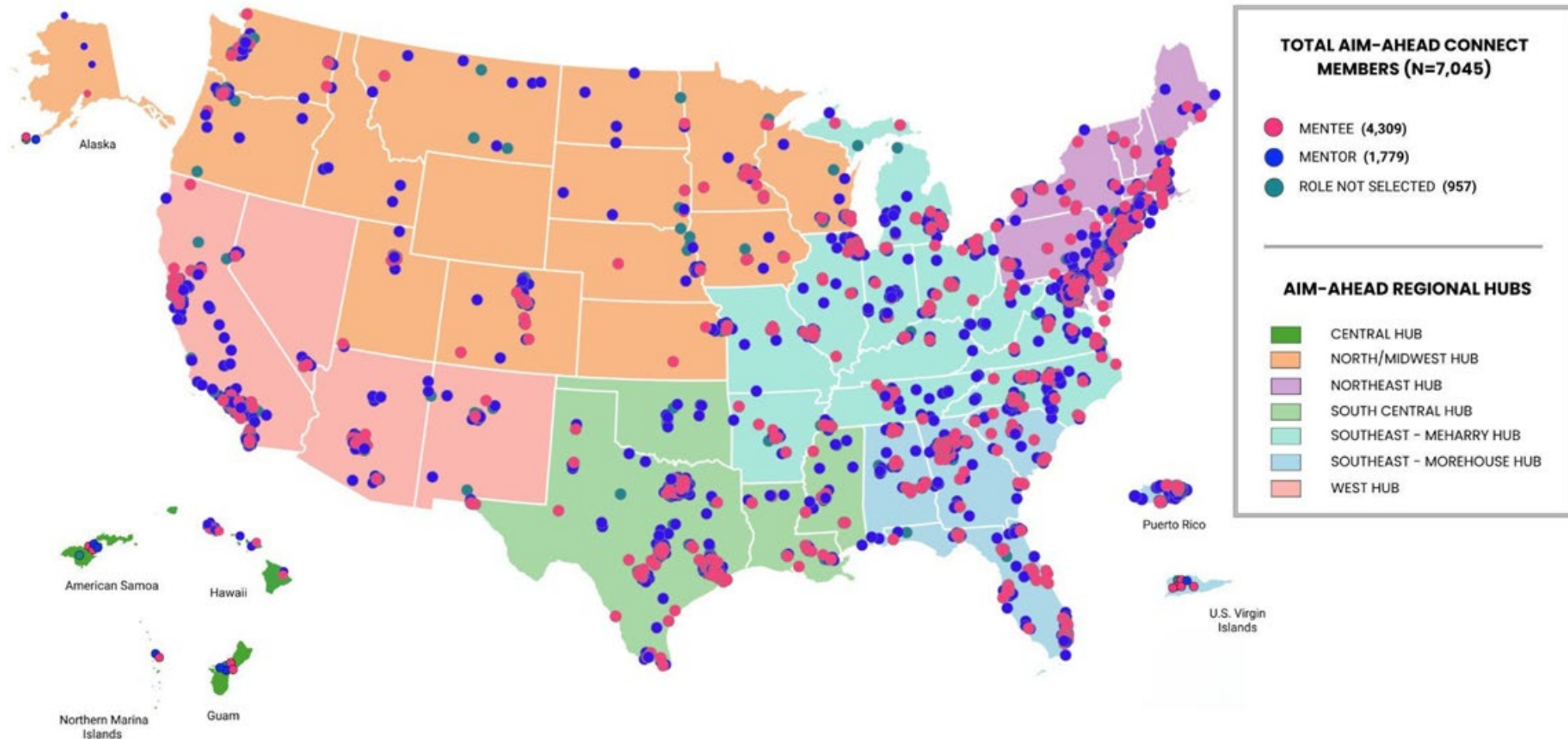
Working Group Findings: AIM-AHEAD Built a National AI/ML Health Research Ecosystem

- **Successfully built** a nationwide network, fostering connections and collaborations among researchers, healthcare providers, community organizations, and the private sector

- **Created** an ecosystem of professional development through **AIM-AHEAD Connect,** with **courses, webinars, symposiums**, and networking

- **Developed ~400 AI-ready workforce**, supported collaborative AI research projects, and strengthened capabilities for limited-resourced institutions—laying the foundation for **sustained national impact**

IMPACT	
7,045	Members
4,309	Mentees
1,779	Mentors
1,901	Institutions

Working Group Findings: Building Sustainable Capacity in AI Health

Strong evidence that the program nurtured sustainability through capacity building, concierge services, and institutional readiness.

- **Federated Network** enables secure, collaborative data analysis across healthcare providers, helping to provide access to infrastructure that was previously unavailable to limited-resourced providers

- The **Regulatory Compliance Office** guides and educates researchers and institutions on IRBs, DUAs, and data privacy, preparing them for future AI research

- Advanced **collaborative AI research** with tribal communities, safety-net hospitals, and community health centers often left out of traditional funding

- Developed a **real-world data AI training curriculum** in partnership with All of Us, NCATS, and Bridge2AI and has boosted trainee confidence and "credibility" in the AI for health field

Challenges and Recommendations

To maximize the program's success, the Working Group recommended the following in the next cycle of the program

- **Challenge 1**: A **1-year award was too short,** which impacted: Preparation, regulatory compliance (IRB, DUA), completion of research projects, and relationship building
- **Recommendation 1: Extend the timeline of the OTA**
    - **Support a multi-year OTA (3 years with reissuances)**

- **Challenge 2:** Short award periods make it difficult for PIs to build trust and meaningful relationships with **new** stakeholders, relying on **old** relationships
- **Recommendation 2: Adopt approaches to maximize community trust & commitment**
    - **6-Month Pre-Award "Seed Stage"**
    - **Establish** "**Community Ambassadors**"

- **Challenge 3:** AIM-AHEAD mentorship has led to strong outcomes, but lacks consistency in participant experiences
- **Recommendation 3: Enhance the success of the mentor-mentee relationship**
    - **Personalized, flexible mentoring:** Consider individual strengths and gaps
    - **Enhanced** training for mentors and a robust vetting process ensure competence

Challenges and Recommendations

- **Challenge 4:** AIM-AHEAD has established an evaluation process, but there are opportunities to better capture **impact** and **outcomes**
- **Recommendation 4: Enhance and implement novel evaluation and reporting**
  - **AIM-AHEAD programs are competitive**: Analyze rejection data to identify barriers & gaps
  - **Track career trajectories** of AI-trained talents into industry and academic roles
  - **Measure baseline data** and **ongoing progress** to assess community engagement, knowledge, and AI uptake
  - **Quantify ROI** beyond traditional measures **on real-world relevance and long-term value**

- **Challenge 5:** While AIM-AHEAD nurtured sustainability through capacity-building and concierge services, long-term sustainability is a key challenge without federal funding
- **Recommendation 5: Consider methods to ensure the long-term sustainability of programs**
  - Support partnerships with industry, philanthropy, and external research entities
    - Provide alternative funding streams, technical resources and expertise, innovation, and scalability
  - **Adopt** the train-the-trainers model to support under-resourced communities post-funding

Council Action

Vote to accept the Working Group Report on the AIM-AHEAD Initiative