

Informatics Curriculum and Training

This week ONC announced that they were going to disburse \$75 million of ARF dollars to provide funds to support training and infrastructure for public health informatics. This is a great opportunity to move forward. We know some of the HCCNs have indicated interest and that the NE PCA with CyncHealth (NEHII) are also looking at it. I would say I can think of a LOT of ways that NACHC could support our partners or even engage in a PHII (public health informatics institute) program with AT Stills or other orgs. I would suggest we have a formal conversation to discuss our strategy. I should point out that Raymonde has already created a curriculum for informatics that has been piloted in the Philippines that we could bring to the table which you can imagine is one of the ways I think would be great. We could potentially also offer training associated with NACHC meetings which may be covered. There are some eligibility requirements in that a Minority Serving Institution needs to apply or be in a consortium led by one or more MSI. (attached list)

ONC will fund up to thirty (30) cooperative agreement awards for a four (4)-year period of performance. The program will be funded at \$75,000,000 with funding contingent upon the availability of funds, satisfactory completion of milestones, and a determination that continued funding is in the best interest of the federal government and the public. The remaining \$5,000,000 in funds will be used to support the program's overall administration. Each individual award will not exceed \$10,000,000.

Through a four year cooperative agreement, PHIT Workforce Development Program recipients will be part of a consortium that will:

1. Develop the program curriculum
2. Recruit and train participants
3. Develop internship opportunities
4. Assist in career placement at public health agencies, public health-focused non-profits or public health-focused private sector or clinical settings

About the Program

The discipline of Health Informatics operates at the intersection of health sciences (e.g. basic, clinical, public health, librarianship, etc.), information technology and data science. It is in this area that a multidisciplinary understanding of health information needs, human-centered design and optimization of health information technologies (HIT) that drives innovation in the use and adoption of modern solutions supporting data-driven decisions that improve patient outcomes.

At NACHC, we recognize the wide diversity and the unique challenges that community health centers and their patients face everyday. With this in mind, we have developed an interdisciplinary health informatics curriculum that invites students, trainees, graduates and post-graduate scholars from a range of disciplines including nursing, medical, public health, dental and allied health professions as well as fields such as computer, library and information sciences. This is an applied course that attempts to engage participants in relevant issues and challenges faced by community health centers across the nation.

Diversity

NACHC supports CHCs catering to a diverse population.

Training Objectives

After going through the health informatics curriculum and training, participants must be able to:

1. Develop competencies in health informatics and implementation sciences pertinent to low-resource settings
2. Develop proficiency in field development and application of HIT solutions across a variety of use-cases
3. Observe and participate in collaborative research and development activities in public health informatics
4. Increase knowledge of allied fields related to health informatics such as computer science, biostatistics, and evaluation methodology
5. Contribute to the field of public health informatics by completing a research project relevant to challenges faced by community health centers

Upon completion of the training, participants will be awarded or afforded the possibility of the following

1. Informatics Fellowship or Blackbelt Certificate:
2. NACHC Internship
3. Mini-certificates - deep dive in specialized health informatics areas
4. In person training institutes; meetings and organization-hosted conferences

Application Requirements

1. Relevant experience working at community health centers or related/supporting organizations.
2. Work experience or a degree in relevant fields including public health, medicine, dentistry, veterinary science, nursing, ancillary therapies, librarianship, biomedical science and computer and information science.

Curriculum / Concepts

1. Design Thinking Framework and No Code Development

- a. No Code Development
 - i. GlideApps, Thunkable, Landbot
 - ii. Free to use any other no code tool for Capstone Project
- b. Examples
 - i. COVID patient registry
 - ii. Facemask image recognition
 - iii. COVID risk assessment chatbot

2. Principles of Health Informatics and Electronic Health Records

- a. Case study evaluation of commercial and open source electronic health record software
 - i. Epic
 - ii. eClinicalWorks
 - iii. NextGen
 - iv. athenahealth / athenaONE / athenaClinicals
 - v. Allscripts
 - vi. Cerner
 - vii. Open Electronic Medical Record (OpenEMR)
 - viii. OSHERA VistA
 - ix. Open Medical Record System (OpenMRS)
 - x. OpenEHR

3. Innovation in Healthcare and Digital Health Business Models

- a. Diffusion of innovation framework for Capstone Project
- b. Business model canvas of a digital health company or industry vendor solution of choice

4. Artificial Intelligence and Data Science in Healthcare

- a. Imaging Informatics and Machine Learning
 - i. AI model for x-ray classification using Teachable Machine (normal, viral pneumonia, bacterial pneumonia, COVID)
 - ii. Data science platform using Rapidminer for COVID patient analysis (decision tree model)

5. Digital Health, Telehealth, Public Health Informatics

- a. Case studies on public health solutions for COVID-19
 - i. Telehealth solutions
 - ii. Data aggregation
 - iii. Pandemic predictive models
 - iv. Common data models

6. Security and Privacy in Healthcare, Ethics in Health Informatics Management

- a. Cybersecurity protocols for Capstone Project
- b. Case studies on ethics in health informatics
 - i. Therac-25
 - ii. Chris Gerdes and Waymo
 - iii. Cogient and Accutane
 - iv. Fitbit
 - v. Intersystems and Johns Hopkins
- c. Exercise : Google Phishing Quiz
- d. Exercise : Cybersecure your medical practice

