



The Office of the National Coordinator for
Health Information Technology

Workforce Training for Health IT Professionals & Educators: Staying Current in the Changing Healthcare Environment

November 30, 2017



Webinar Presenters



Today's CoP Subject Matter Experts (SMEs)

- ▶ Dr. Susan H. Fenton
- ▶ Dr. Harold Lehmann



ONC

- ▶ Dr. Wanda Govan-Jenkins
- ▶ Dr. Maggie Wanis

Instructional Material Development Team

ONC gratefully acknowledges the development team:

Principal Investigator	Project Manager	Institution
Patricia Dombrowski	Heather Neikirk	Bellevue College
Rita Kukafka	Raven David	Columbia University
Harold Lehmann Hadi Kharrazi	Tricia Francis	Johns Hopkins University
Sunny Ainley	Tracy Mastel	Normandale Community College
William Hersh	Kerri Nussbaum	Oregon Health & Science University
Eta Berner	Meg Bruck	University of Alabama at Birmingham
Susan Fenton	Megan Robertson	University of Texas Health Science Center at Houston

Agenda

Health IT Workforce Training Program - Background

Overview of New Instructional Materials

Building a Training Program: Using the Instructional Material Elements

Questions and Discussion

Health IT Workforce Training Program – Historical Background

HITECH ACT – February 2009

Sec. 3016. Information technology professionals in health

... shall provide assistance to institutions of higher education (or consortia thereof) to establish or expand medical health informatics education programs....



With healthcare undergoing enormous changes, hospitals and other providers must continually focus on hiring and retaining quality workers ...

Healthcare IT News – May 2013

Health IT Workforce Training Program – Historical Background (cont.)

- In 2010, ONC funded five Curriculum Development Centers to develop curricula and educational materials for Health IT training
- Developers developed 20 components as a “buffet” from which educators could design customized training
- Curriculum Development Centers included:
 - » Columbia University
 - » Duke University
 - » Johns Hopkins University (JHU)
 - » Oregon Health & Science University (OHSU)
 - » University of Alabama at Birmingham (UAB)

Instructional Materials: Topics Covered in the Original National Health IT Workforce Curriculum

1. Introduction to Health Care and Public Health in the U.S.
2. The Culture of Health Care
3. Terminology in Health Care and Public Health Settings
4. Introduction to Computer Science
5. History of Health Information Technology in the U.S .
6. Health Management Information Systems
7. Working with Health IT Systems
8. Installation and Maintenance of Health IT Systems
9. Networking and Health Information Exchange
10. Fundamentals of Health Workflow Process Analysis & Redesign
11. Configuring Electronic Health Records
12. Quality Improvement
13. Public Health Information Technology
14. Special Topics Course on Vendor-Specific Systems
15. Usability and Human Factors
16. Professionalism/Customer Service in the Health Environment
17. Working in Teams
18. Planning, Management and Leadership for Health IT
19. Introduction to Project Management
20. Training and Instructional Design

Workforce Training to Educate Health Care Professionals in Health Information Technology - Background

- In 2015, ONC awarded 7 grantees \$6.7 million over 2 years to:
 - » Update 20 existing components
 - » Develop 5 new components to support the health IT workforce
 - » Goal: Train **6,000** incumbent health care workers to use health information technologies in a variety of settings
 - » Trained nearly **9,000** health workers by the end of the funding period
- Awardees
 - » University of Alabama at Birmingham
 - » Bellevue College
 - » Columbia University
 - » Johns Hopkins University
 - » Normandale Community College
 - » Oregon Health & Science University
 - » The University of Texas Health Science Center at Houston

INSTRUCTIONAL MATERIALS

- Updated ONC national Health IT Curriculum
- Created new Instructional Materials to address Emerging Topics in Health Care and Health IT
- Target: Health Care Workers, Health IT Professionals and Emerging Health Care Workers



Instructional Material Elements

- Recorded lectures, slide decks, audio transcripts, and audio files
- Activities
- Assessment questions
- Organized into components and units



New Instructional Materials: Emerging Topics in Health Care and Health IT

- Population Health
- Care Coordination & Interoperable Health IT Systems



- Value-Based Care
- Healthcare Data Analytics
- Patient-Centered Care

Population Health

This component covers:

- Role of health IT and emerging data sources in deriving population health solutions
- Application in the context of population health management

Topics:

- Population Health and the Application of Health IT
- “Accountable” Care Approaches for Target Population
- Implications of Policy, Finance, and Business on Population Health
- Research Evaluation and Evidence Generation in Population Health
- Population Health IT and Data Systems
- Big Data, Interoperability, and Analytics for Population Health
- Identifying Risk and Segmenting Populations: Predictive Analytics for Population Health
- Population Health Management Interventions
- Applying Health IT to Improve Population Health at the Community Level
- Engaging Consumers, Providers, and Community in Population Health Programs

Care Coordination & Interoperable Health IT Systems

This component describes care coordination and discusses how interoperability plays an important role.

Topics:

- Overview of Care Coordination
- Team-Based Approach to Patient Care
- Overview of Interoperable Health IT
- Principles and Technology of Health Interoperability
- Standards for Interoperable Health IT
- Implementing Health Interoperability
- Policy and Interoperable Health IT
- Exchange of Health Information
- Expanding Patient Access to Care with Technology
- Privacy & Security of Shared Information
- Supporting Patient-Driven Care Coordination

Value-Based Care

This component describes the movement toward value-based care and introduces key elements of emerging models of care and new payment models.

Topics:

- Introduction to Value-Based Care
- Regulatory Environment
- Overview of New Care Delivery Models
- New Models of Care Management
- Value-Based Quality & Safety
- Volume to Value
- Outcomes and Reimbursement
- Contracts & Payments

Health Care Data Analytics

This component provides techniques and tools to address the challenges of using data analytics in health care.

Topics:

- Working with Data
- Secondary Use of Clinical Data
- Communicating Data Analysis Results
- Patient Identification
- Machine Learning and Natural Language Processing
- Data Analytics in Clinical Settings
- Learning Health Systems
- Usability
- Risk Adjustment and Predictive Modeling

Patient-Centered Care

This component describes concepts and skills to encourage patient-centered care.

Topics:

- Introduction to Patient Engagement & Participation
- Behavior Change Strategies
- Activated Patients
- Supporting Patient-Driven Care Coordination
- Patient-Provider Communication
- Communicating Health Risk
- Shared Decision-Making
- Precision Medicine
- Patient-Oriented Data Analytics

Building a Training Program: Using the Components and Units

<https://www.healthit.gov/providers-professionals/health-it-curriculum-resources-educators>

Building a Training Program: University of Texas

Units used for training course: Applications of a Provider Track

Course Track:	Provider	Component	Unit	Lecture	Self Assessments	Extra Practice Materials
Topic A	Population Health and the Application of Health IT	Comp 21	1	A, B	Comp 21_Unit 1	Activity
Topic B	Structural "Accountable" Care Approaches for Target Population	Comp 21	3	A, B	Comp 21_Unit 3	Lecture C and Activity
Topic C	Population Health IT and Data Systems	Comp 21	5	A, B	Comp 21_Unit 5	Activity
Topic D	Team-based approach to Patient Care	Comp 22	2	A, B	Comp 22_Unit 2	Lecture C and Activity
Topic E	Ensuring the Security and Privacy of Information Shared	Comp 22	10	A, B	Comp 22_Unit 10	Lecture C and D and Activity
Topic F	Supporting Patient-Driven Care	Comp 22	11	A, B	Comp 22_Unit 11	Lecture C and D and Activity
Topic G	Coordination	Comp 23	1	A	Comp 23_Unit 1	Lecture D and Activity
Topic H	Introduction to Value-Based Care	Comp 23	3	A, B	Comp 23_Unit 3	Lecture C and D and Activity
Topic I	Healthcare Delivery	Comp 23	7	A, B	Comp 23_Unit 7	Activity
Topic J	Outcomes and Reimbursement	Comp 23	8	A	Comp 23_Unit 8	
Topic K	Contracts and Payments	Comp 25	9	A, B	Comp 25_Unit 9	Activity
	Patient-Oriented Data Analytics					

Building a Training Program: University of Texas

Units used for training course: Applications of a Business Office Track

Course Track:	Business Office	Component	Unit	Lecture	Self Assessments	Extra Practice Materials
Topic A	Population Health and the Application of Health IT	Comp 21	1	A, B	Comp 21_Unit 1	Activity
Topic B	Structural "Accountable" Care Approaches for Target Population	Comp 21	3	A, B	Comp 21_Unit 3	Lecture C and Activity
Topic C	Population Health IT and Data Systems	Comp 21	5	A, C	Comp 21_Unit 5	Activity
Topic D	Team-based approach to Patient Care	Comp 22	2	A, B	Comp 22_Unit 2	Lecture C and Activity
Topic E	Ensuring the Security and Privacy of Information Shared Supporting Patient-Driven Care	Comp 22	10	A, B	Comp 22_Unit 10	Lecture C and D and Activity
Topic F	Coordination	Comp 22	11	A, B	Comp 22_Unit 11	Lecture C and D and Activity
Topic G	Introduction to Value-Based Care	Comp 23	1	A	Comp 23_Unit 1	Lecture D and Activity
Topic H	Healthcare Delivery	Comp 23	3	A, B	Comp 23_Unit 3	Lecture C and D and Activity
Topic I	Outcomes and Reimbursement	Comp 23	7	A, B	Comp 23_Unit 7	Activity
Topic J	Contracts and Payments	Comp 23	8	A	Comp 23_Unit 8	
Topic K	Introduction to Health Care Data Analytics	Comp 24	1	A, B	Comp 24_Unit 1	Activity
Topic L	Working with Data	Comp 24	2	A	Comp 24_Unit 2	Activity with Additional Instructional Videos uploaded to CRM
Topic M	Communicating Data Analysis Results	Comp 24	4	A	Comp 24_Unit 4	Activity
Topic N	Patient-Oriented Data Analytics	Comp 25	9	A, B	Comp 25_Unit 9	Activity

Building a Training Program: University of Texas

Units used for training course: Applications of a Clinical Support Track

Course Track:	Clinical Support	Component	Unit	Lecture	Self Assessments	Extra Practice Materials
Topic A	Population Health and the Application of Health IT	Comp 21	1	A, B	Comp 21_Unit 1	Activity
Topic B	Population Health IT and Data Systems	Comp 21	5	A, B	Comp 21_Unit 5	Activity
Topic C	Team-based approach to Patient Care	Comp 22	2	A, B, C	Comp 22_Unit 2	Activity
Topic D	Ensuring the Security and Privacy of Information Shared	Comp 22	10	A, B, C, D	Comp 22_Unit 10	Activity
Topic E	Supporting Patient-Driven Care Coordination	Comp 22	11	A, B, C, D	Comp 22_Unit 11	Activity
Topic F	Introduction to Value-Based Care	Comp 23	1	A	Comp 23_Unit 1	Lecture D and Activity
Topic G	Healthcare Delivery	Comp 23	3	A, B, C, D	Comp 23_Unit 3	Activity
Topic H	Overview of Care Coordination	Comp 22	1	A, B, C	Comp 22_Unit 1	Activity
Topic I	Introduction to Health Care Data Analytics	Comp 24	1	A, B	Comp 24_Unit 1	Activity
Topic J	Patient-Oriented Data Analytics	Comp 25	9	A, B	Comp 25_Unit 9	Activity

Building a Training Program: University of Texas

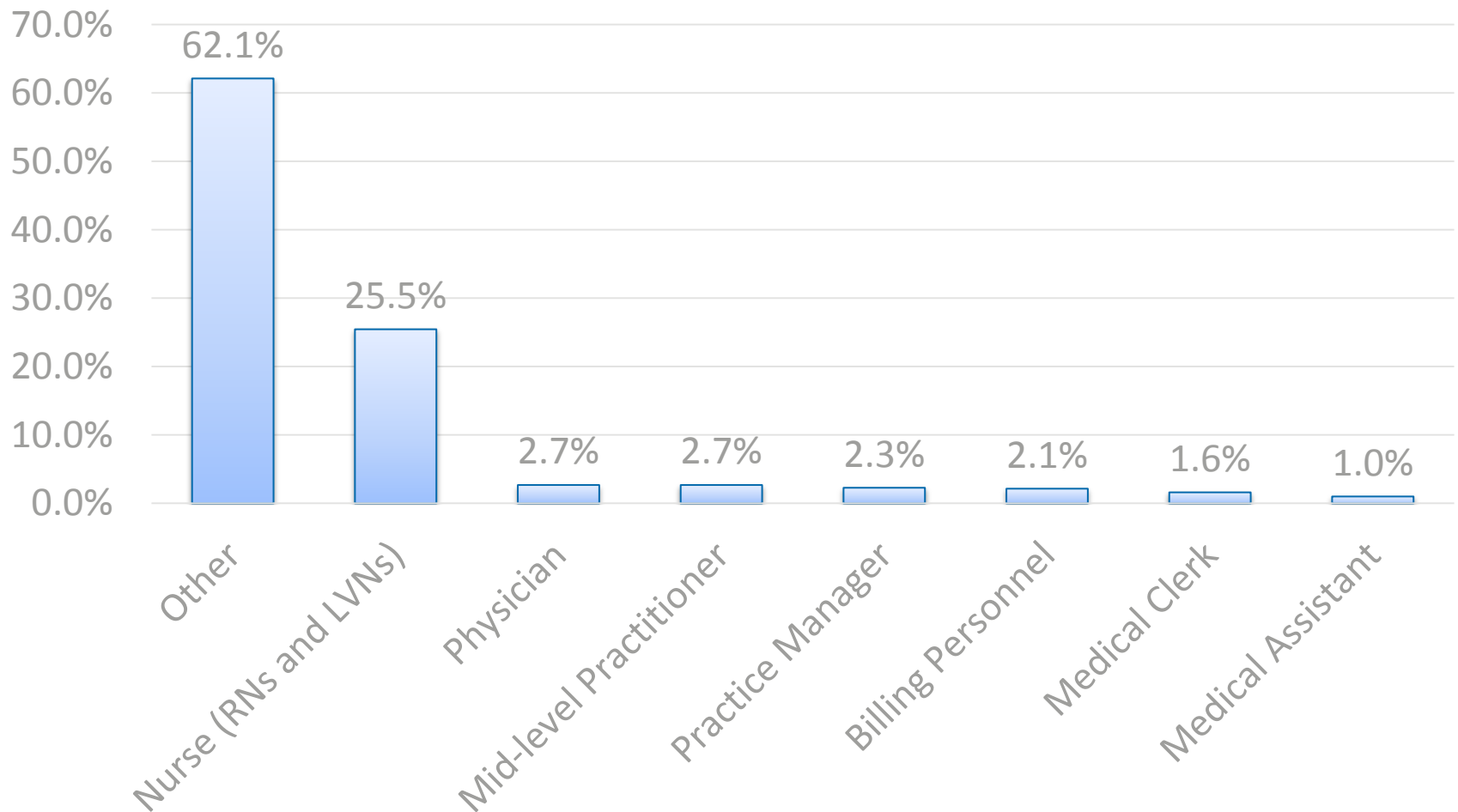
Units used for training course: Applications of a IT/IS Track

Course Track:	IT/IS	Component	Unit	Lecture	Self Assessments	Extra Practice Materials
Topic A	Population Health and the Application of Health IT	Comp 21	1	A, B	Comp 21_Unit 1	Activity
Topic B	Population Health IT and Data Systems	Comp 21	5	A, B, C	Comp 21_Unit 5	Activity
Topic C	Ensuring the Security and Privacy of Information Shared Supporting Patient-Driven Care	Comp 22	10	A, B, C, D	Comp 22_Unit 10	Activity
Topic D	Coordination	Comp 22	11	A, B, C, D	Comp 22_Unit 11	Activity
Topic E	Introduction to Value-Based Care	Comp 23	1	A	Comp 23_Unit 1	Lecture D and Activity
Topic F	Introduction to Health Care Data Analytics	Comp 24	1	A, B	Comp 24_Unit 1	Activity
Topic G	Working with Data	Comp 24	2	A	Comp 24_Unit 2	Activity with Additional Instructional Videos uploaded to CRM
Topic H	Communicating Data Analysis Results	Comp 24	4	A	Comp 24_Unit 4	Activity
Topic I	Machine Learning and Natural Language Processing	Comp 24	6	A, B	Comp 24_Unit 6	Activity
Topic J	Usability	Comp 24	9	A	Comp 24_Unit 9	Activity
Topic K	Patient-Oriented Data Analytics	Comp 25	9	A, B	Comp 25_Unit 9	Activity

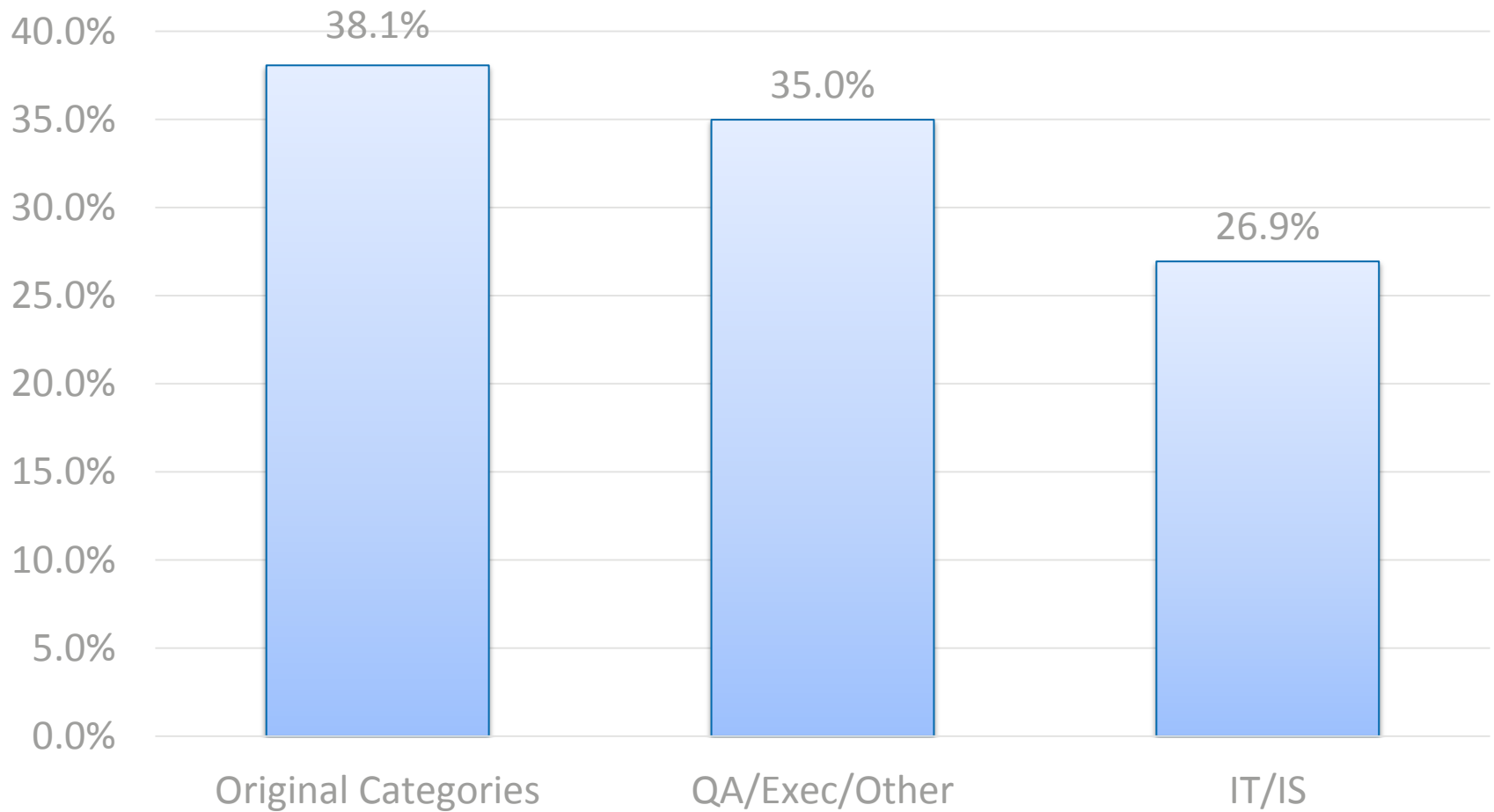
Yearlong Training

- 3,000 + registrants
- 1,535 completed the training
- Mostly online, some hybrid

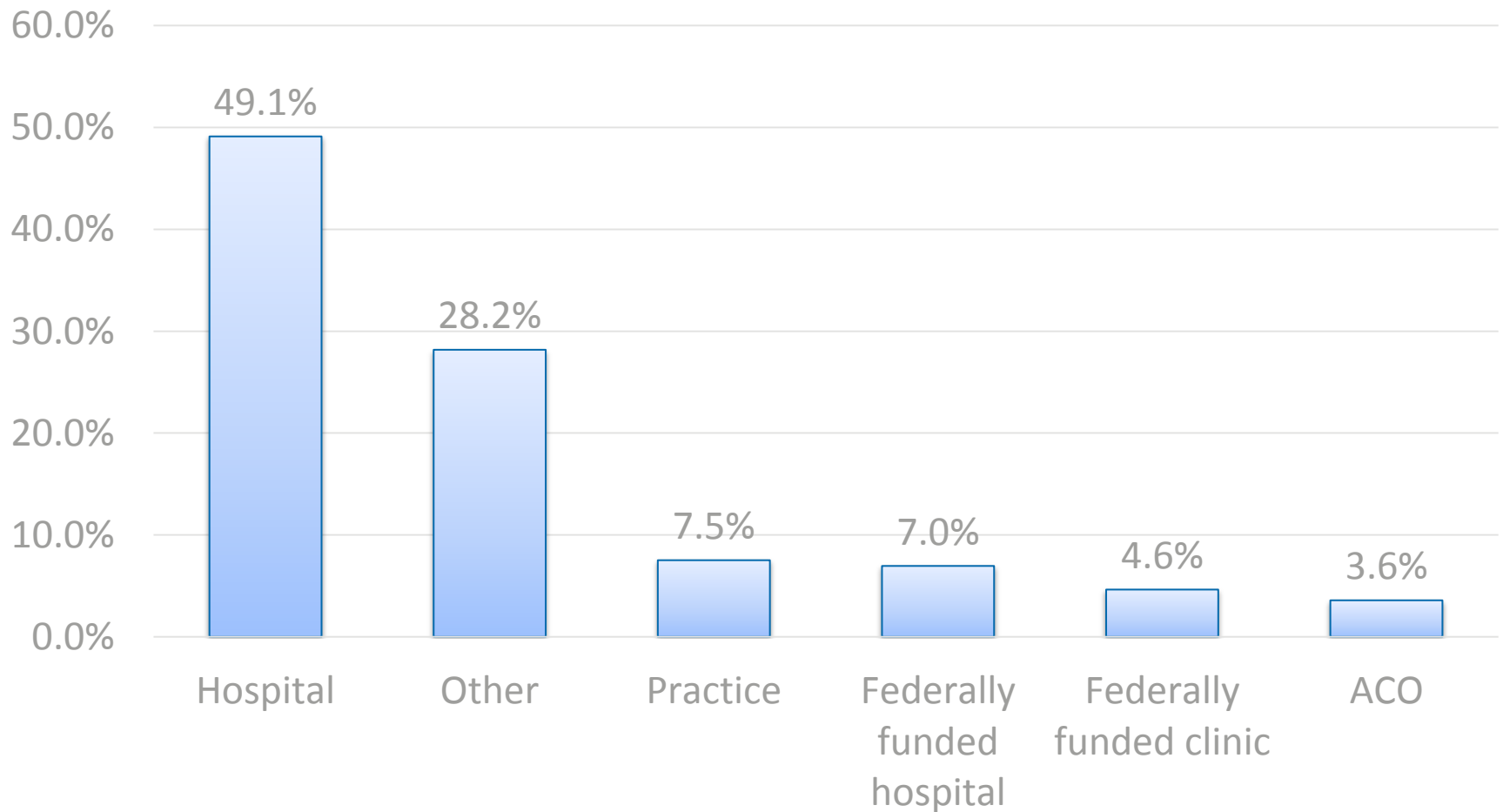
Job Titles Taking Training (N=1,489)



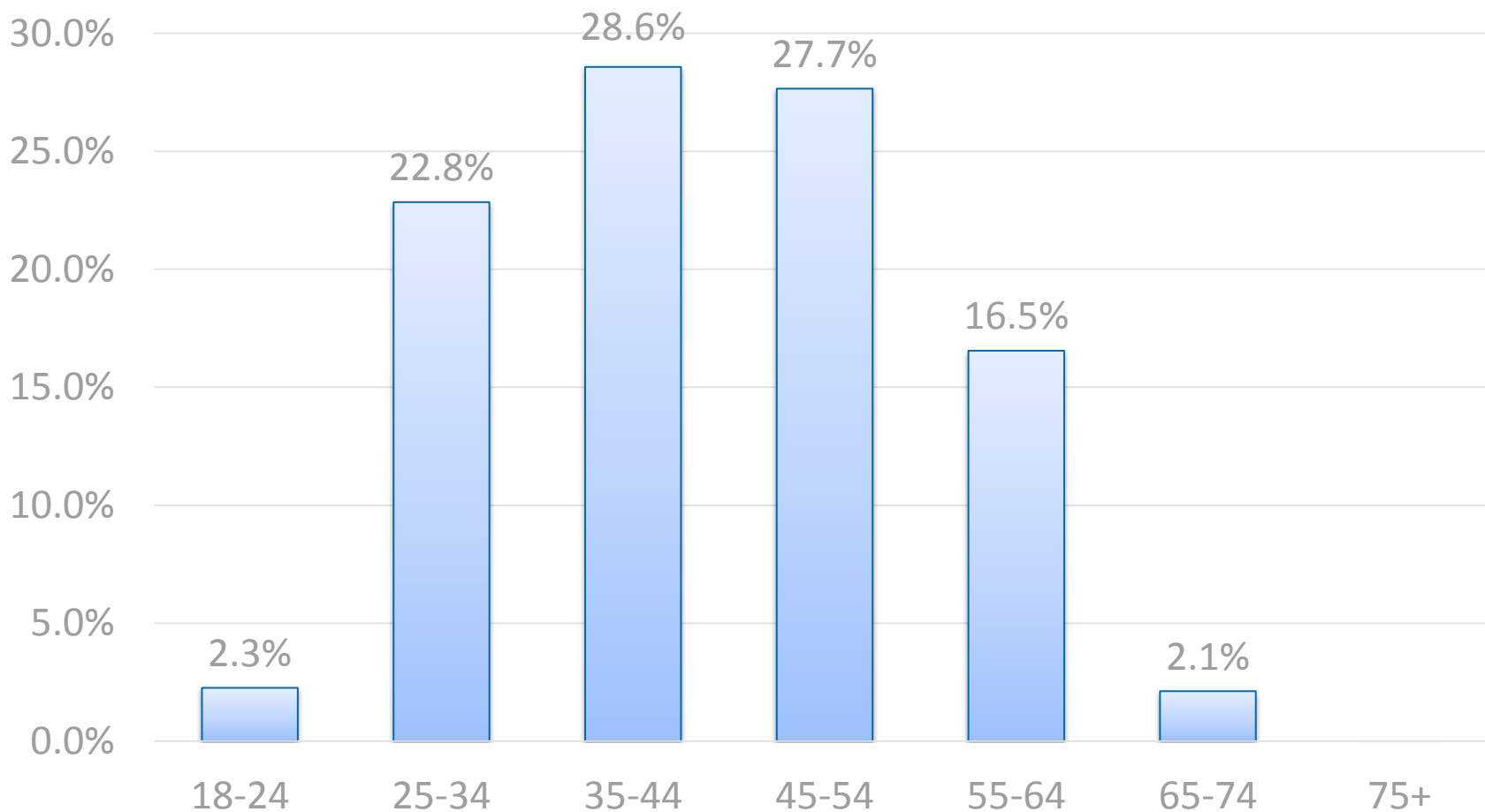
Breakout of Other Job Titles (N=1,489)



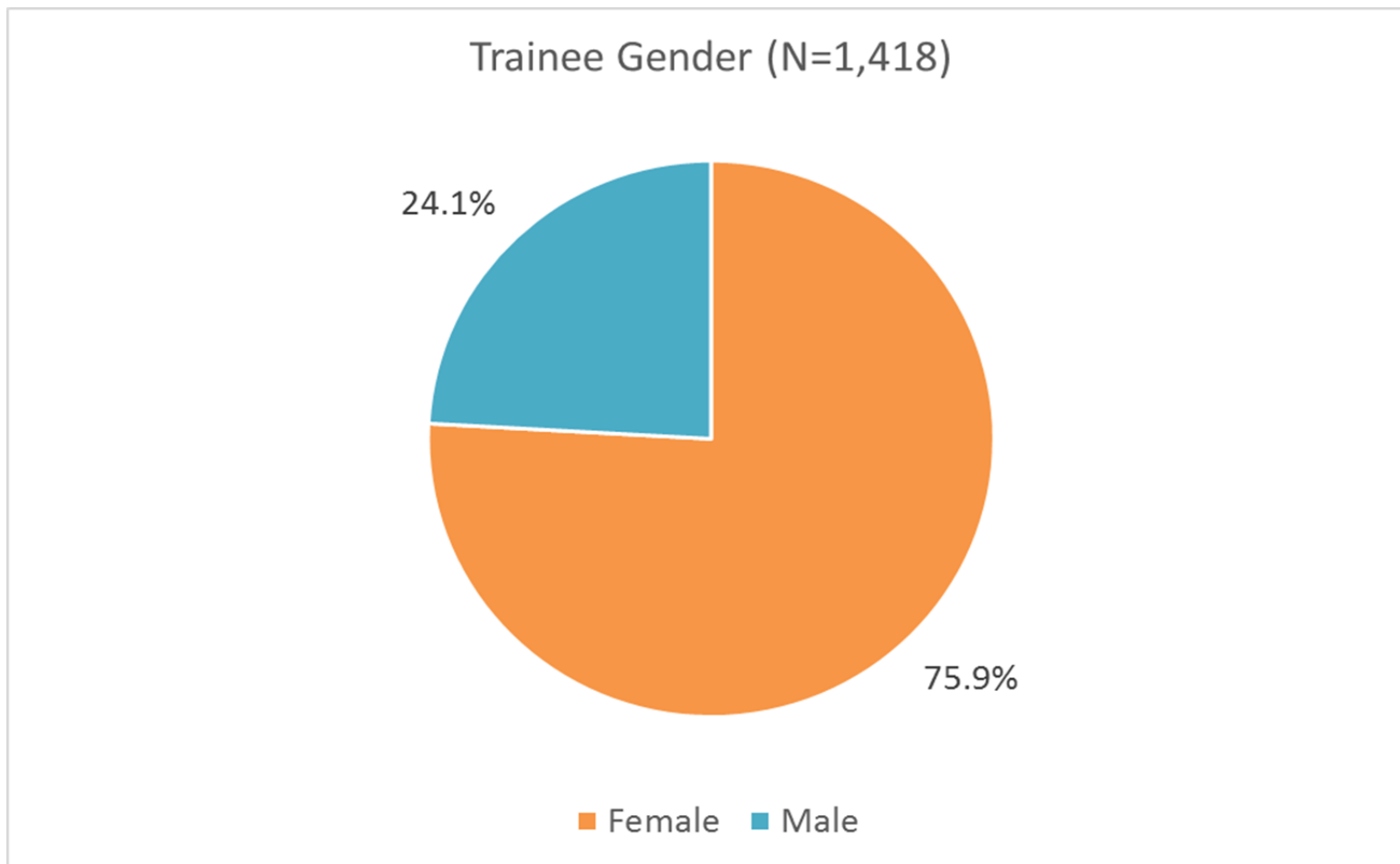
Facility Types (N=1,423)



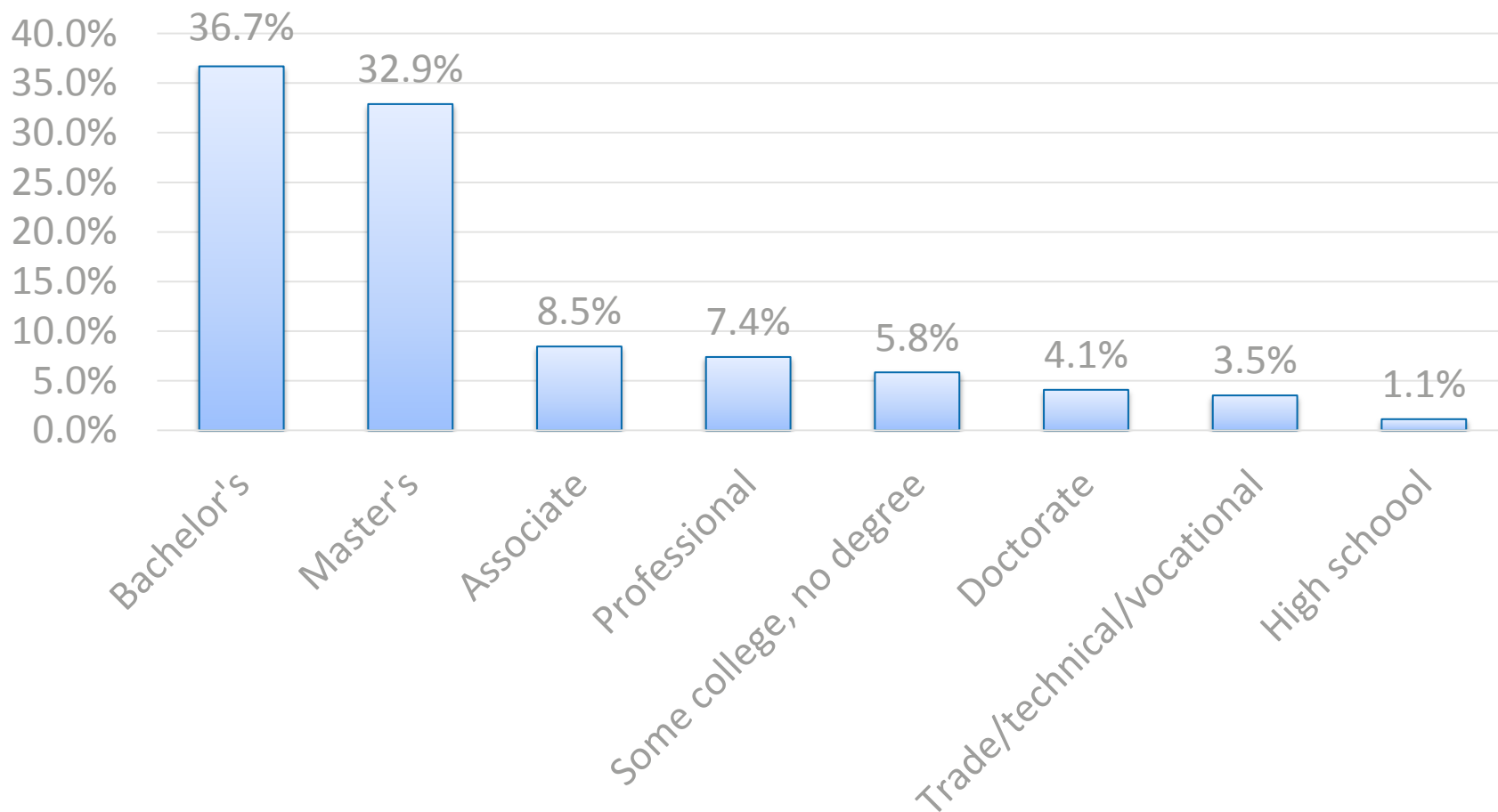
Trainee Age Distribution (N=1,414)



Trainee Gender



Trainee Education Level (N=1,420)



What about the quality?

- 98.7% - Covered Content Relevant to Healthcare and Health IT (Strongly or Somewhat Agree)
- 98.2% - Helped Me Understand Subject Better
- 97.8% - Training Materials Were Helpful
- 97.3% - Training Met Its Objectives
- 94.4% - Likely to recommend the course
- 88.8% - Training was Actively Engaging
- 75.2% - Presenter Proficiency in Subject

Best of All

- 94.7% - Content Relevant to My Job
- 90.4% - Skills I Learned Will Improve My Job Performance



Job Content Relevant Exploration

- 96.0% - IT/IS, including data analysts
- 94.4% - Original Categories
- 81.2% - QA/Executives/Other

Improve Job Performance

- 91.7% - Original Categories
- 88.8% - IT/IS, including data analysts
- 78.5% - QA/Executives/Other

Selected Comments

- Lots of “It was fine, great content.”
- Can you train us in EPIC, Cerner, as well as HL7 FHIR?
- More hands-on activities and practice examples.
- More data analytics!
- Enjoyed having materials in various formats.

Lessons Learned

- Significant demand
 - » Evolving environment
- “Pre-packaged” education can help - BUT
- In-person, hands-on very popular
- Free training hurts completion rates

The Building of Component 21: Population Health

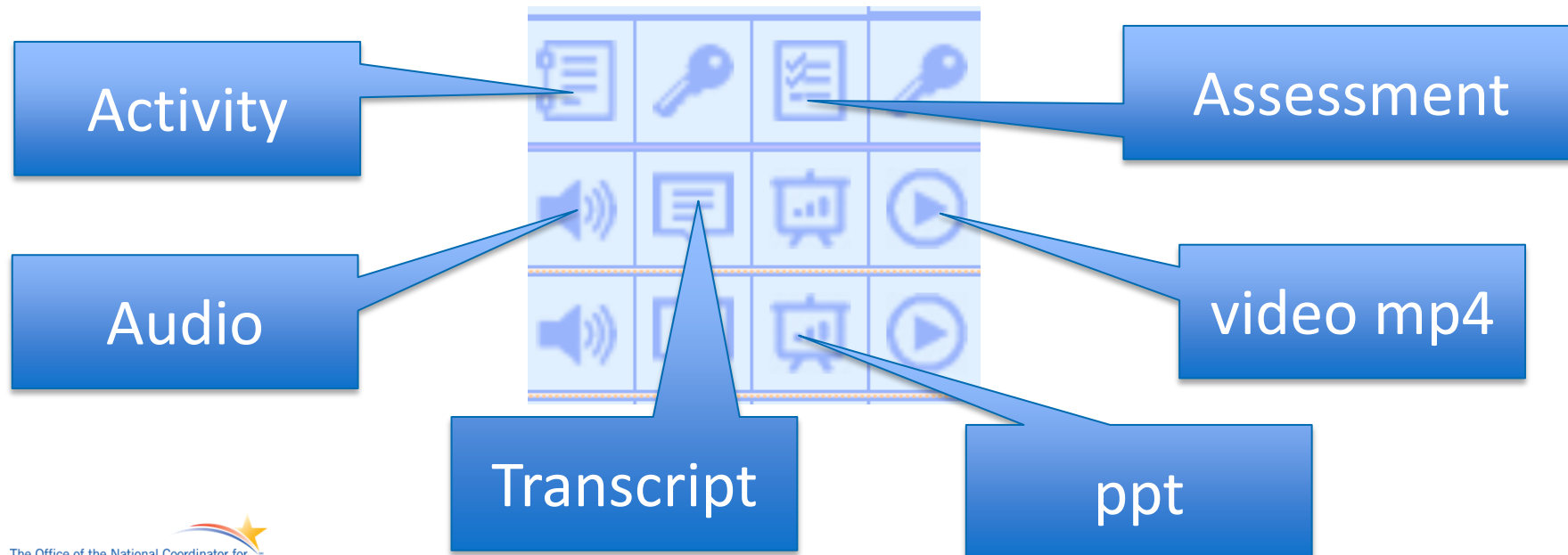
Component 21: Population Health was divided into 3 courses:

1. Population Health Policy
2. Population Health Data Analytics
3. Population Health Interventions

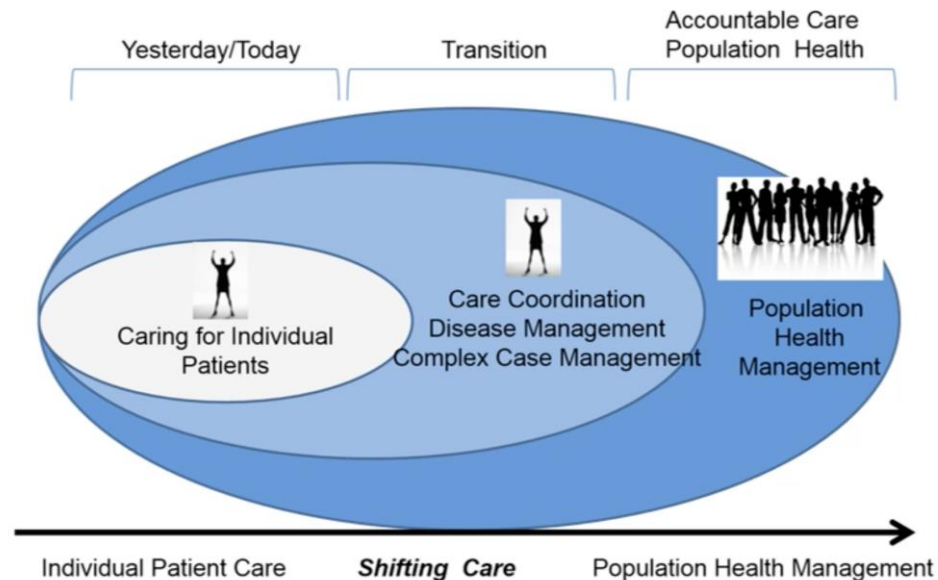
- Unit 1: Population Health and the Application of Health IT

- ▶ *Lecture a: Introduction and Definitions: Population Health and Health IT*

- ▶ *Lecture b: Population Health Management and Health IT*

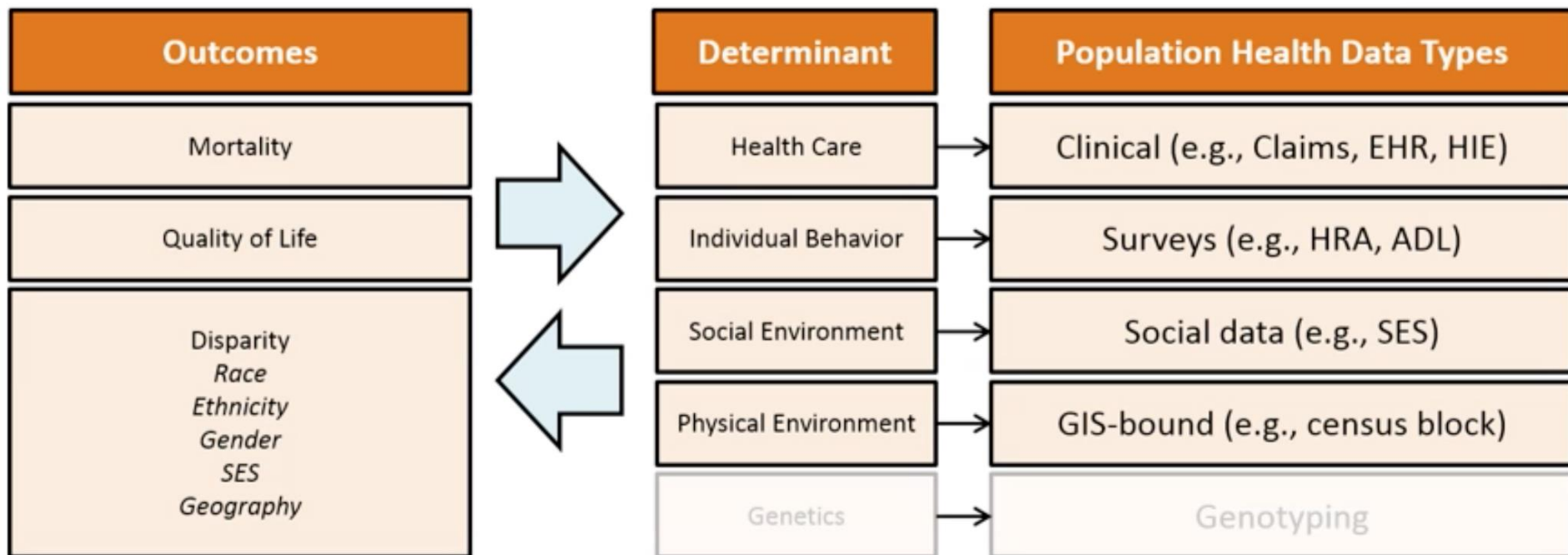


- Unit 3: Structural “Accountable” Care Approaches for Target Population
- Unit 4: Implications of Policy, Finance, and Business on Population Health
- Unit 10: Research Evaluation and Evidence Generation in Population Health



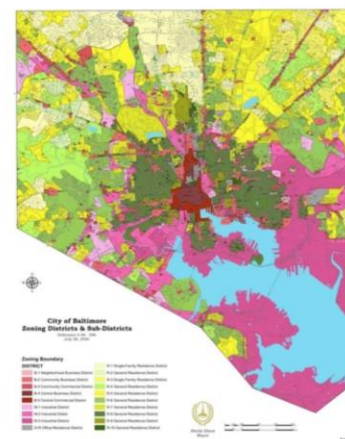
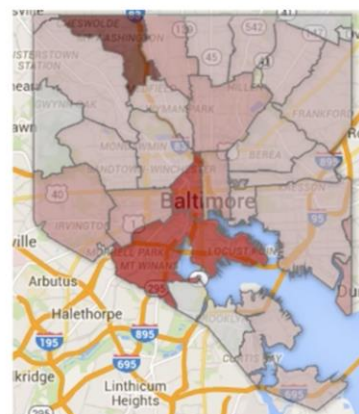
- Unit 5: Population Health IT and Data Systems

- Unit 9: Big Data, Interoperability, and Analytics for Population Health



- Unit 6: Identifying Risk and Segmenting Populations: Predictive Analytics for Population Health
- Unit 7: Population Health Management Interventions
- Unit 8: Engaging Consumers, Providers, and Community in Population Health Programs
- Unit 2: Applying Health IT to Improve Population Health at the Community Level

Population-Based Predictive Analytic/Intervention of Elders' Falls Linking EHRs and Social Data



ONC TRAINING

REGISTER NOW



Johns Hopkins University School of Medicine, the Johns Hopkins University Bloomberg School of Public Health and Normandale Community College are jointly offering free e-Learning courses designed for busy, working adults to upgrade their skills in the transforming healthcare industry.

Click the box below to learn more about each training topic

Population
Health

Healthcare
Data
Analytics

Value-Based
Care

PROGRAM INFORMATION



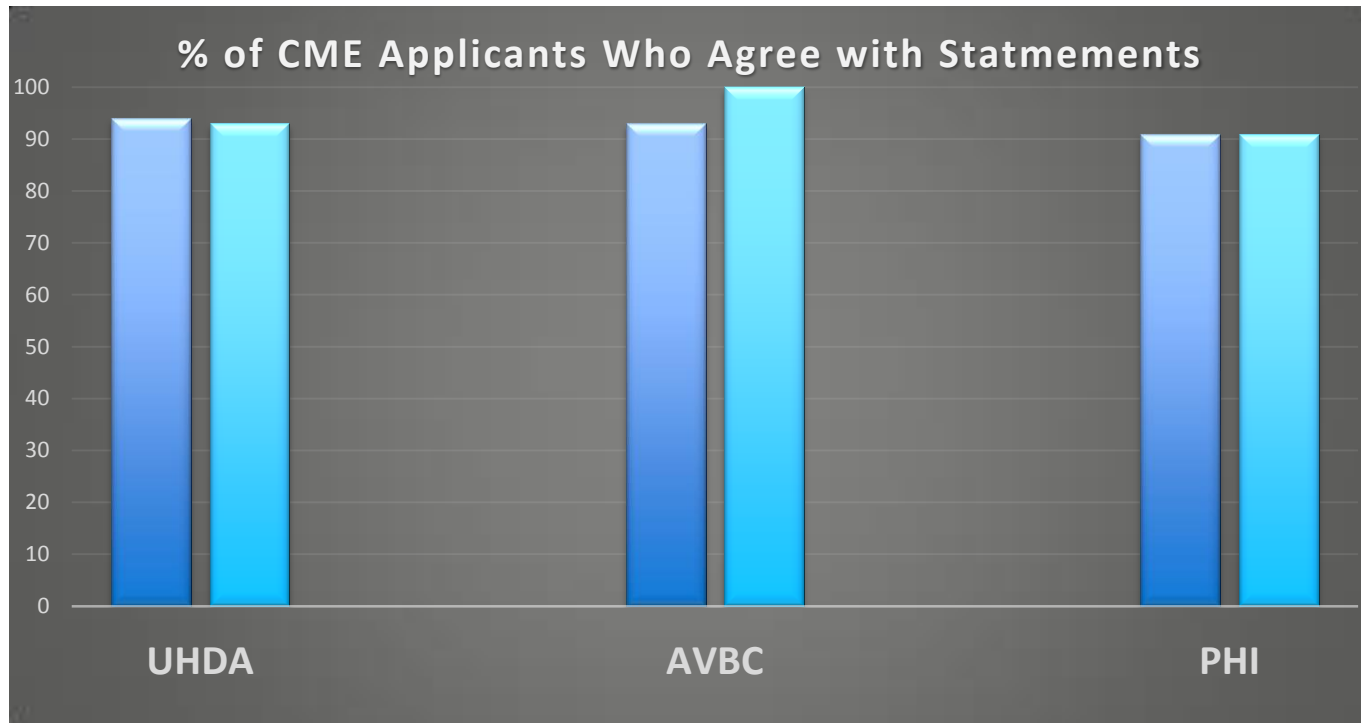
This activity has been approved for **AMA PRA Category 1 Credits™**.

[Click for Full CME/MOC Accreditation Details](#)

UPDATE!

The CME fee has been temporarily waived through 6/20/17. This is limited to the first 450 trainees who register, complete a course, and apply for CMEs by 6/20/2017.

Feedback indicates positive reception



 **Would recommend to others**  **Was relevant to my job**

Workforce Training Continues

University of Alabama at Birmingham - www.uab.edu/healthit

Bellevue College – Exclusive training for VA and DOD employees only

– (Reach out to them if you are an employee)

Columbia University - www.hi-fivetraining.org

Johns Hopkins University – <http://learnhit.com>

Normandale Community College - <https://www.mnhealthit.com/act.html>

Oregon Health & Science University - <https://dmice.ohsu.edu/onc-course/>

The University of Texas Health Science Center at Houston -
<https://sbmi.uth.edu/continuing-education/>

A National Resource

**INSTRUCTIONAL MATERIALS FREE & READY
TO DOWNLOAD**

<https://www.healthit.gov/providers-professionals/health-it-curriculum-resources-educators>

For use by:

Healthcare organizations

Health system employees

Workforce development agencies

Colleges and universities

Public health agencies



For More Information

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