Technical Assistance for Health Information Technology and Health Information Exchange in Medicaid and CHIP

Welcome to the AHRQ Medicaid and CHIP TA Webinar

Finding the Right Person for the Job: Leveraging Health IT Workforce Initiatives to Successfully Achieve Your Agency's Health IT/HIE Goals

Tuesday, June 8, 2010, 3:00 – 4:30 p.m. Eastern

Presented by:

Charles P. Friedman, PhD, Chief Scientific Officer, Office of the National Coordinator for Health Information Technology

Bill Hersh, MD, Professor and Chair, Department of Medical Informatics & Clinical Epidemiology, Oregon Health & Science University

Moderated by:

Barbara Massoudi, MPH, PhD, Health Informatics Program, RTI International

*** Please note all participants were placed on mute as they joined the session.**

Funded by the Agency for Healthcare Research and Quality

Overview

- **Welcome** – Barbara Massoudi, MPH, PhD, RTI International
- **Before we begin** – Barbara Massoudi
- **Introduction** – Barbara Massoudi
- ***Finding the Right Person for the Job***
  - Presented by:
    - **Charles P. Friedman, PhD**, Chief Scientific Officer, Office of the National Coordinator for Health Information Technology
    - **Bill Hersh, MD**, Professor and Chair, Department of Medical Informatics & Clinical Epidemiology, Oregon Health & Science University
- **Questions and Answers** – Barbara Massoudi
- **Closing Remarks** – Barbara Massoudi

Before We Begin

- Please note all participants were placed on mute as they joined the Webinar.
- If you wish to be unmuted, choose the “raise hand” option to notify the host.
- If you have a question during the presentation, please send your question to ***all panelists*** through the chat. At the end of the presentations, there will be a question and answer period.
- Please e-mail Sarah Johnson at sajohnson@rti.org if you would like a copy of today’s presentation slides.
- We are currently in the process of posting all of the TA Webinar presentation slides to the project Web site: http://healthit.ahrq.gov/Medicaid-SCHIP

Technical Assistance for Health Information Technology and Health Information Exchange in Medicaid and CHIP

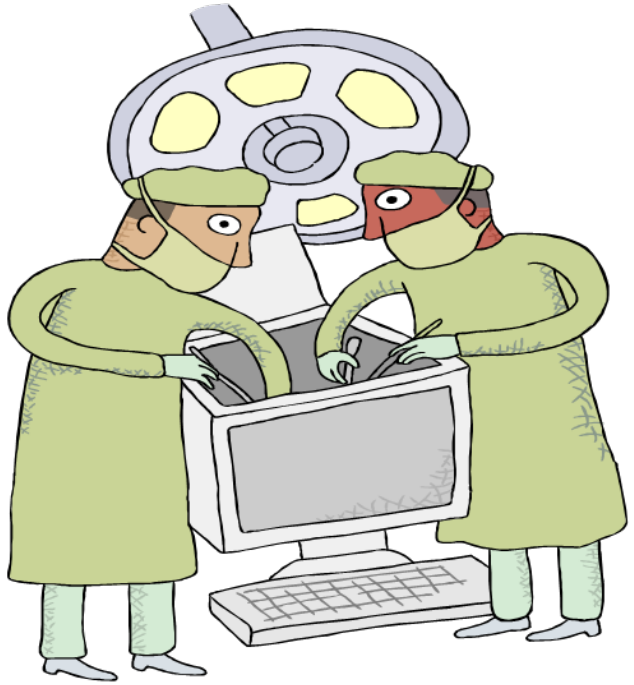
HEALTH INFORMATION TECHNOLOGY WORKFORCE DEVELOPMENT PROGRAM

OVERVIEW

Charles P. Friedman, PhD
Chief Scientific Officer
Office of the National Coordinator for Health Information Technology (ONC)
June 8, 2010

HELP WANTED!

- Advance to meaningful use requires trained health IT practitioners
- Shortfall of at least 51,000 in 12 key workforce roles
- ARRA/HITECH Section 3016 requires funding of institutions of higher education



More health IT for practitioners: more "practitioners" for health IT

12 Key Workforce Roles Supporting HITECH Agenda for Health Care and Public Health

- Six roles requiring 6-month preparation
  - Assumes some relevant background (health or IT)
  - Four roles support EHR adoption process (mobile adoption teams)
  - Two roles provide ongoing support to practices that have adopted EHRs
- Six roles requiring 1-2 year preparation
  - Also assumes relevant background (health or IT)
  - Chief clinician information officers
  - Software developers
  - Researchers and specialists

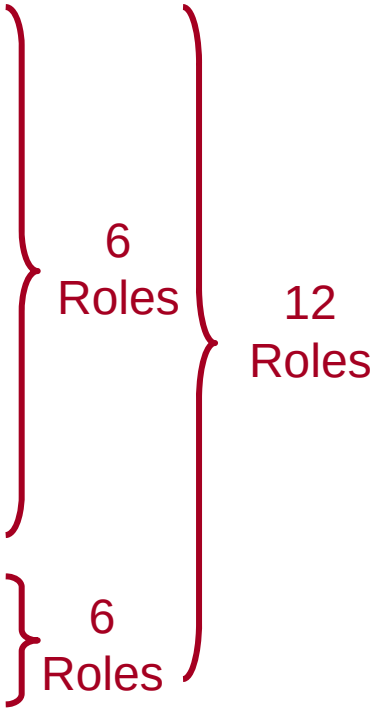
Origin of the Roles

- Anticipating the “new world” of meaningful use
- Rooted in the HITECH program
- Validated by a multistakeholder workshop in August 2009
- “Skate to where the puck is going to be” (Wayne Gretzky)

ONC Health IT Workforce Development Program

Four *integrated* programs:

1. Community college consortia to educate health IT professionals
2. Curriculum development centers
3. Competency examination for individuals completing non-degree training
4. Assistance for university-based training



Community College Consortia Program Vision

- $70 million; supports approximately 70 community colleges via 5 cooperative agreements
- 1 cooperative agreement for each of 5 HHS-defined service regions covering the Nation

Community College Consortia Program

- Targeted health IT professional roles
  - Mobile workforce supporting adoption process
    - Practice workflow and information management redesign specialists
    - Clinician/practitioner consultants
    - Implementation support specialist
    - Implementation managers
  - Onsite support personnel (post-adoption)
    - Technical/software support staff
    - Trainers
- Certificate programs completed < 6 months
- Expectation that training programs will continue past 2-year project period

Community College Consortia Awardees (April 2, 2010)

- Region A: Northwest
  - Bellevue College
- Region B: Southwest
  - Los Rios Community College District
- Region C: Midwest
  - Cuyahoga Community College
- Region D: South
  - Pitt Community College
- Region E: Northeast
  - Tidewater Community College

Key Features of Community College Programs

- Flexibility, innovation, adult learning approaches (hallmarks of community colleges)
- Tailor program to each student's background
- Educational program structure:
  - Application and matriculation process
  - Trainee progress tracking (credits or other mechanism)
  - Evaluation of student achievement
  - Institutional certificate upon completion
  - Use of high-quality educational materials reflecting best practices and latest knowledge in a rapidly changing field

Diverse Trainees Expected!

- Those with health backgrounds: training will emphasize IT topics
- Those with technical backgrounds: training will emphasize health topics
- Those with other backgrounds??

Curriculum Development Centers Program

$10 million program

- Goals:
  - To make available high-quality educational materials reflecting best practices in a rapidly changing field
  - To take a highly progressive view of preparation for the six roles
  - To enable community college programs to ramp up quickly
- Cooperative agreements awarded April 2 to five universities working with community colleges
- Products available free of license fee to all training providers

Curriculum Development Centers

1. Oregon Health and Sciences University
   - Host to National Training and Dissemination Center
2. Duke University
3. Johns Hopkins University
4. University of Alabama at Birmingham
5. Columbia University

Curriculum Development Centers

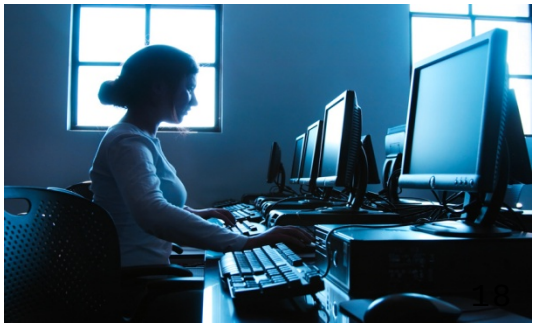
- Centers will develop 20 curricular components; each component divided into units
- Supporting the six roles targeted by the community college program
- Resources developed by centers will include:
  - Overview with objectives
  - Lectures (initially voiceover slides)
  - References to public domain materials or, in certain cases, copyrighted materials.
  - Exam questions
  - Instructor manual
- Faculty training event in August

20 Curriculum Components

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 Information and 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 EHRs
12. Quality Improvement
13. Public Health IT
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

Competency Examination Program

- $6 million program
- Cooperative agreement awarded April 2 to Northern Virginia Community College
- Addresses same six roles as community college consortia and curriculum development centers
- Tests individuals completing non-degree training
- **Not a certification program**
- First 25,000 examinees take exam free of charge



University-based Training

- $32 million program
- Nine training grant awards made April 2
- Targets six roles requiring more specialized technical training (health care and public health):
  - Clinician/public health leader
  - Health information management and exchange specialist
  - Health information privacy and security specialist
  - Research and development scientist
  - Programmer and software engineer
  - Health IT sub-specialist

University-based Training Program

- Will support approximately 1,700 trainees
- Trainees appointed for at least 1 and up to 2 years
- One year of training leads to institutional certificate or master's degree
- Two years of training leads to master's degree with thesis
- Longer programs (and less total funding) will train fewer people than community college program
- Four of the nine funded sites are also curriculum development centers (four to five curriculum development centers funded for university-based training)
- Expectation of sustained training after 3-year project period

University-based Training Awardees

1. Columbia University
2. University of Colorado Denver College of Nursing
3. Duke University
4. George Washington University
5. Indiana University
6. Johns Hopkins University
7. University of Minnesota
8. Oregon Health & Science University
9. Texas State University

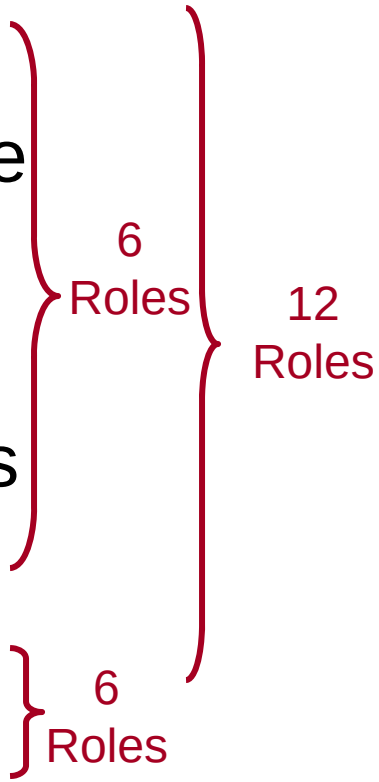
Program Evaluation

- All ONC HITECH programs will be evaluated by separate contracts
- National Opinion Research Center awarded Workforce Program Evaluation
- Formative and summative purpose
- Will work with training sites (community college and university) to track program graduates

Reiteration

Four integrated programs:

1. Community college consortia to educate health IT professionals
2. Curriculum development centers
3. Competency examination for individuals completing non-degree training
4. Assistance for university-based training



Concluding Observations

- Grants are a seed and stimulus
  - Supported programs will be sustained
  - Other programs will start
  - Curriculum development work and competency exam support ongoing program
- Coordination with other funded programs (Dept of Labor)
- Health IT workforce is an international challenge
  - Will be a focus of US-EU cooperation
  - Curriculum materials available globally

Thanks and Write to Me

E-mail: charles.friedman@hhs.gov

Much more information available at:

healthit.hhs.gov

(click on HITECH Programs under Spotlight)

Technical Assistance for Health Information Technology and Health Information Exchange in Medicaid and CHIP

MEANINGFUL USE OF HEALTH INFORMATION TECHNOLOGY REQUIRES A COMPETENT WORKFORCE

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E-mail: hersh@ohsu.edu
Web: www.billhersh.info
Blog: informaticsprofessor.blogspot.com
June 8, 2010

Overview

- Why we need more health information technology (HIT)
- What we know about the HIT workforce
- How we can/should build the HIT workforce
- Education and training programs
- Where to find such personnel to hire

Why Do We Need More Information Technology (IT) in Health Care?

- Quality—not as good as it could be (McGlynn, 2003; NCQA, 2009; Schoen, 2009)
- Safety—Institute of Medicine errors report found up to 98,000 deaths per year (Kohn, 2000)
- Cost—rising costs not sustainable; US spends more but gets less (Angrisano, 2007)
- Inaccessible information—missing information frequent in primary care (Smith, 2005)

What Do We Know About the HIT Workforce?

- Largest (but not only) need now in health care settings
- Traditional groupings of professionals in health care
  - IT—usually with computer science or information systems background
  - Health information management (HIM)—historical focus on medical records; certified as
    - Registered health information administrator (RHIA)
    - Registered health information technologist (RHIT)
    - Clinical coding specialist (CCS)
  - Clinical informatics (CI)—often from health care backgrounds; focus on use of clinical information
- Most research about workforce has focused on counts of professional groupings (usually IT or HIM staffing)

What Do the Data Show?

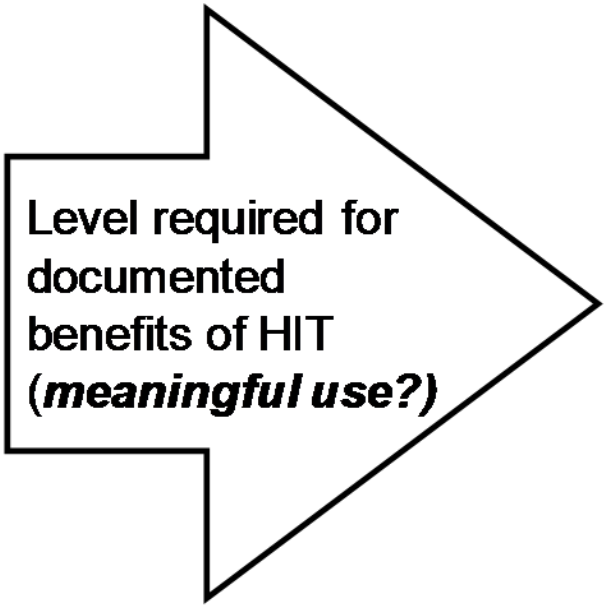
- Mostly done in hospital settings; usually focused on one (of three main) groups
  - IT – HIMSS Analytics Database™ study
  - HIM – Bureau of Labor Statistics data
  - CI – mainly estimates
- Recent work focused on needs for the ARRA/HITECH EHR agenda

HIMSS Analytics Study

(Hersh and Wright, 2008)

- Assessed current and anticipated HIT workforce needs using HIMSS Analytics Database™ (www.himssanalytics.com), which contains
  - Self-reported data from about 5,000 US hospitals, including number of beds, total staff full-time employees (FTE), total IT FTE, applications, and vendors used for applications
  - EMR Adoption Model™, which scores hospitals on eight stages to creating a paperless record environment

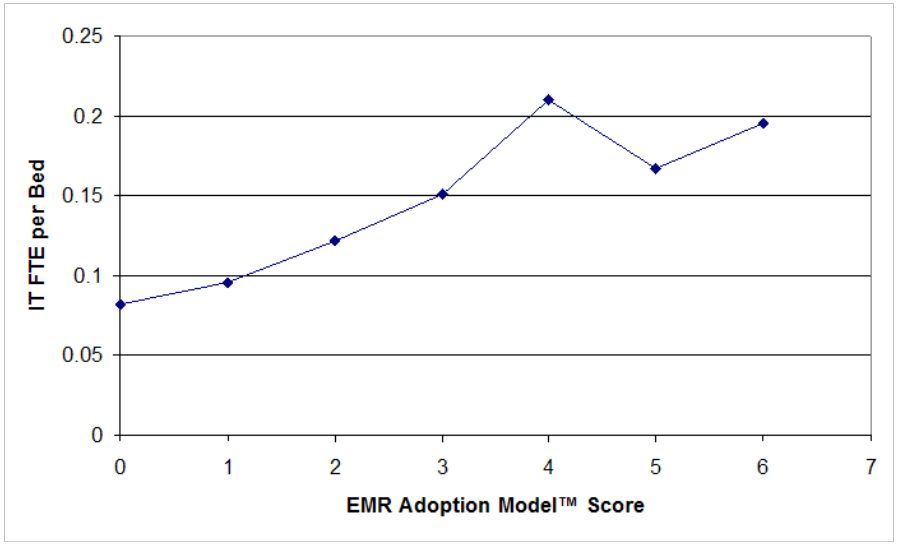
HIMSS Analytics EMR Adoption Model™



Stage 7	Medical record fully electronic; CDO able to contribute to EHR as byproduct of EMR
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS
Stage 5	Closed loop medication administration
Stage 4	CPOE, CDSS (clinical protocols)
Stage 3	Clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology
Stage 2	CDR, CMV, CDSS inference engine, may have Document Imaging
Stage 1	Ancillaries – Lab, Rad, Pharmacy – All Installed
Stage 0	All Three Ancillaries Not Installed

Results

- IT per non-IT staff approximately 1:60
- IT FTE per bed rises from stages 0 to 4
- Extrapolating to country as a whole
  - 108,390 IT staff at current adoption levels
  - Would increase to 149,174 if all stages <4 hospitals moved to stage 4
    - Sound bite: Need for >40,000 more!



Limitations of study:

- Extrapolations
- Data incomplete
- Does not include CI or HIM
- Current practices, not best practices

HIM Data from US Bureau of Labor Statistics

- From US Bureau of Labor Statistics occupational employment projections 2008-2018 (BLS, 2009)
  - Medical records and health information technicians (RHITs and coders)—about 172,500 employed now, increasing to 207,600 by 2018 (20% growth)
- Also employed as managers and in a variety of other occupations (RHIAs)

Clinical Informatics

- Individuals who bring skills at intersection of health care and IT (Hersh, 2008; Hersh, 2009)
  - Focus more on information than technology
  - Likely to lead meaningful use of HIT
- Estimates of need
  - One physician and nurse in each US hospital (approximately 10,000) (Safran, 2005)
  - About 13,000 in health care (Friedman, 2008) and 1,000 in public health (Friedman, 2007)
  - Growing role of chief medical informatics officer (CMIO) and other clinical informatics leaders (Leviss, 2006, Shaffer, 2009)
  - Limitation: Lack of Standard Occupational Code (SOC)—more important than we think (BLS, 2004)

ONC Estimates 51,000 Needed for HITECH Agenda In 12 Job Roles

- Mobile adoption support roles
  - Implementation support specialist*
  - Practice workflow and information management redesign specialist*
  - Clinician consultant*
  - Implementation manager*
- Permanent staff of health care delivery and public health sites
  - Technical/software support staff*
  - Trainer*
  - Clinician/public health leader†
  - Health information management and exchange specialist†
  - Health information privacy and security specialist†
- Health care and public health informaticians
  - Research and development scientist†
  - Programmers and software engineer†
  - Health IT sub-specialist†

(to be trained in *community colleges and † universities) (Monegain, 2009)

How Do We Build the Workforce?

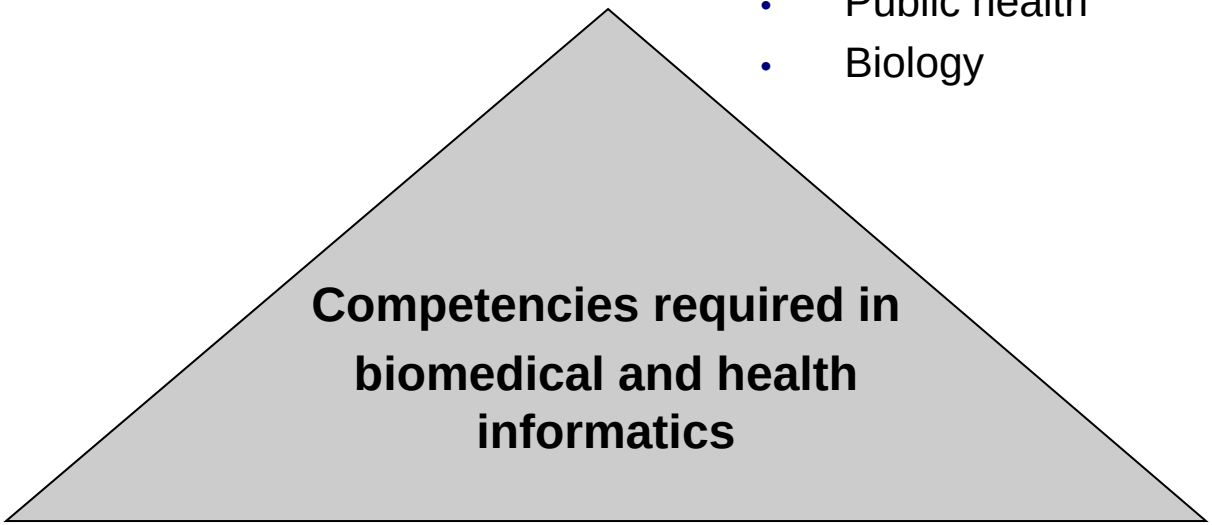
- Historically, most education at graduate level
  - Informatics is inherently multidisciplinary and there is no single job description or career pathway
- More information on programs on AMIA Web site
  - http://www.amia.org/informatics-academic-training-programs
- Commentary at
  - http://informaticsprofessor.blogspot.com
- Let's look at
  - Competencies
  - Career pathways
  - Oregon Health & Science University (OHSU) program experience as an example

What Competencies Should the (Informatics) Workforce Have?

(Hersh, 2009)

Health and biological sciences:

- Medicine, nursing, etc.
- Public health
- Biology



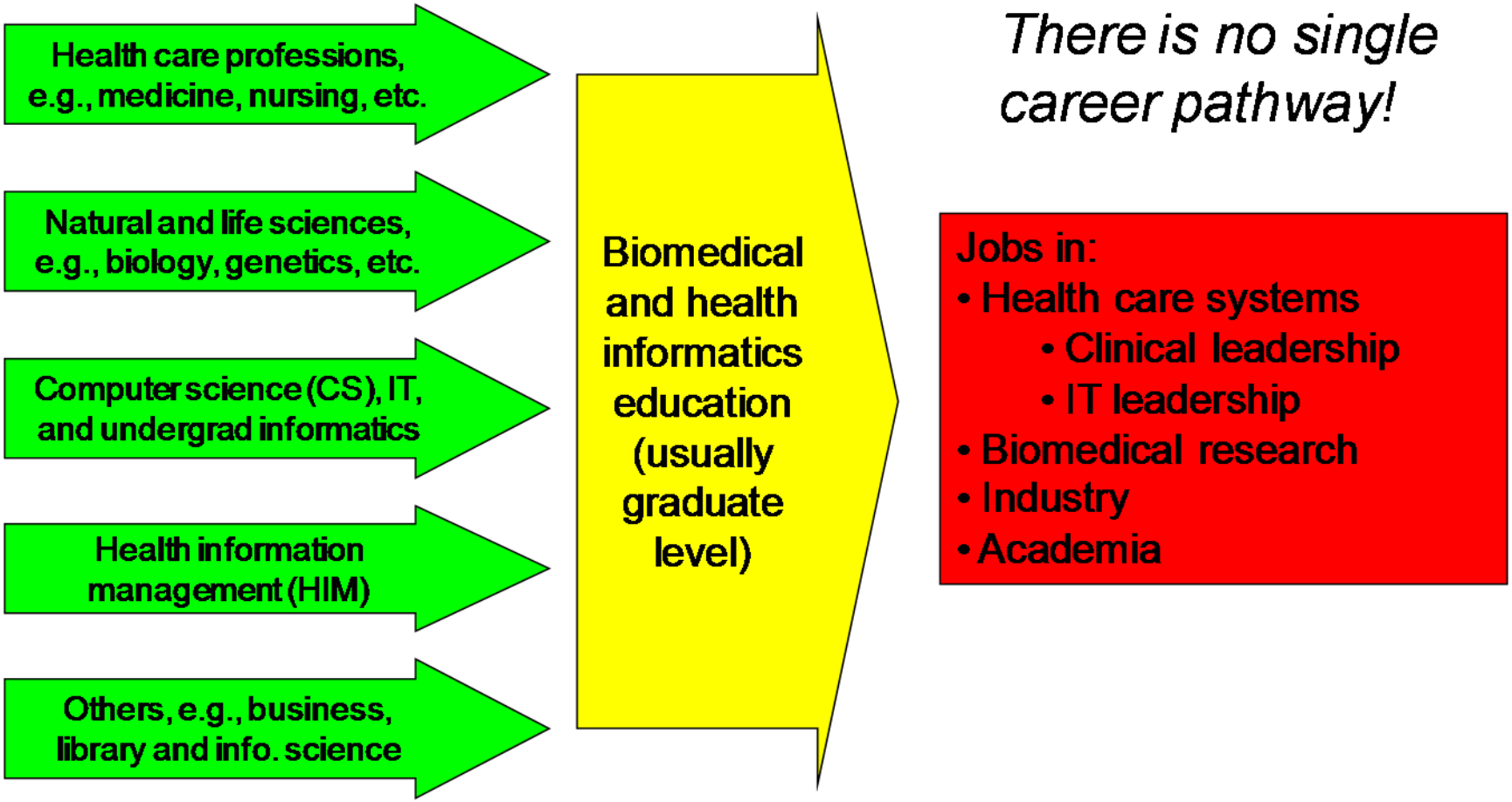
Management and social sciences:

- Business administration
- Human resources
- Organizational behavior

Computational and mathematical

- Computer science
- Information technology
- Statistics

Career Pathways Have Diverse Inputs and Outputs (Hersh, 2009)



Experience of OHSU Program

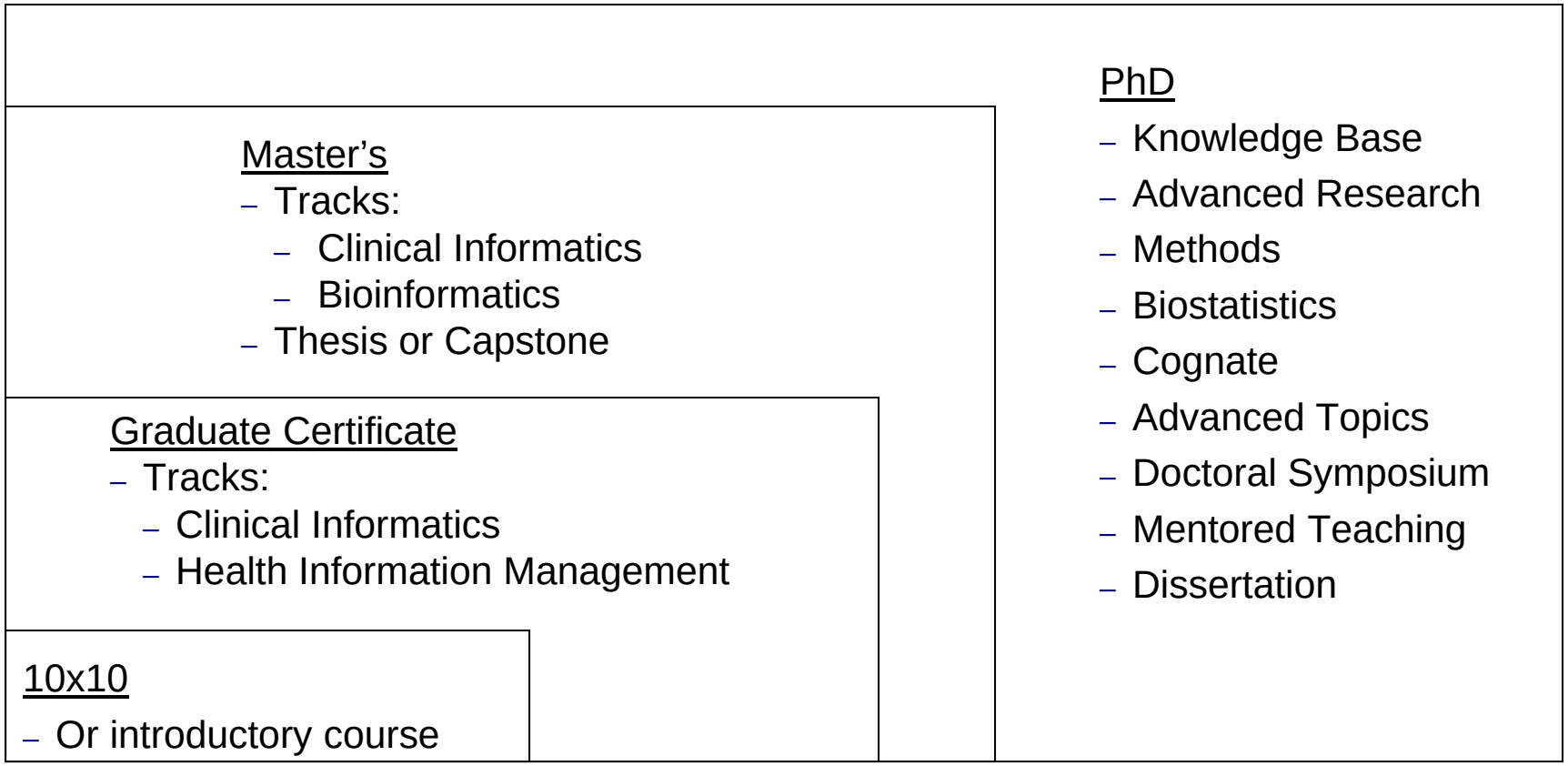
- http://www.ohsu.edu/dmice/
- Graduate-level programs at certificate, master's, and PhD levels
  - "Building block" approach allows courses to be carried forward to higher levels
- Two populations of students
  - First-career students more likely to be full-time, on-campus, and from variety of backgrounds
  - Career-changing students likely to be part-time, distance, mostly (though not exclusively) from health care professions

Many Career Changers Prefer “a la Carte” Learning

- This has led to the successful 10x10 (“ten by ten”) program
  - Started in 2005 as OHSU-AMIA partnership to train 10,000 health care professionals (one physician and one nurse) in 5,000 hospitals by 2010
  - Initial and subsequent OHSU offerings well-received (Hersh, 2007; Feldman, 2008)
    - For a demo, see http://www.billhersh.info/10x10.html
  - Total completing course
    - OHSU—815 (another 70 currently enrolled)
    - Eight other institutions—237

AMIA 10x10™
10,000 Trained by 2010

Overview of OHSU Graduate Programs



Where Do We Find These People To Hire?

- Job mines
  - HIT-related organizations, e.g., AMIA, HIMSS, AHIMA
  - Job sites, e.g., http://www.healthecareers.com/
  - General, e.g., http://www.Monster.com
- HITECH-funded training programs—first graduates in 2011
- Regional extension centers—partnering and developing their own training

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For More Information

- Bill Hersh
  - http://www.billhersh.info
- Informatics Professor blog
  - http://informaticsprofessor.blogspot.com
- OHSU Department of Medical Informatics & Clinical Epidemiology
  - http://www.ohsu.edu/dmice
  - http://www.ohsuscholarships.info
  - http://oninformatics.com
- What is biomedical and health informatics?
  - http://www.billhersh.info/whatis
- Office of the National Coordinator for Health IT
  - http://healthit.hhs.gov
- American Medical Informatics Association
  - http://www.amia.org

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- If you wish to be unmuted, choose the “raise hand” option to notify the host.

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- Immediately following the Webinar, an evaluation form will appear on your screen.
- We would very much like to get your feedback; your input is extremely important to us and will help to improve future sessions to ensure we provide the best possible assistance to your agency.
- If you do not have time to complete the evaluation immediately following the Webinar or would rather receive the form via e-mail, please contact Sarah Johnson at sajohnson@rti.org.
- As always, thank you!

Comments and Recommendations for Future Sessions

- Please send your comments and recommendations for future sessions to the project's e-mail address:

Medicaid-SCHIP-HIT@ahrq.hhs.gov

Technical Assistance for Health Information Technology and Health Information Exchange in Medicaid and CHIP

Project Information

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