

The AMIA 10×10 (“Ten by Ten”) Program: An International Approach to Building Informatics Capacity

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Outline

- History
- Current status
- Future directions



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History, circa 2005

- Charlie Safran (AMIA President):
 - We need more people trained in informatics, at least one physician and nurse in each of the 6000 US hospitals
 - Informatics program directors, How many can you train?
- Most program directors:
 - Can increase capacity 2-3 fold
- Bill Hersh:
 - All of them!
 - Could adapt existing introductory graduate course to train one physician and nurse in each hospital (~10,000) by 2010
 - Thus 10x10 (“ten by ten”) was born



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History (cont.)

- OHSU already had distance learning capacity
 - Initial online course, BMI 510 – Introduction to Biomedical Informatics, launched in 1999
 - Graduate Certificate (8 courses) started in 2000
 - Online master’s launched in 2002
- How much can online learning scale?
 - Nearly infinitely with proper lead time and enough faculty and staff
- Adaptation of introductory course
 - Mostly intact, with addition of concluding in-person session at AMIA meeting



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History (cont.)

- Quick launch in 2005
 - February – idea conceptualized
 - May – Memorandum of Understanding (MOU) established non-mutual exclusivity between AMIA and OHSU
 - OHSU maintained its course for other purposes; AMIA could partner with other universities to create other 10x10 courses
 - June – Program formally launched and registration opened
 - July – First 51 participants enrolled
 - November – 44 people completed course; many attended first in-person session
 - One of whom was Dr. Paula Otero, who translated course into Spanish for Latin American audience in 2006
- AMIA subsequently developed process for other institutions to apply to offer 10x10 courses



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Some offerings have been with partners

- Partners include
 - California Health Care Foundation – 2006
 - Scottsdale Institute – 2007
 - American College of Physicians – 2007
 - Society for Technology in Anesthesiology – 2008
 - Gateway Consulting (Singapore) – 8 offerings
 - American College of Emergency Physicians – 5 offerings
 - Academy for Nutrition and Dietetics – 4 offerings
 - King Saud University – Fall, 2013
- Curriculum with partners generally the same
 - In some instances, add co-faculty and/or additional content
 - US-centric nature challenging in international settings
- In general, in-person session held at partner's meeting or facility



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Course has been highly successful – OHSU enrollment

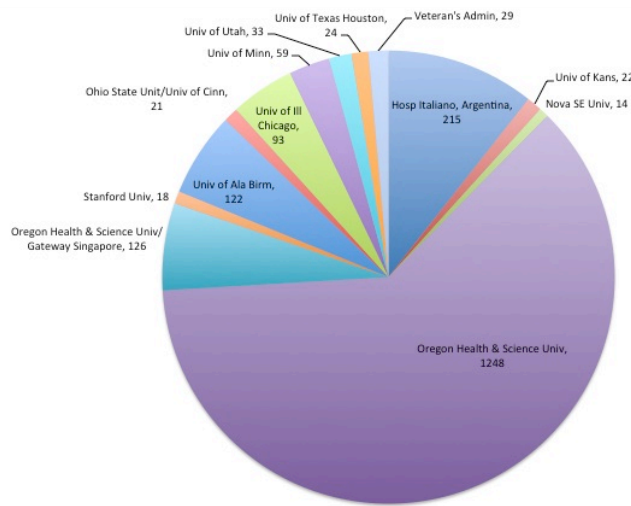


Total OHSU completions, as of August, 2013: 1510



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Overall enrollment – through 2012



HIBA numbers actually higher; these represent start of AMIA i10x10 program

Evaluations

- Hersh and Williamson, IJMI, 2007 – evaluation of first offering
- Feldman and Hersh, AMIA, 2008 – evaluation through end of 2006
- Otero, ..., Hersh, MIM, 2010 – description and evaluation of Spanish course
- Williamson, UVa master's thesis, 2011
- Shaffer, Gartner CMIO survey, 2012 – most common training of CMIO (19%) after “none” (29%)

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Teaching modalities

- Course has always been offered in two parts
 - 10-unit Web-based component, provided through on-line lectures, readings, interactive discussion, and self-assessment tests
 - Intensive one-day in-person session held in conjunction with an AMIA meeting, bringing participants together to integrate the material, allow presentation of course projects, and meet the instructor as well as other students in person
- OHSU 10x10 participants have option of attending the in-person session associated with any AMIA meeting within one year of their taking the class
- Session usually full day with exception of AMIA Annual Symposium where 1-2 tutorials may be taken for free

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Teaching modalities (cont.)

- Voice-over-PowerPoint lectures – key material is delivered using Flash
- Interactive threaded discussion – Students engage in discussion on important issues using the on-line threaded discussion forums
- Reading assignments – Course uses variety of readings made available to students
- Homework quizzes – Each of units accompanied by 10-question multiple-choice self-assessment that aims to have the student apply the knowledge from unit

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On-line part of course accessed via Sakai learning management system

The screenshot shows a web browser window displaying a presentation slide. The slide is titled "Overview of an IR system" and features a diagram with the following components and relationships:

- Queries** (left box) has an arrow pointing to **Metadata** (top box).
- Indexing** (right box) has an arrow pointing to **Metadata** (top box).
- Metadata** (top box) has a double-headed arrow connecting it to **Search engine** (bottom box).

The slide is part of a presentation titled "What's6" and is displayed in a Sakai learning management system interface. The interface includes a navigation menu on the left with items such as "Outline", "Thumbnails", "Notes", and "Search". The slide content includes a list of topics:

1. What is Biomedical and Health Informatics?
2. Applications of knowledge-based information
3. Information retrieval – Herath, 2009
4. Search systems are popular icons
5. Old new problems have emerged
6. Overview of an IR system
7. The intellectual tasks of IR
8. Some IR systems have advanced features, i
9. Growing role of IR and related areas in know
10. The life-cycle of knowledge-based informat
11. Some major IR challenges
12. IR challenges (cont.)
13. Applying EBM
14. Hierarchy of knowledge-based information

The presentation is being viewed in a browser window with the URL `file:///Users/hersh/Documents/Whats6/Content/Whats6/player.html`. The browser's address bar shows the URL, and the page title is "What's6". The browser's status bar at the bottom indicates "SLIDE 6 OF 20 PLAYING 01:35 / 01:35".

Topics – then and now

2005

1. Overview of Field; Biomedical Data
2. Biomedical Computing
3. Electronic Health Records
4. Decision Support Systems: Evolution and Current Approaches
5. Standards; Privacy, Confidentiality, and Security
6. Evidence-Based Medicine and Medical Decision Making
7. Information Retrieval and Digital Libraries
8. Bioinformatics
9. Imaging Informatics and Telemedicine
10. Other Informatics: Nursing, Public Health, and Consumer Health
11. Organizational and Management Issues in Informatics

2013

1. Overview of Field and Problems Motivating It
2. Biomedical Computing
3. Electronic and Personal Health Records (EHR, PHR)
4. Standards and Interoperability
5. Meaningful Use of the EHR
6. EHR Implementation and Evaluation
7. Protection and Analytical Use of Data
8. Information Retrieval (Search)
9. Imaging Informatics and Telemedicine
10. Translational Bioinformatics and Personalized Medicine

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Future directions for OHSU 10x10

- Continues to attract enrollment
 - Offering starting last month attracted 60 students
- Expansion to other partners
 - Including international
- A viable approach for *introducing* informatics
 - Not a full course of study

AMIA 10x10™
10,000 Trained by 2010



10x10™
Training Next-Generation Informatics Leaders

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