

Department of Medical Informatics & Clinical Epidemiology (DMICE)

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What is DMICE?

- One of 27 departments in OHSU School of Medicine
 - Engages in wide collaboration with other departments, schools, and beyond OHSU
- Mission is to provide leadership, discovery, and dissemination of knowledge in the areas of biomedical informatics and clinical epidemiology, fulfilled through programs of
 - Research
 - Education
 - Service
 - Collaboration



Substantial breadth of research expertise

Biomedical Informatics

- Re-use of clinical data
 - Care coordination and predictive analytics – Dorr, Cohen
 - Text and data mining – Cohen
 - Applying IR and NLP to EHR data – Hersh, Wu
 - Data quality – Weiskopf
- EHR simulation for safety – Gold, Mohan
- Imaging informatics – Chiang, Song
- Patient shared decision-making – Eden
- People and organizational issues – Ash
- Bioinformatics and computational biology – McWeeney, Boudreau, Wilmot, Zheng, Mooney, Karstens, Laderas
- Ontologies – Haendel, Vasilevsky

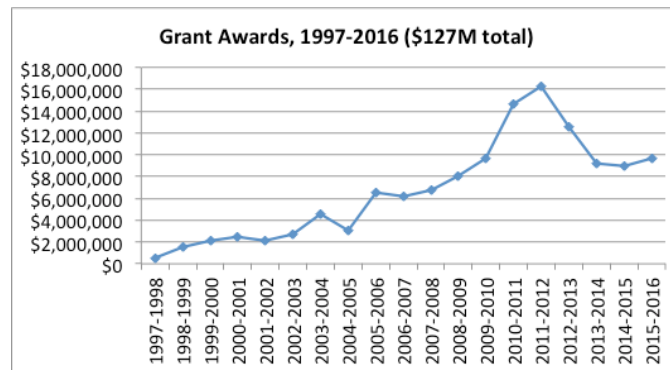
Clinical Epidemiology

- Systematic reviews and meta-analysis
 - AHRQ EPC – Chou, McDonagh, Cantor, Totten, Nelson
 - US Cochrane Center West – Helfand
- Etiology and epidemiology of congenital heart disease – Morris
- Mammography screening – Nelson
- Evidence policy and patient stories – Helfand

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Impactful research by all metrics



Publications in leading journals (number from 2012-2016):

- Annals of Internal Medicine – 34
- JAMA – 4
- PLoS ONE – 3
- Plus many specific to our fields, e.g., JAMIA (9) and Journal of Clinical Epidemiology (6)

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Biomedical Informatics Graduate Program

- Overall goal of program is to train future professionals, researchers, and leaders in area of biomedical and health informatics
- Mostly tuition-supported but with two key fellowship programs
 - National Library of Medicine Training Grant – T15 training grant funded by NIH since 1992
 - ACGME-accredited Clinical Informatics Fellowship – funding by OHSU, Portland VA Medical Center, and OCHIN

Degree/Certificate \ Track	PhD	Master of Science	Master of Biomedical Informatics	Graduate Certificate
Clinical Informatics	On-campus	On-campus On-line	On-campus On-line	On-campus On-line
Bioinformatics and Computational Biology	On-campus	On-campus		

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Many prominent alumni



Track	Clinical Informatics*	Bioinformatics & Computational Biology	Total
Certificate/Degree	406	N/A	406
Graduate Certificate			
Master of Biomedical Informatics**	190	8	198
Master of Science	72	16	88
PhD	18	6	24
Total	686	30	716

Number of students receiving degrees and certificates: 653

* includes former Health Information Management Track
** includes former Master of Medical Informatics degree

International students from: Argentina, Singapore, Thailand, Egypt, Israel, Saudi Arabia, Zimbabwe, China, and other countries

Some notable alumni

- Peter Embi, MD, MS – President and CEO, Regenstrief Institute
- Adam Wright, PhD – Associate Professor, Harvard Medical School
- Jayashree Kalpathy-Cramer, PhD – Assistant Professor, Harvard Medical School
- Several DMICE faculty: Joan Ash, Paul Gorman, Aaron Cohen, Blake Lesselroth, Michael Mooney, Lisa Karstens, Ted Laderas

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Many others reached by DMICE educational programs

- AMIA 10x10 (Hersh) – ~2200
- Human Investigations Program (HIP)/Master of Clinical Research (Morris) – ~800
- Care Management Plus (Dorr) – ~1100
- ONC Health IT Update training (Hersh, Mohan, and Dorr) – ~2700 registered
- Online courses used by 6 other ACGME-accredited Clinical Informatics Fellowships

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Service

- Operational informatics – mostly through Informatics Discovery Lab (IDL, Cohen)
 - Knight Cardiovascular Institute – data analytics capability (Cohen, Weiskopf)
 - Knight Cancer Institute – NLP implementation (Cohen, Edinger)
 - Clinical Informatics Department (Lieberman, Kassakian)
 - OCTRI Biomedical Informatics Program (Schuff, McWeeney)
- SOM Dean's Office
 - Cindy Morris, Assistant Dean for Admissions
 - Paul Gorman, Assistant Dean for Rural Medical Education
 - Tom Yackel, Associate Dean for Clinical Practice
- Leadership in Data Science Initiative proposal

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Collaboration

- Research – proposals submitted (2012-2016) in collaboration with
 - 13 clinical departments and divisions
 - 4 basic science departments
 - 11 centers, schools, and other units at OHSU
- Teaching – in many programs beyond DMICE
 - MD curriculum – including AMA Accelerating Change in Medical Education grant
 - SOM Graduate Program – including CreativeIDEAS initiative
 - Healthcare MBA Program
- Service – Clinical Informatics fellows involved in 18 projects serving 11 units

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Success would not be possible without leaders and mentors



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