

# What's happening at Duke and other thoughts

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Chair Emeritus HL7, Chair HL7 USA, Chair US Realm



Nothing to disclose

# Duke Clinical Research Institute

- DCRI is the largest academic clinical research organization in the world. The DCRI has conducted studies at more than 37,000 sites in 65 countries, enrolled more than 1.2 million people into clinical trials and produced more than 10,000 publications in peer-reviewed journals.
- 55% of funding comes from industry; 45% comes from government



# Duke Clinical Research Institute

- DCRI research spans multiple disciplines, from pediatrics to geriatrics, primary care to subspecialty medicine, and genomics to proteomics. The DCRI also is home to the Duke Databank for Cardiovascular Diseases, the largest and oldest institutional cardiovascular database in the world, which continues to inform clinical decision-making 40 years after its founding.



# Coordinating Center (with Harvard)

- NIH Collaboratory
  - Living Textbook of Medicine
- PCORNet
  - Common Data Model
- CDRN MidSouth - participant



# Duke University School of Nursing

- Duke SON advances nursing science in issues of global importance and fosters the scholarly practice of nursing. The school offers masters, PhD and doctor of nursing practice degrees, as well as an accelerated bachelor of science in nursing degree to students who have previously graduated from college. Duke University School of Nursing received more than \$4.8 million in research funding from the from the National Institutes of Health (NIH) in 2015, making it 9th among nursing schools engaged in NIH-funded research.

- Ranked #1 in the nation by *U.S. News & World Report* for its 2018 Best Nursing School rankings, and in 2016 won the Best Nursing School for Men in Nursing award from the American Assembly for Men in Nursing.



# Duke Global Health Institute

- Catalyzing and conducting innovative research that responds to the changing global burden of disease and influences policy.
- The DGHI works to reduce health disparities in our local community and worldwide. Recognizing that many global health problems stem from economic, social and environmental inequalities, DGHI brings together interdisciplinary teams to solve complex health problems and train the next generation of global health leaders. In 2015, 124 students and scholars performed field work in 25 countries around the world, and 152 active externally funded grants were awarded to DGHI faculty for a total of \$34 million.
- DGHI has developed a dynamic research agenda that reflects the changing global burden of disease and catalyzes interdisciplinary and innovative work among investigators across Duke University, Duke University Medical Center, and DGHI's international partners.
- DGHI faculty are leading more than 215 global health research projects in more than 40 countries. The Institute's research agenda transcends traditional disciplinary and geographic boundaries and our faculty work collaboratively to leverage and build upon the University's existing strengths and institutional priorities.



# DGHI Research Priorities

- Cardiovascular Disease and Obesity
- Emerging Infectious Diseases
- Global Cancer
- Global Environmental Health
- Global Mental Health
- Health Systems Strengthening
- Mental, Adolescent, and Child Health



# Duke Center for Population Health

The Department of Population Health Sciences was first launched as a center in February 2016 with the goal identifying determinants of health and the most effective means for improving health. Designated as a department July 1, 2017, This multi-disciplinary unit will comprise faculty members from a variety of disciplines including epidemiology, health services research and policy, health economics, health measurement and behavior, and implementation science who share an interest in answering complex questions about the drivers of health in populations. The department will foster active collaborations with the Duke Margolis Center for Health Policy, the Duke Global Health Institute, the Center for Community and Population Health Improvement, the Duke Clinical Research Institute, the Duke University Health System, and other entities engaged in the science of population health.



# Other Population Health

- Research Together – DCRI + others
- Community and Family Medicine
  - Practical Playbook
    - Collaboration of de Beaumont, CFM, and CDC
  - Community Engagement
    - LGBT Community



# Duke-Margolis Center for Health Policy

The mission of Duke University's Robert J. Margolis, MD, Center for Health Policy is to improve health and the value of health care by developing and implementing evidence-based policy solutions locally, nationally, and globally.

Duke-Margolis brings together capabilities that generate and analyze evidence across the spectrum of policy to practice, supporting the triple aim of health care – improving the experience of care, the health of populations and reducing the per capita cost. This requires broad multidisciplinary capabilities that few institutions can bring together, and is fueled by Duke University's entrepreneurial culture.

The Center integrates the expertise of Duke University scholars and academic health system with an established team experienced in convening stakeholders and conducting policy analysis. The Center is a catalyst, linking Duke's world-class research and health care with policymakers and policy analysts in the public and private sector at the local, national and global levels. Disciplines involved in Center include business, biomedical research, clinical care, public policy, population health, global health, law, the social sciences, and the humanities. Mark McClellan, MD, PhD is the director of the Duke-Margolis Center for Health Policy and is responsible for overall strategy and development of the Center. Dr. McClellan also leads a significant research portfolio.



# Duke Forge

- The Forge is Duke University's new center for health data science. Based in Duke University School of Medicine and led by Vice Chancellor for Health Data Science Dr. Robert Califf, the Forge has the ambitious goal of playing a significant role in providing actionable insights and working with the community within the university, the health system, and beyond to improve health outcomes. Dr. Califf is joined by a diverse team of scholars, clinicians, and experts spanning multiple disciplines who represent Duke's campus-wide interest in actionable health data science. The Forge is a symbol of creation through transformation—a transformation that entails hard, sweaty work but results in lasting tools capable of improving life and solving big problems.
- The Forge will apply its heat, contact, teamwork, and transformative potential to conscientiously *free the data to enable actionable insights and measurements that will guide implementation efforts across health systems.*
- The Forge draws on a tradition of cross-institutional collaboration at Duke, with faculty and staff who are well-versed in balancing both leading and supportive roles in research networks, clinical trials, and myriad other collaborative ventures.



# Master of Management in Clinical Informatics

- The MMCi program is the only interdisciplinary management program of its kind in the United States - leveraging Duke's world-renowned track record in medicine, business, and health informatics. Through access to the finest faculty and resources across health care, IT, and management education, students will acquire the knowledge and skills to merge technology with research and patient care and help improve human health.



# Interdisciplinary Data Science MS

- Data Science Initiative
- Added Informatics track



# Duke-NUS Medical School

- Established in 2005 as Singapore's first US-style graduate-entry medical school. Based on Duke University School of Medicine's curriculum, graduates go on to play a critical role in transforming medicine and improving patient care. As of 2015, the Duke-NUS Medical School has received more than S\$320 million in research funding, established more than 90 research collaborations and partnerships and has been granted four National Research Foundation Fellowships.
- The school's curriculum is patterned after that of the Duke University School of Medicine. The school is part of the National University of Singapore system, but unique in that it is overseen by a Governing Board, including a Duke representative who has veto power over any academic decision made by the Board.



# Duke Kunshan University

- Through Duke Kunshan University's inquiry-based methods of instruction, students will become comfortable approaching complex problems and using their acquired knowledge and experiences to engage deeply with the world, working to find creative and meaningful solutions to modern challenges.
- Duke Kunshan's graduate degree programs and undergraduate semester programs will challenge students to understand the broader context of their fields of study and prepare them for challenging careers in a global setting. Duke Kunshan's graduate and professional degree programs lead to Duke University degrees. The Duke Kunshan Undergraduate Global Learning Semester program awards Duke University course credits.
- English is the official language of instruction at Duke Kunshan University. Language instruction will be available for students who wish to learn Chinese.
- First class now being admitted.



# 3D Printing at Duke

You can try 3D printing at Duke for a project, research, or just for fun. OIT lets you use digital fabrication tools focusing on 3D printing, laser and CNC milling (ShopBot). Come visit the printer farm consisting of 50+ 3D printers located in the new Technology Engagement Center (TEC) in the Telcom Building on west campus. The 3D print lab is staffed daily to assist you with print jobs. Additionally, you can have 24-hour remote access to Duke's 3D print management system through the open-platform, cloud-based 3D printer OS program. Any member of the Duke community can use this software to manage their print jobs, including remote printing.

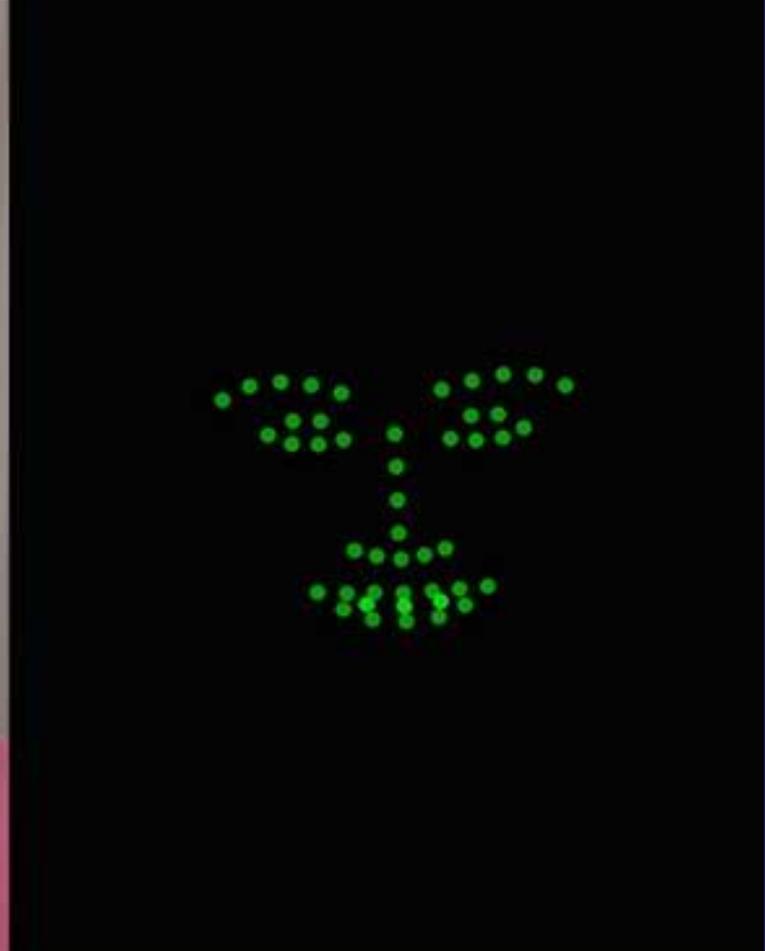


# 3D Printing

- New organs
- New drugs
- Version of teleportation



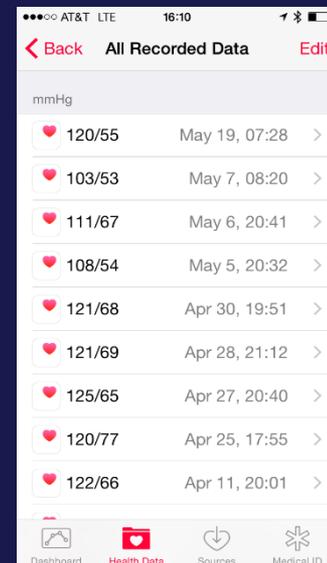
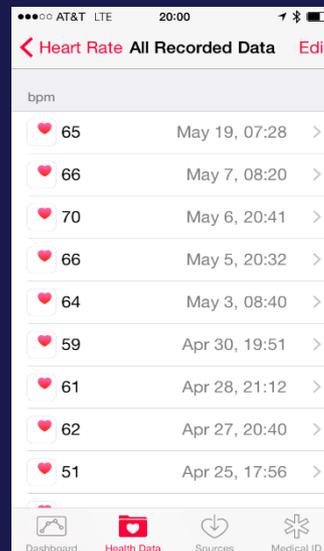
# Autism iApp



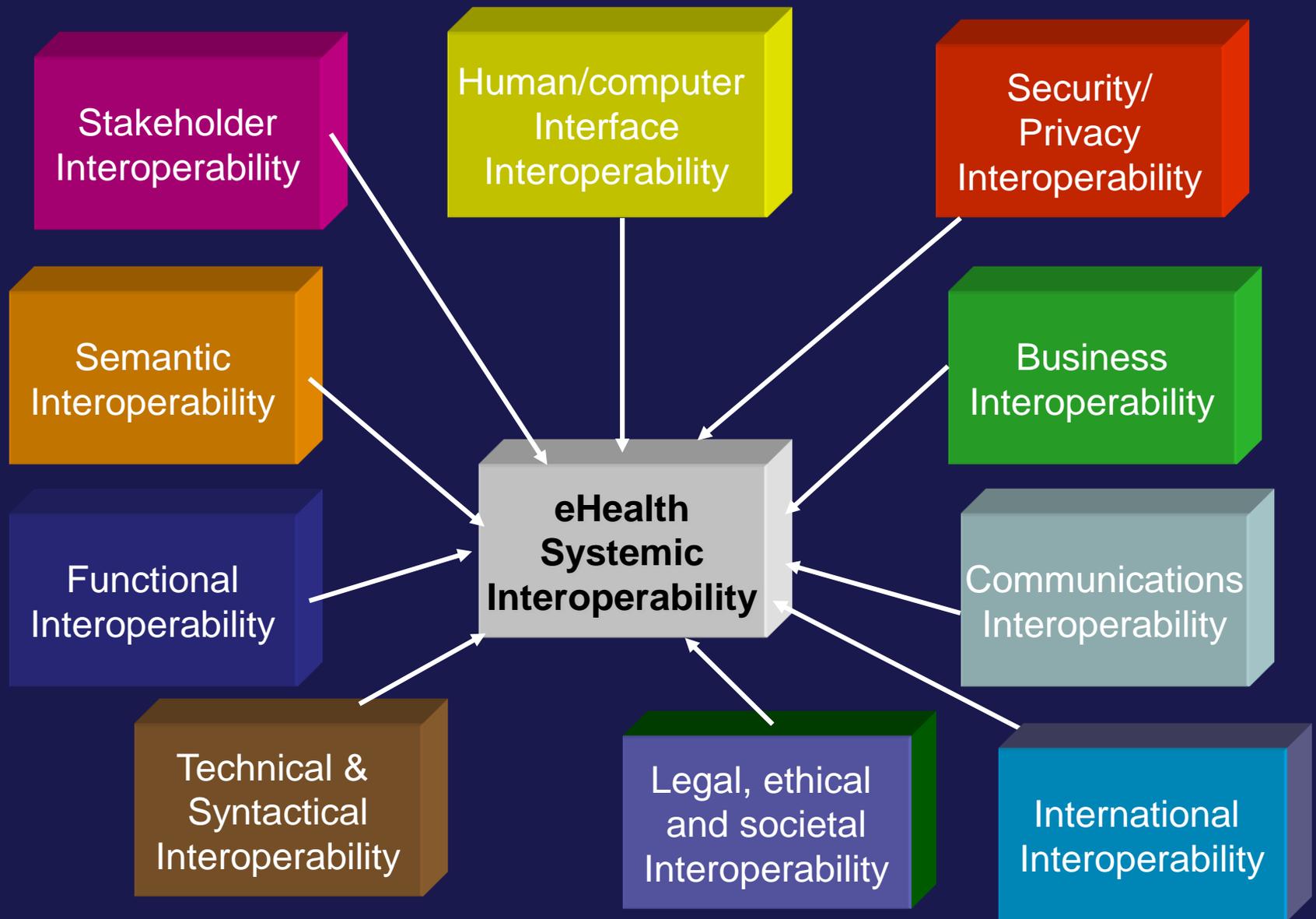
# The Age of the Patient



- Patient reported outcome
- Wearable sensors
- Mobile devices



All impact patient safety and quality.



# Next Generation EHR

- Store and Retrieve only



# New Model for HL7

- Argonaut
- Da Vinci
- Transcelerate – Bio Pharma
- VA Lighthouse

