

Katherine Choi, MD

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EDUCATION

2011 – 2016

Perelman School of Medicine at the University of Pennsylvania

Doctor of Medicine Degree

Honors: Weaver Scholarship - Full merit scholarship

Related coursework: Human Systems Engineering, Medical Informatics, Science of Value-based Healthcare

2007 – 2011

Massachusetts Institute of Technology

Bachelor of Science Degree in Biological Engineering

Honors: Tau Beta Pi Engineering Honor Society (top 1/8 of class); Robert C. Byrd Honors Scholarship. GPA: 4.9/5.0

WORK EXPERIENCE

Penn Medicine Center for Health Care Innovation, Department of Medicine

2019 – Present

Director, Practice Transformation

- Led care delivery and practice innovations for 1500+ faculty and staff across 12 specialty divisions, generating \$350k in downstream revenue in first year.
- Led development, scale, and operationalization of health system's enterprise telemedicine platform within the first month of the pandemic, supporting 30k ambulatory telemedicine visits weekly and 5k unique users/day.
- Co-led creation and on-site operations of city's first insurance-blind covid-19 drive-thru and walk-thru testing site.
- Led the design and development of a specialty-specific physician chart review app to streamline preparation of clinic notes, reducing clicks by 44% and cognitive burden by 67%.
- Led the health system's first e-consult program to 8 specialties, avoiding unnecessary visits in 36% of referrals.

2016 – 2019

Senior Clinical Innovation Manager

- Decreased duration on ventilator by half a day for patients in the medical ICU, shortened hospital length of stay by 1.5 days, and saved \$1-2M annually.
- Reduced readmissions by 50% for high risk superutilizers by enabling cohort-based collaborative care.
- Decreased missed doses of critical antibiotics and anti-epileptics by 33%.

PUBLICATIONS & ENGAGEMENTS

Sept 2020, Office of the National Coordinator for Health Information Technology (ONC)

"Advancing Health Care Using Automation: Opportunities with Modern Computing." Invite-only Policy Workshop.

June 2020, Harvard Business Review

"Lessons from Penn Medicine's Crisis Response: Five Crucial Takeaways."

Katherine Choi MD, Srinath Adusumalli MD MSc, Kathleen Lee MD, Roy Rosin MBA, David Asch MD MBA.

Jan 2020, Department of Medicine Grand Rounds

"Practice Transformation to Support Faculty Wellbeing". Speaker.

June 2018, FastCo Design

"Why Doctors Should Subscribe to Patients."

Katherine Choi MD, David Do MD, Yevgeniy Gitelman MD, David Asch MD MBA.

May 2018, New England Journal of Medicine

"Subscribing to Your Patients — Reimagining the Future of Electronic Health Records."

Katherine Choi MD, Yevgeniy Gitelman MD, David Asch MD MBA.

May 2018, NPR, Science Friday

"Bringing Electronic Health Records into the Modern Age". Live on-air radio interview with Ira Flatow.

May 2018, American Medical Informatics Association Conference

Oral Presentation: "Increasing Efficiency and Enabling Innovation by Implementing Secure Text Messaging Application." **Katherine Choi MD**, Neha Patel MD.

June 2016, American Journal of Emergency Medicine

"Sex Differences in ST-elevation myocardial infarction activation for patients presenting to the ED."

Katherine Choi MD, Frances S. Shofer PhD, Angela M Mills MD.

Jan 2010, Journal of the American Chemical Society

"Virus-Templated Assembly of Porphyrins into Light-Harvesting Nanoantennae."

Yoon Sung Nam, Taeho Shin, Heechul Park, Andrew Magyar, **Katherine Choi**, Georg Fantner, Keith Nelson, Angela Belcher.

RESEARCH & ACTIVITIES

2014 – 2015

Kynett-FOCUS Fellowship for Cardiovascular Research

- Demonstrated significantly shorter median time from door to cardiac catheterization lab activations for male patients compared to female patients in retrospective cohort study of 400 patients.
- First-authored publication in American Journal of Emergency Medicine.

July 2014

IMPACT Teaching Service, Community Health Worker Program

- Completed evidence-based health worker training and conducted home visits and improved access for patients in the five poorest zip codes of West Philadelphia.

June – Aug 2012

NIDDK Research Fellowship, Joslin Diabetes Center, Harvard Medical School

- Studied the potential mechanistic role of adiponectin in salsalate's lowering effect on HbA1c levels.

Jan 2008 – Aug 2010

Research Opportunities Program, Angela Belcher Lab, Massachusetts Institute of Technology

- Designed porphyrin nanowire catalysts using M13 bacteriophage to create an electrochemical device.
- Co-authored publication in Journal of the American Chemical Society.

Aug 2010

MIT 20.309 Bioinstrumentation

- Built a bright-field/fluorescent microscope from basic parts (screws, lenses, breadboard etc), with a final resolution of 590 nm.

June – Aug 2010

MIT International Science and Technology Initiatives, Genopole Lab, Evry, France

- Constructed library of human miRNA-repressing "sponge" constructs for introduction into Ras-mutated melanoma cell lines via lentivirus transduction, in order to find viable miRNA targets to limit metastasis. Began control trials using hsa-miR-34a,192,215.

Aug – Dec 2008

MIT Department of Physics, 8.01 Classical Mechanics Teaching Assistant

SKILLS & INTERESTS

Coding/Design: Proficiency in HTML/CSS, Sketch. Experience with React, Meteor, Ruby/Rails, Swift, D3, MATLAB.

Interests: Delivering bananagrams, hiking, being last violinist in the Main Line Symphony Orchestra.