Role of AI in Health Care

Dr. Brian Anderson
Coalition for Health AI, Inc. | Boston

Building AI that Serves All of Us

CHAI is setting the best practice frameworks for AI safety and reliability in Health
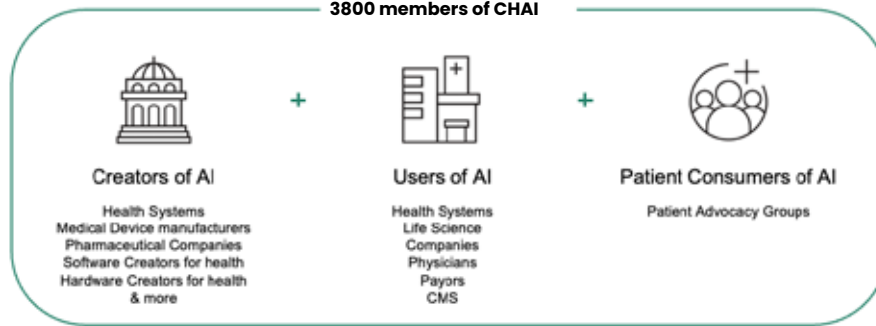
CHAI, the Coalition for Health AI, is committed to setting the best practice frameworks for the trustworthy and responsible implementation of AI in health.

By bringing together a coalition of patient-community advocates, technology companies start-ups, public sector organizations, medical device manufacturers, payors and healthcare organizations, we will develop a consensus set of frameworks for Responsible Health AI.
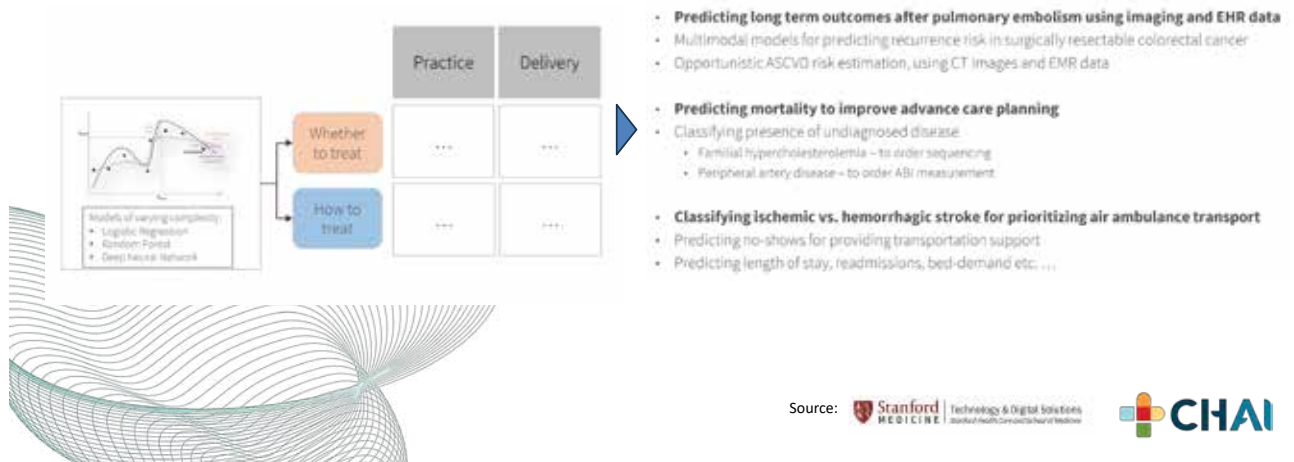
CHAI is bringing together a diverse community of creators, users and beneficiaries to develop consensus-driven products
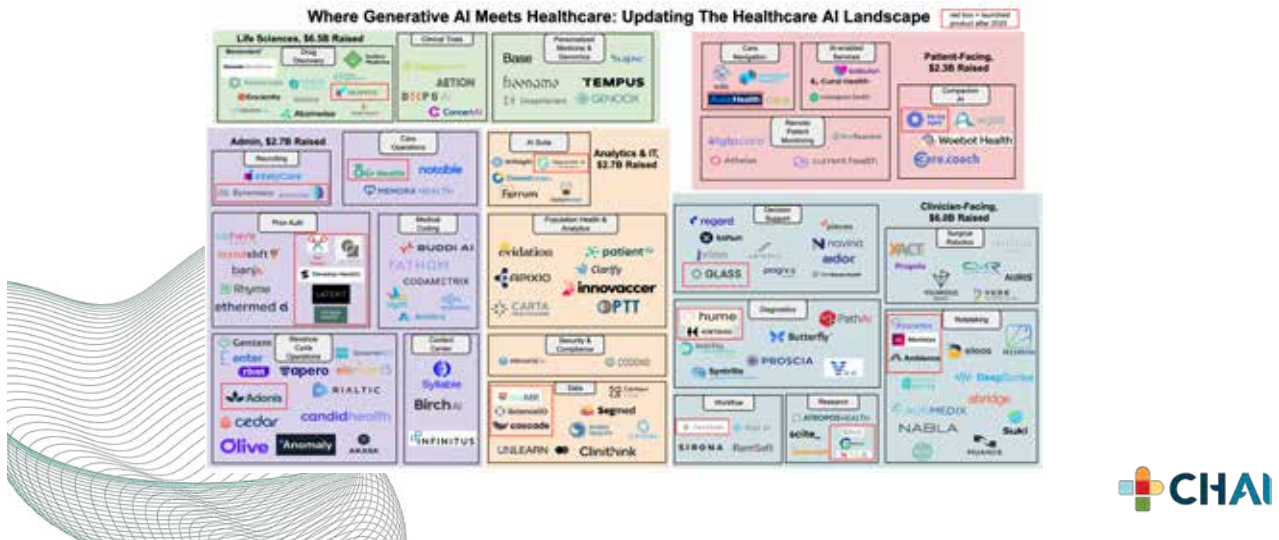
3800 members of CHAI

Creators of AI
Health Systems
Medical Device manufacturers
Pharmaceutical Companies
Software Creators for health
Hardware Creators for health
& more

+

Users of AI
Health Systems
Life Science
Companies
Physicians
Payors
CMS

+

Patient Consumers of AI
Patient Advocacy Groups

CHAI

Predictive AI helps us risk stratify and make recommendations to improve the practice or delivery of care with responsive action

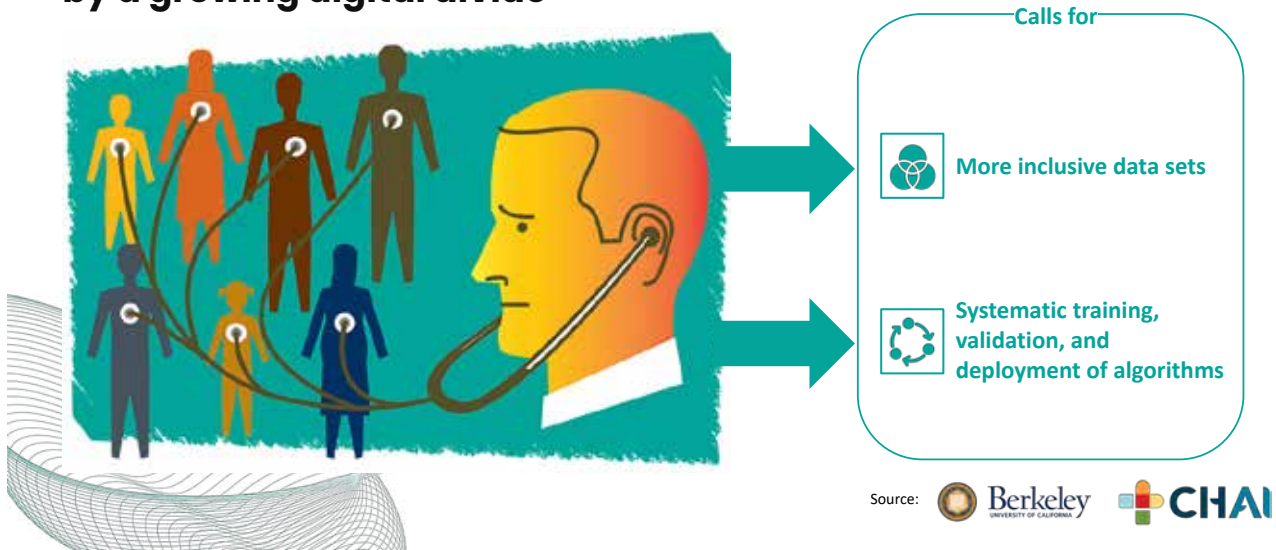|	Practice	Delivery
Whether to treat	···	···
How to treat	···	···

Models of varying complexity
- Logistic Regression
- Random Forest
- Deep Neural Network

- Predicting long term outcomes after pulmonary embolism using imaging and EHR data
- Multimodal models for predicting recurrence risk in surgically resectable colorectal cancer
- Opportunistic ASCVD risk estimation, using CT images and EMR data

- **Predicting mortality to improve advance care planning**
- Classifying presence of undiagnosed disease
  - Familial hypercholesterolemia – to order sequencing
  - Peripheral artery disease – to order ABI measurement

- **Classifying ischemic vs. hemorrhagic stroke for prioritizing air ambulance transport**
- Predicting no-shows for providing transportation support
- Predicting length of stay, readmissions, bed-demand etc. ...

Source: **Stanford** MEDICINE | Technology & Digital Solutions

CHAI

And we are seeing the Generative AI Landscape evolving rapidly to meet consumer demand

The track record of new technologies in healthcare is one marked by a growing digital divide

We believe in the democratization of deployment through equitable and adequate testing and evaluation

"Technological solutions tend to rise into society's penthouses, while epidemics seep into its cracks."
- Ed Yong, *The Atlantic*

CHAI

Meanwhile, the regulatory landscape is similarly changing rapidly

FDA Issues Final **Guidance** on Clinical Decision Support Software and Software as a Medical Device

NEW PROPOSED RULE ONC

Health Data, Technology, and Interoperability: Patient Engagement, Information Sharing, and Public Health Interoperability (HTI-2)

Learn more at HealthIT.gov/ProposedRule

Artificial intelligence assurance labs are coming, HHS chief AI officer says

Office for Civil Rights

ISSUE BRIEF

The Biden Administration's Final Rule on Section 1557 Non-Discrimination Regulations Under the ACA
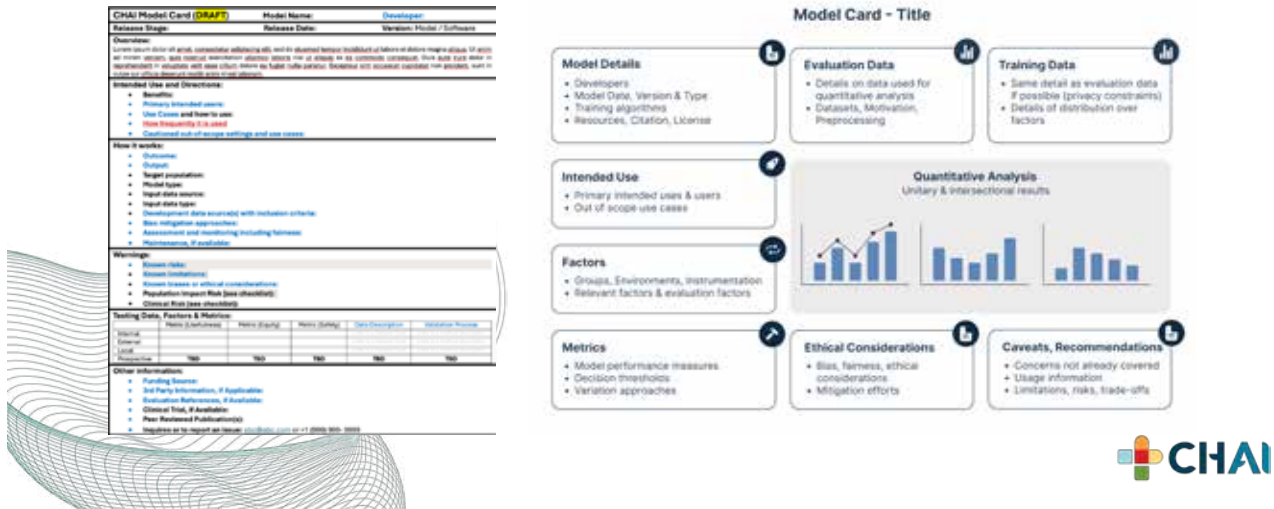
CHAI

CHAI is supporting the development of a nationwide network of Assurance Labs with its certification framework

A Federated Network of Labs – All Models are Local

And Assurance Labs will be issuing model report cards that will elucidate model performance and workflow integration

An Urgent Need to Develop Consensus Guidelines for GenAI

The Road Ahead

We need:

- **Direction and input from our members**

- **Feedback and engagement on our products**

Get involved at www.chai.org

CHAI

Faculty

Dr. Brian Anderson is president and CEO of the Coalition for Health AI, Inc. in Boston, a nonprofit with more than 2,500 member organizations that leads the development of a set of consensus technical guidelines and frameworks for the development of Responsible AI in Health and certification of a network Quality Assurance Labs in Health AI. He is a former pediatric physician and has operational, programmatic and strategic leadership experience in complex organizations. Dr. Anderson led large teams and coalitions of organizations that worked closely with the President Biden Cancer Moonshot, and with the White House COVID Task Force. He was a leading national voice in digital health technologies, including responsible AI in health, and real-world data-driven approaches to improve and advance research and scientific insight. As a Chief Digital Health Officer for MITRE, Dr. Anderson co-founded the Coalition for Health AI, and he led MITRE's work partnering with the White House COVID Task Force and Operation Warp Speed. He also was nominated to serve on multiple ONC and other government task forces, and he has been an international keynote speaker on responsible AI, clinical trials and evidence-generation for the FDA, ONC and National Academies of Medicine. Dr. Anderson received his B.A. magna cum laude from Harvard College in 2000 and his Medical Degree with honors from Harvard Medical School in 2006, and he completed his pediatrict internship and residency in 2009 at Massachusetts General Hospital for Children.