



NATIONAL ACADEMY OF MEDICINE

LEADERSHIP CONSORTIUM FOR A VALUE & SCIENCE-DRIVEN HEALTH SYSTEM

❖
NAM DIGITAL LEARNING COLLABORATIVE

❖
NOVEMBER 30, 2017
NATIONAL ACADEMY OF SCIENCES BUILDING
ROOM 120
2101 CONSTITUTION AVE NW
WASHINGTON, DC 20418

Meeting Focus: *Artificial Intelligence and the future of continuous health learning and improvement*

Meeting objectives:

1. *Aim:* Consider the nature, elements, applications, state of play, and implications of Artificial Intelligence (AI) and Machine Learning (ML) in health and health care, and ways in the National Academy of Medicine might enhance collaborative progress.
2. *AI/ML opportunities:* Identify and discuss areas within health and health care for which AI and ML have already shown promise. Consider implications for other applications.
3. *Barriers:* Identify and discuss the practical challenges to the advancement and application of AI and ML, including those related to data integration, ethical/regulatory implications, clinician acceptance, workforce development, and business case considerations.

Outcomes Intended: Establishment of a charge and charter for an ongoing NAM Collaborative Working Group for information sharing and facilitating the application of AI and ML for better health.

8:30 am **Coffee and light breakfast available**

9:00 am **Welcome, introductions, and meeting overview**

Welcome from the National Academy of Medicine
Michael McGinnis, National Academy of Medicine

Opening remarks and meeting overview by Collaborative Co-Chairs
Jonathan Perlin, Hospital Corporation of America Inc.
Reed Tuckson, Tuckson Health Connections, LLC

9:30 am **Artificial Intelligence and Machine Learning: terms and definitions**

A “big picture” presentation on the AI/ML field and initial reflections on health applications.

Carla Brodley, Northeastern University

Q&A and Open Discussion

10:15 am	Break
----------	--------------

10:30 am	Strategies to enhance data integration to advance AI/ML
----------	--

This session will focus on the role of data integration and sharing in enhancing the capabilities of machine learning algorithms to improve health and health care.

Noel Southall, National Institutes of Health

Douglas McNair, Cerner Corporation

Jon Perlin & Edmund Jackson, Hospital Corporation of America Inc.

James Fackler, Johns Hopkins Medicine

Q&A and Open Discussion

11:45 am	Break
----------	--------------

Participants will pick up lunch.

12:00 pm	AI/ML opportunities in health and health care
----------	--

The lunch session will focus on the areas of health care where machine learning has the potential to improve patient outcomes, including opportunities for better, faster, cheaper diagnosis, treatment, prevention, self and family care, service linkages, and etiologic insights.

Paul Bleicher, OptumLabs

Steve Fihn, University of Washington

Daniel Fabbri, Vanderbilt University

Tim Estes, Digital Reasoning

Q&A and Open Discussion

1:15 pm	Practical challenges for AI/ML development, spread, and scale
---------	--

Participants will explore the practical challenges related to AI/ML development, spread, and scale including developing the business case, addressing regulatory and ethical considerations, and improving clinician acceptance and workforce expertise.

Nigam Shah, Stanford University

Michael Matheny, Vanderbilt University

Seth Hain, Epic Systems

Q&A and Open Discussion

2:30 pm

The charge for accelerating progress

The aim of this session is to develop a charge and charter for an ongoing NAM AI/ML Collaborative Working Group. The charge will outline opportunities for the Working Group to address barriers and accelerate progress.

Sean Khozin, FDA
Javier Jimenez, Sanofi
Leonard D'Avolio, Cyft
Wendy Chapman, University of Utah

Q&A and Open Discussion

3:45 pm

Next Steps

Comments from the Chairs

Jonathan Perlin, Hospital Corporation of America Inc.
Reed Tuckson, Tuckson Health Connections, LLC

Comments and thanks from the NAM

Michael McGinnis National Academy of Medicine

4:00 pm **Adjourn**