# AI in Quality Measurements

Opportunities and Challenges in Health AI for a Resilient Health System

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**Chief Executive Officer**

**Coalition for Health AI, Inc.**

# Introduction

# Who We Are

- **Over 2000+ Private Sector Organizations:**
  - Health Systems, Payors, Device Manufacturers, Technology Companies, Patient Advocates
- **US Govt Partners:**
  - HHS, FDA, ONC, NIH, CMS, White House OSTP, AHRQ, VA, NIST, CDC, OCR
- Formally became **501c6 non-profit** in Jan 2024

# Who we are



Over 1300 private sector organization members

Including Health Systems, Payors, Device Manufacturers, Technology Companies, Patient Advocates

## Founding Members

MAYO CLINIC
DukeHealth
MITRE
Berkeley UNIVERSITY OF CALIFORNIA
JOHNS HOPKINS UNIVERSITY
Stanford MEDICINE
UCSF University of California San Francisco

## Industry Partners

CHANGE HEALTHCARE Part of Optum®
SAS
Google
Microsoft

## US Government Partners

FDA
ONC Office of the National Coordinator for Health Information Technology
NIH National Institutes of Health
Office of Science and Technology Policy
AHRQ
CMS CENTERS FOR MEDICARE & MEDICAID SERVICES
VA
NIST National Institute of Standards and Technology U.S. Department of Commerce
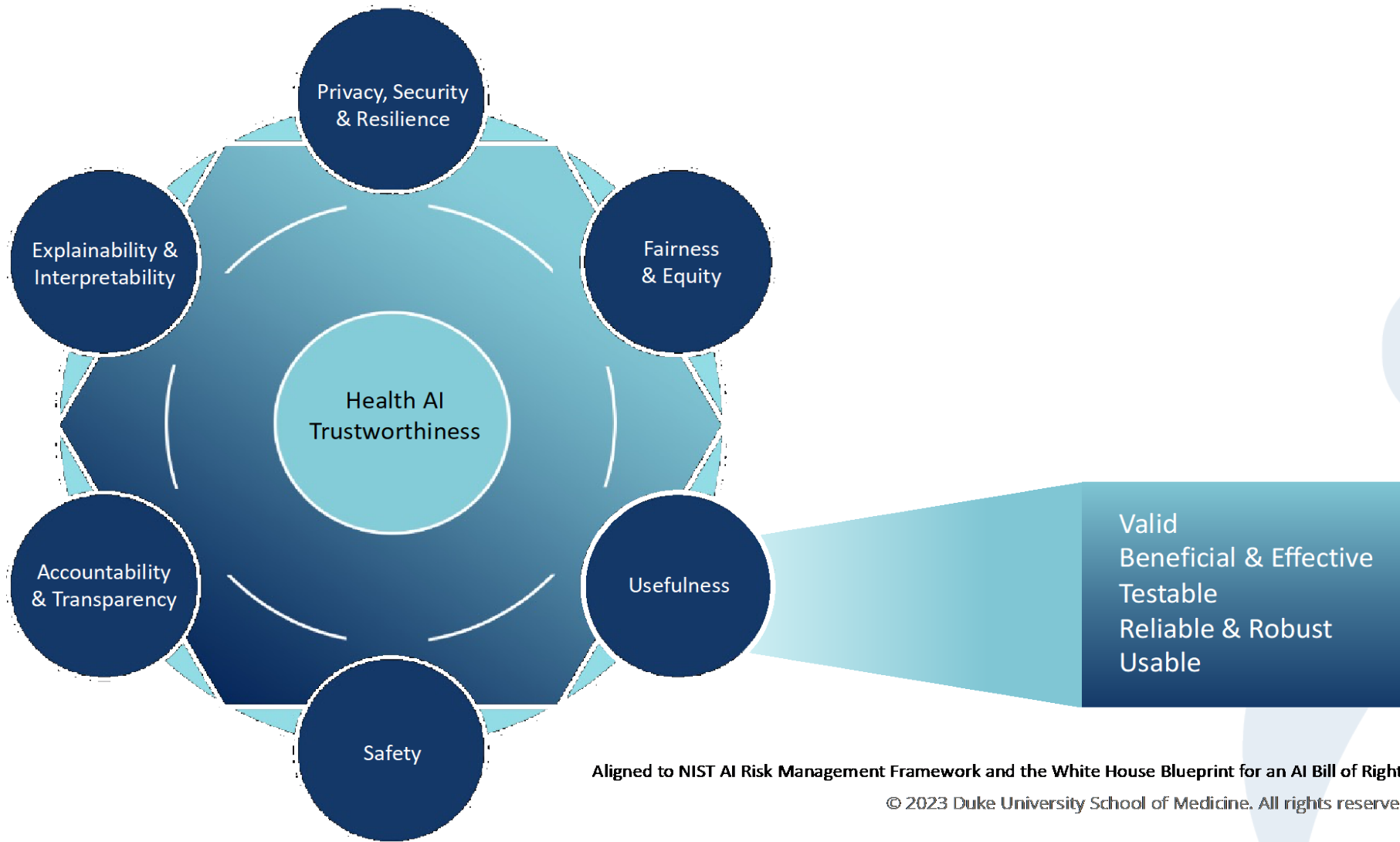
BLUEPRINT FOR TRUSTWORTHY AI IMPLEMENTATION GUIDANCE AND ASSURANCE FOR HEALTHCARE

COALITION FOR HEALTH AI

VERSION 1.0 _ APRIL 04, 2023

# Core Principles for Responsible Health AI



Health AI Trustworthiness

- Privacy, Security & Resilience
- Fairness & Equity
- Explainability & Interpretability
- Accountability & Transparency
- Usefulness
- Safety

Usefulness:
- Valid
- Beneficial & Effective
- Testable
- Reliable & Robust
- Usable

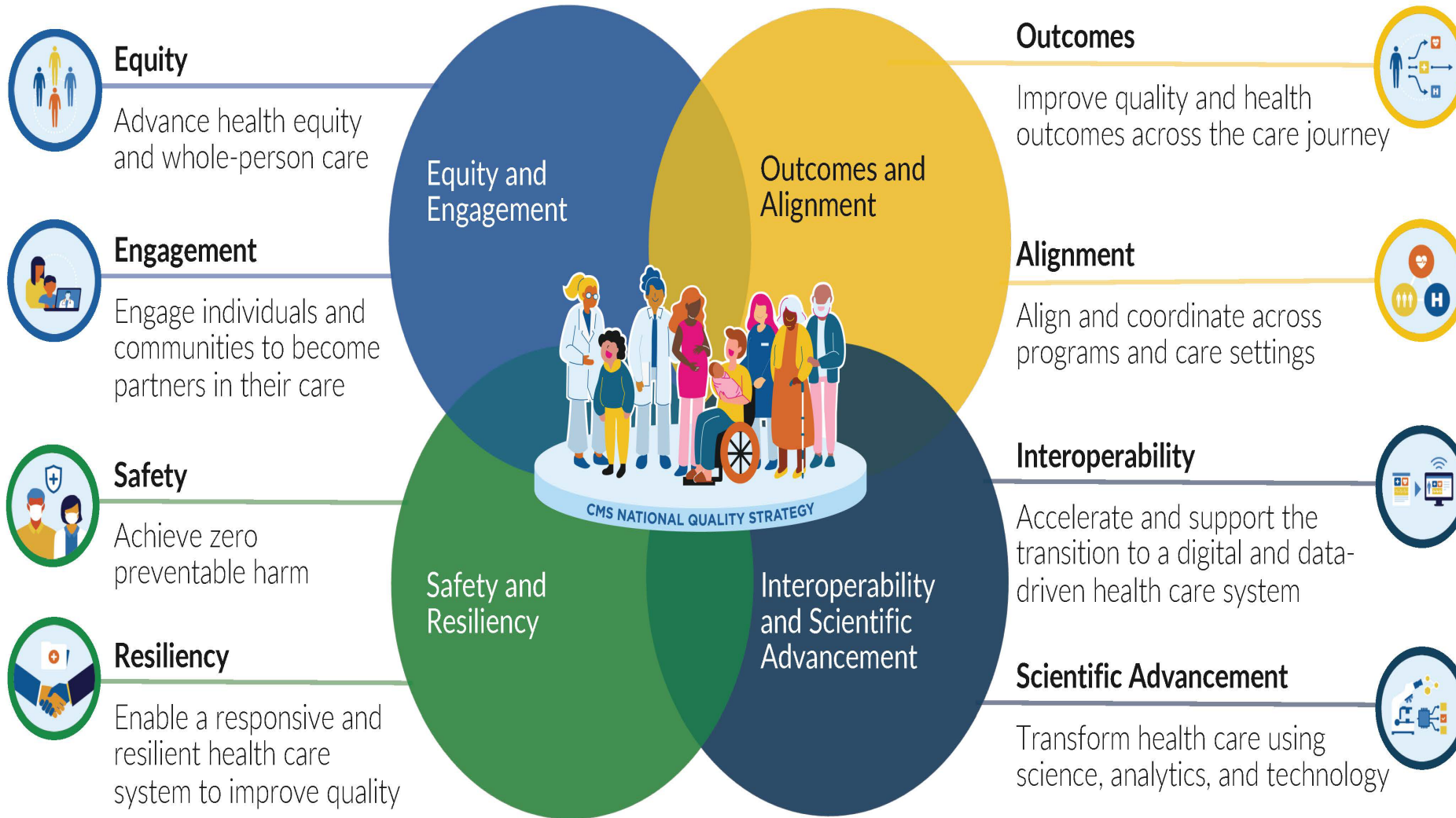Aligned to NIST AI Risk Management Framework and the White House Blueprint for an AI Bill of Rights

# Health AI Quality Assurance Labs

# A Federated Network of Labs - All Models are Local

# CMS National Quality Strategy Goals



**Equity**

Advance health equity and whole-person care

**Engagement**

Engage individuals and communities to become partners in their care

**Safety**

Achieve zero preventable harm

**Resiliency**

Enable a responsive and resilient health care system to improve quality

Equity and Engagement

Outcomes and Alignment

Safety and Resiliency

Interoperability and Scientific Advancement

CMS NATIONAL QUALITY STRATEGY

**Outcomes**

Improve quality and health outcomes across the care journey

**Alignment**

Align and coordinate across programs and care settings

**Interoperability**

Accelerate and support the transition to a digital and data-driven health care system

**Scientific Advancement**

Transform health care using science, analytics, and technology

CMS 2024 Quality Conference
Resilient and Ready Together

# Foundational Models for Medicine – an Approach to Quality Improvement
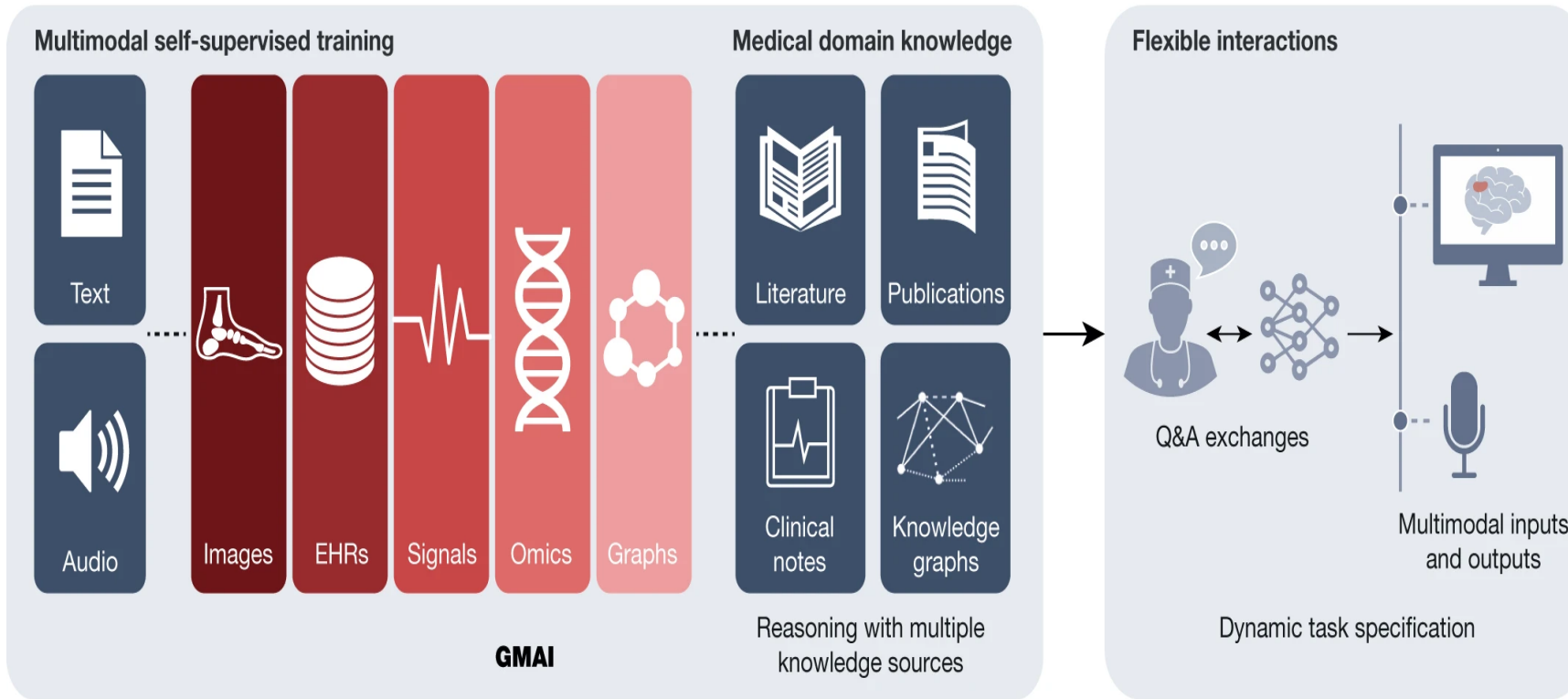
# Bridging the Gap between Risk Prediction & Quality Improvement

- **Model Development for Outcome Risk Prediction & Stratification**
  - CMS AI Outcome Challenge
    - ▴ Bias Mitigation
    - ▴ Transparency
    - ▴ Explainability & Interpretability

- **Tying Quality Improvement Metrics to Clinical Outcomes**
- **Weighting & Instructional Tuning for Equity**
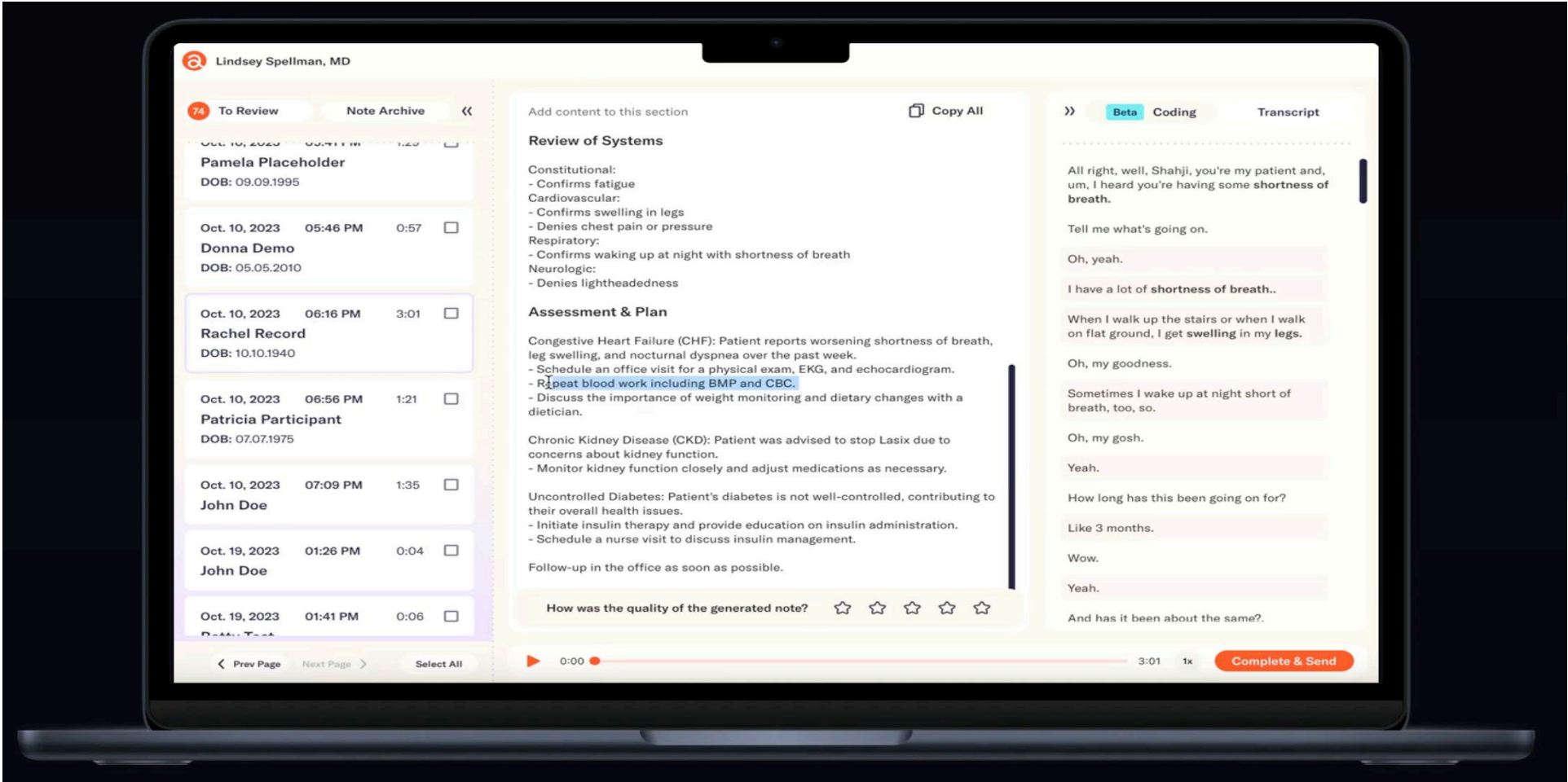- **Causal Machine Learning & "Patients Like This"**

# Reducing Burden – the power of LLMs

Rethinking digital Quality Measures (dQMs) and Measurement Calculation Tools (MCTs)
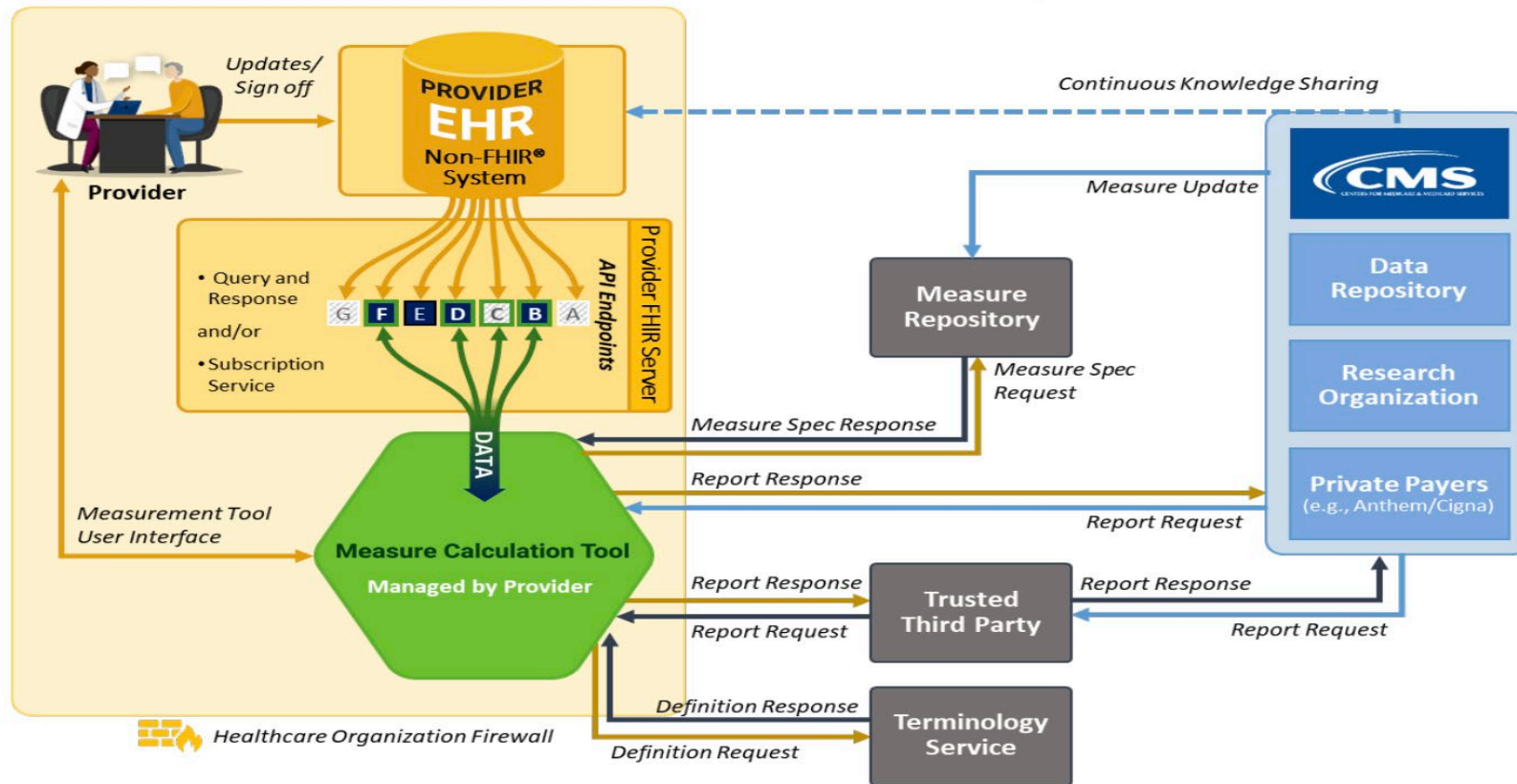
# Generative AI and Summarization

Automating Measurement Capture *from Conversation to Orders*