AGENCY FOR HEALTHCARE RESEARCH AND QUALITY

AHRQ National Webinar on Advancing Digital Healthcare Equity: Navigating Disparities in the Digital Age

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December 3, 2024

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Agenda

- Welcome and Introductions

- Presentations

- Q&A Session With Presenters

- Instructions for Obtaining CME Credits

Note: You will be notified by email once the slides and recording are available.

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Presenter and Moderator Disclosures

Meagan T. Khau, M.H.A.
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How To Submit a Question

- At any time during the presentation, type your question into the "Q&A" section of your WebEx Q&A panel.
- Please address your questions to "All Panelists" in the drop-down menu.
- Please include the presenter's name or their presentation order number (first, second, or third) with your question.
- Select "Send" to submit your question to the moderator.
- Questions will be read aloud by the moderator.
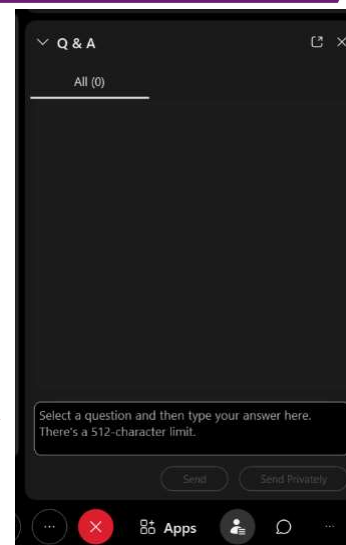
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Learning Objectives

At the conclusion of this webinar, participants should be able to do the following:

1. Discuss CMS initiatives to improve health equity data collection and use to identify areas of disparities.

2. Describe how AHRQ's evidence- and consensus-based Digital Health Equity Framework can improve outcomes while reducing disparities.

3. Identify how artificial intelligence model creation can introduce bias and learn more about ASTP's Health Equity by Design efforts.

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AGENCY FOR HEALTHCARE RESEARCH AND QUALITY

Advancing Health Equity Through Data

Meagan T. Khau, M.H.A.

Director, Data Analytics & Research Group
Office of Minority Health, Centers for Medicare & Medicaid Services

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CMS Office of Minority Health

The Centers for Medicare & Medicaid Services (CMS) is the largest provider of health insurance in the United States, responsible for insuring more than 150 million individuals supported by CMS programs (Medicare, Medicaid, the Children's Health Insurance Program, and the Health Insurance Marketplaces).

The CMS Office of Minority Health (CMS OMH) is one of eight offices of minority health within the U.S. Department of Health and Human Services. CMS OMH works with local and federal partners to eliminate health disparities while improving the health of all minority populations.

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What Drives Our Data Initiatives?

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Executive Orders Focus on Data

- **EO 13985:** Advancing Racial Equity and Support for Underserved Communities Through the Federal Government
  - ▶ Section 4(a)—Identifies methods to assess equity
    - ▪ *"Assist agencies in assessing equity with **respect to race, ethnicity, religion, income, geography, gender identity, sexual orientation, and disability**…"*
    - ▪ Emphasizes the need to take actions to collect demographic data to fully assess impact of health equity responses and extent of existing health disparities
  - ▶ Section 9(a) Establishes a workgroup to gather necessary data
    - ▪ *"Many Federal datasets are not disaggregated by **race, ethnicity, gender, disability, income, veteran status, or other key demographic variables**. This lack of data has cascading effects and impedes efforts to measure and advance equity."*
    - ▪ Emphasizes the need to gather data to promote equity
- **EO 14031:** Advancing Equity, Justice, and Opportunity for Asian Americans, Native Hawaiians, and Pacific Islanders
  - ▪ Expand the collection and use of disaggregated data at the Federal, State, and local level in AA and NHPI communities, and facilitate improved research on policy and program outcomes for AA and NHPI communities

EO – 13985 - https://www.federalregister.gov/documents/2021/01/25/2021-01753/advancing-racial-equity-and-support-for-underserved-communities-through-the-federal-government
EO 14031 - https://www.federalregister.gov/documents/2021/06/03/2021-11792/advancing-equity-justice-and-opportunity-for-asian-americans-native-hawaiians-and-pacific-islanders

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CMS Strategic Plan

https://www.cms.gov/about-cms/what-we-do/cms-strategic-plan

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CMS Interoperability

Our Mission—To promote the secure exchange, access, and use of electronic health information to support better informed decision making and a more efficient healthcare system.

Our Vision—A secure, connected healthcare system that empowers patients and their providers to access and use electronic health information to make better informed and more efficient decisions.

Patients & Caregivers

Have access and use of their complete electronic health record (EHR), confidence that their care providers are communicating and coordinating their care and can engage in their own care in a more meaningful way.

Providers

Have easy access to the right patient health information at the right time to facilitate safer, better coordinated, and more efficient care.

Payers

Facilitate care coordination through the exchange of electronic health information and can make timely coverage decisions based on current and accurate information.

Researchers & Innovators

Have streamlined access to recent data to support groundbreaking studies and the development of new applications and technology.

https://www.cms.gov/priorities/key-initiatives/burden-reduction/interoperability/cms-interoperability

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Demographic and Social Determinants of Health Data Collection

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Race and Ethnicity Data Collection at Disaggregated Level

- CMMI Models—Started January 1, 2023—All CMMI model participants are required to report race and ethnicity data at the USCDI standards.

- 2011 HHS Data Standards

  ► Post-Acute Care Settings

    ▪ October 2022—Started to collect race and ethnicity data in long-term care and inpatient rehabilitation facilities.

    ▪ January 2023—Started to collect race and ethnicity data in home health agencies.

    ▪ October 2023—Started to collect race and ethnicity data in skilled nursing facilities.

  ► Medicare Part C/D Enrollment Form

  ► Surveys conducted by CMS

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Revisions to Statistical Policy Directive No. 15: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity (New)

- Effective March 28, 2024

- Using **one combined question for race and ethnicity**, and encouraging respondents to select as many options as apply to how they identify.

- **Adding Middle Eastern or North African as a new minimum category**. There are now seven new sets of minimum race and/or ethnicity categories.

- **Requiring the collection of additional detail beyond the minimum required race and ethnicity categories** for most situations, to ensure further disaggregation in the collection, tabulation, and presentation of data, when useful and appropriate.

- The updated standards also include several additional updates to definitions, terminology, and guidance to agencies on the collection and presentation of data.

https://www.govinfo.gov/content/pkg/FR-2024-03-29/pdf/2024-06469.pdf

What is your race and/or ethnicity?
Select all that apply and enter additional details in the spaces below.

☐ **American Indian or Alaska Native** – *Enter, for example, Navajo Nation, Blackfeet Tribe of the Blackfeet Indian Reservation of Montana, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, Aztec, Maya, etc.*

☐ **Asian** – *Provide details below.*
☐ Chinese   ☐ Asian Indian   ☐ Filipino
☐ Vietnamese   ☐ Korean   ☐ Japanese
Enter, for example, Pakistani, Hmong, Afghan, etc.

☐ **Black or African American** – *Provide details below.*
☐ African American   ☐ Jamaican   ☐ Haitian
☐ Nigerian   ☐ Ethiopian   ☐ Somali
Enter, for example, Trinidadian and Tobagonian, Ghanaian, Congolese, etc.

☐ **Hispanic or Latino** – *Provide details below.*
☐ Mexican   ☐ Puerto Rican   ☐ Salvadoran
☐ Cuban   ☐ Dominican   ☐ Guatemalan
Enter, for example, Colombian, Honduran, Spaniard, etc.

☐ **Middle Eastern or North African** – *Provide details below.*
☐ Lebanese   ☐ Iranian   ☐ Egyptian
☐ Syrian   ☐ Iraqi   ☐ Israeli
Enter, for example, Moroccan, Yemeni, Kurdish, etc.

☐ **Native Hawaiian or Pacific Islander** – *Provide details below.*
☐ Native Hawaiian   ☐ Samoan   ☐ Chamorro
☐ Tongan   ☐ Fijian   ☐ Marshallese
Enter, for example, Chuukese, Palauan, Tahitian, etc.

☐ **White** – *Provide details below.*
☐ English   ☐ German   ☐ Irish
☐ Italian   ☐ Polish   ☐ Scottish
Enter, for example, French, Swedish, Norwegian, etc.

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Marketplace Sexual Orientation and Gender Identity (SOGI) Questions

Since November 1, 2023, the Marketplace has asked three new SOGI questions on all applications starting with Plan Year 2024.

Purpose:

- Identify health disparities in access to coverage

- Improve Marketplace consumer experience by allowing consumers to attest in a way that better reflects and affirms their identities

Category	Question	Responses
Sex Assigned at Birth	What was [First Name]'s sex assigned at birth? *You can find this on an original birth certificate or similar document.* *(optional, single select)*	•Female •Male •A sex that's not listed: [free text] •Not sure •Prefer not to answer
Gender Identity	What's [First Name]'s gender identity? *(optional, single select)*	•Female •Male •Transgender female •Transgender male •A gender identity that's not listed: [free text] •Not sure •Prefer not to answer
Sexual Orientation	What's [First Name]'s sexual orientation? *(optional, single select)*	•Lesbian or gay •Straight •Bisexual •A sexual orientation that's not listed: [free text] •Not sure •Prefer not to answer
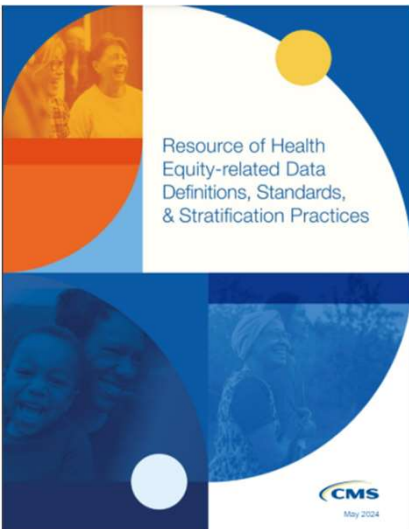
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Development of a Resource of Health Equity-Related Data Definitions, Specifications, and Stratification Practices

- **Data definitions, standards, and stratification practices for health equity-related data elements** to support the priorities of the CMS Framework for Health Equity 2022–2032 and the CMS Framework for Advancing Health Care in Rural, Tribal, and Geographically Isolated Communities

- Standardized data collection and stratification **allow for comprehensive analyses that can be combined or compared across multiple programs or initiatives**

- **Resource that can be used for internal alignment and used by external entities** to facilitate harmonization with CMS on the collection and/or stratification of sociodemographic data

https://www.cms.gov/files/document/cms-2024-omh-data-definitions.pdf

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Data Elements and Specifications

Nine data elements highlighted in EO 13985

- **Race and Ethnicity**
  — aligning with OMB's revisions released on March 28, 2024
- **Gender Identity, Sex (as assigned at birth), Sexual Orientation**
  — modification of OMB Best Practices and NASEM
- **Disability Status**
  — 2011 HHS Data Standard (used on the American Community Survey)

- **Primary Language, English Language Proficiency**
  — 2011 HHS Data Standard (used on the American Community Survey)
- **Rurality/Urbanicity of Residence**
  — Core Based Statistical Areas (CBSA)— metropolitan, micropolitan, and non-CBSA
  — Rural-Urban Commuting Area Codes (RUCA Codes)—granular/zip codes level analysis

https://aspe.hhs.gov/reports/hhs-implementation-guidance-data-collection-standards-race-ethnicity-sex-primary-language-disability-0

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Considerations

- The **Resource of Health Equity-Related Data Definitions, Specifications, and Stratification Practice technical guide** can be used by organizations or entities that wish to harmonize with CMS when collecting, stratifying, and/or analyzing health equity-related data.
- **Specifications were selected based upon broadest applicability and feasibility** for the various collection methods and systems, as well as usage of the data.
- **Some of these standards are binding** on CMS as a federal agency (e.g., OMB race and ethnicity standards) while **others are not binding,** but CMS programs will begin **moving towards voluntary adoption** where practicable and legally permissible on the "front end" collection.
- **CMS recommends,** where applicable and appropriate, **harmonization with USCDI** standards on the "back end" to facilitate the sharing of interoperable data.
- **Many CMS programs adopted specifications prior to the development of this resource** document. Where practicable and legally permissible, some collection will align with these listed specifications over time.

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Social Determinants of Health (SDOH) Data

New SDOH Data Element Submission to USCDI Standard

-CMS OMH submitted a new SDOH data element through the ONC New Data Element and Class system, currently in v5.

-New element: "Do you need or want an interpreter to communicate with a doctor or health care staff?"

-This data element can add important context about the supports a particular patient requires to address literacy or language barriers.

Post-Acute Care Settings

Started October 2022

-Preferred Language

-Need for an Interpreter

-Health Literacy

-Social Isolation

-Transportation

CMMI Models

Started January 1, 2023—All CMMI model participants are to provide SDOH data based on USCDI standards.

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SDOH Measures

Both SDOH measures finalized for adoption into Hospital IQR program from the fiscal year (FY) 2023 IPPS rule

Voluntary reporting in 2023

Mandatory reporting beginning in CY2024 reporting period (FY 2026 payment determination)

Screening for Social Drivers of Health

- Assesses the total number of patients, aged 18 years and older, screened for social risk factors during an inpatient facility stay, or during established care in the case of dialysis facilities

- Focuses specifically on food insecurity, housing instability, transportation needs, utility difficulties, and interpersonal safety

End Stage Renal Disease Quality Incentive Program (ESRD QIP), Inpatient Psychiatric Facility Quality Reporting Program (IPF), and PPS- Exempt Cancer Hospital Quality Reporting Program (PCH)

Screen Positive Rate for Social Drivers of Health

- Structural measure

- Percentage of patients who were admitted for an inpatient facility stay, or received established care in the case of dialysis facilities, and were 18+ years old on the date of admission or established care who:

  o Were screened for all five HSRNs, **and**

  o Screened positive for one or more of the following five HRSNs: food insecurity, housing instability, transportation problems, utility difficulties, or interpersonal safety

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SDOH and Coding

Effective 10/1/2024—CMS finalized a change to the severity designation of the three diagnosis codes describing homelessness, reflecting the higher average resource costs of inpatient hospital cases where the patient is experiencing homelessness compared to similar cases where the patient is not experiencing homelessness.

- Codes Z59.00 (Homelessness, unspecified), Z59.01 (Sheltered homelessness), and Z59.02 (Unsheltered homelessness)

Figure 3. The Top Five Z Codes Representing the Largest Shares of All Z Code Claims, 2019.
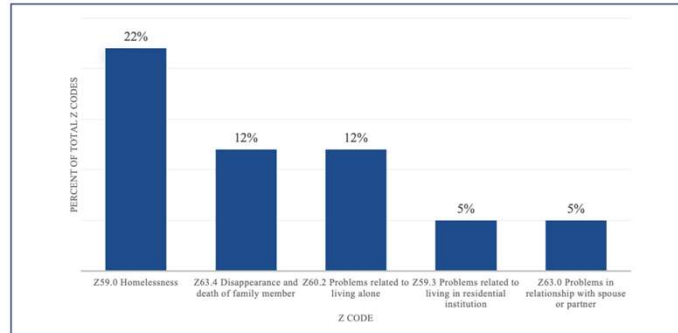
The five Z codes that represented the largest shares of all Z code claims (N=1,262,563) in 2019:

2022		
Z60.2 Problems related to living alone		18.6%
Z63.4 Disappearance and/or death of family member		14.4%
Z59.0 Homelessness		7.7%
Z59.3 Problems related to living in a residential institution		5.2%
Z63.6 Dependent relative needing care at home		4.7%

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SDOH and Coding

- Effective 10/1/2024—CMS finalized the rule in changing the severity designation of the seven ICD-10-CM diagnosis codes that describe inadequate housing and housing instability from non-complication or comorbidity (NonCC) to complication or comorbidity (CC), based on the higher average resource costs of cases with these diagnosis codes compared to similar cases without these codes.

- The relevant codes include the following:
  - Z59.10 (Inadequate housing, unspecified);
  - Z59.11 (Inadequate housing environmental temperature);
  - Z59.12 (Inadequate housing utilities);
  - Z59.19 (Other inadequate housing);
  - Z59.811 (Housing instability, housed, with risk of homelessness);
  - Z59.812 (Housing instability, housed, homelessness in past 12 months); and
  - Z59.819 (Housing instability, housed unspecified).

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Using Z Codes Infographic—Updated in June 2023

Describes:
- What SDOH Z codes are
- How to collect and document SDOH with Z codes
- How to use these data

There are also links to key resources on coding and equity.

https://www.cms.gov/files/document/zcodes-infographic.pdf

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Released September 7, 2023

Improving the Collection of SDOH Data With ICD-10-CM Z Codes

This resource aims to assist providers with understanding and using Z codes to improve the quality and collection of health equity data. Using social determinants of health, Z codes can enhance quality improvement activities, track factors that influence people's health, and provide further insight into existing health inequities.

Improving the Collection of Social Determinants of Health (SDOH) Data with ICD-10-CM Z Codes (2023).

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Data and Analytics for Health Equity

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Mapping Medicare Disparities (MMD) Tool

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Stratified Reports
(Medicare Advantage)

To comprehensively address and eliminate health disparities, it is necessary to measure and publicly report—in a standardized and systematic way—the nature and extent of health care disparities.

Stratified reporting provides useful information for the following:

- ✓ Targeting quality improvement activities and resources,
- ✓ Monitoring health and drug plan performance, and
- ✓ Advancing the development of culturally and linguistically appropriate quality improvement interventions and strategies.

https://www.cms.gov/About-CMS/Agency-Information/OMH/research-and-data/statistics-and-data/stratified-reporting

2024 Disparities in Health Care in Medicare Advantage by Race, Ethnicity, and Sex
This report summarizes the quality of care received by Medicare Advantage enrollees nationwide, highlighting racial and ethnic differences in health care experiences and comparing the quality of care between men and women.

2024 Disparities in Health Care in Medicare Advantage Associated with Dual Eligibility or Eligibility for a Low-Income Subsidy and Disability
This report includes information about differences in clinical care by dual eligibility for Medicare and Medicaid or eligibility for a Low-Income Subsidy (DE/LIS status). The data also examines how differences based on DE/LIS status vary by race and ethnicity and between rural and urban areas.

2023 Rural-Urban Disparities in Health Care in Medicare
This report describes rural-urban differences in health care experiences and clinical care received by Medicare beneficiaries and compares the quality of care delivered to rural and urban Medicare beneficiaries. The reports also look at how these differences vary by race and ethnicity.

Trends in Racial, Ethnic, Sex, and Rural-Urban Inequities in Health Care in Medicare Advantage: 2009–2018 (December 2021)
This report summarizes inequities in the quality of care delivered to Medicare beneficiaries enrolled in Medicare Advantage plans nationwide from 2009 to 2018. The report examines racial, ethnic, sex, and rural-urban differences in quality of health care beginning in 2009 and identifies how scores for each group have changed over time, pointing out health inequities that persisted until 2018.

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Tribal Data Learning Community (TDLC) Program

A new 1-year pilot program for researchers at Tribal Epidemiology Centers (TECs) that uses CMS data to conduct research that is meaningful to tribal communities.

Sponsored by the CMS Office of Minority Health in partnership with the CMS Division of Tribal Affairs.

Provides participating TECs with data resources to assess the needs of their communities and develop appropriate interventions.

Includes a peer learning network, CMS Medicare and Medicaid program data access for 1 year, and technical support in conducting analyses.

Promotes development of research, analytic methods, and dissemination practices relevant to tribal communities.

Creates opportunities for participants to network and develop meaningful, sustainable connections with each other;.

Provides timely and tailored technical assistance that enhances participants' capacity to carry out their research.

Provides a forum for CMS to engage with TECs along their research lifecycle.

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# Health Equity Data Access Program (HEDAP) Grant

CMS OMH supports three "seats" in the CMS Virtual Research Data Center (VRDC) to assist researchers in gaining access to CMS restricted data for minority health research.

Awardees gain access to CMS data to conduct health services research focusing on, but not limited to, minority populations including race, ethnicity, language, sexual orientation, gender identity, and disability status.

Learn more:
- Visit: go.cms.gov/hedap
- Email: HEResearch@cms.hhs.gov
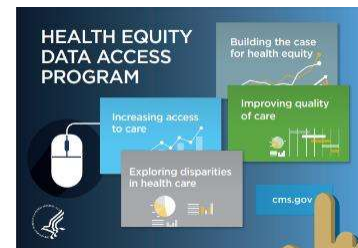
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Minority Research Grant Program (MRGP)

- Administered by CMS OMH to support researchers at minority-serving institutions that explore how CMS can better meet the health care needs of the populations we serve.

- Supports CMS's efforts to advance health equity by increasing understanding and awareness of health disparities, developing and disseminating solutions, and implementing sustainable actions.

- Health equity researchers with suitable projects from the following types of minority serving institutions may apply:
  - Historically Black Colleges and Universities
  - Hispanic-serving institutions
  - Asian American and Native American Pacific Islander serving institutions
  - Tribal colleges and universities
  - Predominantly Black institutions
  - Native American-serving nontribal institutions
  - Alaska Native and Native Hawaiian-serving institutions

- Email questions to **OMHGrants@cms.hhs.gov**

https://www.cms.gov/priorities/health-equity/grants-awards/minority-research

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Contact Information

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![CMS logo - Centers for Medicare & Medicaid Services]

HEALTH EQUITY TECHNICAL ASSISTANCE PROGRAM

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AGENCY FOR HEALTHCARE RESEARCH AND QUALITY

Hardwiring Equity @ AHRQ:
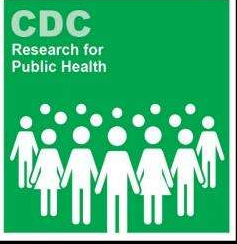# A Consensus- and Evidence-Based Digital Healthcare Equity Framework

Kevin Chaney, M.G.S.
Senior Advisor for Dissemination and Innovation
Division of Digital Healthcare Research,
Center for Evidence and Practice Improvement, AHRQ

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Agency for Healthcare Research and Quality (AHRQ)

NIH Research for **Cures**
AHRQ Research for **Care**
FDA Research for **Drug Safety**
CDC Research for **Public Health**

www.ahrq.gov

Produce evidence to make healthcare <u>safer</u>, higher <u>quality</u>, and more <u>accessible</u>, <u>equitable</u>, and <u>affordable</u>.

To work with the Department of Health and Human Services (HHS) and other partners to make sure that the evidence is <u>understood</u> and <u>used</u>.

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How AHRQ Improves Healthcare Delivery

- **Generating scientific evidence and knowledge**: AHRQ funds health services research to understand <u>how care is delivered</u> and <u>how it can be delivered better</u> (quality, safety, *equity*, value).

- **Moving evidence into practice**: AHRQ fills <u>the "Evidence to Implementation Gap"</u> with knowledge generation and implementation, development of –tools, training, resources, and (nonregulatory, nonpunitive) assistance.

- **Monitoring and feedback**: AHRQ provides performance <u>measurement</u>, data collection, analytics, and reporting (especially on quality and disparities).

AHRQ is to healthcare systems as CDC is to public health systems.

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Trending in the Wrong Direction

- Just two decades ago, the Institute of Medicine released two seminal reports on the need to improve healthcare quality—one that emphasized the promise of digital healthcare technologies (2001) and another on healthcare disparities (2003).

- Since then, healthcare technology has made significant strides. However, as the latest AHRQ report (2023) on healthcare quality and disparities shows, inequities stubbornly persist (2024).
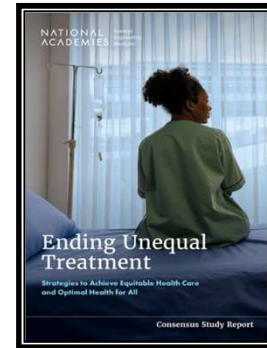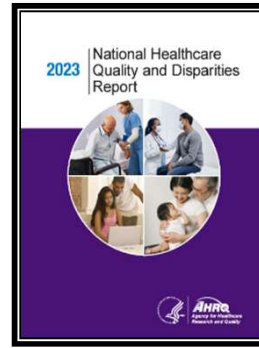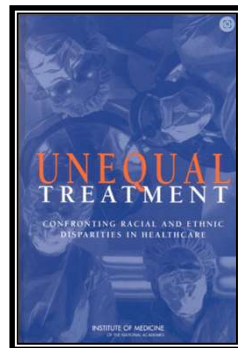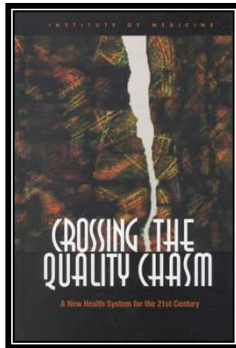
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Hardwiring Equity @ AHRQ

- AHRQ is aware of inequities and implicit bias embedded in today's healthcare delivery systems.

- Our efforts have been informed by the Administration's commitment to advancing equity and support for underserved communities, as described in Executive Orders 13985 and 14091 and HHS' Health Equity Plan.

- AHRQ is committed to efforts to fund and disseminate strategies to vanquish care inequities and bias and advance all Americans' well-being by leveraging three core competencies:
  - ► Health services and systems research (HSR)
  - ► Practice improvement
  - ► Data and analytics

https://www.ahrq.gov/sites/default/files/wysiwyg/cpi/about/health-equity/health-equity-factsheet.pdf

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AHRQ's Research and Action Agenda

- Summarize the state of evidence and results from an inclusive, participatory process to identify opportunities in five areas to drive more equitable care:
  - Healthcare delivery systems and structure
  - Payment
  - Social determinants of health and social needs
  - Implementation science
  - Access to care

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Addressing Bias With Healthcare Algorithms

- When algorithms include race and ethnicity without clear rationale, they may perpetuate the incorrect notion that race is a biologic construct and contribute to disparities.
- Some algorithms may reduce or perpetuate disparities without containing race and ethnicity as an input.
- Several modeling studies showed that applying algorithms out of context of original development (e.g., illness severity scores used for crisis standards of care) could perpetuate or exacerbate disparities.

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AHRQ's Guiding Principles to Address Impact of Algorithm Bias

- Overarching goals:
  - Promote health and healthcare equity during *all healthcare algorithm life cycle phases.*
  - Ensure healthcare algorithms and their use are *transparent and explainable*.
  - *Authentically engage patients and communities* during all healthcare algorithm life cycle phases and earn trustworthiness.
  - *Explicitly identify* healthcare algorithmic fairness issues and *tradeoffs*.
  - *Establish accountability* for equity and fairness in outcomes from healthcare algorithms.

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The Promise and Pitfalls of Digital Healthcare Technologies

- **Promise:** Digital healthcare technologies can improve healthcare delivery and outcomes
- **Pitfalls:** Needs and capabilities of affected patient and caregiver populations often not recognized
- **The Result:** Increased healthcare disparities

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Goals

Develop an evidence- and consensus-based digital healthcare equity framework.

Create a practical guide to help users implement the framework and bring equity intentionality across the digital healthcare lifecycle.

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Project Scope

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Identifying Framework Domains
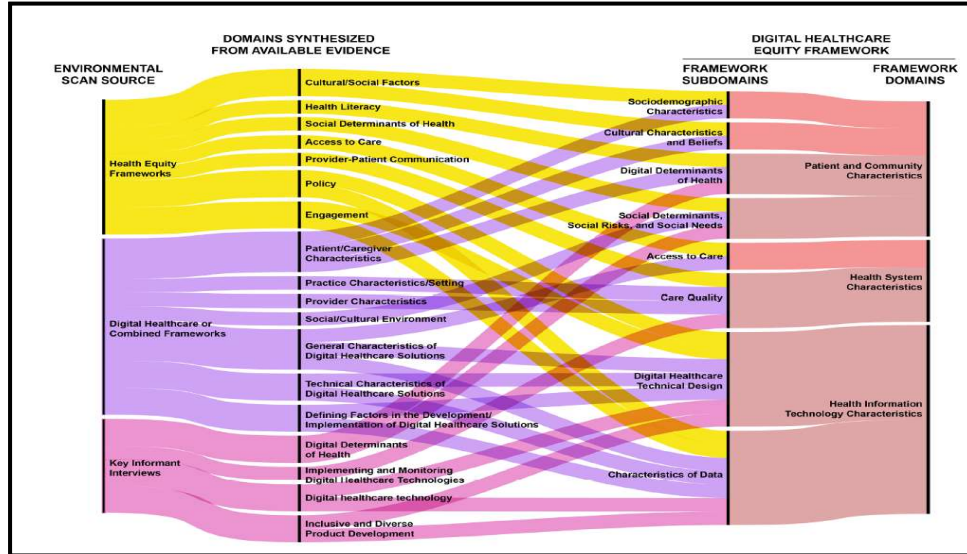
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Digital Healthcare Equity Framework

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Getting Intentional About Digital Healthcare Equity

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A Practical Guide

- Intended Users:
  - Digital healthcare developers and vendors
  - Health systems, health plans, and clinical providers
- Provides users with best practice examples and steps to help implement the Framework

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Getting Started

- Any transformational change depends on strong leadership, organizational readiness, and ongoing systems support. Here are some general recommendations:
  - Assess Your Organizational Readiness
    - The assessment should focus on 1) change management capabilities; 2) economic assessments, including costs and the potential return on investment related to equity intentionality; 3) health IT and data capabilities; and 4) leadership commitment to improving health equity
  - Identify an Equity Champion
  - Develop a Diverse Workforce
  - Build in Equity Assessments and Feedback Loops
  - Track Whether Equity is Achieved

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Using the Guide

Steps for Digital Healthcare Developers and Vendors

FOCUSING ON THE PLANNING AND DEVELOPMENT PHASES OF THE DIGITAL HEALTHCARE LIFECYCLE

Checklist Of Steps for Digital Healthcare Develope

Select each step for additional information and real-world examp

- Identify and engage potential users of the digital healthcare soluti marginalized demographic groups, to ensure it will meet the need
- Understand the cultural characteristics and beliefs of the commun solution is proposed to identify potential barriers to using the prop
- Consider the impact of the proposed solution on digital equity in a distinct healthcare settings.
- Assess whether the proposed solution serves as a facilitator (versa high-quality care.
- Assess the technical characteristics of the proposed solution and v of potential users.
- Ensure that data are used equitably and transparently during the when a solution is capturing, generating, or transmitting data.

Steps for Health Systems Health Plans, and Clinical

FOCUSING ON THE ACQUISITION AND MAINTENANCE PHASES OF THE DIGITAL LIFECYCLE

Checklist Of Steps For Health System

Select each step for additional information and

- Adopt a digital inclusion-informed strategy re of healthcare solutions that involve digital tech
- Consider a participatory and multisectoral coll maintenance of healthcare solutions that invol
- Consider the impact of the implemented soluti care continuity) across different types of healt
- Adopt strategies that guarantee a new healthc facilitator and not as a barrier to accessing and
- Assess the technical characteristics of the solu users.
- Before acquiring a healthcare solution, conside implemented and maintained, and how it will u

Steps for Health Systems, Health Plans, and Clinical Providers

FOCUSING ON THE MONITORING/IMPROVEMENT/ EQUITY ASSESSMENT PHASE OF THE DIGITAL HEALTHCARE LIFECYCLE

Checklist Of Steps For Health Systems, Health Plans, And Clinical Providers:

Select each step for additional information and real-world examples.

- Identify the characteristics of the populations that are using a healthcare solution that involves digital technologies, and identify populations presently excluded, not benefiting, or not participating at the desired or same rates as others.
- Use a participatory approach to collect input from affected community members about the healthcare solutions that involve digital technologies.
- Consider the impact of the healthcare solution on digital equity (access to and quality of care, and care continuity) across different types of health systems.
- Adopt strategies that guarantee a new healthcare solution that involves digital technologies serves as a facilitator, not a barrier, to accessing and receiving high-quality care.
- Identify information sources and gaps in available data for a comprehensive monitoring, improvement, and equity assessment of digital technologies.

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Key Takeaways

- AHRQ is committed to efforts to fund and disseminate strategies to vanquish care inequities and bias and advance all Americans' well-being by leveraging its core competencies.

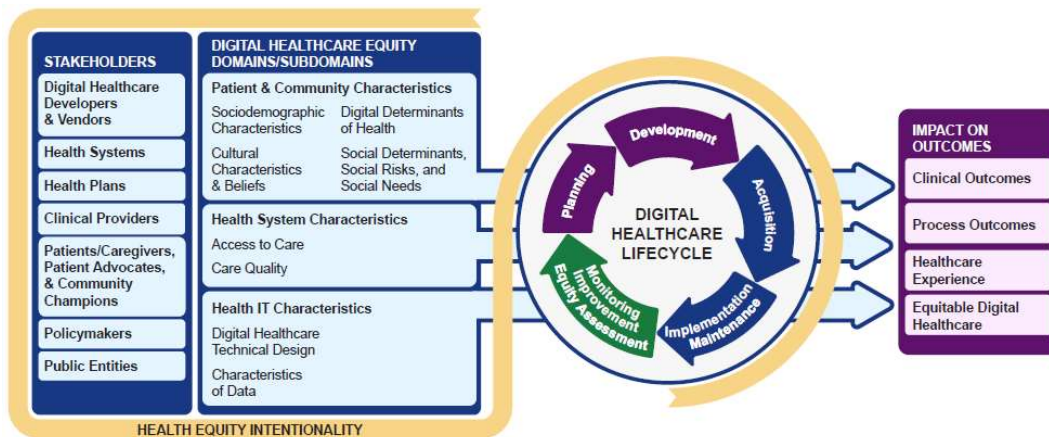- AHRQ's Evidence- and Consensus-Based Digital Healthcare Equity Framework (the Framework) serves as a tool to help users and other stakeholders assess whether healthcare solutions that involve digital technologies are equitable at every phase of the digital healthcare lifecycle.

- The Implementation Guide (the Guide) provides users with best practice examples and steps to help implement the Framework at their organization.

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The Latest Research, Funding Opps, Webinars, Tools, and Resources

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Stay Current on AHRQ Developments

- Connect to AHRQ's LinkedIn page: https://www.linkedin.com/company/agency-for-healthcare-research-and-quality/
- Sign up for *AHRQ News Now*, the Agency's weekly electronic newsletter, and enroll to receive content specific GovDelivery bulletins: https://subscriptions.ahrq.gov/accounts/ USAHRQ/subscriber/new)

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References and Links

- Crossing the Quality Chasm: https://www.ncbi.nlm.nih.gov/books/NBK222268/
- Unequal Treatment: https://nap.nationalacademies.org/catalog/12875/unequal-treatment-confronting-racial-and-ethnic-disparities-in-health-care
- 2023 National Healthcare Quality and Disparities Report: https://www.ahrq.gov/research/findings/nhqrdr/nhqdr23/index.html
- 2024 Ending Unequal Treatment: https://nap.nationalacademies.org/catalog/27820/ending-unequal-treatment-strategies-to-achieve-equitable-health-care-and
- Health Services Research—Special Issue: https://onlinelibrary.wiley.com/toc/14756773/2023/58/S3
- Health Services Research Article: https://onlinelibrary.wiley.com/doi/epdf/10.1111/1475-6773.14230

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References and Links, pt 2

- Addressing Algorithmic Bias:
  https://effectivehealthcare.ahrq.gov/sites/default/files/related_files/cer-268-racial-disparities-health-healthcare-addendum.pdf

- Awareness of Racial and Ethnic Bias and Potential Solutions to Address Bias With Use of Health Care Algorithms: https://jamanetwork.com/journals/jama-health-forum/fullarticle/2805595

- Guiding Principles to Address Algorithmic Bias:
  https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11181958/pdf/nihms-1999312.pdf

- Evidence- and Consensus-Based Digital Healthcare Equity Framework:
  https://digital.ahrq.gov/sites/default/files/docs/citation/health-equity-framework.pdf

- A Practical Guide: https://digital.ahrq.gov/sites/default/files/docs/citation/health-equity-practical-guide.pdf

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AHRQ · **20** YEARS **Digital Healthcare Research**
Advancing Today's Discoveries, Transforming Tomorrow's Care

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Health IT and Equity by Design

David R. Hunt, M.D., FACS
Medical Director, Patient Safety
Assistant Secretary for Technology Policy, Office of Policy

AGENCY FOR HEALTHCARE RESEARCH AND QUALITY

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Disclaimer

- Unfortunately, due to a series of questionable career choices, Dr. David Hunt has no financial relationships, affiliations with ineligible companies, or conflicts of interest to disclose.

- The materials contained in this presentation are based on the provisions contained in 45 C.F.R. Parts 170 and 171. While every effort has been made to ensure the accuracy of this restatement of those provisions, this presentation is not a legal document. The official program requirements are contained in the relevant laws and regulations. Please note that other federal, state, and local laws may also apply.

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Objectives

- Describe the ecosystem of health disparities and the opportunities for electronic health information to identify points of possible mitigation.

- Apply principles of the ASTP Health Equity by Design policy to reduce barriers to health equity using information technology.

- Analyze the process of artificial intelligence model creation and determine the opportunities for the introduction of bias.

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About ASTP/ONC

Our Vision

Better health enabled by data.

Our Mission

To create systemic improvements in health and care through the access, exchange, and use of data.

PRIORITIES

Build the digital foundation
- Data standards
- Health IT gaps
- HHS Health IT Alignment Policy

Make interoperability easy
- TEFCA
- APIs
- Expand education and outreach

Promote information sharing
- Information blocking rules
- HHS Health IT Alignment Policy

Ensure proper use of digital information and tools
- Health equity by design (data capture and use)
- Transparency in areas such as algorithm use and safety

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The NEW ENGLAND JOURNAL of MEDICINE

POINTS OF VIEW

"What Do Health Inequities Have to Do with Anything?"

One of my most cherished career moments was giving a presentation at the American Heart Association Scientific Sessions last November on the effects of stress on cardiovascular disease inequities affecting Black women. I was ecstatic that research has shown that medical mistrust fuels them, and that patient–provider relationships are paramount in building trust. "What do health inequities have to do with anything?" she scoffed, turning to the nurse to mock me.

N Engl J Med 390;23 nejm.org June 20, 2024

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What Do Health Inequities Have to Do With Anything?

There's no silver bullet for reducing health disparities. But as a health researcher who is Black in America, I can say unequivocally that health inequities have everything to do with everything. And people are literally dying for a solution.

Jolaade Kalinowski, Ed.D.
University of Connecticut
Storrs, CT

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Transformation?
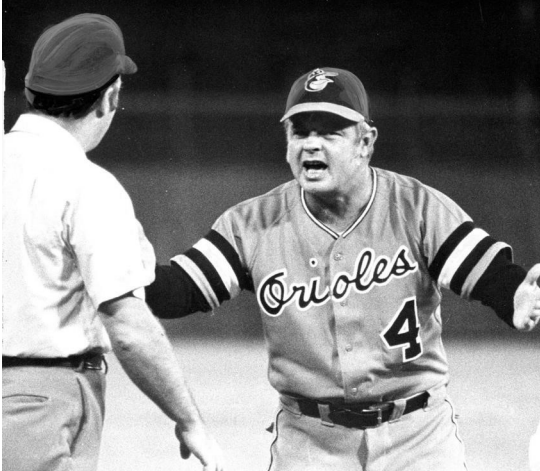
"Are you
going to get
any better or
is *this it*?"

Earl Weaver

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An Inclusive Framing of How to Address Challenges

FAVES is our quality framework describing the characteristics of "high-quality" algorithms and communicating how we may get the best out of predictive models in healthcare.

Fair **(unbiased, equitable)**
Model does not exhibit biased performance, prejudice, or favoritism toward an individual or group based on their inherent or acquired characteristics. The impact of using the model is similar across same or different populations or groups.

Appropriate
Model is well matched to specific contexts and populations to which it is applied.

Valid
Model has been shown to estimate targeted values accurately and as expected in both internal and external data.

Effective
Model has demonstrated benefit and significant results in real-world conditions.

Safe
Model use has probable benefits that outweigh any probable risk.

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What Does "Health Equity by Design" Mean?

- **What is it?**
  - Equity considerations are identified and incorporated as early as possible in design, build, and implementation process
  - Health IT products and capabilities are designed to be foundationally equity enforcing—making the implicit explicit
  - Strategies, tactics, and patterns are guiding principles for developers, enforced by architecture and built into the system at every layer

What is ASTP/ONC doing to promote health equity by design?

- Data and standardization efforts to address health inequities
  - USCDI: Added SDOH and SOGI data in July 2021; USCDI v3 in July 2022
  - Race, ethnicity, language (REL) data: Identify levers for adoption of standards across USG and industry
- Programmatic efforts to address health inequities
  - Public Health Informatics & Technology program: $73M to 10 awardees to train/place 4000+ students from MSIs
  - Referrals for social services: Awarded LEAP grant to UT Austin
- Finalized policies focus on the use of AI and predictive algorithms that optimize for clinical decision making and methods that build transparencies into these technologies to help guard against discrimination

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Ecosystem of Health Disparities

Inequities upstream lead to *disparities* in care and outcomes downstream

Inequities → Disparities

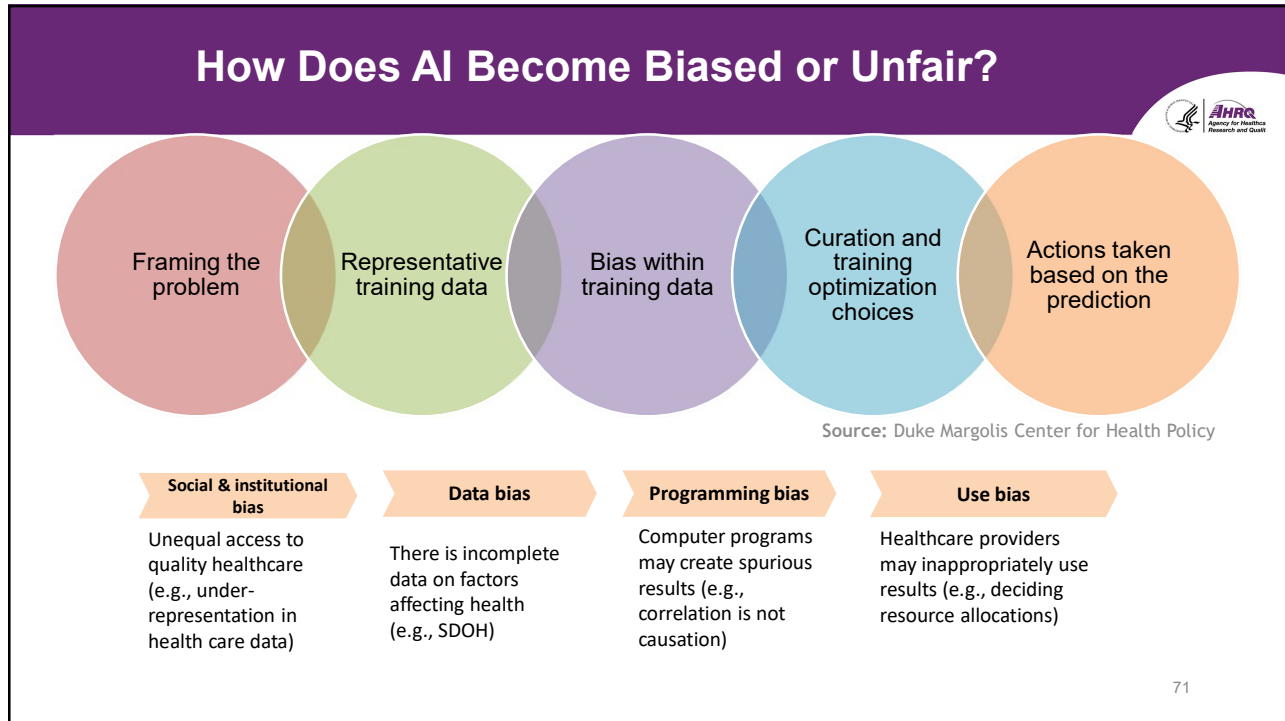| Social Inequities	Institutional Inequities	Living Conditions	Risk Behaviors	Disease & Injury	Mortality
• Class	• Corporations & businesses	• Physical environment	• Smoking	• Communicable disease	• Infant mortality
• Race/ethnicity	• Federal government agencies	• Economics & work environment	• Poor nutrition	• Chronic disease	• Life expectancy
• Immigration status	• STLT agencies	• Social environment	• Low physical activity	• Injury (intentional & unintentional)	
• Gender	• Laws & regulations	• Service environment	• Violence		
• Sexual orientation	• Schools		• Alcohol & other drugs		
• Disability	• Not-for-profit organizations		• Sexual behavior		
	• Criminal justice system				
	• Healthcare system				

80% of non-genetic determinants of health

Focus of traditional healthcare and historic ONC activities

Data needs to turn into actions

Data to better identify health inequities

Mechanisms for upstream intervention to mitigate social determinants of poor health

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How Does AI Become Biased or Unfair?

Framing the problem

Representative training data

Bias within training data

Curation and training optimization choices

Actions taken based on the prediction

Source: Duke Margolis Center for Health Policy

Social & institutional bias
Unequal access to quality healthcare (e.g., under-representation in health care data)

Data bias
There is incomplete data on factors affecting health (e.g., SDOH)

Programming bias
Computer programs may create spurious results (e.g., correlation is not causation)

Use bias
Healthcare providers may inappropriately use results (e.g., deciding resource allocations)

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ORIGINAL RESEARCH · BREAST IMAGING

Radiology

Patient Characteristics Impact Performance of AI Algorithm in Interpreting Negative Screening Digital Breast Tomosynthesis Studies

Derek L. Nguyen, MD* • Yinhao Ren, PhD* • Tyler M. Jones, BS • Samantha M. Thomas, MS • Joseph Y. Lo, PhD • Lars J. Grimm, MD, MS

From the Department of Radiology, Duke University School of Medicine, 10 Duke Medicine Cir, Durham, NC 27710 (D.L.N., J.Y.L., L.J.G.); Pratt School of Engineering (Y.R.) and Department of Biostatistics and Bioinformatics (T.M.J., S.M.T.), Duke University, Durham, NC; and iCAD, Nashua, NC (Y.R.). Received August 31, 2023; revision requested November 7; final revision received January 22, 2024; accepted March 25. **Address correspondence to** D.L.N. (email: *derek.nguyen@duke.edu*).

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Radiology: Volume 311: Number 2—May 2024

"In conclusion, our study demonstrated that **patient characteristics were associated with the performance of a commercially available artificial intelligence (AI) algorithm** when analyzing negative screening digital breast tomosynthesis mammograms. The Food and Drug Administration **should provide clear guidance on the demographic characteristics of samples used to develop algorithms, and vendors should be transparent about how their algorithms were developed**. Continued efforts to train future AI algorithms on diverse data sets are needed to ensure standard performance across all patient populations."

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"It soon became clear, however, that tacit assumptions— the substance of dogma—served as a barrier to effective communication."

Barbara McClintock
(1902–1992)

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ASTP Assistant Secretary for Technology Policy

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