



Department of Medicine  
University of Pennsylvania

# Opportunities and Challenges for the Development and Adoption of Multicancer Detection Tests

## Health Equity Considerations

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# Disclosures

- ▶ **Advisory Board**
  - Guardant Health
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- ▶ **Research grant to the Trustees of the University of Pennsylvania**
  - Genentech
- ▶ **Guideline Development Group**
  - American Cancer Society
- ▶ **Views are my own**



# MCD Health Equity Considerations

- ▶ **Populations that are more likely to have less access to USPSTF-recommended cancer screenings and greater cancer mortality include:**
  - Racial and ethnic minorities
  - Un- and under-insured
  - Lower SES
  - Rural residence
  - Non-English speakers
  - Without regular source of care or primary care providers
  
- ▶ **MCDs could reduce or widen disparities in these populations**
  - The system is currently designed to widen disparities
  
- ▶ **To minimize the risk of exacerbating disparities, intentionally:**
  - Eliminate barriers to accessing MCDs at multiple levels
  - Increase access, timeliness and quality of downstream diagnostic evaluations and cancer care
  - Mitigate through “Equity by Design”

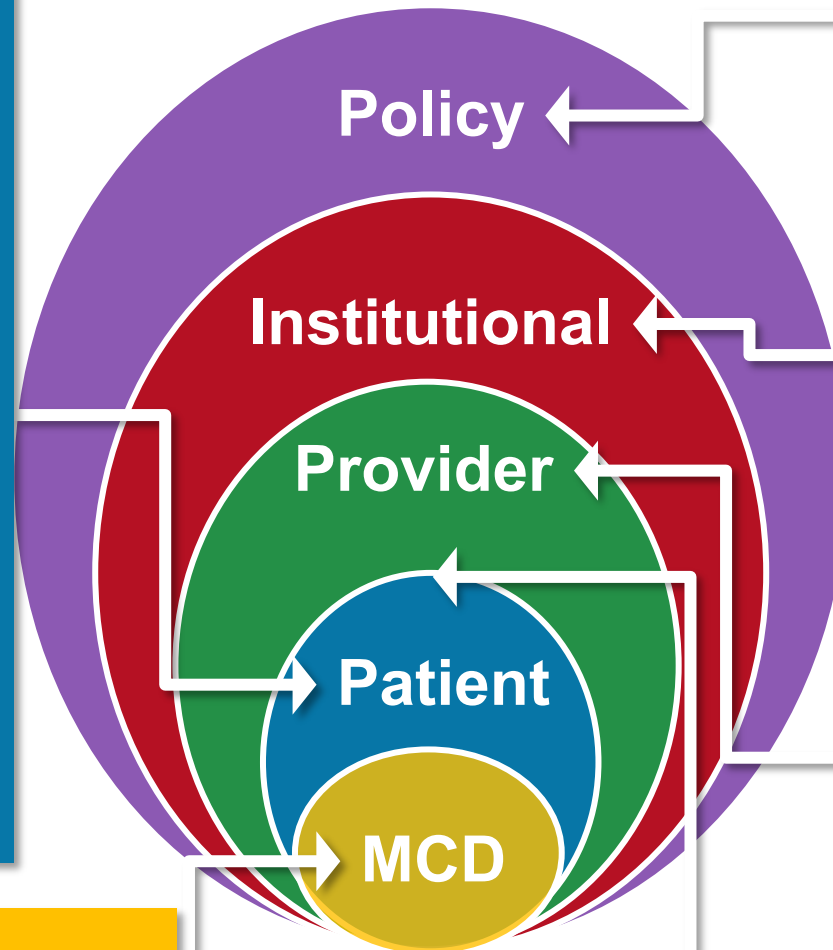
# SEM framework to identify and mitigate barriers to equitable access to MCDs

## Patient

- Socioeconomic status (SES)
- Awareness, knowledge
- Beliefs & attitudes, including fatalism, fear, stigma, inaccurate perceptions of risk, etc
- Self advocacy
- Language
- Health literacy
- Trust
- Health insurance
- Access to care/PCP
- Transportation
- Out-of-pocket costs
- Conflicts with work & life demands
- Caregiver support

## MCD test

Test identifies cancers in populations disproportionately affected by cancer



## Policy

- MCD test insurance coverage
- Medicaid non-expansion states
- State level coverage of cancer screenings and diagnostic testing for un- and underinsured

## Institutional

- Geography
- Segregation of cancer diagnostic resources
- Reminder systems
- Interpreters
- Patient navigators
- Community outreach, education, & engagement
- Perceived trustworthiness

## Provider

- Workforce diversity
- Knowledge of MCDs and diagnostic evaluations
- Time constraints
- Cultural humility
- Communication skills
- Office team support
- Unconscious bias

## Interpersonal

- Shared decision making

# Drivers of inequity

## ► MCD test

- Comparable performance across racial and ethnic groups in the CCGA sub-study (Tang et al. Prev Med 2022)
- The cancers and stage detected by the MCD test could impact equity
  - Black populations have high prostate cancer mortality, but many MCDs have poor test performance for prostate cancer
  - AI/AN and Hispanic populations have disproportionately higher liver and bile duct cancer mortality

## ► Patient

- 100 million individuals lack access and a regular source of care
- To reach these disenfranchised patients:
  - MCDs should be made available at FQHCs and safety net institutions
  - Mobile strategies
  - Language and culturally tailored MCD education and testing
  - Work with trusted messengers
  - In strong partnership with health systems and specialists that can guide +MCDs evaluation

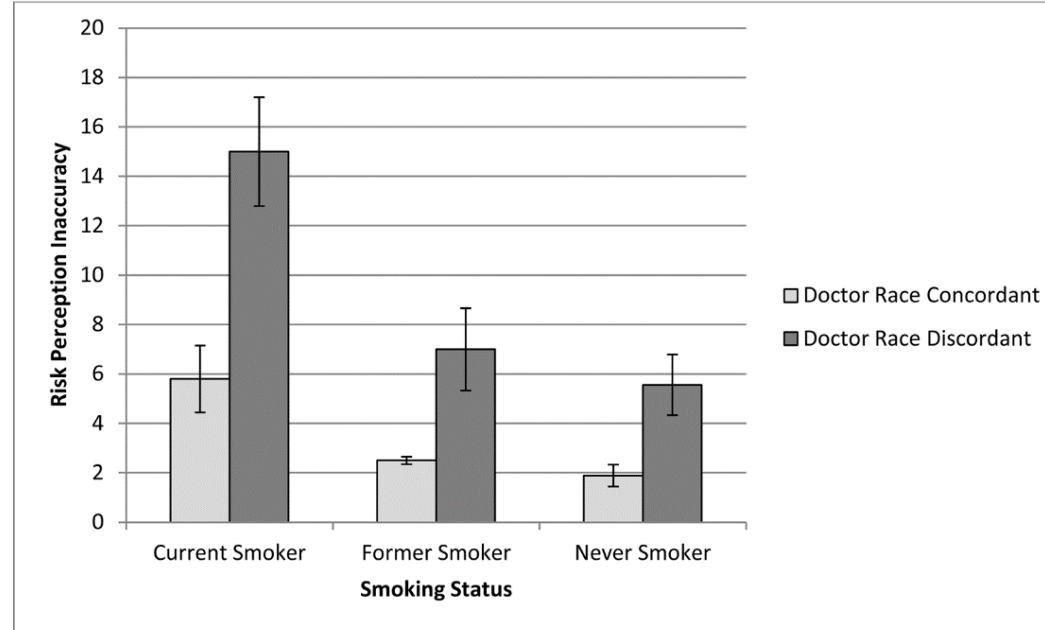
# Drivers of inequity

## ► Interpersonal – Shared Decision Making

- Black men are less likely to undergo shared decision making for PSA

BRFSS item (PA)	White % (95% CI)	Black % (95% CI)
Ever talked with provider about <b>advantages</b> of PSA	46 (43-49)	40 (29-51)
Ever talked with provider about <b>disadvantages</b> of PSA	22 (19-35)	16 (10-25)

# Workforce diversity and patient trust



Patients receiving information on lung cancer risk from a virtual physician **were more likely to accurately relay the information when the virtual physician was racially concordant.** (Persky S, et al. *Ann Behav Med.* 2013)

**Figure 2.**  
Risk perception inaccuracy by condition and smoking status, raw means. Bars represent standard error.

Black patients receiving screening mammography reports were more likely to **trust the report information if the radiologist providing the report was also Black** as identified by a study developed image of the interpreting radiologist. (Grimm LJ, et al. *J Am Coll Radiol.* 2022)

For Black patients who watched an online video about prostate cancer, **racial concordance with the presenter was associated with an increase in trust.** (Loeb S, et al. *JAMA Network Open.* 2023)

# Segregation of cancer screening, diagnostic and care resources

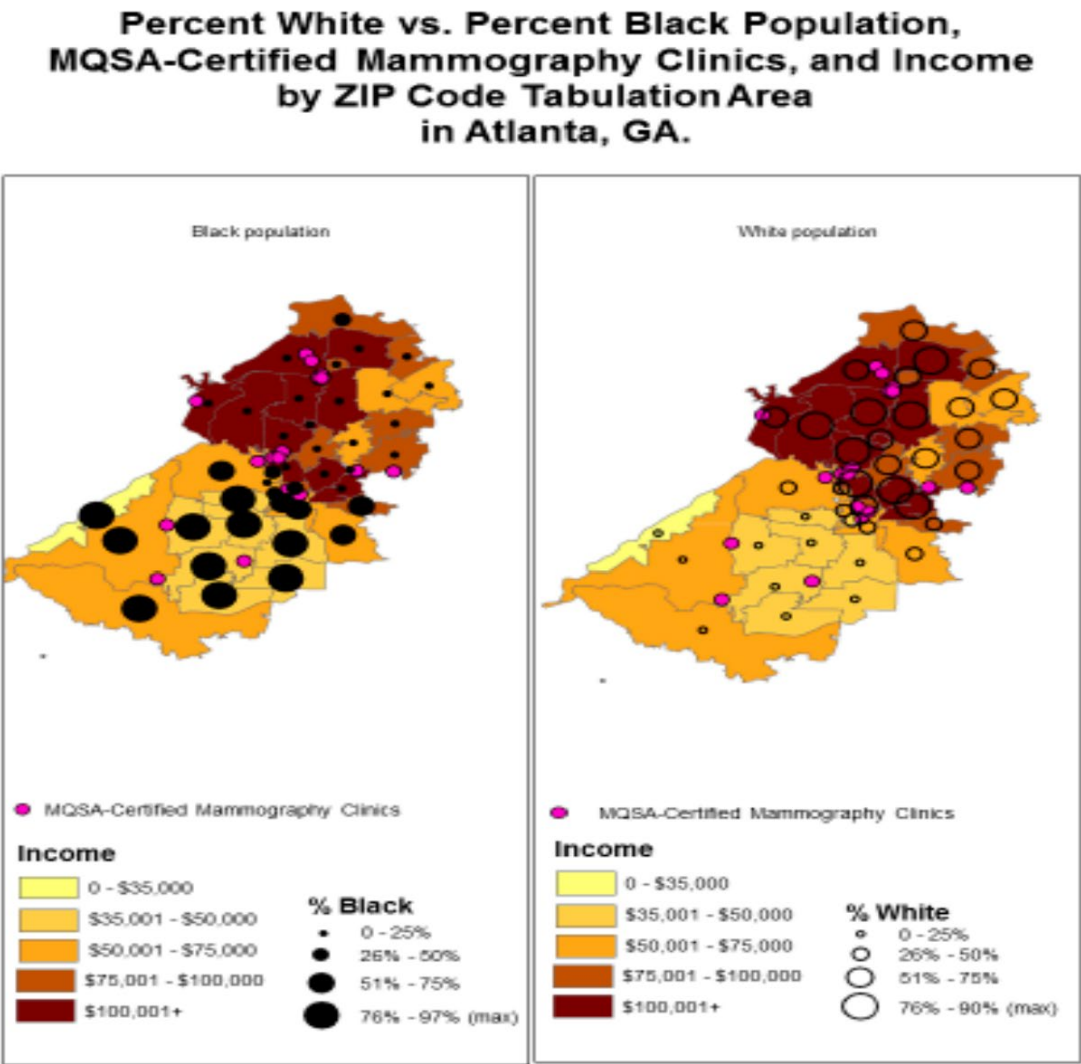


Figure A2. Percent White vs. Percent Black Population, MQSA-Certified Mammography Clinics, and Income by ZIP Code Tabulation Area in Atlanta, GA.

## Research Letter

November 16, 2023

## Distribution of Cancer Care Resources Across US Hospitals by Patient Race and Ethnicity

Gracie Himmelstein, MD, PhD<sup>1</sup>; Patricia A. Ganz, MD<sup>1,2</sup>

» Author Affiliations

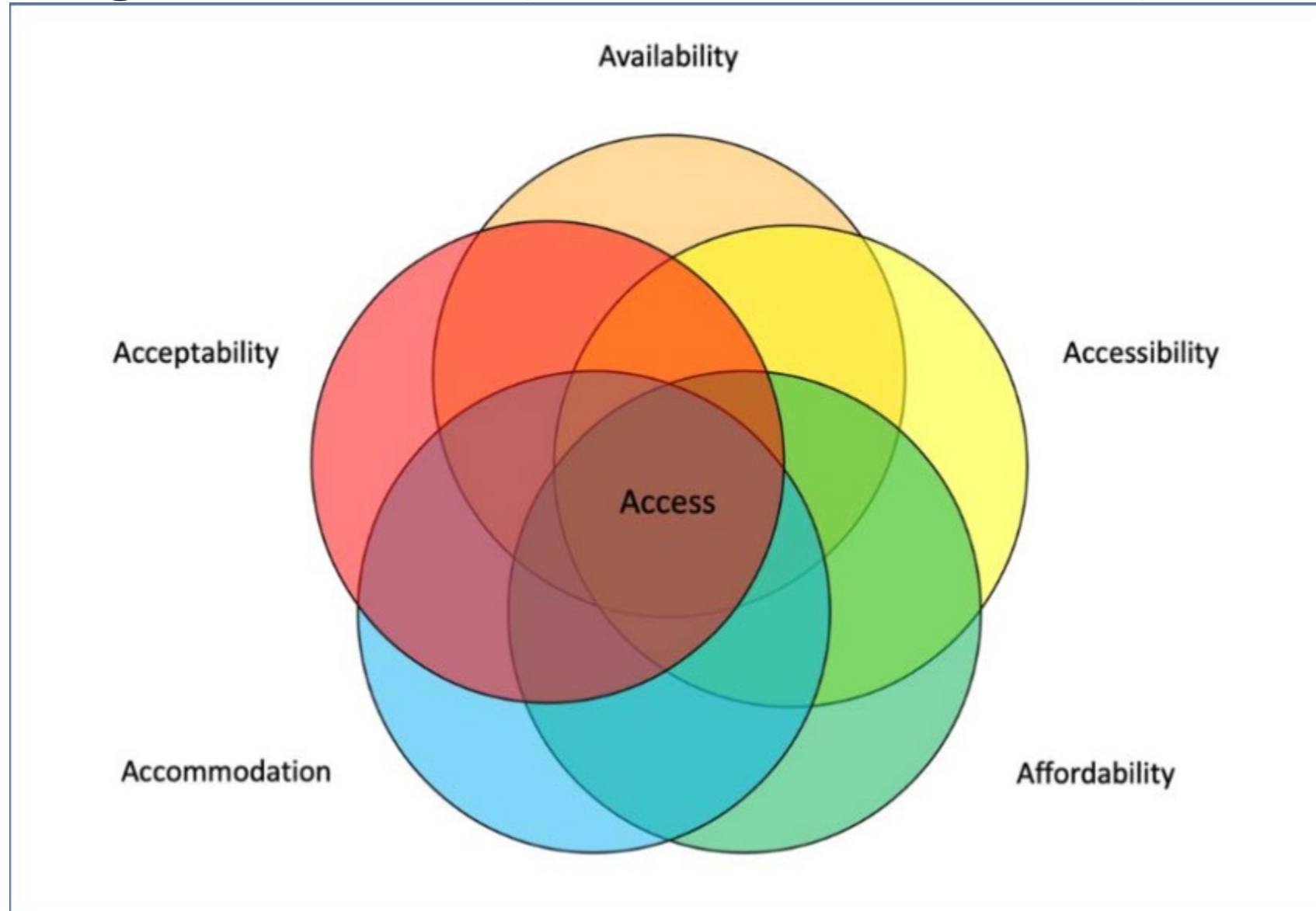
JAMA Oncol. 2024;10(1):134-137. doi:10.1001/jamaoncol.2023.4952

Hospitals with high numbers of Black, Hispanic and other racial and ethnic minority patients were significantly **less likely than other hospitals to have access to** core cancer screening and treatment services including, **MRI, PET/CT scanners, endoscopic ultrasound, robotic surgery and palliative care.**

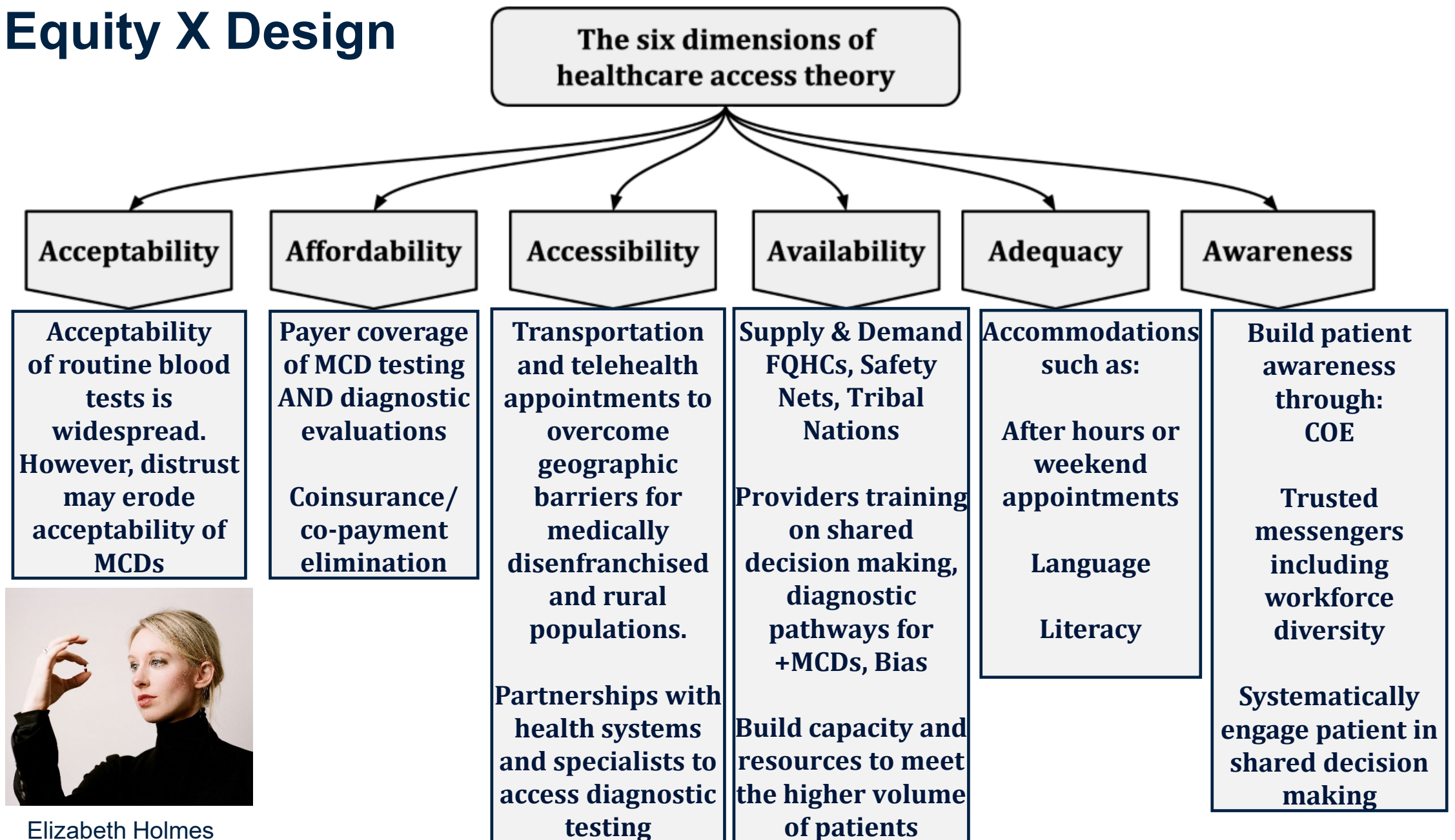
**Partnerships with health systems and specialists will be key to overcome segregation of resources**



# Equity X Design: Penchansky and Thomas's Theory of Access



# Equity X Design



# Equity X Design

## ► Patient Navigation

- Partnership with Academy of Oncology Nurse Navigators to develop competencies
  - Ideally the navigation workforce represents the communities served
- Payer reimbursed service or assumed as part of the testing model (e.g. Cologuard)

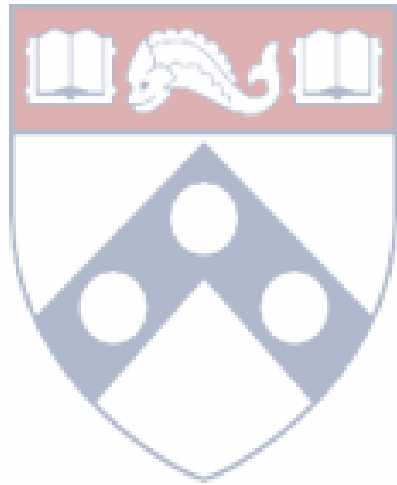
## ► Policy to redefine cancer screening and provide comprehensive coverage from screening to diagnosis (Taylor CD, et al. Redefining Cancer Screening Coverage—Screening to Diagnosis. *JAMA Health Forum*. 2024;5(9):e242814)

## ► Development of metrics to assess equity

- Disaggregate data by subgroups (race/ethnicity, rurality, income, insurance type) to reveal gaps in:
  - MCD testing access (access metric)
  - Completion of recommended diagnostic evaluations (quality metric)
  - Time to diagnosis after +MCD (quality metric)
  - Once guidelines are available, guideline concordant evaluation and treatment (quality metric)
- Collaboratively propose equity-minded interventions to address gaps, and evaluate the impact of interventions as a continuous improvement process
- Accountability

# Summary

- ▶ Multilevel factors will threaten equitable access to MCDs tests and evaluation of +MCD tests
- ▶ Mitigate inequities by
  - Addressing the multilevel barriers
    - MCD tests for diseases that disproportionately burden populations with cancer
    - Sites and efforts to reach under-resourced, disenfranchised and rural patients
    - COE with trusted messengers and diverse workforce
    - Systematic implementation of shared decision making
    - Partnerships with health systems and specialists to overcome inequities due to segregation of resources
  - Equity X Design
    - Informed by Theory of Access
    - Patient Navigation for MCDs by working with AONN and integrating into existing navigator's scope of work
    - Policy to redefine screening to include diagnostic testing and provide payer coverage across the screening continuum
    - Develop and monitor equity metrics and continuous improvement to close gaps
    - Accountability



# Department of Medicine

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