

**Date of Council:** May 2024

**Title of Initiative:** Research on Primary Care for Populations that Experience Health Disparities

**Author(s):** Dolly Penn White, M.D., MSCR, Larissa Avilés-Santa, M.D., M.P.H., FACP, FACE, and Yewande Oladeinde, Ph.D.

**Reviewers:** Kendrick E. Curry, Ph.D., M.Div., and Frank J. Penedo, Ph.D.

**Objective:** Support research on primary care in populations that experience health disparities to (1) understand the role of primary care in reducing disparities and promoting health equity, (2) evaluate multilevel factors and mechanisms that facilitate or challenge the effectiveness of primary care, and (3) support sustainable, innovative strategies within primary care that improve health and health outcomes.

**Background:** Multiple challenges exist in primary care delivery in the United States, including workforce shortages, inadequate focus on prevention, limited coordination with specialty care, and variable quality of care that lacks grounding in evidence-based approaches. Increased access to primary care has had limited effect on reducing health disparities and advancing health equity (1). Populations that experience health disparities are less likely to receive recommended preventive services (2-14) and evidence-based treatment (13-17). Further, populations that experience health disparities have a disproportionately higher risk of receiving low-value care (8-12), having poor control of health conditions for which there are evidence-based treatments (13,20,21), and experiencing worse health outcomes from preventable and treatable conditions (23-25). The provision of high-quality primary care\* (26) may reduce disparities and advance health equity (26-33), but there is an increasing shortage of primary care clinicians (34,35). Receiving high-quality health care is often the exception, not the rule, for populations that experience health disparities (1). Primary care literature centering on populations that experience health disparities has gaps. Studies have been primarily cross-sectional and focused on racial and/or ethnic minority groups. There is a need for research on all populations that experience health disparities and in settings serving a large proportion of these populations, such as clinical training clinics and low- or no-cost health clinics (e.g., mobile health clinics and community/migrant/shelter health centers). Most studies focus on cancer screening, diabetes, or hypertension and do not consider clinical (vs. statistical) significance of

\*The National Academies of Sciences Engineering and Medicine (NASEM) defines High-Quality Primary Care as “The provision of whole-person, integrated, accessible, and equitable health care by interprofessional teams who are accountable for addressing the majority of an individual’s health and wellness needs across settings and through sustained relationships with patients, families, and communities.”

outcomes. Additional progress in improving health and health outcomes will require more investigation to understand and address disparities at all levels of prevention (i.e., primordial through quaternary) and measure and understand the clinical significance of findings for acute and chronic conditions. There are few studies on the timeliness of evidence-based care and even fewer on decision-making related to ineffective/low-value care (e.g., non-evidence-based cancer screening, imaging for lower back pain, and opioid prescriptions for migraines). While the characteristics and benefits of health care teams have been well studied in cancer, there is less known about the structure and processes of effective interprofessional primary care teams and care coordination both within primary care (e.g., transition from pediatric to adult care) and across specialties (e.g., co-management by primary care clinicians and specialists). The role and defining characteristics of primary care for unique populations (e.g., indigenous, immigrant, migrant farmworkers) and settings (e.g., U.S. territories, penal institutions, houses of worship) need further study. Finally, there is a need for additional research on the primary care workforce.

The need for investment in primary care research was highlighted by an analysis of the FY 2023 National Institutes of Health (NIH) portfolio using the Research, Condition, and Disease Categorization (RCDC) term “primary health care,” which showed about 2% of the overall NIH budget supported primary health care research. NIMHD invested about 15% of its FY 2023 budget in primary health care research. NIH’s investment reflects the importance and cross-cutting nature of primary care research.

**Taken together, the persistent disparities in health and health outcomes for populations that experience health disparities despite improved access, the gaps in primary care literature, and the limited NIH primary health care research portfolio highlight the need for greater investment by NIMHD in primary care research that prioritizes populations that experience health disparities.**

**Description of Initiative:** The purpose of this initiative is to support research on primary care for populations that experience health disparities (1). Of particular interest, is research that investigates the effectiveness of primary care in addressing the health care needs of populations that experience health disparities and (2) develops, tests, implements, and/or evaluates sustainable, innovative interventions within primary care settings designed to reduce health disparities and advance health equity. Study designs and methods could include mixed methods, natural experiments, quasi-experimental or clinical trials (e.g., RCT, clustered randomization of primary care practices, or pragmatic), retrospective and prospective analyses, simulation modeling, and others. Comprehensive conceptual frameworks should guide the community-engaged development of effective evidence-based and sustainable strategies that can be implemented in and disseminated across primary care settings. Studies that prioritize clinically significant outcomes or intermediate clinical outcomes or risk factors that drive the clinically significant outcomes are of interest. Studies in any setting in which populations that experience health disparities receive primary care are of interest (e.g., academic, community, low-resource, retail, and workplace).

## Research Priorities (examples):

### The provision of high-quality primary care to improve health outcomes

- Examine factors and mechanisms influencing access, quality, utilization, and continuity of care. Of interest is understanding facilitators and barriers to increasing access to primary care services for uninsured and underinsured populations and increasing engagement in care for those with access (e.g., insured).
- Develop and test, implement, and/or evaluate strategies or interventions to optimize timely receipt of evidence-based preventive, diagnostic and treatment services, and specialty care referrals.

### The coordination of care through interprofessional teams to improve primary care quality and health outcomes [*Interprofessional teams that include clinical and nonclinical persons (e.g., administrators, community health workers) are of interest.*]

- Examine multilevel factors and mechanisms that influence the functioning and effectiveness of teams and modifiable features that are associated with differences in care quality and health outcomes.
- Develop innovative strategies to identify and address care coordination challenges or breakdowns in care pathways. Of interest are transitions to adult care for children with chronic conditions, behavioral health care coordination, and return to primary care or co-management after treatment for specific health conditions managed by specialists (e.g., cancer, cardiovascular events, recovery from major surgery, or injury).

### The role, structure, and effectiveness of primary care in unique populations and/or settings. [*Application must define how the proposed population and/or setting is unique.*]

- Examine primary care organizational structure, team characteristics, workflow, and health outcomes.
- Community-engaged design and testing, implementation, and/or evaluation of sustainable strategies or interventions to improve primary care access and engagement for people from groups who may avoid conventional clinical settings due to stigma or other social circumstances (e.g., sex workers, people with disabilities), or people not available during usual outpatient clinic hours due to conflicting priorities (e.g., irregular work schedule, caregiving).

### The role of the primary care workforce in facilitating or challenging the effectiveness of primary care

- Examine the role of narrow-/limited-scope primary care practice (e.g., specialization, urgent care) on access, care quality, and health outcomes.
- Examine factors and mechanisms at the clinician level that influence medical recommendations or decisions (e.g., diagnostic tests/procedures, referral to specialists, medication selection, and initiation) and the effect on health outcomes. Of particular interest is understanding decisions not to intensify treatment in patients not meeting evidence-based care goals (i.e., clinical inertia).

## References:

1. National Academies of Sciences, Engineering, and Medicine. 2024. Unequal Treatment Revisited: The Current State of Racial and Ethnic Disparities in Health Care: Proceedings of a Workshop. Washington, DC: The National Academies Press. <https://doi.org/10.17226/27448>.
2. Lin SC, McKinley D, Sripipatana A, Makaroff L. Colorectal cancer screening at US community health centers: Examination of sociodemographic disparities and association with patient-provider communication. *Cancer*. 2017 Nov 1;123(21):4185-4192. doi: 10.1002/cncr.30855. Epub 2017 Jul 14. PMID: 28708933.
3. Khatib R, Glowacki N, Lauffenburger J, Siddiqi A. Race/Ethnic Differences in Atherosclerotic Cardiovascular Disease Risk Factors Among Patients With Hypertension: Analysis From 143 Primary Care Clinics. *Am J Hypertens*. 2021 Sep 22;34(9):948-955. doi: 10.1093/ajh/hpab053. PMID: 33876823; PMCID: PMC8457428.
4. Krishnan JK, Mallya SG, Nahid M, Baugh AD, Han MK, Aronson KI, Goyal P, Pinheiro LC, Banerjee S, Martinez FJ, Safford MM. Disparities in Guideline Concordant Statin Treatment in Individuals With Chronic Obstructive Pulmonary Disease. *Chronic Obstr Pulm Dis*. 2023 Oct 26;10(4):369-379. doi: 10.15326/jcopdf.2023.0395. PMID: 37410623; PMCID: PMC10699489.
5. Dunn MR, Metwally EM, Vohra S, Hyslop T, Henderson LM, Reeder-Hayes K, Thompson CA, Lafata JE, Troester MA, Butler EN. Understanding mechanisms of racial disparities in breast cancer: an assessment of screening and regular care in the Carolina Breast Cancer Study. *Cancer Causes Control*. 2024 Jan 13. doi: 10.1007/s10552-023-01833-5. Epub ahead of print. PMID: 38217760.
6. Jacobs JA, Addo DK, Zheutlin AR, Derington CG, Essien UR, Navar AM, Hernandez I, Lloyd-Jones DM, King JB, Rao S, Herrick JS, Bress AP, Pandey A. Prevalence of Statin Use for Primary Prevention of Atherosclerotic Cardiovascular Disease by Race, Ethnicity, and 10-Year Disease Risk in the US: National Health and Nutrition Examination Surveys, 2013 to March 2020. *JAMA Cardiol*. 2023 May 1;8(5):443-452. doi: 10.1001/jamacardio.2023.0228. Erratum in: *JAMA Cardiol*. 2023 May 24;: PMID: 36947031; PMCID: PMC10034667.
7. Pelayo C, Mora Pinzón M, Lock LJ, Fowlkes C, Stevens CL, Hoang J, Garcia JL, Jacobson NA, Channa R, Liu Y. Factors Influencing Eye Screening Adherence Among Latinx Patients With Diabetes: A Qualitative Study. *Transl Vis Sci Technol*. 2023 Dec 1;12(12):8. doi: 10.1167/tvst.12.12.8. PMID: 38060234; PMCID: PMC10709803.
8. Kurani SS, McCoy RG, Lampman MA, Doubeni CA, Finney Rutten LJ, Inselman JW, Giblon RE, Bunkers KS, Stroebel RJ, Rushlow D, Chawla SS, Shah ND. Association of Neighborhood Measures of Social Determinants of Health With Breast, Cervical, and Colorectal Cancer Screening Rates in the US Midwest. *JAMA Netw Open*. 2020 Mar 2;3(3):e200618. doi: 10.1001/jamanetworkopen.2020.0618. PMID: 32150271; PMCID: PMC7063513.

9. Viramontes O, Bastani R, Yang L, Glenn BA, Herrmann AK, May FP. Colorectal cancer screening among Hispanics in the United States: Disparities, modalities, predictors, and regional variation. *Prev Med.* 2020 Sep;138:106146. doi: 10.1016/j.ypmed.2020.106146. Epub 2020 May 28. PMID: 32473957.
10. Jones T, Wisdom-Chambers K, Freeman K, Edwards K. Barriers to Mammography Screening among Black Women at a Community Health Center in South Florida, USA. *Med Res Arch.* 2023 Apr;11(4):10.18103/mra.v11i4.3814. doi: 10.18103/mra.v11i4.3814. Epub 2023 Apr 25. PMID: 37475892; PMCID: PMC10358292.
11. Xie Z, Chen G, Suk R, Dixon B, Jo A, Hong YR. Limited English Proficiency and Screening for Cervical, Breast, and Colorectal Cancers among Asian American Adults. *J Racial Ethn Health Disparities.* 2023 Apr;10(2):977-985. doi: 10.1007/s40615-022-01285-8. Epub 2022 Mar 16. PMID: 35297497.
12. Mishra SI, Adsul P, Leekity S, Rodman J, Sussman AL, Kelly K, Sheche J, Faber T, Shah V. A culturally informed model to enhance breast, cervical, and colorectal cancer screenings: perspectives of American Indian adults and healthcare providers in rural New Mexico. *Cancer Causes Control.* 2023 Oct;34(10):855-871. doi: 10.1007/s10552-023-01721-y. Epub 2023 Jun 6. PMID: 37277513; PMCID: PMC10460346.
13. Essien UR, He W, Ray A, Chang Y, Abraham JR, Singer DE, Atlas SJ. Disparities in Quality of Primary Care by Resident and Staff Physicians: Is There a Conflict Between Training and Equity? *J Gen Intern Med.* 2019 Jul;34(7):1184-1191. doi: 10.1007/s11606-019-04960-5. Epub 2019 Apr 8. PMID: 30963439; PMCID: PMC6614525.
14. Frank DA, Johnson AE, Hausmann LRM, Gellad WF, Roberts ET, Vajravelu RK. Disparities in Guideline-Recommended Statin Use for Prevention of Atherosclerotic Cardiovascular Disease by Race, Ethnicity, and Gender : A Nationally Representative Cross-Sectional Analysis of Adults in the United States. *Ann Intern Med.* 2023 Aug;176(8):1057-1066. doi: 10.7326/M23-0720. Epub 2023 Jul 25. PMID: 37487210; PMCID: PMC10804313.
15. Marshall C, Adams AS, Ma L, Altschuler A, Lin MW, Thompson NA, Young JD. Clinical Decision Support to Address Racial Disparities in Hypertension Control in an Integrated Delivery System: Evaluation of a Natural Experiment. *Perm J.* 2021 Oct 25;26(1):11-20. doi: 10.7812/TPP/21.024. PMID: 35609161; PMCID: PMC9126555.
16. Vransy EA, Hill-Briggs F, Ephraim PL, Myers AK, Garnica P, Fitzpatrick SL. Continuous glucose monitors and virtual care in high-risk, racial and ethnic minority populations: Toward promoting health equity. *Front Endocrinol (Lausanne).* 2023 Jan 25;14:1083145. doi: 10.3389/fendo.2023.1083145. PMID: 36761197; PMCID: PMC9905720.

17. Williams C, Shang D. Telehealth for Chronic Disease Management Among Vulnerable Populations. *J Racial Ethn Health Disparities*. 2024 Apr;11(2):1089-1096. doi: 10.1007/s40615-023-01588-4. Epub 2023 Apr 13. PMID: 37052797; PMCID: PMC10100602.
18. Schpero WL, Morden NE, Sequist TD, Rosenthal MB, Gottlieb DJ, Colla CH. For Selected Services, Blacks And Hispanics More Likely To Receive Low-Value Care Than Whites. *Health Aff (Millwood)*. 2017 Jun 1;36(6):1065-1069. doi: 10.1377/hlthaff.2016.1416. PMID: 28583965; PMCID: PMC5568010.
19. Ganguli I, Mackwood MB, Yang CW, Crawford M, Mulligan KL, O'Malley AJ, Fisher ES, Morden NE. Racial differences in low value care among older adult Medicare patients in US health systems: retrospective cohort study. *BMJ*. 2023 Oct 25;383:e074908. doi: 10.1136/bmj-2023-074908. PMID: 37879735; PMCID: PMC10599254.
20. Schuttner L, Haraldsson B, Maynard C, Helfrich CD, Reddy A, Parikh T, Nelson KM, Wong E. Factors Associated With Low-Value Cancer Screenings in the Veterans Health Administration. *JAMA Netw Open*. 2021 Oct 1;4(10):e2130581. doi: 10.1001/jamanetworkopen.2021.30581. PMID: 34677595; PMCID: PMC8536952
21. Kurani SS, Heien HC, Sangaralingham LR, Inselman JW, Shah ND, Golden SH, McCoy RG. Association of Area-Level Socioeconomic Deprivation With Hypoglycemic and Hyperglycemic Crises in US Adults With Diabetes. *JAMA Netw Open*. 2022 Jan 4;5(1):e2143597. doi: 10.1001/jamanetworkopen.2021.43597. PMID: 35040969; PMCID: PMC8767428.
22. Selby K, Michel M, Gildengorin G, Karliner L, Pramanik R, Fontil V, Potter MB. Disparities in Hypertension Control Across and Within Three Health Systems Participating in a Data-Sharing Collaborative. *J Am Board Fam Med*. 2018 Nov-Dec;31(6):897-904. doi: 10.3122/jabfm.2018.06.180166. PMID: 30413545; PMCID: PMC6420811.
23. Jackson, C. S., and J. N. Gracia. 2014. Addressing health and health-care disparities: The role of a diverse workforce and the social determinants of health. *Public Health Reports* 129(Suppl 2):57–61
24. CDC Health Disparities & Inequalities Report (CHDIR) 2013  
<https://www.cdc.gov/minorityhealth/CHDIRReport.html>
25. 2023 National Healthcare Quality and Disparities Report. Executive Summary. Rockville, MD: Agency for Healthcare Research and Quality; December 2023. AHRQ Pub. No. 23(24)-0091-EF.
26. National Academies of Sciences, Engineering, and Medicine. 2021. Implementing high-quality primary care: Rebuilding the foundation of health care. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25983>.
27. Homa L, Rose J, Hovmand PS, Cherng ST, Riolo RL, Kraus A, Biswas A, Burgess K, Aungst H, Stange KC, Brown K, Brooks-Terry M, Dec E, Jackson B, Gilliam J, Kikano GE, Reichsman A,

- Schaadt D, Hilfer J, Ticknor C, Tyler CV, Van der Meulen A, Ways H, Weinberger RF, Williams C. A participatory model of the paradox of primary care. *Ann Fam Med*. 2015 Sep;13(5):456-65. doi: 10.1370/afm.1841. PMID: 26371267; PMCID: PMC4569454.
28. Valente J, Johnson N, Edu U, Karliner LS. Importance of Communication and Relationships: Addressing Disparities in Hospitalizations for African-American Patients in Academic Primary Care. *J Gen Intern Med*. 2020 Jan;35(1):228-236. doi: 10.1007/s11606-019-05392-x. Epub 2019 Oct 22. PMID: 31641992; PMCID: PMC6957662.
29. Burch AE, Lee E, Schmidt P, Shackelford P, Bolin P. Correction to: Factors Responsible for Healthcare Avoidance Among Rural Adults in the Eastern Region of North Carolina. *J Community Health*. 2022 Dec;47(6):1001. doi: 10.1007/s10900-022-01134-z. Epub 2022 Aug 4. Erratum for: *J Community Health*. 2022 Oct;47(5):737-744. PMID: 35925436; PMCID: PMC9828846.
30. Chen BK, Hibbert J, Cheng X, Bennett K. Travel distance and sociodemographic correlates of potentially avoidable emergency department visits in California, 2006-2010: an observational study. *Int J Equity Health*. 2015 Mar 21;14:30. doi: 10.1186/s12939-015-0158-y. PMID: 25889646; PMCID: PMC4391132.
31. Starfield, B. 2009. Primary care and equity in health: The importance to effectiveness and equity of responsiveness to peoples' needs. *Humanity & Society* 33(1-2):56-73.
32. Starfield, B. 2012. Primary care: An increasingly important contributor to effectiveness, equity, and efficiency of health services. *SESPAS report 2012*. *Gaceta Sanitaria* 26(Suppl1):20-26.
33. Starfield, B., L. Shi, and J. Macinko. 2005. Contribution of primary care to health systems and health. *Milbank Quarterly* 83(3):457-502.
34. Basu S, Berkowitz SA, Phillips RL, Bitton A, Landon BE, Phillips RS. Association of Primary Care Physician Supply With Population Mortality in the United States, 2005-2015. *JAMA Intern Med*. 2019 Apr 1;179(4):506-514. doi: 10.1001/jamainternmed.2018.7624. PMID: 30776056; PMCID: PMC6450307
35. Nikpour J, Carthon JMB. Characteristics, work environments, and rates of burnout and job dissatisfaction among registered nurses in primary care. *Nurs Outlook*. 2023 Jul-Aug;71(4):101988. doi: 10.1016/j.outlook.2023.101988. Epub 2023 Jun 15. PMID: 37329590; PMCID: PMC10592661.