How are Health Care Workers Utilized in Health Equity Interventions? An Exploratory Review

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KEY FINDINGS

Health care workers play crucial roles in interventions and policies that promote health equity by providing culturally sensitive services, partnering with communities to promote population health, and addressing unconscious racial and ethnic biases in health care delivery. Despite their significance for eliminating health disparities experienced by historically marginalized communities, the roles that the health workforce plays within these interventions are not systemically monitored. In this study, we sought to understand how health care workers are expected to address issues of health equity in a burgeoning literature by answering the following questions:

1) Which health care workers have been charged with reducing health disparities?
2) Where are they positioned in the pathway toward improving health equity?
3) What training, if any, did they receive to address health equity?

We conducted an exploratory review to identify patterns regarding the role of the health workforce in health equity interventions, using PubMed and Google Scholar to identify research articles on health equity published between 2007 and 2021. After a multidisciplinary team of experts screened the available articles, 54 articles were included in the final sample. Four key themes emerged:

1) Researchers addressed health equity by recruiting health care workers for their self-identification as belonging to a historically marginalized community;
2) Researchers charged health care workers with carrying out health equity interventions;
3) Researchers typically lacked a clear description of health disparity and thus the health occupation that was to carry out the intervention; and
4) Researchers made implicit assumptions about health care worker training and skills.

Our study showed that health equity research commonly focuses on the patients and communities that experience a disparity and less on the specifics of health care workers' training, roles, or support that can be utilized to improve health outcomes through health equity interventions. Where health care workers are mentioned, it is often without clear qualifications or specific job titles. Ongoing monitoring of health care workers' roles in health equity interventions is needed to better target future investments in education and training of health professionals.

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INTRODUCTION

The conditions in which people are born, work, live, grow, and age—commonly referred to as the social determinants of health (SDOH)—shape people's health and wellbeing. Health care workers, including physicians, nurses, medical assistants, community health workers, and many others, play crucial roles in carrying out activities within the many emerging health interventions and policies that address these social conditions to promote equal opportunity to attain full health potential, or "health equity."[1] Health care workers can improve health equity by providing culturally sensitive services, partnering with communities to promote population health, and addressing unconscious racial and ethnic biases in health care delivery. Despite their significance for eliminating health disparities experienced by historically marginalized communities, the roles that the health workforce plays within these interventions are not systematically monitored.

The field of health equity research has grown in recent years due to an increasing focus on solutions to address health disparities as well as attention brought about by the Black Lives Matters movement and the disproportionate impact of the COVID-19 pandemic on Black, Latinx, and American Indian communities.[2,3] Whereas previous research focused on identifying and documenting the root causes of health disparities, current health equity research is increasingly identifying interventions to close those gaps. Researchers have integrated the SDOH framework into health equity interventions[4] to educate health professionals to address the wide-ranging systematic inequalities that create disparities.[5] Such interventions within, as well as outside, the health system can help address unmet social needs and improve health outcomes among underserved communities.[6]

Despite attention on ways that the health workforce may contribute to health disparities, the health workforce plays an important role in reducing health disparities.[7,8] Research has pointed out that the health workforce can reduce disparities by providing culturally tailored care, working in and with multidisciplinary care teams, improving their skills through interactive health education pedagogies,[9] and supporting patient care through accepting insurance, patient beliefs about treatment, quality of care, disparate clinical decision-making, and societal influence.[4] Many efforts have been made to educate and train health care workers on their role in reducing health disparities and achieving health equity through bias awareness and cultural humility trainings, plus the use of interactive techniques in health education, to reduce provider-based systemic inequalities in care and outcomes.[5,10-15] Standardizing the collection of patients' SDOH in electronic health records and integrating this data in primary care clinical decision making,[16] plus the use of patient navigation, communication coaching, and engaging family and community members in the health care process may also improve outcomes for historically marginalized patients.[17]

Diversifying the health workforce is another way health equity research aims to close care gaps and reduce disparities. Such interventions seek to recruit and train health care providers and members from historically marginalized communities.[18-20] Evaluations of efforts to diversify the health workforce have shown that patients from these communities report better quality care when health care providers resemble their race, ethnicity, language, or socio-economic background.[21,22] Health care institutions can diversify the health workforce and adopt explicit anti-racism language through, among other strategies, the building of meaningful partnerships with Black, Indigenous, and communities of color and the implementation of racial equity policies and procedures for hiring, retention, and promotion.[23]

INTRODUCTION *continued*

Health equity researchers stress that disparities experienced by certain populations may be attributable to, and therefore mitigated by, attitudes and behaviors of providers in health care.[14,24] In such mitigations, researchers attribute crucial roles to health care workers, but they generally do not specify health care workers' established or expected training, their scope of practice, or the required support to successfully implement change. Recognizing the many health care workers who strive to achieve health equity through their engagements with patients and communities, we sought to understand which workers are expected to address issues of health equity and which support they may need. In reviewing the burgeoning literature on health equity, this study aims to answer the following questions:

1) Which health care workers have been charged with reducing health disparities?
2) Where are they positioned in the pathway toward improving health equity?
3) What training, if any, did they receive to address health equity?

Identifying the gaps in our knowledge on the role of the health workforce in addressing health equity is important for allocating future investments in education and training of health professionals.

METHODS

We conducted an exploratory review to identify patterns regarding the role of the health workforce in health equity interventions, given how little is known about the role of the health workforce in health equity research. We used PubMed and Google Scholar to identify research articles on health equity published between 2007 and 2017. From November 2019 through the end of 2021, we conducted a spot check and included additional publications.

Table 1: Search terms used for data collection*

Search terms used	Number of articles included in review
Health equity workforce	6
Health inequity	4
Health disparity intervention	5
Health disparity intervention provider	0
Health inequity intervention	5
Health equity provider	1
Health inequity intervention provider	2
Patient outcomes, assessments	5
Equity treatments outcomes, assessments	1
Health disparities patient outcome assessments	3
Patient reported outcome disparities	4
LGBT provider	1
African American health disparity interventions	3
Cultural competency interventions	2
Health equity	1
Racism health inequities	2

* An additional 9 articles were included that provided a framework for studying health disparities that are not listed in Table 1

We included studies that provided or evaluated health equity interventions in health care to improve health equity. We kept our definitions of intervention, health equity, and health workforce broad to include research studies that examined diverse interventions that sought to improve the health outcomes of a population suffering from health disparities by providing a conceptual framework that incorporated the health workforce actively intervening in health care services delivery through novel program development, or otherwise utilizing health care workers to create change. We utilized expertise within the team as well as guidance from the AcademyHealth report titled, *The State of Health Equity Research: Closing Knowledge Gaps to Address Inequities*, to develop a set of search terms to guide our data selection process.

In our initial search, using the search terms listed in **Table 1**, we looked for articles that addressed health equity or health disparities, mentioned health care workers, and offered a health equity intervention. The initial search

identified 500 articles. We excluded research that was not within the year range and conducted outside of the United States. We also excluded perspective pieces, opinion pieces, and descriptive studies. Team members with expertise in the health workforce, health services, public health, and medical anthropology screened article titles and abstracts. A final 54 articles were included in the review (see **Appendix A Table 1** for the number of articles identified and **Appendix B** for a full list of articles). **Box 1** indicates the information we collected from the articles.

Box 1: Data collected from articles included in review

- Year of publication
- Description of the research
- The targeted population or demographics mentioned
- Type of health equity intervention
- Description of health disparity
- Role of the health care worker(s)
- Funder/grant ID (if available)

LIMITATIONS

We faced challenges during the data collection process, especially in relation to our search terms. We did not define *a priori* what a health disparity is nor what causes it. We also did not limit our search to health equity interventions targeting historically marginalized populations, including Black and Hispanic, Native American/First Nation, and Indigenous communities. The open-endedness of our approach enabled us to build upon existing literature and the literature's use of the terms. However, the openness of our search process also made it difficult at times to establish which medical subject heading (MeSH) terms or other search terms best captured the wide array of research on health disparities and health equity. We also wanted to keep the search process open by not defining *a priori* which groups we deemed marginalized and the subject of population-specific targeted health equity interventions. Due to these limitations, we intend this review to identify broad patterns and implicit assumptions regarding the role of the health workforce in health equity and disparities research.

RESULTS

Our exploratory review revealed that health researchers have identified important roles for the health workforce to engage in health equity interventions. Health care workers engage in a range of health equity interventions, including but not limited to, improving health education for patients and providers about risks factors, healthy practices, or training focused on providing culturally informed care to a variety of populations; health equity interventions focused on health promotion by developing a screening program or increasing access to and use of preventative care; developing health policies that increase awareness of and target racial discrimination in health care and other social realms; and, health equity interventions aimed at improving provider-client interactions in clinical care.

Where the health workforce was mentioned explicitly in health equity interventions, four key themes emerged: 1) researchers addressed health equity by recruiting health care workers for their self-identification as belonging to a historically marginalized community; 2) researchers charged health care workers with carrying out health equity interventions; 3) researchers typically lacked a clear description of health disparity and thus the health occupation that was to carry out the intervention; and 4) researchers made implicit assumptions about health care worker training and skills. We discuss our findings for each theme below.

ADDRESSING HEALTH EQUITY VIA HEALTH CARE WORKERS' SELF-IDENTIFICATIONS OF COMMUNITY BELONGING

The studies in our sample shared the same goal, namely wanting to reduce health disparities and improve health outcomes by allocating important roles to health care workers for driving the change that could lead to greater population health. In general, they used the health workforce in two distinct ways: first, for the worker's *self-identification* with a target population and, second, for the worker's *role* in patient care and community-based health equity interventions.

Diversifying the health workforce by recruiting health care workers from minoritized communities

In the literature included in our sample, efforts to diversify the health workforce often focused on increasing the representation

of faculty from minoritized populations, improving mentorship opportunities to recruit and retain faculty and students of color, and support the academic and professional careers of health care workers from minoritized populations. For example, Williams and colleagues[22] advocate the diversification of the nursing workforce to increase the opportunities for people. They seek to increase the opportunities for people from historically marginalized populations to enter nursing education through federal programs. Such educational opportunities benefit individuals and health equity as individuals from historically marginalized populations are more likely than their White peers to serve in resource-poor and rural areas and can provide cultural- and language-congruent patient care, which, in turn, can strengthen patient-provider communication, trust, and clinical decision making.[22] Other researchers aimed to improve structural diversity by increasing job trainings and job growth for low-income communities, which could improve income and wages, and educational and employment levels on individual and community levels.[20] Other researchers aimed to recruit minoritized junior faculty and doctoral candidates in clinical and translational research through inter-institutional collaborations, increased interdisciplinary mentoring, and financial incentives and awards to help cover program fees and research expenses.[25] Researchers also focused on the diversification of hospital leadership because hospitals with diverse leadership boards are more likely than homogenous executive boards to advance health equity through strategic planning, sensitivity to cultural influences, and community outreach and education.[26] Efforts to successfully tackle health disparities should include preparing and moving health care workers from minoritized populations into influential health leadership roles.[27]

CHARGING HEALTH CARE WORKERS TO CARRY OUT HEALTH EQUITY INTERVENTIONS

In addition to efforts to diversify the health workforce, health equity interventions in our sample focused on how health care workers can address the social determinants of health by: 1) improving clinical care provision, and 2) supporting community-led projects. This research represented a broader shift in health equity research that took place over the past thirty years -- away from simply describing disparities to developing health equity interventions that target disparities on multiple levels.

Improving health outcomes through clinical care

One set of research that focused on the SDOH did so by improving clinical care delivery that targets specific health disparities in historically marginalized communities. For example, Chin and colleagues[28] used key findings from six papers to review which health equity interventions reduced racial and ethnic disparities in cardiovascular, diabetes, depression, and breast cancer care. They assessed the evidence for effective use of culturally tailored health equity interventions and analyzed the effect of pay-for-performance and public reporting on reducing disparities. Based on their assessment, they built a comprehensive conceptual framework for addressing racial and ethnic disparities.

Researchers also advocated another approach, namely, to engage specific workers from the community who may understand cultural norms and practices to connect the community to clinical care and address health disparities. For example, in one study, O'Brien and colleagues[29] designed and implemented a randomized trial of *Promotora*-led educational health equity interventions to improve pap screening rates, knowledge about cervical cancer, and self-efficacy among Hispanic women. They focused on Hispanic women because cervical cancer represented one of the starkest health disparities for this group with incidence rates being nearly twice that of White women. The researchers solicited the help of *Promotoras*, who are lay community members who serve as connectors between Hispanic women in their communities and health care providers. O'Brien and colleagues,[29] with the help of a community advisory board, concluded that the *Promotoras*-led intervention was effective in increasing participants' self-efficacy and knowledge about cervical cancer and improving pap smear screening rates. This study was an example of health equity research that tasked medically trained and non-medical members from underserved communities or those serving such communities with improving clinical care by supporting patients through health equity interventions that target community-specific disparities.

Supporting community-based health equity interventions

A second set of research in our sample used health care workers' roles, often but not always coupled with their self-identifications,

to support community-based projects. In such community-led interventions, health care workers such as primary care physicians and nurse practitioners worked together with and supported community members, such as community health workers, health advocates, and policymakers, to encourage systemic change and improve population health. Underlying the call for systematic coordination of health care workers across clinical and community settings are frameworks such as the *National Institute on Minority Health and Health Disparities (NIMHD) Research Framework*, which identifies the complex array of determinants, rather than a single determinant, that may be at the heart of a community's health disparity or diminished health outcomes.[30] Recognizing the wide array of social determinants impacting community and individual health, some researchers sought to bridge the gap between clinical care sites and community members with enhanced medical and social needs. For example, the Centers for Medicare & Medicaid Services (CMS) launched the Accountable Health Communities Model to address Medicare and Medicaid beneficiaries' unmet health-related social needs, like food insecurity and inadequate or unstable housing.[1] In this model, 'bridge organizations' served as a 'hub' in their communities by partnering with clinical delivery sites, including physician practices and hospitals, to connect members with community services to address beneficiaries' needs. In one example, a non-profit organization recruited community health workers to act as navigators to help beneficiaries access community resources. Workers were trained in outreach and education, health education and prevention, communication skills, data collection and medical record review, among other skills.[2]

Other researchers sought to strengthen community health by enhancing community participation. Contributors to the report titled, *Communities in Action: Pathways to Health Equity,*[1] stressed that community-driven health equity interventions hold the greatest promise of improving health equity. They defined community as everyone—ranging from individuals and neighborhood residents to community organizations and faith-based groups—living or working in a specific geographic location. The contributors of the report highlighted nine different community-based health equity interventions that incorporated the committee's three conceptual components for successful community-based change: including multiple stakeholders across different sectors, incorporating health equity as a shared vision and value, and increasing a community's capacity to shape outcomes.[3] It is one of the examples of health equity research that focuses on what communities in collaboration with health care workers can do to promote health and the kinds of support communities need to overcome structural barriers and attain full health potential.

WHICH HEALTH CARE WORKER FOR WHICH DISPARITY?

Our review showed that the literature often lacked a clear description of health disparity and the specific health occupation that was to drive the intervention. In our sample, researchers used both wide and narrow definitions of the term *disparities*. Some defined disparities specifically as racial and ethnic minoritized populations receiving low-quality care and facing issues accessing care. Other studies used a broad definition of disparities that included a health difference that adversely affects historically marginalized populations' health outcomes, including but not limited to, a high incidence or prevalence of disease or poor daily functioning or quality of life relative to a population that has not been historically marginalized. Some of the research targeted racial and ethnic groups inside and outside clinical care, whereas others identified any community that faced a form of discrimination or social disadvantage.

In health equity interventions targeting a health disparity (both broadly and narrowly defined) and where the health workforce was mentioned, specific health occupations were not clearly identified. For instance, when targeting implicit biases, researchers used generic terms like *health care provider, health communicator, or health professional*. Such terms can include nurses, specialized physicians, nurse practitioners, primary care physicians, or any other health care worker, each of which is trained differently, has their own scope of practice, and occupies different positions in clinical care delivery.

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[1] https://innovation.cms.gov/innovation-models/ahcm

[2] https://innovation.cms.gov/files/x/ahcm-casestudy.pdf

[3] See for instance https://www.nationalacademies.org/news/2017/01/new-report-identifies-root-causes-of-health-inequity-in-the-us-outlines-solutions-for-communities-to-advance-health-equity

Several studies called out the implicit biases that health care providers can have toward certain populations that may impede their ability to provide effective care,[7,8] yet few researchers mentioned specific details on the type of worker they had in mind and how they were trained. Without knowing which health providers are most at risk for having implicit bias and against which groups, developing targeted training is a challenge. Each of these occupations is trained differently, occupies different roles in patient care, and has leeway to create change due to their respective positions in the health system. Further, these occupations work in different departmental units and health clinics that place different organizational demands on their health workforce, which may further trigger implicit biases. Because patients' perceived quality of health care can significantly impact health outcomes (e.g., adherence to medical advice, screening recommendations or medication regimens), biases that contribute to lowering a patient's perceived quality of care further perpetuate health inequities and poor health outcomes.[31] Over time, these biases become institutionalized and harder to eliminate.[24]

CALLING OUT RESEARCHERS' UNCONSCIOUS ASSUMPTIONS OF THE HEALTH CARE WORKER

Conceptual frameworks or health equity interventions that researchers describe in our sample literature often highlight the many factors that combine to affect the health of individuals and communities and the multilevel health equity interventions that can be significant in addressing health disparities.[32] To address these complex challenges, Hendren and colleagues[17] solicited the help of community-based patient navigators and activators to reduce cancer disparities among newly diagnosed patients. Patient navigators and activators help patients keep track of appointments, interpret medical information, provide social support, and encourage patients to assume more active involvement in their care and ask appropriate and relevant cancer care-related questions. Hendren's team not only described how they recruited the non-medically trained persons from patient communities, but also offered detailed information on the navigators' training and supervision, and of the navigation intervention itself. This study was one of few that described and reflected upon the training and support navigators needed to participate in health equity interventions.

An article by Spencer and colleagues[33] was another example that explicitly described the role and training of community health workers. The authors created a randomized controlled trial to test the effectiveness of a "culturally tailored, behavioral-theory-based community health worker intervention" for improving glycemic control among African American and Latino adults diagnosed with type 2 diabetes. The authors identified a health occupation, namely community health workers, whom they referred to as "family health advocates." The family health advocates were trained in motivational interviewing, taught to use empowerment theory in diabetes education classes, and supported patients to ask for more information when needed. The authors emphasized the importance of the role of community health workers in this intervention and the need to address major challenges to support these health care workers. They stressed the need to improve the inadequate and unstable funding and recognize the value and legitimacy of these health providers. Yet, despite the detailed description of the advocates' position, the authors did not address how the intervention affected the family health advocates' work or changed their perception of which methods were most successful in the intervention. Consequently, little was known about how the family health advocates managed the execution of the equity intervention on top of or as part of their regular patient care or other responsibilities in their work.

Many of the studies in our sample frequently lacked a reflection on health care workers' training and expertise. Some studies pointed to the role of nursing care, sometimes in collaboration with pharmacists and community health workers, to improve patient well-being and adherence to provider recommendations, and access to clinical health services. Chin and colleagues,[28] for instance, stated that nurses are cost-effective, familiar with working in teams, are patient centered, and may be likely to use culturally competent or culturally tailored approaches due to their training and background. However, the authors were less explicit about which nursing degree (such as licensed practical nurse, associate degree or bachelor's degree in nursing, advanced practice registered nurse) was most appropriately suited to direct programs of change within the broader context of the health system or which aspect of nursing education makes nurses more culturally competent or cost-effective, and compared to other health care providers. The lack of detail and reflection on health care workers' training and expertise may maintain or reinforce

implicit assumptions researchers may hold about the kind of training health care workers may or may not have received and the skills they may or may not yet possess. This, in turn, can obscure the support health care workers need before, during, and after equity interventions to improve health outcomes.

DISCUSSION

Health equity and health disparity research commonly acknowledged that the health workforce is key to improving health outcomes both within and outside the health system, but few studies explicitly identified which health occupations were considered the best suited to support a specific health equity intervention. Many studies in our sample did not identify a specific health occupation to carry out a health equity intervention and referred to these workers using broad terms such as "providers" or "health professionals". When mentioning explicitly the roles of health care workers as nurses or community-based workers, some authors did not address the clinical or institutional settings in which they worked. Greater attention to these settings is important because, as some studies have pointed out, provider biases may worsen under organizations' stressors.[34]

Moreover, lack of sustained access to resources further hinders health care workers' abilities to be effective. For example, community health care workers and patient navigators are cost-effective for improving cancer prevention and control among underserved groups. Yet, community health workers and patient navigators in safety net institutions that serve populations with limited insurance and other financial resources, often do not have access to robust financial resources, training, or support for community health worker and patient navigator programs. In Federally Qualified Health Centers, community health worker and patient navigator services are frequently not billable or reimbursable, which adds pressure to workers and institutions to find alternative means to provide underserved populations with cancer prevention services.[19] In such circumstances, knowing the organizational setting and the types of stressors likely to be experienced (e.g., hospital versus Federally Qualified Health Centers, teaching hospital versus community-based clinic) is crucial for health researchers for understanding the broader organizational dynamics that may trigger provider biases, create barriers that impede health care workers' performances, and limit the success of health equity interventions.

Researchers and intervention designers run the risk of implying that health equity interventions are naturally within health care workers' scope of practice and breadth of training before the intervention, or that health care workers of color having unique skills to address inequities (due to workers' upbringing, socio-economic status, or education within an underserved community). These implicit assumptions suggest incorrectly that these workers do not require further organizational support or training. Health care workers of all levels and backgrounds should be included in cultural competency training and should not be excluded due to the assumption that life experiences are sufficient to carry the responsibility and burden to improve patient care for communities of color.[35] Without proper training and support, and recognition for the work done, health care workers may develop burnout and possibly leave the health care field. Further, the research reviewed in this study also lacked reference to how community belonging could affect the position or work of individual health care workers, creating potential gendered, racial, ethnic, or indigenous community could affect the position or work of individual health care workers of color, creating potential gendered, racial, ableist, or other power differentials within communities that may complicate health care workers' own status within those communities.

Finally, the lack of clear descriptions of what constitutes a health disparity may affect future recruitment and support of the health workforce. The disparity definitions used—or not used—shape the focus of the intervention and targeted communities. For instance, research that employs a definition of disparities grounded in racial and ethnic groups receiving low-quality care is more likely to focus on clinical care-based health equity interventions targeting minoritized patients. Preferably, health care workers are engaged in a multifaceted approach to address disparities, incorporating community-based programs that target a wide range of SDOH not only within the health care system, but also in education, employment, and housing.[1] Grounding

health equity interventions in SDOH frameworks may activate different health care workers, both inside and outside the health care system, each of whom need different resources and support to contribute to lessening adverse health outcomes in their respective communities.

Interviewing study authors or health care workers included in the identified health equity interventions may be an area for future work and may add insights into the challenges workers experience when implementing a community-led intervention or redesigning clinical care delivery to address health disparities or health inequities. Contacting study authors and/or health care workers engaged in health equity interventions could result in additional data highlighting the breadth of workforce roles, the challenges workers face, and how they have successfully overcome them to provide sustainable health equity projects.

CONCLUSION

Our study showed that health equity research commonly focuses on the patients and communities that experience a disparity and less on the specifics of health care workers' training, roles, or support that can be utilized to improve health outcomes through health equity interventions. Where health care workers are mentioned, it is often without clear qualifications or specific job titles. Some research describes health care workers as receiving extra training to address health disparities in these health equity interventions, though the occurrences are rare. The lack of systematic attention to the health workforce's roles in health equity interventions and research misses the challenges faced by and opportunities created for health care workers as they seek to reduce health disparities experienced by historically marginalized communities. Ongoing monitoring of health care workers' roles in health equity interventions is needed to better target future investments in education and training of health professionals.

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APPENDIX A

Table A1: Total number of articles included in the review

Selection Steps	Number of Articles
Background articles to help establish search terms (n)	9
Articles included for review after first search	38
Added after spot check in November 2021	7
Total number of articles included in review	54

APPENDIX B

List of articles included in review sample

1. AcademyHealth. The State of Health Equity Research: Closing Knowledge Gaps to Address Inequities; 2014. www.aamc.org/91514/reproductions.html
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