Examining the Social Mission of Academic Public Health: Development of Domains and Novel Assessment Metrics to Advance Health Equity

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Dedication

To Christ, through whom all things are possible.

To the women in my life; beacons of strength and courage and light in my world.

To those who knowingly or unknowingly instilled a belief in me that there is no limit to what I could achieve and who I could become.

To those who have felt and carried the weight of suffering for no other reason than the circumstances into which they were born.

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Abstract of Dissertation

Examining the Social Mission of Academic Public Health: Development of Domains and Novel Assessment Metrics to Advance Health Equity

Background: Health inequities remain entrenched across racial, socioeconomic, and geographic lines in the United States, often exacerbated by unequal access to resources and social determinants of health. Academic institutions – particularly schools of public health – hold significant power not only through workforce training and development but also through their own institutional policies, research, and community engagement. Despite the potential to be distributors of critical resources to the community, there is a disconnect between the aspirational equity values of academic public health and the tools and standards by which they define, implement, and measure their actual contributions to health equity and social justice. While prior research has explored the concept of social mission in medical and nursing education, there remains a critical gap in defining and operationalizing social mission within public health education.

Objectives: This dissertation aimed to define and develop domains for understanding and measuring how academic public health institutions advance health equity and social justice by: (1) defining "social mission" within the unique context of public health schools; (2) identifying domains that characterize a public health school's contribution to advancing equity and justice; and (3) developing process-based indicators for assessing the implementation of practices within those domains. The study purpose is to support development of accountability structures and benchmarking tools that move schools beyond only compliance-based metrics and towards comprehensive indicators of institutional transformation centered on equity and justice.

Aims and Methods: This applied, mixed-methods study uses a modified Delphi approach to generate consensus from an expert panel composed of educators, researchers, practitioners, and policymakers in academic public health and social mission work. The study began with a scoping review of existing literature on health equity, accreditation standards, and frameworks from public health associations. The literature informed the design of a novel conceptual framework illustrating how academic public health's three core functions – education, research, and practice – interface with institutional equity commitments.
The study produced a working definition and domains of social mission for academic public health and a set of novel assessment metrics.

Results: The Delphi process yielded six final domains of social mission in academic public health, which both overlap with and diverge from frameworks developed in medical and nursing education. The domains are:

1. Empowerment and Training of Practitioners: Emphasizes equipping current and future public health professionals with the skills and knowledge necessary to implement effective, equity-focused interventions and policies.

2. Institutional Commitment to the Greater Good: Reflects an institution's explicit mission and policies aimed at advancing the health and well-being of all communities through a demonstrable commitment to societal benefit.

3. Foundation in Social Justice Principles: Centers ethical obligations to advance health justice by actively dismantling structural inequities and promoting the equitable distribution of health resources.

4. Diversity, Inclusivity, and Shareholder Engagement: Highlights the importance of diverse representation and inclusive institutional culture, supported by shared governance that empowers all stakeholders in shaping public health education and policy.

5. Accountability, Transparency, and Measurable Performance: Calls for institutions to track and report progress toward equity goals through transparent metrics, while holding themselves accountable to communities through socially responsive research and practice.

6. Community-Centric Operations: Underscores the necessity of bidirectional engagement and localized responsiveness, ensuring that academic public health institutions are rooted in and guided by the needs of the communities they serve.

Across each domain, panelists generated a series of indicators – both quantitative and qualitative– that schools of public health could adopt to assess their progress toward equity-centered transformation. The indicators were organized as process-based metrics rather than outcomes-based, reflecting the study's focus on institutional actionability rather than direct attribution to population-level health improvements.

Conclusions: This dissertation provides a foundational framework for defining, assessing, and advancing the social mission of academic public health institutions. By establishing expert-informed domains and developing prototype metrics for institutional self-assessment, the study fills a critical gap in the field's ability to move from rhetorical support of health equity to demonstrable progress. The social mission framework presented may be used by schools of public health to benchmark their own practices, by accreditors to refine equity-oriented standards, and by professional associations to build collective capacity for transformation.

While this study focuses on U.S.-based institutions, the methodological approach and conceptual framework have potential for adaptation in global contexts and domestically for other health professions. Future research is needed to validate the proposed metrics through field testing, explore associations between domain engagement and public health outcomes, and evaluate the influence of institutional structure and policy on social mission performance.

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Glossary of Terms

Academic public health: refers to the public health teaching, practice, and research functions conducted within educational institutions.

Association of Schools and Programs of Public Health (ASPPH): a nonprofit organization that represents accredited schools and programs of public health in the United States, working to promote and advance public health education, research, and practice.

Community engagement: a participatory principle where stakeholders -- including individuals, organizations, and institutions -- collaborate to address shared concerns and enhance community well-being through active involvement, decision-making, and resource sharing.

Council on Education for Public Health (CEPH): an independent agency recognized by the U.S. Department of Education to accredit schools of public health, and public health programs outside schools of public health.

Health disparities: preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations. Populations can be defined by factors such as race or ethnicity, gender, education or income, disability, geographic location (e.g., rural or urban), or sexual orientation. Health disparities are inequitable and are directly related to the historical and current unequal distribution of social, political, economic, and environmental resources.

Health equity: a fair and just opportunity to be as healthy as possible. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care. For the purposes of measurement, health equity means reducing and ultimately eliminating disparities in health and its determinants that adversely affect excluded or marginalized groups.[1]

Public health: the science and art of preventing disease, prolonging life, and promoting health through the organized efforts and informed choice of society, organizations, public and private communities, and individuals.

School of public health: academic institutions and centers of higher education that focus on research, education, and training in the field of public health. They typically offer undergraduate and graduate programs designed to prepare students for careers in public health, epidemiology, health policy, and related fields. This study focuses on graduate programs within such schools.

Social mission: the contribution of an institution in its mission, programs, and the performance of its graduates, faculty and leadership in advancing health equity and addressing the health disparities of the community in which it exists.

Chapter 1: Introduction

Background of the Problem

Preventable health disparities persist across social, economic, and geographic subgroups of the American public. The public health crisis caused by COVID-19 further revealed and exacerbated differences in health outcomes among the U.S. population, with greater mortality and morbidity among people of color and those with underlying medical conditions.[2] Widening disparities underscore the need for a diverse, well-trained, well-distributed public health workforce: life expectancy and quality of living still lag greatly for those from historically marginalized racial/ethnic backgrounds, those who live in concentrated areas of low income, and those with limited access to public health and healthcare service resources. Moreover, a socially responsive workforce is only one of the critical outputs of public health education and training institutions. These higher learning institutions – namely schools of public health – have the scope and resources to eliminate major preventable health disparities through their non-training functions too, such as public health research, procurement, community partnerships, and employment of faculty and staff. Between the functions of these non-training examples and their instrumental role in workforce preparation, schools of public health carry an oversized responsibility in health equity and social justice.

Social justice itself is a core component of public health; they are inextricably linked given how societal arrangements of power shape the public's health.[3] Public health strategies, along with environmental, economic, and social policies, influence common health problems and the difference in outcomes that subgroups experience as a result.

Rooted in public health are health concerns and their foundational causes: differences in rates of lung cancer, heart disease, infant mortality, injuries caused by violence, and life expectancy are among the several health outcomes that have been shown to be attributed to low education, racial segregation, poverty, and income inequality.[4] Addressing these preventable differences is therefore both a matter of equity and justice.

As institutions responsible for teaching the delivery of services and policies to improve the health of populations and close morbidity and mortality gaps, schools of public health are inherent agents of social justice through their missions and responsibilities. However, social justice and health equity as core values of public health schools are not adequately realized. There is a mismatch between belief of what schools of public health should be responsible for in terms of advancing equity, and what they actually operationalize and measure. One characterization of this mismatch is the Institute of Medicine's (IOM) recommendation that 25% to 50% of medical students should earn the equivalent of a master's degree in public health.[5] The IOM recommendation was made in acknowledgement that social issues and public health are inadequately covered in American medical schools, leaving physicians with inadequate understanding of social factors and their consequences for the population's health.[6] This recommendation implies that schools of public health – the conferrer of most graduate degrees in public health – are viewed as a key intervention source for eliminating social injustices and inequities.

There are foundational competencies in public health education related to health equity -- namely the expectations of learners to discuss how structural bias, social inequities, and racism undermine health to create challenges to achieving health equity at organizational, community, and systemic levels, and learner ability to evaluate policies for their impact on public health and health equity.[26]

Schools of public health provide an opportunity for extensive training of the next generation of public health professionals, including centering undergraduate public health education around the need to be competent in addressing health disparities to achieve health equity. Schools offer this through not only graduate education, but undergraduate instruction as well by providing learners with evidence-based decision-making skills that center on health equity.[7] Integrating health equity into learning at all levels of instruction supports the equity training pathway across schools of public health.

Beyond pedagogical frameworks, schools do have additional expectations for *aspects* of advancing equity. For example, Council on Education for Public Health (CEPH) accreditation assesses diversity and cultural humility of schools and programs of public health. Cultural humility in the CEPH context refers to bridging the cultural gap between public health professionals and communities to promote culturally sensitive and population-centric strategies, and involves public health professionals being aware of their own cultural biases, acquiring knowledge about different cultures, and demonstrating respect and sensitivity to diverse cultural perspectives. [26] CEPH describes qualifying practices that include incorporation of diversity and cultural humility into

curriculum, recruitment and retention of diverse faculty, staff, and learners, development or implementation of policies that support a climate of equity and inclusion, and reflection of diversity and cultural humility in the types of scholarship and community engagement conducted. [26] These categories of curriculum, recruitment and retention, school policies, and inclusive climate offer valuable direction of where considerations of equity and justice can begin to be laced when assessing schools of public health. They also offer insight into the substantial influence of accreditors in creating a foundation for such practices.

Presumably, these standards are not exhaustive. Early in 2024, CEPH adopted revisions to the accreditation criteria for schools of public health and public health programs. The four-year revision process was conducted, at least in part, to address themes of diversity, equity, and inclusion.[26] Many of the revisions describe changes to language, streamlined documentation requests, and expectations of diversity considerations in decision making and partnership alignment.

Figure 1

Revised Accreditation Criteria for Schools of Public Health and Public Health Programs. Council on Education for Public Health. March 2024.

Summary of revisions

Criterion	Topic(s)	Revisions
A1 & A3	Governance, Student Participation in Policy Making	Units must describe efforts to include diverse voices in decision making
B1	Guiding Statements	Guiding statements must address preparing students to work with diverse populations
B3	Graduation Rates	Added 2 new pathways to compliance for units that do not meet current benchmarks
B5	Alumni Perceptions	Units must collect data on alumni perceptions of their ability to work with diverse communities
D1-D3, D9-D10, D16-D18	Foundational Learning Objectives & Competencies	Adjusted language in several learning objectives and competency statements
E1-E5	Faculty	Minor adjustments to criteria language & documentation requests
F1	Community Involvement in Evaluation & Assessment	Units must explain how partnerships align with mission, degree programs, and relevant student & community demographics
G1	Diversity	Streamlined documentation requests & clarified expectations for collection of data on perceptions of climate
H1-H2	Advising	Units must explain how they ensure that advisors understand the needs of a diverse student body

In addition to being non-exhaustive, the standards presented in the revised criteria are limited in other notable ways: Firstly, they stop short of addressing the totality of a school's functions; understandably because many of those non-training functions may not be in the purview of learning competencies. Many of those functions are tangible areas by which schools impact inequities in their communities and society nonetheless.

Secondly, the criteria provided are not meant to serve as a playbook but rather a checklist. This misses the opportunity to support how schools enact the criteria with clear benchmarking and examples. Granted, CEPH is not the only entity with the capability of providing such a blueprint for schools. However, given the weight of accreditation in steering school practice and policies, elevating the standards and promoting more unambiguous expectations for advancing equity and justice may prove more impactful.

Thirdly, they do not explicitly coalesce around a common premise of the social accountability of public health training institutions to eliminate health inequities through

their practices and policies. A more uniformed, common concept of why and how these contributions are at the heart of accreditation expectations would further cement equity and justice as the core of public health schools rather than an appendage.

There is also a fundamental limitation: the need for introducing revised criteria in and of itself. The revisions are displayed as a markup of the current version rather than a re-envisioning of standards from the ground up with equity and justice at the center. Future revisions should consider the merits of a transformational overhaul of standards with eliminating inequities at the core of criteria compared with incremental additions to existing standards.

Presenting new accreditation standards that involve equity and justice is necessary but insufficient. In 2016, over 13,000 graduate-level degrees were conferred by 91 accredited schools and programs of public health.[8] Those 91 schools are key leverage points for who enters the health workforce, who those practitioners serve, how students are supported during their training, where graduates go to practice, and how they practice once in those communities.[9] Yet, as previously stated, the overwhelming majority of these graduates do not explicitly engage equity principles and social determinants of health in their public health practice, even as graduates of CEPH-accredited schools.

Public health workers need to be trained to assess and address the social, political, cultural, and environmental underlying causes of health outcomes, often referred to as the social determinants of health.[10] Only 20% of health outcomes are attributed to clinical

care, while SDOH accounts for an estimated 80% of overall health outcomes.[11] However, a nationwide survey of practitioners in state health departments showed only 2% of practitioners working primarily on health equity, 9% reporting health equity as one of multiple priority areas, and a low proportion indicating being "very involved" in affecting specific social determinants of health.[12] The dismal rates of public health workers focusing on equity raises questions of what is considered core learning for public health trainees in a nation with stalling progress towards health equity.

The disconnect continues when looking at who comprises the public health workforce. Studies show that diversifying the health professions workforce to better reflect the population is a critical step to addressing disparities for medically underserved communities.[13] Nationwide, the governmental public health workforce is roughly proportional to racial and ethnic demographics of the national population. However, these numbers become far more disproportional when factoring leadership hierarchy and supervisory status and annual income of this workforce by race, further compounding socioeconomic disparities. Thirty-four percent of Black/African American staff make less than $45,000 annually, as do 37% of Hispanic/Latino staff, 23% of White staff, and 21% of all other staff. [14] These numbers also do not factor in the gross racial disparities of the broader health workforce, such as nurses and physicians, who may not practice in a governmental public health setting but may still serve public health functions.

Public health services for mental and behavioral health are not equitably accessible. People of color face increased access barriers due to a range of factors, such as the lack of

a diverse mental health care workforce, the absence of culturally informed treatment options, and stereotypes and discrimination associated with poor mental health, with Black (39%) and Hispanic (36%) adults who report fair or poor mental health being less likely to have received mental health services than their white (50%) counterparts.[15] In fact, racial and ethnic disparities were reduced in only 20 of the 505 health objectives launched in 2010 by Healthy People 2020.[16]

These disparities are compounded by cost of services. A 2012 study showed 18 percent of US adults experience affordability barriers to the healthcare system and a closer look reveals that of those adults who experienced cost as an affordability barrier, 66.8 percent experienced an unmet need or delayed care. Among adults with such affordability barriers, accessibility and availability of public health services were heavily cited as further barriers.[17]

Poor geographic access to services, cost barriers, and lagging racial diversity in the workforce are only some of the obstacles to eliminating public health inequities. Beyond addressing these preventable issues, there is opportunity to explore other avenues by which the ecosystem of trainees, graduates, faculty, and researchers address inequities through the collective academy that is the school of public health. This collective ecosystem is referred to as academic public health, and its three core functions of education, research, and practice comprise the several public health schools operating within the United States. These institutions that constitute academic public health are

central to providing the resources and workforce capable of identifying and addressing determinants of health and social inequities.

Our current public health workforce is trained in a variety of settings and come from different training backgrounds with standards that are not uniform. The public health workforce consists of numerous occupations, including public health clinicians and analysts, but is largely based on the work of hundreds of thousands of community health workers who promote health within communities by assisting individuals to adopt healthy behaviors.[18,19] For this reason, the public health workforce is also more difficult to define and classify due to an inconsistent definition of public health professionals and a lack of common licensure or certification for public health professionals. Growing calls for a new, intersectional definition of the public health workforce[20] underscore the need for uniformity in how public health workers are labeled, categorized, trained, and deployed.

Importantly, when high quality learning opportunities are provided and accessible, public health workers are well positioned to increase access to care, improve public health emergency responses, and address the public health needs of underserved communities.[21] This evidence suggests that based on their positionality, our public health workforce can be deployed to eliminate disparities if they are trained and educated by institutions that have centered equity in their practices.

Yet within those learning settings that supply public health workers with terminal or professional degrees, questions remain about their current orientation towards eradicating health inequities. Largely in accordance with expectations of accrediting bodies, schools of public health incorporate policies or practices that will invariably impact health equity in one way or another. However, such categories of how schools of public health impact health equity have yet to be clearly defined and assessed in a uniform method. Some practices that are performed by schools of public health may already be conducted with equity as a component or objective[25] but are not necessarily grouped and cataloged in a way that can be measured as factors towards reducing inequities. If domains for advancing equity via public health schools are defined, socially accountable practices within those domains of assessing social impact can be means of advancing health equity through public health school functions.

Aside from the trainees they produce, schools themselves are anchor institutions within their communities and have influence on the employment, education, culture, and partnerships of a community. These factors create an interdependence between the school and the society in which it exists; however, the accountability of schools to their community and society are often unclear, unmeasured, or simply unaccounted for, outside of mission statements and accreditation compliance. The totality of this reach may explain how schools influence the social determinants of health and health disparities in their community; particularly in the case of American schools of public health which maintain a responsibility to the scope of addressing health disparities.[22]

The factors of public health education and workforce that influence equity are several: graduates of public health schools and programs are certainly one critical component in addressing disparities. This goes beyond the known research that suggests that a diverse student body improves the educational environment for all learners.[23] The Institute of Medicine (IOM) published *The Future of Public Health* report in 1988, in which IOM identified the three core functions of public health practice as assessment – the ability to appropriately use data to direct actions; policy development – the appropriate use of scientific knowledge in developing public health policies and programs; and assurance – the development of policies that are backed up by services necessary to ensure their success.[24] This report was followed 11 years later by a formal recognition, by the Council of Public Health Practice Coordinators of the Association of Schools of Public Health, of academic public health practice as a new domain of scholarship. This sequence gave way to a firmer role for schools in shaping public health practice and greater responsibility for public health schools and their graduates to address health disparities. Though a necessary step, establishing academic public health as a domain is insufficient in supporting how schools transform towards implementing and measuring equity-based practices and policies.

As part of Framing the Future 2030, the Association of Schools and Programs of Public Health (ASPPH) developed a framework intended to create momentum for its member institutions and partners to articulate and advance a shared commitment of social justice in public health education, along with the social and structural conditions that have enabled inequities across generations in the United States.[25] The pioneers of FTF 2030

pointed to their recognition that public health education runs the risk of continued disconnection from community needs, erosion of public trust, and inadequacy in responding to new public health challenges. As a leading member-based organization of schools of public health, the implications of a framework on how academic public health and its member schools transform towards equity could be influential as school practices are operationalized and assessed; the potency of which relies on centering equity and justice as opposed to retrofitting the framework to be inclusive of equity and justice metrics.

The mission of ASPPH is to advance academic public health by mobilizing the collective power of their members to drive excellence and innovation in education, research, and practice.[25] Though equity is a component of their strategic plan, their influence on accreditation standards and their relationships with member schools means ASPPH could have a renewed role in transforming schools of public health firmly towards equity.

Additionally, because schools are responsive to accreditation standards, they can support health equity if expected to do so as part of their mission and operations. The current and revised CEPH accreditation standards do focus on implementing and assessing practices and policies. These standards require public health schools or programs to:

1. Clearly outline organizational and administrative processes.
2. Share outcome data like admissions and graduation rates.

3. Define evaluation methods to measure their effectiveness in achieving their mission and goals.[26]

The role of accrediting stakeholders is an important one to examine how schools of public health can advance equity and address health disparities. Yet, similar to ASPPH, health equity is not explicit in the CEPH standards that were initially developed nor in the 2024 revisions. There are currently 63 CEPH-accredited schools of public health in the United States[27] and accreditation, namely developing new standards and expanding the scope of existing ones, have been shown to influence institutional policies.[28] However, exploring *how* schools of public health advance equity in the midst of accreditation expectations and specific institutional context is needed.

This study proposes that current standards for public health schools, though incorporating health equity through recent ASPPH and CEPH priorities, do not necessarily center nor provide instructive clarity for introducing health equity practices and assessing equity indicators explicitly. Clarifying and formalizing this role of health equity in academic public health offers opportunity for schools to better operationalize and measure not only their adherence to accreditation standards, but to the mission of public health more broadly and health equity more specifically.

Purpose of the Study

The purpose of this study is to explore how schools of public health recruit, train, and graduate; and how academic public health advances health equity and social justice through both their institutions' training and non-training functions. This study contends that academic public health was not inherently constructed with equity at its center and therefore would benefit from intentional guidance on implementation and measurement of practices that advance equity and social justice. Some academic public health institutions may already have processes that advance equity without a systematic form of measurement; others may be motivated to transform their practices if more guidance on implementing and assessing equity-driven practices were available. Schools of public health engaging in practices that advance equity are demonstrating and engaging in what has been termed as *social mission*.

Social mission is a concept that describes a school's commitment to advance health equity in all its processes, including admissions and faculty hiring, curriculum development, the extent of community based experiential learning, and ultimately measured in their graduates' outcomes.[29] Mullan defined social mission as the contribution of a medical school in its mission, programs, and the performance of its graduates, faculty, and leadership to advancing health equity and addressing the health disparities of the society in which it exists.[29] Consequently, social mission was initially contextualized through the lens of medical education specifically.[29] Because public health schools serve a different function from clinical training programs and health profession schools broadly, defining social mission in the specific context of public health is an aim of this study.

The sizable role, reach, and resources that schools of public health possess create an opportunity to examine how the ecosystem of academic public health addresses inequities through their processes and actions. This study will explore the concept of social mission as a means towards health equity and help establish formative domains of social mission as they relate to public health. Examining the formative domains of social mission in schools of public health that emerge could further influence stakeholders to inform schools of how to advance and assess their individual commitments towards health equity, and potentially even institute comprehensive standards for schools to advance health equity.

In addition to understanding how schools assess their commitments towards equity, social mission will need to be understood on a broader level to build widespread improvement: this study will provide a framework for measuring indicators of social mission transformation in schools of public health that may be adopted by professional associations as a resource for members, and by accreditors to modify their standards to be more inclusive of equity and justice. Similarly to earlier studies on social mission, the metrics produced by this study will support tracking of social mission engagement and help schools know their levels of performance in advancing equity and justice.

Assessing social mission using these established indicators will allow for the identification of national norms and can highlight schools and programs that serve as exemplars.[30] Establishing domains will also allow for future studies to explore the

association between social mission in different domains of academic public health and corresponding health outcomes. Ultimately, findings of this study could be provided to professional associations and accrediting agencies to instruct the development of dashboards that member schools can use to assess their institutional contributions to equity and justice.

Finally, a purpose of this applied dissertation study is to engage literature and primary research data in producing practical metrics informed by evidence. The scope of this study is to explore advancement of equity as opposed to achievement of equity and, as such, the study will focus on the implemented processes by which schools address health inequities rather than on the much needed understanding of the outcomes themselves.

Introduction to Social Mission

Concept

Social mission is more than simply the inclusion of certain topics in a school's curriculum; it encompasses the mission of the school, the school's relationship with the community, and structures and policies that have the potential to advance health equity and social justice commitments.[29]

Social mission conceptually arrives from early descriptions and discussions of social accountability. Social accountability is defined by the World Health Organization as the "obligation [of medical schools] to direct their education, research and service activities towards addressing the priority health concerns of the community, region, and/or nation

they have a mandate to serve… identified jointly by governments, health care organizations, health professionals and the public."[31] One important consideration is who defines terms like "community" and "priority health concerns" and how these definitions are determined. Another key factor is understanding the mechanisms that either promote or hinder social accountability in different settings. Since the relationships between medical schools, hospitals, and health systems vary across communities and countries, the strategies and resources available for advancing health equity may also differ.

Social accountability was introduced in the American context as a fundamental challenge to the conventional role of medical schools. This conventional model had been sourced from a biomedical and hospital-centric paradigm of training since the Flexner Report of the early 1910s. Admission standards, physical facilities, well-equipped laboratories, and instruction by physician scientists were the major criteria for judging the quality of the education offered.[32] Given the relationship between medical education and public health broadly, the health impacts of this paradigm seen today can be attributed in part to the century-long practices of training institutions.

The impact of the Flexner Report on medical education is complex: its reformation of health workforce training caused generations of medical educators to design medical curricula based on a better understanding of the scientific foundations of life and disease. However, Boelen questions whether the scope of healthcare training should be

considerably widened to understand better the basic determinants of health, with an expectation of medical schools and health professions education in general to play a more proactive role in health development.[33]

The premise of social accountability is that medical schools should be held accountable for what they produce in terms of graduates, research results, and models of health service delivery, and should demonstrate how these products contribute to improving quality, equity, relevance, and cost-effectiveness in health services.[34] Those four values offered by Boelen and Heck (1995) -- relevance, quality, cost-effectiveness, and equity – were the basis of social accountability and provide early domains schools could use to track their "planning, doing, and impacting" of social responsiveness.[34]
Additionally, a social accountability grid was conceptualized to provide a framework for assessing a medical school's progress towards social accountability in each of the domains of institutional responsibility: education, research, and service. Their framework is accompanied by a suggestion of continuous testing of its validity, defining the benchmarks of progress in addressing social accountability, and expanding the framework to apply to other health professions schools.[34] The latter two suggestions support the basis for this study and exploration of new contextual application towards social responsiveness of public health and public health education.

Given its formative roots in social accountability, the concept of social mission was initially contextualized for academic medicine in the United States. Academic medical centers – characterized as the collective enterprise of university, medical school, and

teaching hospital – consist of considerable clinical, research, educational, and financial resources. Each academic medical center has a stated mission, with varying demonstrations of commitment to addressing the social determinant of health needs of their community. Such commitments can be described as social mission as it relates to academic medicine and studies have been conducted to further examine the implementation and assessment of social mission in the context of medicine.[34]

Social mission has since expanded beyond medical education, incorporating interprofessional education, health service reform, socially responsible research, and learning from socially responsible health movements in other countries.[35] Its evolution and adaptable application offers a path for how social mission domains can be established to capture how public health addresses health disparities through the functions of their schools.

There is a need to understand *what* the priority areas are for public health and public health education. Social mission of medical education was developed from the initial concept of social accountability and understanding how medical schools were – or were not – meeting the needs of the communities which they serve. The corresponding domains that describe equity via public health will be understood by defining social mission of academic public health and understanding what the inequities are that a social mission approach would address.

Description of Domains

The premise behind examining the social mission of medical education was the notion that the purpose of medical schools is to educate physicians to care for the national population and, more specifically, areas of highest need. Fulfilling this goal requires an adequate number of primary care physicians, adequate distribution of physicians to underserved areas, and a sufficient number of physicians of color in the workforce.[29] Because these domains were established to frame social mission in the context of medical education, less is known of how these domains contribute to the practices and policies of public health education. There is also a gap in the literature of how public health schools monitor and assess their contribution to addressing inequities through institutional practice. For this to be further explored, the priorities of public health education must be informed by the existing body of research and leaders within public health education, health equity, and social justice.

The framework for social mission as it related to medical education gradually evolved to six domains. The six domains expanded beyond the medical school classroom to encapsulate academic medicine more broadly and were comprised of educational programs, community engagement, governance, diversity and inclusion, institutional culture and climate, and research. Below are brief descriptions of each of the previously identified six domains[38]:

- Educational programs: includes concordance between community needs and education, presence of health equity in curriculum, clinical rotations with patients

from underserved communities off-site, and development of training programs for paraprofessional health staff.

- Community engagement: includes the community partnerships of a school, job opportunities and financial community enhancement, co-curricular experiences related to underserved populations, and community inclusion in advisory groups.
- Governance: includes whether social mission values appear explicitly in a school's written goals, mission statement, and strategic plan. It also encompasses community representation in school leadership and diversity in leadership.
- Diversity and inclusion: includes student diversity, faculty diversity, establishment of pathway programs, and focus of diversity and inclusion in recruitment and admissions process.
- Institutional culture and climate: includes faculty development on social mission values, student and faculty activism, and career counseling on primary care and priority health care needs.
- Research: includes community-based participatory research, grants and research dollars for health equity, health disparities, social determinants of health, and health promotion, and the presence of a community needs impact research agenda.

Prior studies on social mission

A 2010 study on social mission created a novel ranking system to report on three related outcomes of medical schools -- primary care physician output, workforce distribution, and graduates of racial and ethnic identities historically underrepresented in medicine.[29]

This seminal study selected these outcomes based on identified gaps between population health needs and the physicians that medical schools were producing. A 2020 study published in the *Journal of Academic Medicine* further described a social mission metrics survey, a formalized method to assess dental, medical, and nursing schools' social mission values, programs, and activities.[36] Notably absent from this study was public health.

In 2016, a literature review was performed using PubMed to identify preexisting indicators, criteria, and frameworks related to social mission via interviews of key informants with expertise in health professions education, measurement, and social mission. MeSH terms included social accountability, academic public health, public health schools, public health workforce, social mission, health equity, and social justice. Based on available research, an extensive list of programs, policies, functions, and activities at health professions schools that were judged to be social mission enhancing was created.[37] A 2022 study on social mission in nursing education then used a case study approach to identify the strategies used to strengthen different components of social mission.[38] This study extended the concept of social mission by transforming the domains for the context of the United States' largest health profession and describing the programs and policies of social mission exemplars in academic nursing.

Social mission varies by institution and there is no uniformly established method to measure the commitment of an institution to social mission activities, pedagogically and experientially. Understanding how academic public health impacts and assesses its

impact on inequities is increasingly pressing as schools and public health programs are accountable to their community members, students, accreditors, and policymakers regarding their commitments to equity, inclusion, and diversity. As more attention is placed on how public health schools operationalize the concept of social mission, effective strategies, and the context in which they are implemented and measured, may be instructive for scalability and replicability.

Overview of Academic Public Health

In 1999, the Council of Public Health Practice Coordinators of the Association of Schools of Public Health formally recognized academic public health practice as a new domain of scholarship.[39] Though public health degrees have long been conferred at the undergraduate and graduate levels, recognizing academic public health more formally encourages better socializing of academic public health as a distinct area for scholarly exploration. Through research, teaching, and service, schools of public health carry out the mission of developing, integrating, and applying new knowledge to improve public health in the population, and practice in public health agencies in the community, medical, and traditional public health settings.[40] More conventional definitions of public health education often refer to the educational process that provide students with knowledge and skills related to various aspects of public health, including biology, environmental factors, communication, data management, epidemiology, health policy, and emergency management.[41] The framing of this study aims to distinguish the definition of "academic public health" from such conventional definitions of public

health education that are less inclusive of the multiple functions of public health schools beyond classroom instruction.

For the purposes of this study, “academic public health” is referred to as a derivative of the more familiar concept of academic medicine, loosely defined by the Joint Commission International as an integrated teaching hospital (practice), medical school (education), and research site.[42] This trio of domains, though not exactly similar, is closely aligned to the trio presented by ASPPH of education, research, and practice. The term “academic public health” may be seen used across this study interchangeably with “schools of public health,” “schools and programs of public health,” and “public health education.”

Chapter 2: Literature Review

Health Equity and Social Justice in the United States

The World Health Organization defines health inequities as "the unfair and avoidable differences in health status" and describes eradication of such inequities as a key priority of public health.[43] The disparities observed in mortality, morbidity, and quality of living are driven in part by preventable social inequities that people experience based on factors such as race, ethnicity, income, and socioeconomic status. [44] Such social factors have an impact on neighborhoods and communities, as where people live is considered to play a major role in determining life expectancy and other health indicators. Braveman and Gruskin, in a foundational 2003 article, aimed to provide an operationalizable and measurable definition of equity in health as "the absence of systematic disparities in health -- or in the major social determinants of health -- between groups with different levels of underlying social advantage/disadvantage."[45] Healthy People 2030 defines health equity as the "attainment of the highest level of health for all people and notes that it requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and health and health care disparities."[46]

Social determinants of health are important not only because they are major contributors to health, but because they also are the principal cause of health disparities in our society. In 2008, the World Health Organization Commission on the Social Determinants of Health affirmed social injustice as being responsible for producing and reinforcing health

inequalities through poor social policies and unfair economic arrangements. The report demonstrated a social gradient in health outcomes associated with levels of socioeconomic conditions.[47] The implications of this report on health inequities continue to tie social and structural drivers to public health outcomes.

The factors that drive health outcomes show disparities across communities of various backgrounds, such as race and ethnicity. American Indian people and those who identify as Hispanic are more than twice as likely as their White counterparts to be uninsured. Among adults with any mental illness, Black, Hispanic, and Asian adults are less likely than White adults to receive mental health services. Roughly, six in ten Hispanic (62%), Black (58%), and American Indian (59%) adults went without a flu vaccine in the 2021-2022 season, compared to less than half of White adults (46%).[48]

Life expectancy across race and ethnicity remains disparate in the US. Recent data show an overall life expectancy across all racial/ethnic groups of 76.1 years, however, illustrate a life expectancy for Black people of only 70.8 years compared to 76.4 years for white people and 77.7 years for Hispanic people.[49] Blacks continue to have higher death rates than whites for 10 of the 15 leading causes of death while Hispanics and American Indians have higher death rates than whites caused by diabetes, liver cirrhosis, and homicide.[50]

Racial disparities in health are notable given the potential role of race and ethnicity as a possible contributor to corrective intervention. People of color are more likely to seek

services from providers of color and studies show that racial and ethnic concordance between providers and those in their care is associated with increased likelihood of seeking preventive care and greater use of health services.[51,52] Developing a public health workforce that is culturally representative of historically marginalized communities can impact these concerning racial health disparities.

Public health plays a significant role in addressing health inequities in a number of ways such as the advancing and aligning health literacy with the complex factors affecting people's ability to find and use health information, supporting health and well-being in all policies and laws, and ensuring fair and just access to affordable housing and safe workplace conditions.[53] Public health frameworks, such as Healthy People 2030, have guided advances in addressing inequities by identifying causes of and differences in health outcomes across US population groups and investigating how to address them. They guide diverse, distinct disease prevention and health promotion efforts toward the common goal of improving the health and well-being of all people.[54]

Public health has long had a goal of improving health and promoting social justice among disadvantaged and marginalized populations.[55] The conscious coupling of this goal with the prominent role of social determinants of health in addressing health disparities is an opportunity for public health as a field to drive change. Social determinants of health include factors like socioeconomic status, education, neighborhood and physical environment, employment, social support networks, and access to health care, and have a

considerable impact on community health outcomes in comparison to factors often thought to be primary drivers of health such as clinical care delivery and genetic factors.

In addition to preventable social drivers of disparities, exploration of structural racism itself continues to be elevated and prioritized by public health as a field. Since 2020, local and state leaders have joined the Center for Disease Control and Prevention (CDC) in declaring racism a public health crisis.[56] Studies indicate that people of different ethnic backgrounds experience variance in allostatic load relating to the manifestation of racism.[57] Even after adjusting for poverty, Blacks experience higher allostatic load scores than their white counterparts, pointing to differences in stressors that present physiologically.[57] Exposure to racial/ethnic discrimination is shown to increase the odds of mental health problems, with a notable increase in racial discrimination against Asian Americans during the COVID-19 pandemic serving as a recent point of research in effects of racism on public health.[58] Subsequently, studies find that individuals who report experiences of racism exhibit worse health outcomes than those who do not.[59] Public health as both a practice and an industry therefore serve multiple roles in addressing structural racism and its effects on inequitable lived experiences.

Given the scope, causes, and impact of social determinants of health on public health, it is unsurprising that addressing the social causes of health disparities falls within the purview of public health education and practice. A public health workforce trained to systematically identify, prioritize, and respond to causes of health disparities provides a

powerful network of leaders to advance the mission of eradicating health inequities nationally and globally.

Public Health Workforce

The public health workforce is one key mechanism for advancing health equity, but challenges of this workforce persist. These challenges are related to factors that constitute this critical workforce, such as how schools recruit students and who they ultimately admit, how learners are trained once they matriculate, their community experiences during training, and where and how they ultimately choose to practice once they have completed training. Studies have aimed to understand the link between health workforce and health equity.[60,61,62] A framework introduced by Pittman et al (2022) describes six domains and their relationship to outcomes that impact equity: (1) who enters the workforce, (2) how they are educated and trained, (3) how they are distributed, (4) whom they serve, (5) how they practice, and (6) under what conditions they work.[63] This framework provides context for ways in which the public health workforce can influence health equity, with who enters the workforce (such as admissions practices) and how they are educated and trained (such as curriculum and community engagement) being areas of direct involvement for schools of public health. Further exploration of how schools influence the other four areas through their practices and policies is needed.

The composition of who enters the workforce is in many ways dictated by school admissions policies and practices. A diverse public health workforce is better equipped to

address public health disparities than a nondiverse workforce[64], creating a responsibility for schools to actively prioritize diversity through admissions to tackle health inequities. Yet a large, nationally representative survey of state and local public health staff showed that just 70% of the workforce overall feels their organization prioritizes diversity, equity, and inclusion, and rates were lower among Black/African American staff. However, focusing on building a diverse public health pipeline alone will not bring public health closer to equity. In fact, while the public health workforce has become more diverse and now mirrors the U.S. population more closely, there is much less diversity at senior levels, with 66% of all executives identifying as white.[96] There is still need for a concerted, systematic effort and commitment to equity and diversity by public health staff working in organizations such as those surveyed.[14] Those who lead public health organizations must be cultivated by their institution during training to center equity and diversity.

Lack of workforce diversity negatively impacts patient outcomes, access to care, patient trust, workplace experiences, and employee retention.[65] In a 2011 study on awareness of racial and socioeconomic health disparities, 27 percent of the National Opinion Survey on Health and Health Disparities respondents (n=2,791) were unaware of health disparities between the poor and the middle class and only 46 percent were aware of disparities between Blacks and whites, with people of color less likely to hold such perceptions.[66] Perceptions and attitudes related to inequities can be influenced by workforce diversity given the impact of diversity on providing culturally competent

services, yielding innovative public health approaches, and informing targeted approaches for communities of highest need.[67]

Where public health graduates practice is one component of the health workforce equity framework. For example, governmental public health workers should be proficient in cultural competency and understand how to address social determinants of health as a means for reducing health disparities and meeting the needs of underserved populations.[68] Introduction of this expectation in the form of accreditation standards would provide the common floor needed to assure all accredited schools are integrating cultural competency in their teaching and practice. The Public Health Accreditation Board, which provides official standards, measures, and guidance for national public health department accreditation, aligns their domains to the 10 Essential Public Health Services framework with equity at the center.[69] Therefore, more concentrated effort should be made to ensure that the institutions that train much of the public health workforce prepare their graduates to enter organizations where equity is an expected value.

Despite the growing recognition of the importance of cultural competency and addressing social determinants of health, the governmental public health workforce continues to demonstrate significant gaps in proficiency in these areas. Many public health professionals lack adequate training and resources to effectively engage with diverse communities, leading to disparities in health outcomes and ineffective program implementation. Research, including findings from the Public Health Workforce Interests and Needs Survey (PH WINS), has highlighted deficiencies in workforce preparedness to

address social determinants of health, with many employees reporting limited confidence in their ability to apply equity-driven approaches.[71,96] Structural barriers, such as inadequate workforce diversity, limited continuing education opportunities, and insufficient policy support exacerbate these challenges. Without an intentional effort to integrate cultural competency and SDOH frameworks into public health training, workforce development, and strategic planning, public health practitioners will struggle to fulfill their mission of promoting health equity and reducing health disparities.

Measurement of public health workforce indicators has been cited as necessary for quality improvement. Rotenstein et al suggest that metrics related to "workforce composition and to retention, promotion, and satisfaction of underrepresented and historically marginalized trainees, faculty, technical staff, and administrative leaders should be regularly reviewed by leaders, tracked over time."[65] The public health workforce is a tool for advancing health equity when policies and practices can be implemented to produce effective, diverse graduates. In healthcare, racial concordance is associated with numerous positive health outcomes for Black patients including being more likely to follow health care provider guidance and receive preventive care, along with even subsequent reduction in infant mortality, one of the most persistent racial health disparities.[70] Applying this lens to public health entails a recognition of positive health outcomes similarly being associated with more representative non-clinical practitioners who serve broader public health outside of care delivery.

Tools such as PH WINS provide guidance on assessing the public health workforce. PH WINS is the largest survey of the governmental public health workforce, capturing individual perspectives of workers in health departments on key workforce development issues such as engagement and satisfaction, intent to leave, mental and emotional well-being, and training needs. The 2021 version of the survey reflects the changing need to incorporate equity as a factor of public health and the awareness and confidence the workforce has in addressing important concepts. The concepts introduced in the "Addressing Issues in Public Health" section of PH WINS have evolved to include (1) health equity, (2) social determinants of equity, (3) social determinants of health, (4) structural racism, and (5) environmental justice.[71] Though inclusion of these concepts as domains of measurement is productive, it is rendered insufficient when considering that only 14 percent of governmental public health workers have a bachelor's, master's or doctoral degree in public health.[72] However, a key source of leaders within the workforce – schools of public health – can be leveraged to offer insights into how they and their graduates advance and assess their commitment to health equity, in governmental public health and otherwise.

Building and effectively tracking equity in public health practice has been identified as a need to support the public health workforce.[73] Some tools have been implemented to incorporate and assess health equity in public health practice. The *State Health Department Organizational Self-Assessment for Achieving Health Equity* is a self-assessment tool that provides public health leaders with tools and guidance to help identify the skills, organizational practices, and infrastructure necessary to achieve health

equity.[74] The *Foundational Practices for Health Equity* provides a set of foundational practices to advance health equity by documenting current capabilities and practices, tracking improvements and changes in capabilities and practices, and transforming public health practices to advance health equity.[75] Similarly, the practice-oriented *Advancing Health Equity Toolkit* leads agencies, teams, community-based organizations, and community partnerships through different public health processes using a health equity lens.

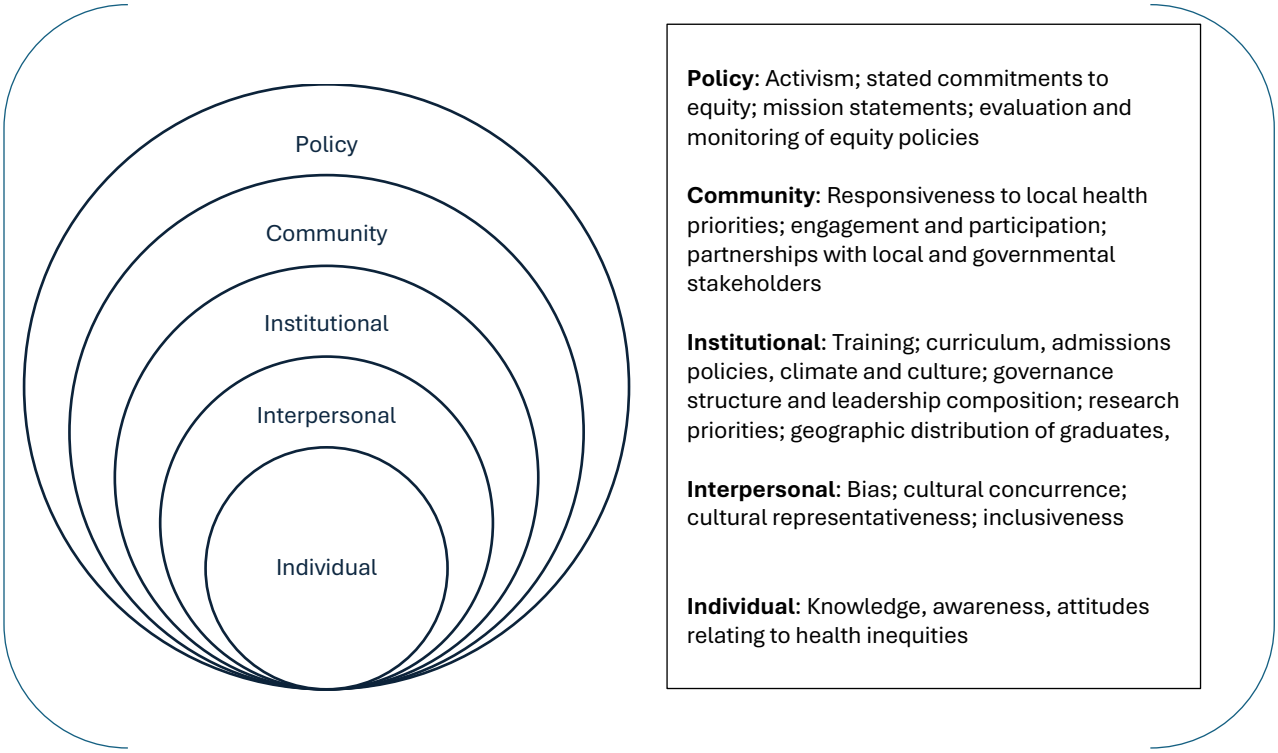
Each of these tools serve a purpose in supporting equity across the public health workforce, though they are not specific to the unique opportunities within the multiple functions of public health training programs and institutions.

Non-Training Functions of Schools of Public Health

In addition to serving as the primary source of the public health workforce, schools of public health have capacity to mitigate health inequities in other ways. In communities and neighborhoods across the United States sit over 60 schools of public health with individual and collective missions to address health inequities.

These are effectively regional hubs of education that serve a greater purpose than only educating our public health workforce. They provide employment, are critical to disaster preparedness, and are part of multisectoral partnerships of social innovation.[76] In other words, their impact on the community in which they exist goes beyond training; how schools interface with their community is indicative of social responsiveness.

Figure 2:
A socioecological model describing multilevel influences of public health schools



The socioecological model provides a framework for examining the different ways in which schools of public health can impact health equity, inclusive of but beyond classroom instruction.

- *Policy*

Schools of public health play a crucial role in shaping health and social policies by conducting research, analyzing health trends, and advocating for evidence-based interventions. They influence legislation by providing policymakers with data on public health disparities, social determinants of health, and the impact of existing policies on marginalized populations. Through faculty expertise, policy briefs, and partnerships with

government agencies, these institutions help design regulations that promote health equity, such as expanding access to healthcare, improving environmental health standards, and addressing systemic barriers in housing, education, and employment. Schools of public health also train some policymakers and policy activists, equipping them with the knowledge and skills to craft or advocate for policies that reduce health and social inequities on a broad scale.

- *Community*

At the community level, schools of public health work directly with local organizations, leaders, and residents to identify health challenges and develop culturally appropriate solutions. They engage in community-based participatory research, ensuring that interventions reflect the needs and priorities of the populations they serve. By fostering collaborations with grassroots organizations, public health schools help implement programs that address food insecurity, access to healthcare, housing instability, and social cohesion. Schools of public health provide technical assistance and resources to community groups advocating for structural changes that promote equity, such as improved transportation, access to safe public spaces, and equitable healthcare services.

- *Institutional*

At the institutional level, schools of public health influence policies and practices in healthcare systems, workplaces, and educational settings to promote health and social equity. They collaborate with hospitals, clinics, and health departments to improve healthcare delivery, reduce disparities in patient outcomes, and implement inclusive policies that address the needs of diverse populations. Through workforce training and professional development programs, these schools help shape institutional cultures that

prioritize diversity, equity, and inclusion. Schools conduct research on institutional biases and advocate for reforms that dismantle discriminatory practices in hiring, education, and healthcare provision.

- *Interpersonal*

At the interpersonal level, schools of public health educate and train healthcare providers, public health practitioners, and community leaders on effective communication, cultural competency, and implicit bias reduction. By incorporating social justice and equity frameworks into their curricula, they prepare professionals to build trust with marginalized communities, provide patient-centered care, and advocate for systemic change. Additionally, public health programs foster mentorship and peer-support networks that empower individuals from underrepresented backgrounds to enter and succeed in the public health and healthcare fields, ultimately diversifying the public health workforce and improving culturally responsive care and community health programs.

- *Individual*

On an individual level, schools of public health impact health behaviors, knowledge, and empowerment through education and outreach initiatives. They provide individuals with the tools to understand their rights, navigate healthcare systems, and adopt healthier lifestyles within the constraints of their social and economic environments. By addressing health literacy and promoting awareness of social determinants of health, these institutions help individuals advocate for themselves and their communities. Finally, schools of public health equip students with the skills to become change agents,

encouraging them to address health and social inequities in their careers and even personal lives.

Infrastructure to Connect Functions of Schools

An opportunity for schools of public health is to elevate their broader social responsiveness through their practices, programs, and policies. Research points to the importance of social determinants of health as key for educating health professionals; a framework published by the National Academies of Science, Engineering, and Medicine describes a useful framework comprising of three domains: education, community, and organization.[77] The framework and accompanying study call on health professions education to provide a "holistic, consistent, coherent structure that aligns education, health, and other sectors to better meet local needs in partnership with communities." Because of their missions, schools of public health can serve this function if equipped with adequate guidance and incentive.

The Association of Schools and Programs of Public Health (ASPPH) is the leading membership organization responsible for supporting member schools and programs of public health in playing a vital role in advancing health in their communities and enhancing academic public health locally and globally.[79] The professional association engages their members to advance a series of initiatives related to practice, research, and education – the three mainstays of academic public health. ASPPH, and their member CEPH accredited schools and programs, have stated their commitment to dismantling

racism and ending the cultural and structural conditions that enable inequality, hate, colonialism, and the disproportionate burden of morbidity and mortality.[78]

The role of professional associations in supporting schools and programs of public health extends beyond fostering excellence in education, research, and practice; they can also serve as the necessary vehicle for advancing health equity and social justice. By committing to dismantling racism and addressing structural inequities, professional associations can move academic public health towards systemic interventions that reshape the conditions contributing to health disparities by influencing curricula, policies, and institutional culture. This requires a measurable framework for assessing the impact of academic public health institutions in addressing inequities via training and non-training functions of member schools.

ASPPH established the original Framing the Future Task Force in 2011 to better prepare graduates for success in a changing world and global marketplace.[79] Three focus areas were identified for the task force to advance:

- Transformations in public health degree programs (baccalaureate, master's, and doctoral levels)
- Increased understanding of public health among clinical and other professions
- Enhanced collaboration with governmental public health agencies for improving the preparation of their workforce.

This foundational 2011-2015 initiative has since been further built upon to develop the "Vision for 2030" charted by ASPPH. The evolution of the vision has since included

equity as a core component. This vision is stated as “equitable, quality education in public health for achieving health equity and well-being for everyone, everywhere” with three additional objectives:

- Inclusive excellence through an anti-racist lens
- Transformative approaches to teaching and learning
- Expanding the reach, visibility, and impact of the field of academic public health

In 2023, ASPPH submitted a letter to congressional appropriators in support of FY24 allocations for member areas of interest. The letter was geared towards agencies that provide essential resources to advance evidence-based approaches to public health threats and prepare future generations of public health practitioners. These recommendations included $15,000,000 for the Centers for Public Health Preparedness and Response, $35,000,000 for Prevention Research Centers, $104,600,000 for vital global research and training to prevent newly emerging infectious agents, and $1.0 billion for the Advanced Research Projects Agency for Health.[80]

ASPPH funding recommendations were made to “support the mission of [their] 141 academic institutions to provide public health education, workforce practice training, and research.”[79] Not included in this letter, however, were pointed recommendations for funding initiatives that advance equity or diversity in academic public health.

Aside from the general public as the clear target of public health support, the 141 member institutions referenced are essentially the end user of the resources that are requested

from ASPPH. Member public health schools are the mechanism by which appropriation resources ultimately carry out the vision stated by ASPPH.

It is not assumed that a letter for funding recommendations to appropriators is an exhaustive list of member institution priorities. For example, the American Public Health Association lists simply "[addressing] the impacts of climate change" in their 2023 advocacy priorities while recognizing the disproportionate impact of climate change on vulnerable and marginalized communities.[81] However, omission of calls for supporting health equity research at public health schools or resources for schools to bridge gaps in social inequities present an opportunity for elevating equity as a core priority for schools and for congressional appropriators.

Impact of Accreditation Standards on Academic Public Health

In examining how the health workforce is educated and trained, research describes that among the policies and programs key to improving social mission goals are HRSA's Title VII and Title VIII workforce development programs authorized under the Public Health Service Act, accreditation standards that influence educational institutions' policies and practices, and certification and licensing exams which may or may not include topics such as health disparities, systems-based practice and social determinants of health in health professions exams or competency assessments; community-based, experiential clinical or service-learning experiences; and the inclusion of social mission in governance documents and processes.[63]

Accreditation in public health not directly related to curriculum has prioritized equity in a manner that should elevate academic public health and how they produce practitioners and policies. In 2022, the Public Health Accreditation Board (PHAB) added equity as an eighth foundational capability, "elevating its importance as a cross-cutting skill and capacity and reinforcing its critical role in ensuring community health and well-being."[82] This addition is critical as schools must adjust accordingly to produce a public health workforce capable of integrating equity into their practice. The 2020 PHAB strategic plan which prioritizes creating and implementing a comprehensive anti-racism, diversity, equity, inclusion strategy to address structural racism and inequity within PHAB, public health departments, and the public health sector, creates pressure on schools of public health to implement strategies and measurements to reflect equity as a public health education priority.

One study examined the impact of professional credentialing and regulation on the public health workforce. Professional credentialing, defined in the study as "the process of obtaining, verifying, and assessing the qualifications of public health professionals to provide services/operations for a public health organization, institution or agency," [83] creates a lane of impact for accrediting agencies to influence what is deemed critical for public health education and training. Additionally, there is a need for the public health workforce to have a systematic method of guidelines and standards to ensure that the workforce is providing essential public health services.[84] This should explicitly include equity and be supported by bodies such as ASPPH and CEPH.

ASPPH collaborates closely with CEPH to promote accreditation standards by supporting undergraduate and graduate criteria and procedures that serve students' learning, practice, and research needs while fulfilling their and societal expectations for excellence in education.[80] This collaboration creates mutually beneficial opportunity for accreditation to accurately reflect their stated priorities regarding incorporating equity in practice, research, and education, and for professional associations to provide equity-related resources to schools towards achieving and measuring practices aligning with such standards.

The gap in regulatory involvement to advance equity is not unique only to academic public health. In medical education, regulatory agencies like the AAMC and ACGME increasingly recognize the need for health professionals to provide quality care for marginalized communities and understand the role of social and structural determinants of health, including racism, in influencing health outcomes. Yet training standards and clinical guidelines mandating these practices still do not exist.[85]

There is precedent in understanding how guidelines and indicators can be developed and adopted by regulatory agencies to advance health equity. In health professions education, accreditation is a key mechanism for schools to demonstrate the quality and value of their services. In a study that analyzed publicly available accreditation standards documents across 5 health profession disciplines (medicine, dentistry, pharmacy, nursing, and physician assistant schools), 18 areas and 79 associated indicators were identified as associated with health equity. These areas and indicators were developed based on a

review of existing tools and frameworks -- including social accountability and social justice related literature, and key informant interviews, from which an extensive list of social mission enhancing activities was identified.[89] The study also found that most accreditors have social mission – the contribution of the school towards health equity – content in their standards as it related to curriculum, student diversity and training, and faculty diversity, with varying extent and scope across accreditors and disciplines.[89,37]

Advancing and Assessing Social Mission in Public Health Schools

The footprint of ASPPH is wide as the organization's scope influences the stakeholders of academic public health: from accreditors to the practices of schools of public health themselves. ASPPH states that "as the leading voice of academic public health, we advance excellence and innovation in teaching, research, and practice. By fostering a culture of awareness and inclusion, we will strengthen collaboration with academic public health institutions around the world."[22] ASPPH convenes deans, administrators, faculty, staff, and students from schools and programs of public health, totaling 137 deans and program directors, over 380 administrators, over 11,000 instructional faculty, and over 80,000 students.[22] Of those students, 13 percent are doctoral students, 38 percent are bachelor's students, and 49 percent are master's students. ASPPH maintains a major impact on each of these groups within academic public health.

The 2030 ASPPH strategic plan lists six values in support of their mission of advancing academic public health by mobilizing their member schools collectively towards innovation and excellence in education, research, and practice. The six values are

diversity, equity, inclusion, and social justice; collaboration; excellence; innovation; agility; and commitment to public health.[86]

The first goal listed in the 2030 strategic plan is to "advance solutions to the critical public health challenges facing society."[25,79] The stated objectives for this goal are:

- [To] lead the academic public health community in generating the knowledge and taking collective action to advance evidence-based solutions to critical public health challenges globally.
- [To] advance the journey on diversity, equity, inclusion, and social justice in academic public health.

There is overlap across the goals of the ASPPH strategic plan for their member schools of public health, and that of the social mission domains as previously applied to medical and nursing education. Adapting social mission domains for public health education context could provide a powerful vehicle for public health schools to measure and advance their commitments to equity in a more uniform manner, particularly if supported by ASPPH and public health education accreditation.

Social mission includes a school's programs that teach or role model diversity and inclusion, community engagement, health disparities reduction, and address the social determinants of health. [87] An increasing number of health profession schools use the social mission concept to define their educational and institutional commitments to health equity. Findings from previous social mission research provide some evidence that social mission–related activities in medical and nursing education are associated with intended outcomes like primary care practice, provision of care for the medically underserved,

student diversity, and students graduating with skills and knowledge that prepare them to address societal needs.[88]

A novel ranking system was developed in 2010 to report on three health workforce equity–related outcomes of medical schools: primary care physician output, workforce distribution, and graduates of racial and ethnic identities historically underrepresented in medicine.[89] These three outcomes were chosen based on identified gaps between population health needs and the physicians being produced by medical schools. The study argued that the basic purpose of medical schools is to educate physicians to care for the national population, therefore requiring an adequate number of primary care physicians, adequate distribution of physicians to underserved areas, and a sufficient number of physicians of color in the workforce.[90] The study's secondary analysis of data from the American Medical Association, Association of American Medical Colleges, and the American Association of Colleges of Osteopathic Medicine generated a social mission score to evaluate medical school outputs across these three domains.

Until 2019, no established method to measure a school's commitment to social mission activities had existed. Building off the 2010 study on medical education, field tests were conducted by the Mullan Institute for Health Workforce Equity to prepare a survey tool to measure a school's social mission values, programs, and activities across six domains and 18 activity areas. The tool was informed by researchers with educational, clinical, and methodological experience, along with dental, medical, and nursing educators,

representatives from national organizations, students, residents, and a public member as part of an advisory committee.[87]

A 2022 study of social mission in medicine, nursing, and dentistry education found that that social mission is an important aspect of health professions education, especially in as institutions seek to advance their health equity and social justice commitments. The study measured 79 indicators across the previously identified 18 areas and six domains of schools (educational program, community engagement, governance, diversity and inclusion, institutional culture and climate, and research) that had potential to enhance social mission engagement and performance.[91] Notably, though the three different professions of interest each require clinical training, the six domains do not describe exclusively clinical categories. This suggests that other health profession education programs, such as public health, could be assessed using the template of these social mission domains and modified indicators to reflect other outcomes of interest.

Measuring the interrelationships between different social determinants and health outcomes is a pivotal component to understanding and acting on health equity. Some frameworks – such as the Determinants of Health Model and the WHO's Commission on Social Determinants of Health conceptual framework – guide the measurement of public health. Others such as __ go further in identifying social determinants of health and measurement of health equity, but are not integrative of schools of public health as the primary setting.[92]

Just as it applies to academic medicine and academic nursing, social mission provides a framework for how public health schools can influence health equity and reduce health and social inequities. However, the social mission of academic public health has yet to be defined and domains have yet to be distinguished. Multiple studies have called for equity-centered data across health professions education and the need for standardized ways of assessing social mission.[93,94] These include calls for more equitable, diverse, inclusive, and accessible ways of collecting, analyzing, disseminating, and translating public health data.[9494]

The advent of PH WINS in 2013 characterized the needs of public health practice and workforce and now serves as a reliable source of information on individual-level public health staff needs, workplace perceptions, and workforce demographics.[95] Defining and assessing social mission in academic public health presents a new frontier in advancing health equity. Findings from the 2021 PH WINS survey showed that more than in previous surveys, policy engagement and topics related to justice, equity, diversity, and inclusion were identified as important areas of needed training, especially by senior staff and executives of state and local government public health organizations.[96]

Measurement of how schools implement these social mission processes is critical. Research shows measuring, tracking, and regularly reporting on the extent of representation of Black, Hispanic, and Native American health workers can encourage health care professional organizations, states, and individual institutions to make greater efforts to increase representation.[97]

Chapter 3: Methods

Study Aims and Research Questions

The purpose of this study was to explore how schools of public health systematically – in response to mounting health inequities – advance health equity and social justice through their institutions' training and non-training functions. A secondary purpose of this study is to begin exploring how schools of public health can assess the processes that have been expertly identified to contribute to a school's social mission. The three aims and corresponding research questions are as follows:

- AIM I: To define "social mission" in academic public health.
    a. RQ I: How can social mission be defined in the context of schools of public health and their contributions to advancing health equity and social justice?
- AIM II: To identify domains of social mission in academic public health.
    a. RQ II: What are the domains of relevance that would provide indicators for assessing a public health school's contribution to advancing health equity and social justice?
- AIM III: To identify process metrics across identified domains of social mission that assess how schools demonstrate commitment to equity and justice.
    a. RQ III: How can schools of public health implement and assess activities (practices, policies, and partnerships) to advance health equity and social justice across the identified domains of social mission?

Proposition

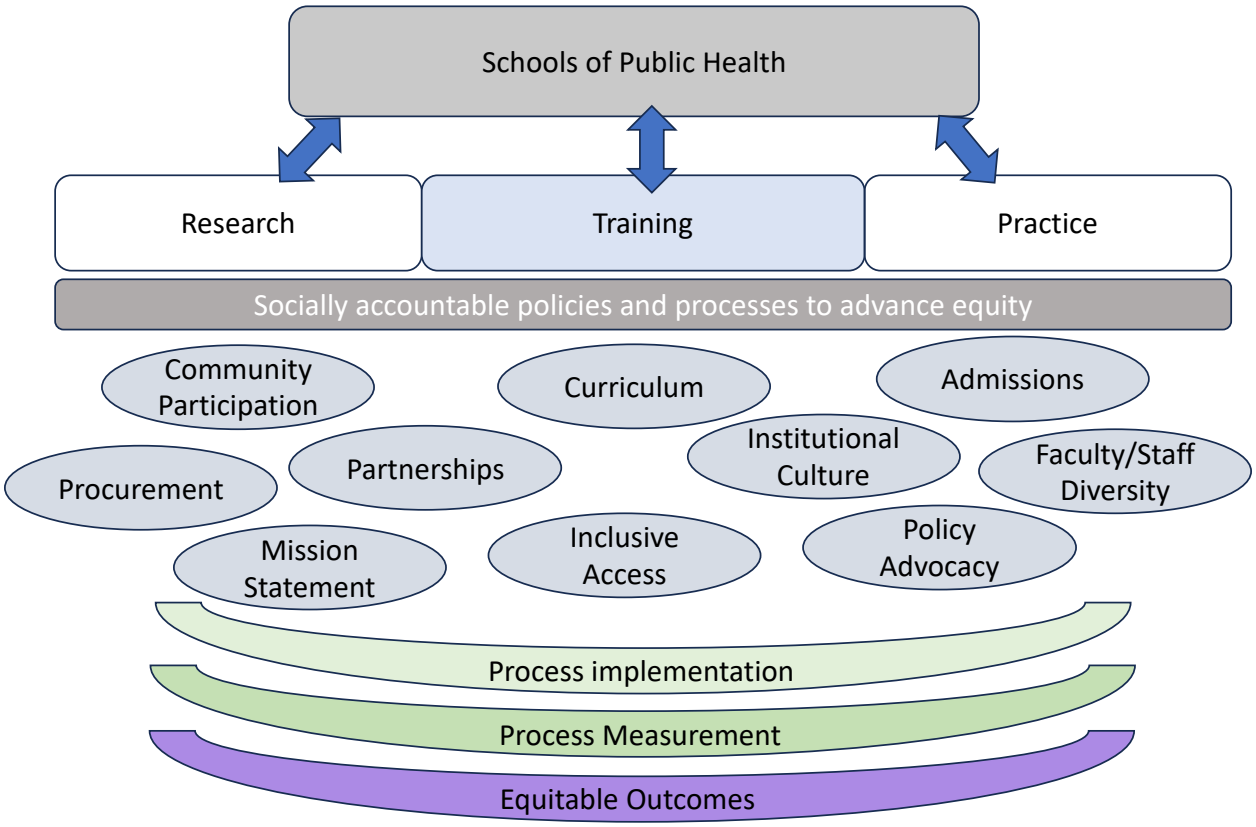
Given the exploratory nature of the research questions, this study is guided by a single proposition. The study proposes that academic public health – that is, schools of public health and their education, research, and practice operations – can advance health equity through the mission statements, policies, practices, and partnerships of its institutions. Understanding how schools of public health assess such operations would contribute to emerging practices for how schools can further address inequities along with greater accountability of their commitment to such practices. These domains and metrics may be adopted by professional associations to generate guidance for schools nationally, by accreditation agencies to enhance standards for equity, or by individual schools to improve their equity and justice practices. Each of the established social mission domains and metrics could support how academic public health as a discipline can guide their schools towards making and measuring greater contributions to health equity.

Study Design and Conceptual Map

This qualitative study used a modified Delphi technique to explore and resolve the three research questions. The lack of a consensus-driven logic framework demonstrates the need for a novel framework guided by expert input. In lieu of such a framework, a conceptual map was adapted from previous studies that have established common social mission domains in medical, dental, and nursing education. Previously established social mission domains include community engagement, curriculum, diversity, governance, institutional culture and climate, and research. Unlisted domains were expected to emerge aside from domains that have been established for other health professions. The conceptual map also incorporates the Framing the Future 2030 framework from ASPPH

and the 12 recommendations the framework details to "foster the next generation of leaders in the fight for health equity and well-being globally."[86]

Figure 3: Conceptual map



The three functions of academic public health then offer perspective into possible domains within each that describe how research, training, and public health practice advance health equity and social justice. The circular icons in the conceptual map above display possible domain categories that are to be agreed upon and explored by the technical expert panel through a consensus-building process. Within these domains are processes that would need to be implemented to operationalize the domain, followed by indicators that would measure the implementation by a school. As supported by previous

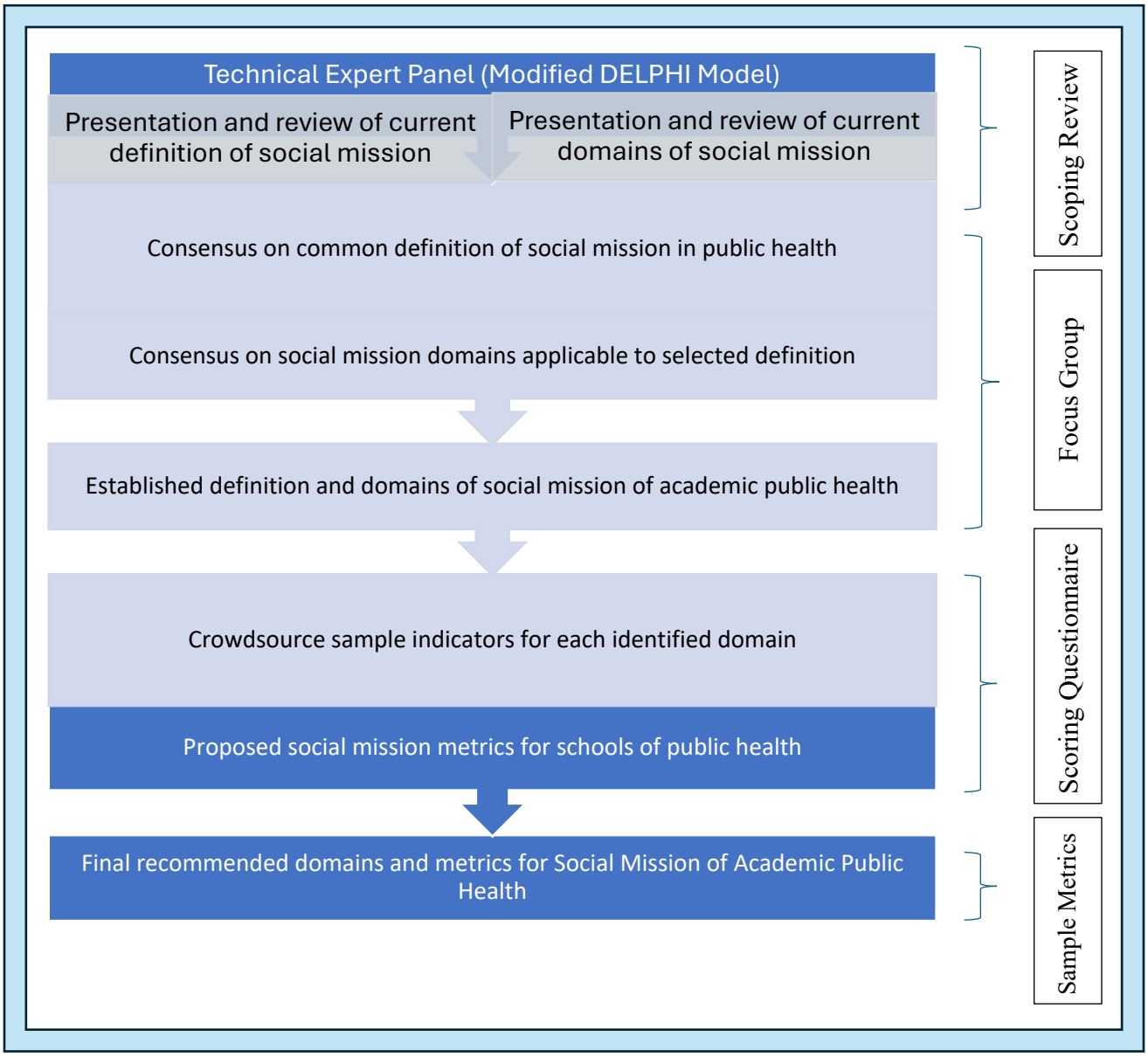
research, this study proposes that such equity and justice processes and assessment will ultimately influence public health outcomes.

Prospective Domains for Academic Public Health

Based on previous social mission studies conducted, this study may reasonably assume some overlapping social mission domains and functions that had been used in the context of academic medicine and nursing. Domains were predicted to emerge during the formative research phase that may not have been included in prior studies or relevant to other health professions. One example of a potential emergent domain includes health department partnerships, a domain that was not included in previous social mission studies. This domain may be of interest given the role of public health departments as major employers of public health graduates and local facilitators of community health practice. The inductive nature of the Delphi approach encouraged other unlisted domains to be identified and reviewed by the panel for consensus.

The conceptual map for this study illustrates the need to define the domains of academic public health as a means of establishing useful metrics for schools to assess their commitments to health equity and social justice. The driving formative research question behind the conceptual framework is: does academic public health have the same domains as academic medicine and academic nursing? If not, what are the unique domains of health equity and social justice influence that correspond to public health schools?

Figure 4
Methodological sequence of data collection



The methodological sequence for the qualitative study (Figure 4) describes the process by which data was collected and analyzed to inform the findings of the research questions.

The initial collection step was the scoping review. This step contained a content analysis of the existing literature on strategic plans, accreditation standards, public health

organizational missions, and institutional policies. Much of this review is cataloged in the scoping review of Chapter Two and was used to inform the summary of research purpose and procedures that the technical expert panel received. The review also informed the structure and content of the focus group questions for the panel. The technical expert panel identified, categorized, and described domains and offered potential metrics to measure those domains. The findings from the focus group informed the scoring survey that panelists received to add, eliminate, and rank the selected domains. The results of the survey were then reintroduced to the panel as the proposed social mission domains for academic public health. The final domains and sample metrics are recommended by this study to be adopted by public health schools to guide their practices towards equity and social justice. The final output of the study was a non-exhaustive social mission metrics survey for public health schools that may be adopted, developed, or further explored by subsequent research.

Delphi Model Methodology

Two research aims are directly related to the proposed Delphi methodology. Aim I of this study is to define social mission of academic public health and Aim II is to have informed technical experts identify domains of social mission in academic public health. Though there is no clear framework in place for this topic, this study relied on three main sources to answer RQI and RQII. The first was the supporting literature and previous social mission studies that have provided foundational domains in social mission. The second included sources that are accessed by public health schools to inform their practices, including ASPPH Strategic Plan and the accreditation guidelines of CEPH. The third

included drawing consensus on social mission definition domains from an expert panel consisting of experienced public health practitioners, educators, and social mission researchers. The technical expert panel was an essential asset to this study and the selection process for the panel is detailed below.

Description of the Delphi Approach

The Delphi Panel Method was chosen for this study for multiple purposes. The method is useful for defining a problem, forming consensus, clarifying issues, and engaging subject matter expertise.[98] Also, in the absence of an existing framework, the study relied on expertise of those in academic public health and social mission practice. The method involves working to identify a consensus position on a specific set of questions based on the knowledge and experience of experts in the field.[99] The existing literature was insufficient to identify the domains of social mission in public health, creating the need for a consensus-driven process of informed experts in social mission and public health education to provide and confirm potential domains.

Experts in social mission and in public health education were described as those who hold or have held executive and/or technical positions within public health graduate schools, accreditation bodies, professional associations, or organizations with social mission research experience. The selection method of the technical expert panel is described in the sections below.

Technique Rationale

The Delphi Approach is a well-established method to reach expert consensus on issues in health services research and health policy such as establishing clinical guidelines, setting research priorities, and determining competencies. Modifications are often made to accommodate for challenges presented by the study design or data availability. Nevertheless, this approach has particular strengths to acknowledge. The main the modification to this Delphi approach was removing the element of anonymity, a trait of more conventional Delphi techniques. The anonymous format of cultivating panelist opinions is a time-consuming measure. This study modified the approach by first generating discussions via group interview format rather than via anonymous collection. However, the final feedback provided by the panelists to determine consensus will be collected by anonymous survey. This crowdsourcing approach for a novel topic, in the form of an initial focus group discussion, should create greater buy-in from technical expert panelists.

The benefit of this modified Delphi methodology is the encouragement of dialogue. Traditionally, the anonymity of individual members in a Delphi study removes the inherent bias such as single-person dominance or groupthink that are often observed with group meetings.[100] Since the modified approach will not include anonymity, the risk mitigation will involve the researcher-facilitator using motivational interviewing techniques to encourage full participation from each panelist. A final limitation is that the method can be limited if there are too many divergent views on the panel. The risk mitigation for this will be to have no more than 12 panelists, each of whom will receive the same level-setting documentation to review. This risk will also be mitigated by

adhering to selection criteria that prioritizes homogeneity of the panel in exchange for broader diversity on the panel.

Data Collection Plan

Sampling Strategy

Selection for the panel utilized a criterion sampling approach. A panel of eight were ultimately invited to serve on this ad hoc panel. Recruitment contingency relied on snowball sampling once the initial outreach did not yield the sufficient eight panelists meeting the necessary criteria, with confirmed panelists being requested to recommend additional peer administrators who fit the panel criteria. The selected respondents reviewed existing domains of social mission to better understand and define social mission as it related to schools of public health. Panel selection adhered to the following two predefined criteria:

- Deans or associate/vice deans of diversity, equity, and inclusion or similar title (e.g. justice, belonging, community engagement, accessibility, etc.) within a school of public health.
    - Current or past administrators were allowable.
    - Via snowball sampling, the study allowed for acceptance of prospective panelists recommended as proxies for invited deans or associate/vice deans if the prospect met the criterion below.

- Experience in academic public health as faculty, administrators, and/or researchers, who have at least 10 years of teaching or practice experience in health equity and social justice and hold a graduate degree in public health.
    - This experience was qualified through a review of available bio sketches and curriculum vitae obtained from public sources including university profiles, publication portals, LinkedIn, or via verbal attestation.

This study recognizes the challenges of reaching consensus within a highly heterogeneous panel and will therefore prioritize selecting panelists with shared experience and expertise relevant to the topic. While this creates a degree of homogeneity in terms of professional background, the study also values and intentionally seeks a range of personal perspectives and institutional contexts to enrich the dialogue and interpretation of findings. The selection strategy aimed for even distribution of panelists by geography and a variety of perspectives on the various responsibilities of public health schools. Selection included prioritization of balance among private and public schools across different regions of the country.

Prospective panelists were contacted via email with an invitation to join the panel. Respondents were given ten (10) days to indicate their interest in participation before recruitment continued to the next potential participant until the minimum threshold of six acceptances were met. The invitation (Appendix E) included the aims of the study, the expected time commitment, and the expected outputs. Panelists were asked to confirm via emailed response or verbally. A Doodle poll and consent form were shared via email to confirmed panelists to select available dates for the focus group discussion.

Consideration during exclusion was given to recent changes in the higher education and political landscape that may have led to attendees either being less explicit with posting titles related to equity and justice. Consideration was also given to the recognition that several schools either reduced or eliminated their diversity, equity, and inclusion operations during the time of recruitment. To modify for these limitations, specific review was given to titles that indicated institutional leadership related to culture, climate, admissions, and community.

Participants were considered by geography, with the intention of national balance across the South, Mid-Atlantic, Midwest, Southwest, West, and New England regions. Attendees representing non-public health schools (such as medical or nursing schools) within the United States or public health schools located outside of the United States were not included. Attendees affiliated with the George Washington University were also not included.

Recruitment began February of 2025 using purposive sampling by accessing the ASPPH 2025 Annual Meeting attendee list and cross-referencing the considerations above. The inclusion criteria was applied to search for attendees who had listed titles that included markers of interest such as “associate dean of diversity, equity, and inclusion,” or “assistant dean of community engagement and curriculum.” 43 individuals were identified who met all inclusion criteria. 16 were contacted in the initial round of

recruitment with a response of 8 acceptances. 6 of the 8 qualifying panelists who accepted participated in the focus group.

Level-Setting for Panel Preparation

Once the panel had been confirmed and prior to engaging the technical expert panel, secondary data collection took place in the form of a level-setting scoping review. The initial step involved conducting a detailed review on the concept of social mission and the stated mission of academic public health to share with the panel in the form of a level-setting summary. This summary included existing literature and links to relevant definitions, strategic plans, accreditation standards, and institutional policies.

- Scoping Review: Sources of information collected for documentation review and content analysis for the technical expert panel included public documentation available from professional associations and schools of public health. This information was collected to better examine current priorities related to equity and justice that had been set by various organizations. Acceptable data to review included strategic plans and operating plans such as Framing the Future by ASPPH, formal studies conducted on health equity, existing dashboards, member resources and guidelines, curricula, concept papers, frameworks, guidelines, CEPH accreditation standards, and other written policies. The summary of the review was shared with all confirmed panelists via email.

One purpose of the cursory scoping review was to identify gaps that could be supplemented by the social mission domains and proposed metrics. Another purpose was to illuminate that academic public health professional organizations -- namely CEPH and

ASPPH -- had in fact elevated equity and justice as part of the mission of academic public health. The scoping review identified mechanisms that schools currently or may use to assess their commitments to equity. This secondary data was collected via websites, published articles, accreditation standards, and archival records in the form of the extensive literature review of this study (Chapter 2).

With the scoping review conducted and shared, the technical expert panel was informed of their three primary responsibilities:

- Establish common definition of social mission in academic public health.
- Reach consensus on social mission domains applicable to public health schools.
- Provide input on potential social mission indicators for identified domains.

Panelists were provided with the summary of social mission, a brief description of this study, and three relevant manuscripts on past social mission studies. The manuscripts included level-setting information on social mission in the context of medicine and nursing, along with the background of social mission as a concept. The one-page summary (Appendix F) concisely explained the study, provided level-setting information for the panel, and solicited consent for participation. There were two facilitators: a primary and secondary facilitator. The primary facilitator set the bounds of the discussion and delivered the prompts while the secondary facilitator took notes and interject with any appropriate context or background knowledge needed.

Upon entry into the study, panelists were provided with a formative definition of social mission of academic public health. The purpose of introducing this definition before the

initial focus group was to allow for reaction and deliberation by the panel. The panel was instructed to critique and/or validate the proposed definition in support of Aim I.

Descriptions included domains, subgroups, and indicators that were included in previous social mission studies. Correspondence took place by email and individual calls with panelists, except for the group discussion, which took place via Zoom. Panelists were invited to a virtual two-hour group session to discuss the initial deliberations of the panel.

Collecting primary data from the panelists included two approaches:

- Focus Group: Each technical expert panelist was provided with background information on social mission as a level-setting measure. Panelists were then convened to discuss a definition and potential domains to be included in the social mission of academic public health. The semi-structured focus group aimed to generate iterative and collective feedback on the definition and reviewed domains. During the focus group, panelists were reflexively provided with a written synthesis of the domains identified during the group discussion by one facilitator. Panelists were then asked to verbally elect to add domains for final consideration on the survey before the focus group was dismissed. Content was collected by researcher memo, facilitator notes, and audio transcription. These were then triangulated for accuracy and updated accordingly.

  Consensus on a definition was established using median scoring and interquartile ranges (IQR) to generate a quantitative measure of agreeability. The median and

IQR for each proposed definition was recorded, identifying the definitions with the highest median scores. The IQR was recorded to identify definitions and domains falling outside of the first and third quartiles to indicate outliers. This median effectively indicated our level of consensus and the IQR aimed to identify outliers requiring further examination; a smaller IQR suggested a higher degree of agreement among experts, while a larger IQR indicated greater divergence. A summary of the panelists' responses and open-ended comments were compiled from the survey to enhance the final proposed definition.

The second focus group was intended to include the final domains that fall within the range of consensus and discuss those that were outside of the range of agreeability. Here, panelists were to be presented with any IQR outliers and given a final opportunity to suggest their inclusion into the final collection of domains. The objectives of the second group interview would have been to:

- present the final domain consensus and final proposed definition of social mission of academic public health
- discuss outliers from ranking questionnaire
- present final findings and proposed metrics gathered from questionnaire responses
- request sample metrics for presented domains

Both focus groups were to be conducted by an external facilitator with the interview guide. The student investigator was to be a present observer for both group sessions.

- Scoring Questionnaire/Survey: Two weeks after the first focus group, all panelists were presented with a survey on the definitions and domains that had been identified during the focus group. Panelists were asked to score the proposed definitions by agreeability and were asked to score the proposed domains by perceived importance and relevance to schools of public health. The survey was administered via email using Qualtrics. The survey invited panelists to add sample indicators that could be included to assess each domain (e.g., a proposed domain on community engagement may be accompanied by a panelist recommendation to include an indicator on whether the public health school conducts regular community health needs assessments). No indicators from previous social mission studies were provided; rather, novel indicators were accepted from the panelists based on the domains presented in the survey.

- The questionnaire was shared with the panelists two weeks after the first panel convening. The final rankings and corresponding median scores are included in the findings to illustrate perceived relevance and importance of each domain to social mission in academic public health. Using Qualtrics, the panel received the final definition options and domain options and were instructed to adjust their slider to indicate the level of agreeability on the definition and the perceived relevance and importance of a listed domain. Definitions were generated from a thematic analysis of the focus group discussion and displayed via Qualtrics with respondents indicating their agreeability to each proposed definition through use of a Likert scale slider. The questionnaire concluded by inviting respondents to

optionally provide any comments, clarifications, or caveats to their responses in an open text field.

Table 1
Summary of scoring questionnaire collection plan

	Question I	Question II
Aim of interest	Proposed Definition	Proposed Domains
Variable of interest	Agreeability	Importance, relevance
Scoring mode	Likert Scale (0-10)	Likert Scale (0-10)
Measure	Median score and IQR	Median

Final questionnaire results were provided to the panel two weeks before the second focus group was to be convened. Proposed dates for the focus group were sent via email with embedded poll to maximize attendance.

Collection and Analysis Modification Due to Response

A major modification to the study is noted here. To strengthen the validity of the findings, the study design was changed to include a broader sample of academic public health experts beyond the initial Delphi panel. While the original panel of six provided rich qualitative input, the limited response rate in the follow-up scoring round (five of six

participants) presented a challenge to the reliability and robustness of consensus metrics. To address this, a second scoring survey was distributed to an expanded group of 32 academic public health leaders, including program directors, deans, and administrators with experience in social mission, health equity, or public health accreditation. This expansion aimed to ensure that the refined definitions and domains reflected a more comprehensive range of perspectives within the field. The second survey provided an additional data source to triangulate the findings from the initial survey and expanded the input provided from the relatively homogenous focus group.

Data Analysis Plan

Table 2:
Original Collection and Convergent Analysis Timeline with Modification

Collection Point	**Method**	**Mode**	**Timeline (from T_1)**
T_1	Focus Group (1)	Panel interview	--
T_2	Scoring Questionnaire	Investigator to panel via Qualtrics	~2 weeks
T_3	Scoring Questionnaire Results	Investigator to panel via email memo	4-6 weeks
T_4	Scoring Questionnaire with added qualitative prompts	Investigator to broader sample via Qualtrics	12 weeks

To develop a robust analysis plan that incorporated both the content analysis for consensus and median-based scoring from the two survey sources, a mixed methods

convergence approach was adopted. Once focus group session notes were summarized, summaries were prepped for content analysis. Analyzing the data collected from the expert panelists consisted of the following two approaches:

- Content Analysis for Consensus: Session notes were checked against the audio transcription for accuracy and summarized in preparation for identifying and analyzing content. Identified themes chosen by panel during the first focus group were concept mapped and consolidated as they emerged. Identified themes were visually mapped using automated network diagrams to show the relationships among them. Similar themes were consolidated to minimize redundancy and the categorization of new, emergent domains were collected as part of the analysis process.
- The automated inductive analysis was conducted using Avidnote. The full transcript was entered into Avidnote along with the observed notes taken during the interview. The analysis produced two outputs: six potential definitions of social mission of academic public health, and thirteen prospective themes corresponding with the definition based on respondent input. Researcher notes and audio transcription were then cross-walked with presented themes to provide additional context and supporting quotes to each selected thematic domain. Quotes were deidentified and included in the scoring questionnaire in order to mitigate recall bias from the initial focus group.
- Median-based Scoring: After the automated content analysis described each theme, the domain descriptions were added to the panelist surveys. Once panelist

prioritization was collected based on assessment of importance and relevance, each domain was assigned an equal value. Scoring responses on the survey were collected, with median domains scoring closer to 10 indicating higher prioritization among the panel members about the importance and relevance of the domain.

The data required for analysis was collected from the focus group conducted with the panel and their questionnaire responses. Once collected, data was transcribed and subjected to initial coding to categorize the content into themes. These responses were initially collected and maintained separately from the second survey group by using two distinct Qualtrics links.

The second respondent group was similarly identified through purposive sampling and professional networks, including participants from national consortia, association working groups, and leadership in accredited public health institutions. Respondents were invited to complete a slightly modified version of the existing Qualtrics survey, which presented six candidate definitions derived from the initial Delphi round. Similar to the initial version, respondents were asked to rate each of the six proposed definitions based on their level of agreement and each of the 13 proposed domains based on their perceived relevance and importance using a 0–10 Likert scale. The questionnaire modification only involved a new invitation to offer open-ended alternatives to the six proposed definitions and 13 proposed domains.

This expanded scoring phase preserved the original Delphi content while increasing the sample size for more robust quantitative analysis. Responses were requested within two weeks of receiving the Qualtrics link and the initial IRB-approved process for confidentiality was maintained and communicated via email. Median scores, interquartile ranges, and thematic patterns in qualitative feedback were then recalculated with the initial dataset, enabling a more stable and credible identification of a definition and key domains for the social mission of academic public health.

The second round of invitations yielded 13 completed survey responses. 0 explicitly declined to participate, 4 bounced back via email, and 1 did not respond during the allotted timeframe. All responses received by the deadline were included in the final analysis.

Using a convergence approach, initial data from the first cohort on respondents were analyzed separately from the expanded questionnaire cohort to help validate the findings from the initial focus group. The second survey included only two new open-ended prompts. The first was: “If you would like to provide a definition of social mission of academic public health that is more precise or more accurate than the options above, please record your entry here.” The second was: “If you would like to provide unlisted domains for consideration that you believe to be important and/or relevant, please record your entries here (up to 3).”

These open-ended responses from both surveys were added to the initial findings from the focus group then analyzed via manual coding using nVivo. The two open ended questions were asked of the second group to collect descriptive and contextual information to support the quantitative findings.

For the second phase of coding, the broad preliminary themes were analyzed once more via nVivo to create more consolidated, synthesized domains with all gathered responses. The purpose of this second phase analysis was to reduce the final number of domains to be presented to the panel by merging salient themes that shared similarities. Once the domains were firmly established through manual coding, each final domain was ascribed a description based on the earlier automated analysis and a final domain label.

The next step of analysis deductively mapped the identified domains to the three functions of academic public health: research, training, and practice. The content analysis in nVivo categorized the final social mission themes to one of these three central functions of academic public health. This final step of analysis was followed by the synthesis of findings into a comprehensive report detailing the methodologies used, presenting the definition and domain prioritizations visually, and recording implications of findings.

Chapter 4: Findings

Overview

This chapter presents the findings of the modified Delphi study aimed at identifying a working definition, key domains, and sample metrics of the social mission of academic public health – Aims I, II, and III respectively. The collection and analysis included three phases: (1) an initial expert panel round involving six selected leaders in health equity,

social justice, and public health education, (2) a scoring survey of the panelists based on the findings of the initial analysis, and (3) an expanded quantitative validation round with respondents from a broader network of academic administrators and faculty leaders.

Results were organized into three sections: (1) synthesized content analysis from the initial qualitative round, (2) scoring and feedback from the two surveys, and (3) analysis of definition/domain preferences and convergence across the study phases. The findings from the data collection and analysis informed the final phase illustrated in the metrics of the sample questionnaire.

Phase 1: Content Analysis from Expert Panel

Six expert panelists ultimately participated in the semi-structured focus group designed to obtain the conceptual base for social mission in academic public health. Content analysis of responses via Avidnote yielded six candidate definitions and an initial set of domain themes. The findings presented in the discussion reflect a collective aspiration for a more equitable and just approach to public health education and practice. By centering ethical obligations, community engagement, and inclusive language, panelists advocated for a transformative vision of academic public health that addresses systemic inequities and empowers diverse shareholders. The emphasis on measurable performance and accountability further underscored the need for practical frameworks that align with the social mission of public health. Some key narratives are included in the table below with deidentified panelist quotes:

Table 3
Narratives and supporting quotes

Generated Narrative	**Supporting Quote**
School commitment to advancing health equity through institutional teaching, research, and service	"The research domain needs to go back to modeling the behaviors that we're expecting that next generation to display."
School alignment with community needs and responsiveness to social determinants of health	"I believe that the mission of academic public health is to actually train and empower the current and future practitioners that are going to address a lot of the public health challenges that we have today."
Intentional structures and practices that ensure accountability to marginalized populations	"Public health touts itself on being founded and grounded in social justice principles, but we don't center those things."
Workforce development with an explicit focus on underrepresented communities	"I believe that the mission of academic public health is to actually train and empower the current and future practitioners that are going to address a lot of the public health challenges that we have today."
Community inclusivity in school governance and decision making	"To actually create any actual change, all stakeholders must be at the table… to leave [community] *stakeholders* out I think is a huge, huge miss."

These narratives were coded and used to construct six discrete definitions and thirteen thematic domains, each reflecting slightly different emphases – some prioritizing institutional purpose, others focusing more on measurable impact or values alignment. These definitions and domains formed the basis of the survey collection and analysis in Phases 2 and 3.

Phase 2: Scoring Survey I Results (Expert Panel Follow-Up)

In the second round, a scoring questionnaire was distributed to the original six panelists, with five completed responses. Each of the six definitions was evaluated on agreeability using a 1–10 Likert scale to identify highest median scores and any potential outliers. While there was general consistency in favoring definitions that emphasized community accountability and equity-centered workforce preparation, the small sample limited the ability to draw robust conclusions about consensus.

Table 4
Results from Survey I Question I

Definition	Median	Mean	IQR
the pursuit of health equity through research, education, and community engagement, ensuring that all populations have access to the resources necessary for optimal health.	8.0	7.2	2
dedication to advancing public health knowledge while addressing systemic inequalities that affect health outcomes.	8.0	7.8	2
educating future public health leaders while promoting research and institutional policies that directly benefit communities of greatest need.	8.0	7.4	2
the commitment to the well-being of society through the equitable distribution of resources and public health workforce, and the application of research findings.	10.0	9.4	0
a school's focus on promoting health for all individuals, particularly those from disadvantaged backgrounds.	8.0	6.6	2
the fundamental creation of a healthier society through education, research, and community service.	9.0	8.0	4

For the second survey question, each of the 13 proposed thematic domains was evaluated on two dimensions – importance and relevance to the panelists' understanding of social mission – using a 1–10 Likert scale. Median scores ranged from 8.0 to 10.0 across the six proposed definitions, with the top-rated definition receiving the sole median score of 10 on panelist agreeability. Nine domains received a median score of 10 with six of the nine domains scoring an average of at least 9.0.

Table 5:
Results from Survey I Question II

Domain	**Median**	**Mean**
School Mission	10.0	9.4
Ethics and Social Justice in Curriculum	10.0	9.2
Performance Assessment, Accountability, and Transparency	9.0	8.6
Diversity of Students, Faculty, and Staff	10.0	9.8
Inclusive Language and Terminology	10.0	8.8
Bidirectional Community Engagement	10.0	9.8
Institutional Culture and Climate	10.0	9.4
Community-Centered Research	10.0	9.0
Local Investment and Procurement	10.0	8.8
Neighborhood Accessibility	8.0	8.2
Shared Governance	10.0	7.8
Foundational Health Equity Pedagogy	9.0	9.2
Interdisciplinary Learning	8.0	8.6

The questionnaire yielded qualitative comments and clarifications to be used in the final analysis and to contextualize the quantitative scoring. Qualitative feedback from panelists emphasized the importance of avoiding overly abstract language and ensuring that the definition reflected action-oriented commitments beyond rhetorical values.

Phase 3: Scoring Survey II Results (Expanded Survey Responses)

In light of limited participation in the follow-up round, the scoring questionnaire was disseminated to a broader group of 32 public health educators and administrators, of whom 13 completed the survey. These participants represented a diverse cross-section of academic public health institutions across the U.S., with professional roles spanning deans, program directors, associate deans for social mission or diversity, and senior faculty.

Table 6
Results from Survey II Question I

	Median	**Mean**	**IQR**
the pursuit of health equity through research, education, and community engagement, ensuring that all populations have access to the resources necessary for optimal health.	9.0	8.67	2

dedication to advancing public health knowledge while addressing systemic inequalities that affect health outcomes.	7.5	7.50	3
educating future public health leaders while promoting research and institutional policies that directly benefit communities of greatest need.	7.0	7.08	3
the commitment to the well-being of society through the equitable distribution of resources and public health workforce, and the application of research findings.	9.0	9.08	2
a school's focus on promoting health for all individuals, particularly those from disadvantaged backgrounds.	6.0	6.75	2.5
the fundamental creation of a healthier society through education, research, and community service.	8.5	7.75	3.5

Quantitative analysis of the broader group showed greater consistency and reinforced earlier trends. Two definitions emerged as favorites; one of the two definitions received the highest median scores for agreeability with an interquartile range of 1, indicating a high degree of convergence and corroborating the top option of the first survey cohort. Similar to Phase 2, the questionnaire yielded qualitative comments and clarifications that was used in the final analysis and to contextualize the quantitative scoring. Respondents highlighted specific strengths of the top definition, including its emphasis on institutional responsibility, actionability, and alignment with accreditation and accountability frameworks. Some respondents suggested minor revisions to ensure accessibility and avoid jargon, but there were no major areas of disagreement. Notably, definitions that lacked specificity about power, equity, or structural drivers of health disparities were consistently rated lower by this cohort.

Table 7
Results from Survey II Question II

Domain	Median	Mean
School Mission	9.5	8.92
Ethics and Social Justice in Curriculum	8.5	8.50
Performance Assessment, Accountability, and Transparency	9.0	8.83
Diversity of Students, Faculty, and Staff	9.0	8.00
Inclusive Language and Terminology	9.0	8.08
Bidirectional Community Engagement	9.0	8.50
Institutional Culture and Climate	9.0	8.50
Community-Centered Research	9.0	8.00
Local Investment and Procurement	8.5	7.58
Neighborhood Accessibility	8.5	7.83
Shared Governance	6.5	6.50
Foundational Health Equity Pedagogy	8.0	8.00
Interdisciplinary Learning	8.0	8.09

Seven domains were given a median score of at least 9.0, with four of those domains scoring an average of at least 8.5: school mission, performance assessment, bidirectional community engagement, and institutional culture and climate.

4.5 Proposed Definition and Domains of Social Mission

Based on the combined feedback from the expert panel and the broader group, two final outputs were generated to complete Aims I and II of the study: (1) a final working definition of the social mission of academic public health was proposed and (2) a final set of domains that were synthesized, described, and content mapped to the core functions of academic public health.

Definition of Social Mission

Table 8
The proposed definition of social mission of academic public health

The commitment to the well-being of society through the equitable distribution of resources and workforce, and the pursuit of health equity through research, education, and community engagement.

The definition above incorporated language that reflected equity, structural accountability, and the mission of academic public health institutions (teaching, research, and practice/service). The definition reflects the top two listed definition scores from the survey and a slight modification based on the qualitative feedback. This definition will serve as the foundation for identifying corresponding domains and measurable indicators, to be further developed in future research.

Domains of Social Mission

The final recommended domains were selected based off evenly weighted scores from both questionnaires. The top seven median scores were selected:

Table 9

Thematic domains of the social mission of academic public health

Domain	Survey I		Survey II	
	Median	**Mean**	**Median**	**Mean**
School Mission	**10.0**	**9.4**	**9.5**	**8.92**
Ethics and Social Justice in Curriculum	**10.0**	**9.2**	**8.5**	**8.50**
Performance Assessment, Accountability, and Transparency	**9.0**	**8.6**	**9.0**	**8.83**
Diversity of Students, Faculty, and Staff	**10.0**	**9.8**	**9.0**	**8.00**
Inclusive Language and Terminology	10.0	8.8	9.0	8.08
Bidirectional Community Engagement	**10.0**	**9.8**	**9.0**	**8.50**
Institutional Culture and Climate	**10.0**	**9.4**	**9.0**	**8.50**
Community-Centered Research	**10.0**	**9.0**	**9.0**	**8.00**
Local Investment and Procurement	10.0	8.8	8.5	7.58
Neighborhood Accessibility	8.0	8.2	8.5	7.83
Shared Governance	10.0	7.8	6.5	6.50
Foundational Health Equity Pedagogy	9.0	9.2	8.0	8.00
Interdisciplinary Learning	8.0	8.6	8.0	8.09

Though inclusive language and terminology recorded a median of 10.0 and 9.0 and local investment and procurement recorded a median of 10.0 and 8.5 in the two cohorts

respectively, the mean scores of these domains were lower than other top domain contenders. The wider gaps between median and mean indicated less agreeability and the domains were downgraded in favor of performance assessment, accountability and transparency which recorded a similarly favorable median and higher means across both cohorts. The seven selected thematic domains were analyzed using nVivo once more to inductively combine categories with similar themes into final domains and descriptions. The descriptions are reflective of the focus group results, survey responses, and open-ended survey additions. This final analysis generated six domains:

1. **Empowerment and Training of Practitioners**: A primary aspect of social mission is to train and empower current and future public health practitioners. This mission emphasizes the necessity of equipping trainees with the knowledge and skills required to address and resolve contemporary public health challenges. By fostering a generation of competent practitioners, academic public health aims to create a workforce capable of implementing effective interventions and policies that promote health equity.

2. **Institutional Commitment to the Greater Good**: Findings emphasized a school commitment to the greater good of society. This domain underscores the need for a stated and demonstrated mission statement, school policies, and leadership committed to achieving optimal health outcomes for all individuals, thereby contributing to a healthier and more equitable society. It reflects an understanding

that school policies should prioritize the well-being of the entire population through practices that are just and equitable.

3. **Foundation in Social Justice Principles**: Findings suggest that to advance social justice, institutions must center ethical obligations to equitably distribute health resources. It emphasizes the importance of health justice and equity, suggesting that public health activities must not only not exacerbate existing inequities but actively work to dismantle them.

4. **Diversity, Inclusivity, and Shareholder Engagement**: Findings for this domain recognized the value of a diverse student body, faculty, staff, leadership, and workforce. Beyond diversity, respondents stated the need for institutional cultures that support public health students and are inclusive of all communities and individuals. This domain included the idea of shared governance in school decision-making processes, where all invested parties, including students, community members, practitioners, and academic staff, are actively involved in shaping school policies and practices.

5. **Accountability, Transparency, and Measurable Performance**: Findings suggest that social mission should also encompass a framework for accountability in public health research and practice. This includes establishing measurable performance indicators that allow for the assessment of progress towards health equity and social justice goals, along with socially accountable research that

foremostly prioritizes the advancement of health equity. Respondents emphasized the need for transparency and mechanisms that hold academic institutions accountable for their commitments to advancing the social mission.

6. **Community-Centric Operations**: This domain reflects the importance and relevance of bidirectional community engagement and community-centered research. Findings describe the need for school responsiveness to the geographic community in which the academic institution operates. This domain elevates institutional operations that are driven by the needs and input of the local community, ensuring that academic public health programs are accessible and relevant to the populations they serve. It also highlights the importance of creating a sense of belonging for students and community members, fostering an environment where all voices are heard and valued.

The final selected social mission domains were attempted to map conceptually to the three functions of academic public health. However, each of the final proposed domains may have significant overlap across multiple functions of academic public health. For instance, "*community-centric operations"* does not cleanly belong in one function as it may be – and perhaps should be – integrated across education, practice, and research functions of a public health school. Further research should be conducted to explore the ways in which each domain can be operationalized across each function.

Social Mission Metrics Development

The final output of the study were assessment metrics containing indicators that align with the identified social mission domains. The purpose was to create a practical product that was collectively informed by a national community of academic public health experts. These metrics aim to advance the most critical equity and justice functions of public health schools, as described by ASPPH and CEPH, and defined by the leaders responsible for carrying out these processes and policies.

Aim III of this study was to identify how schools of public health can assess their social mission once domains have been established. Following the scoping review, convening of the technical expert panel, and two rounds of corroborating surveys, a series of indicators were generated based on the final findings. Open-ended prompts in both surveys invited respondents to provide potential indicators for the domains which they were scoring.

The metrics – which are illustrated in a non-exhaustive sample assessment below – can be applied directly by a school to measure their commitment to equity or adopted by professional associations and accrediting agencies to support member institutions in their own social mission transformations. Systemwide adoption of the metrics could also be supported if CEPH and ASPPH integrate the study findings into their accreditation standards and member support tools, respectively.

Figure 5

Section A: Introductory Information

A1. What is the name of your school of public health?
Open Text

A2. If applicable, specify the campus or program this response represents.
Open Text

A3. Which degrees does your school offer?
Multiple Select
☐ MPH
☐ DrPH
☐ PhD
☐ MS/MA in Public Health
☐ Undergraduate Public Health Degrees
☐ Certificate Programs
☐ Other (please specify)

A4. What type of institution is your school based in?
Single Select
○ Public University
○ Private Non-Profit
○ Private For-Profit
○ Other (please specify)

A5. Does your school have a dedicated unit or office focused on health equity or social mission?
Yes/No

A6. Approximately how many students are enrolled in your public health programs?
Numeric Entry

A7. What percentage of your students are enrolled in online or hybrid programs?
Numeric Entry (%)

Domain 1: Empowerment and Training of Practitioners

The following questions are related to your school's Mission-Driven Curriculum & Skills.

B1. Does your school have a mission statement that explicitly references preparing practitioners to advance health equity?
Yes/No

B11. Does your school track and report employment outcomes disaggregated by sector and population served?
Yes/No

B12. Describe any challenges you face in equipping graduates with practical public health skills.
Open Text

Domain 2: Institutional Commitment to the Greater Good

The following questions are related to your school's Mission, Vision, and Strategy.

C1. Is advancing health equity and the greater good explicitly stated in your mission, vision, or values?
Yes/No

C2. Are these priorities reflected in your strategic plan?
Yes/No

C3. Does senior leadership report on progress annually?
Yes/No

C4. Does your school regularly evaluate how well it fulfills this mission?
Yes/No

C5. Do you assess your policies for their impact on health equity?
Yes/No

C6. Are students and community partners formally engaged in strategic planning?
Yes/No

C7. Does your school dedicate funding to initiatives that improve health equity in your community?
Yes/No

C8. Has your school undertaken public health advocacy aligned with its mission?
Yes/No

C9. Is language in public communications consistently inclusive and mission-aligned?
Yes/No

C10. Does your school have a defined process to review how mission goals are operationalized in curriculum and practice?
Yes/No

C11. Describe any barriers to fully realizing your mission commitment.
Open Text

C12. Which indicators best reflect mission alignment? *(Select all that apply)*
☐ Mission statement inclusion
☐ Course review and alignment
☐ Strategic plan monitoring
☐ Public reporting
☐ Other (please specify)

Domain 3: Foundation in Social Justice Principles

The following questions are related to your school's Equity and Ethics in Public Health.

D1. Are courses in ethics, social justice, or human rights required for graduation?
Yes/No

D2. Does your school provide training on dismantling structural inequities?
Yes/No

D3. Do you track whether teaching content addresses distributive justice and health equity?
Yes/No

D4. Are learning objectives linked to promoting social justice?
Yes/No

D5. Does your school fund research on structural determinants of health?
Yes/No

D6. Are faculty promotions influenced by contributions to social justice?
Yes/No

D7. Are students required to participate in advocacy projects or community engagement?
Yes/No

D8. Are faculty trained in recognizing bias in curriculum and materials?
Yes/No

D9. How does your school measure progress in integrating social justice principles? *(Select all that apply)*
☐ Curriculum review
☐ Faculty evaluations

The indicators included have two main sources. The source of primary data was the qualitative feedback received from the two questionnaires. Respondents were given open-ended prompts to include potential metrics for identified domains, which were included in the assessment metrics where applicable. The source of secondary data is the previous social mission metrics assessments that had been developed for medical, dental, and nursing schools. Other sources such as the DICE inventory of the Association of American Medical Colleges were also reviewed for potential indicators relating to health equity measurement. The full list of compiled indicators can be found in Appendix K.

Feedback Report to Panel

A final report of findings was generated and shared with the panel to close the participatory process. This final feedback loop was specified in the IRB and included as a method of elevating findings for further research and practical use. Participatory practice encourages engaging shareholders in each step of research processes and the final report demonstrates this process through panelist engagement. Proposed domains and sample metrics were presented to the panel as a completed novel framework for social mission of academic public health.

Chapter 5: Discussion

Discussion

The contextual feedback from the two questionnaires was instructive. The sentiment from experts in the field described inefficiencies of health equity in academic public health. While expanding access to resources is essential for advancing health equity, it is equally critical to ensure that all communities receive high-quality services and resources. For example, research indicates that racial and ethnic groups, even when afforded comparable resources, often experience lower-quality care due to conscious and unconscious biases among providers.[9,63,65] This is only one disparity of many underscoring the need to move beyond simply increasing access and instead prioritize interventions that address systemic inequities at the root of health disparities. These interventions can be in the form of research, educational, and practice interventions, and public health schools committed to their social mission can address each of these.

Recognizing that inequities – rather than inequalities – drive health outcome gaps is viewed by field experts as vital, and using precise, uniformed language can help maintain focus on structural causes rather than individual or group shortcomings. In addition, the terminology used to describe communities plays a powerful role in shaping perceptions and influencing attitudes. Labels such as “communities of need” or “disadvantaged backgrounds” can inadvertently reinforce stigmatizing narratives, while alternatives like “underserved communities,” “disproportionately impacted communities,” or

"communities with limited access to resources" more accurately highlight systemic barriers without placing blame.

While community services are important, incorporating community-engaged practice into definitions and frameworks is identified by national leaders as a way to further strengthen efforts to build trust, share power, and co-create solutions that advance equity. The social mission of academic public health is to improve health by focusing on what communities need most, especially those historically marginalized or left out of institutional priorities. This involves teaching, researching, and practicing in ways that expand real opportunities for healthier lives. Importantly, using the term *community-engaged research* emphasizes genuine collaboration with communities as equal partners in identifying problems and creating solutions, rather than simply labeling community as passive recipients of public health practices and policies.

The development of social mission domains that map to academic public health core functions provides the opportunity for standardization across all CEPH accredited schools. Each of the domains present texture that can be guide school practices when applied to their unique contexts, while still advancing towards a common vision of public health education and workforce as levers towards health equity and social justice. To that end, there is much to consider when assessing the adaptability of social mission across various contexts. For instance, though CEPH-accredited schools of public health share common standards, the mission, values, and environment of schools can vary. It is worth considering if social mission standards for schools should be modified based on factors

such as private versus public schools, schools with a religious mission and mandate, or schools that receive certain amounts of federal or state funding.

Regardless of context, the domains may benefit from a more granular division of action areas within each domain. For instance, institutional commitment to the greater good is a useful domain that is broad and comprehensive. To operationalize and properly measure the domain, institutional commitment to the greater good may be further categorized by distinct action areas such as school mission, leadership structure, and strategic plans. These more micro-level areas within each domain may offer new insights, promote more objectivity during school assessments, and even allow for leaders to better distribute the assessment by assigning action areas of interest to liaisons responsible for those specific areas.

Contributions to the Field

There are anticipated contributions to public health education, workforce, and research. The novel nature of this study as it relates to the academic public health field should create opportunity for further research into the gaps and opportunities presented by the domains. Schools of public health will be introduced to new ways of identifying, categorizing, operationalizing, and measuring how they advance health equity. Participation in the assessment itself serves as an advocacy mechanism, as it encourages schools to review their own practices and discuss opportunities for change.

Another anticipated contribution of this study is how the findings will contribute to the existing body of knowledge around health equity and the role public health has conventionally played and could potentially play in its advancement.

Finally, exploration of social mission as a nascent concept can serve a particularly contemporary purpose. An onslaught of legislative and judicial challenges to diversity, equity, and inclusion (commonly referred to as "DEI") policies in higher education create new barriers to progress in eliminating health inequities. Presenting social mission as a concept that can deepen the field's understanding of pathways to achieving health equity may help protect the essence of equity work public health education, protect those who are leading such work at their academic institutions, and create more common language to equip equity advocates in public health. This study looks to help socialize and crystallize the concept of social mission.

Limitations of Study

This study has notable limitations to record. The selection of the Delphi panelists may not have been fully representative of the expertise needed to crowdsource and identify appropriate domains related to equity and justice. Additionally, the Delphi approach and the responses it yielded are only as informed as the panelists who participated in the study and may neglect insights that may have been generated if other communities of thought were sufficiently represented. The direction of the panel would have been steered differently if the composition were changed. Explicit inclusion of only presidents, chancellors, and deans may have yielded perspectives that would be more in line with

how whole institutions could be stewarded towards change yet may have resulted in less on-the-ground knowledge that associate administrators possess. Additionally, faculty of public health schools may have also been able to give a thorough vantage point, given their responsibilities often reflect each of the three core functions of public health.

The relatively small panel size reduced generalizable input and limited the potential for definitions and domains that may not have been presented by the initial panel of experts nor the extended survey sample. The study was at risk of potential volunteer bias given that panelists are often highly visible experts in their field who have self-selected to participate based on interest of the study content or relationship to the investigator.

Furthermore, the scope of this study was to focus on exploring processes related to social mission. Future studies should explore the outcomes related to these social mission processes and practices within a school of public health. This study reasonably aimed to contribute to the foundational body of knowledge needed to advance much needed outcome-based research on social mission in academic public health.

Additional context would have been valuably gained through case exploration of sample schools. Though not within the scope of this study, future research should consider the depth of qualitative feedback that can be provided via deep-dive case studies into select public health schools and their practices.

Perhaps the most noteworthy limitations were due to changes in the federal administration during the study which led to major shifts in policies and personnel related to diversity, equity, and inclusion. As a result, the study acknowledges possible reporting bias and social desirability bias related to panelists who represent offices and departments that had been under federal and local scrutiny, potentially influencing responses. Nationwide attention on higher education was determined to create fear of retribution from the federal administration. Concerns of supporters of diversity, equity, and inclusion being targeted for contributing to this study may have hampered recruitment, particularly at schools such as Harvard University, Columbia University, and University of California at Berkeley, where there were public threats of investigation made during the recruitment period.

Challenges

As noted in the study limitations, one of the most prescient challenges that arose was a contemporary one. The response rate was limited by respondents who declined to participate and indicated specific concern about spotlighting their own position or their institution given the contemporaneous threats from the federal administration towards universities who maintained their DEI initiatives and commitments. Recruitment was a challenge for this reason, and was further compounded later in the study timeline as one participant who had agreed to participate on the technical expert panel insisted they exclude themselves. This prospective panelist represented an institution that was a target

of high-profile threats from the federal administration only days before the first focus group was convened.

The study withheld from providing detailed descriptions of potential domains in an attempt to avoid bias. However, this presented an additional challenge of not creating clear, concrete definitions of domains to be discussed by respondents. Rather, the survey and focus group left the domains open to interpretation and resulted in more abstract definitions to be scored.

Conclusion

This study aimed to answer three questions:

- How can social mission be defined in the context of schools of public health and their contributions to advancing health equity and social justice?
- What are the domains of relevance that would provide indicators for assessing a public health school's contribution to advancing health equity and social justice?
- How can schools of public health implement and assess activities (practices, policies, and partnerships) to advance health equity and social justice across the identified domains of social mission?

Social mission in the context of schools of public health can be defined as the commitment to the well-being of society through the equitable distribution of resources and workforce, and the pursuit of health equity through research, education, and community engagement. This definition may not yet be a perfect one, but it is the

collective reflection of multiple insights from across public health practice, education, and research.

The domains of social mission will likely continue to evolve and be subject to debate. As currently constructed, the utility of the assessment is primarily to evoke discussion within schools and to equip advocates with tangible domains and markers. These domains may look different at different institutions based on unique characteristics that may make some domains more relevant than others. Such characteristics may include schools with programs that are affiliated with health systems or other health professional (medical, public policy, etc.) schools. Therefore what may be needed to help crystallize social mission metrics as a standard tool across schools is a modified assessment validated by psychometricians that can develop composite scores. However, it should be noted that creating scoring for all schools can have the consequence of competition; this can be harnessed positively to create widespread transformation of academic public health if implemented with intentionality.

The assessment metrics have multiple purposes for the schools themselves. The assessment can allow for establishing a baseline against which schools can manage and monitor their progress over time. The idea for the metrics are not only to use as a quantitative measure; it may also be useful for recording inventory and doing periodic appraisals of program-specific performance, having most utility if integrated into internal institutional reviews. Finally, the assessment metrics by nature present an advocacy tool. By presenting questions related to health equity to other administrators and faculty within

the school, leaders are signaling their commitment to measuring what should matter most to academic public health. Students, community, and staff can also use these metrics to ensure accountability of school leadership in responsibly allocating school resources towards their stated mission of serving community and eliminating disparities. Through these multilevel levers, the metrics can support individual advocacy and institutional transformation.

The novel conceptual framework suggested that the research, training, and practice functions of public health schools could ultimately result in more equitable health outcomes. The framework indicated that if categories of socially accountable policies and processes to advance equity could be identified, standardized, operationalized, and measured, then implementation of such processes would lead to a stronger, well-trained, well-distributed health workforce. It suggested that schools themselves could improve health outcomes of communities by having practices in place that were founded in justice and distributing resources to those in greatest need as a way of narrowing urgent health disparities. The framework was largely supported by the process-based findings of this study, with further exploration needed on how these processes lead to the intended outcomes of improved community health status for all.

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