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Addressing Equitable Access in a Safety-Net Hospital System- An Implementation Framework

A DISSERTATION

Submitted to the Faculty of The University of

Nebraska Medical Center

College of Public Health in Partial Fulfillment of

the Requirements for the Degree of Doctor of

Public Health

by

Hillary Alycon

University of Nebraska Medical Center

April 2024

Dissertation Chair: Dr. Edward Peters

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Abstract

Acute care organizations face a significant challenge in effectively implementing health equity programs, particularly in rural areas where guidance is often lacking. Despite abundant literature focusing on health outcomes, there remains a noticeable dearth of published data on implementing health equity initiatives. In response to this gap, I present a comprehensive analysis that utilizes readily available, open-sourced data to address this critical issue.

A thorough assessment of the demographic characteristics of acute care facilities within the catchment regions was conducted based on data from reputable sources such as the US Census Bureau, the American Community Survey, and the County Health Rankings. While specific to a New York health system, this research offers a replicable framework that can be adapted with minimal resources to suit various institutional settings.

This approach emphasizes the importance of utilizing performance improvement models and techniques to initiate and sustainably evaluate health equity and access initiatives. By leveraging ubiquitous data sources and adopting a population-targeted approach, institutions can take proactive steps toward reducing health disparities and promoting equitable healthcare delivery, particularly in underserved rural communities.

This research fills a critical gap in the literature and provides actionable insights for acute care organizations seeking to enhance their commitment to health equity. Through strategic implementation and ongoing evaluation, institutions can be pivotal in

advancing equitable healthcare practices and improving outcomes for all individuals within their catchment areas.

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CHAPTER 1

INTRODUCTION AND PROBLEM STATEMENT

Inequitable access to healthcare has been dubbed a moral injustice. While a business, humanitarian, and public health case can be made in support of equity programs, ubiquitous efforts remain absent across much of America's healthcare institutions and systems. Why? Defining what equity and equitable access mean is the first challenge; the three concepts established by Margaret Whitehead in 1991 are the definitions utilized in this dissertation. They are as follows.

1. Equal access to available care for equal needs,
2. equal utilization for equal needs, and
3. equal quality of care for all (WHITEHEAD, 1991)

Additionally, addressing health and healthcare equity is a complex and strategy-altering endeavor requiring total commitment from executive leadership to entry-level employees. Systematic reviews surrounding equity implementation efforts remain minimal. Equity program development in institutions in rural areas and smaller systems lacks clear guidelines, and currently available frameworks do not meet the needs of the rural and small health systems. As the United States becomes increasingly diverse, ensuring equity is paramount in providing high-quality health for America's future.

The Albany Med Health System (AMHS) was established within the past three years, the only regionally governed, not-for-profit health system serving northeastern New York and western New England. AMHS is composed of Albany Medical Center

(AMC), Columbia Memorial Health (CMH), Glens Falls Hospital (GFH), and The Saratoga Hospital (TSH). Each of the hospitals has a century-long tradition of caring for their communities. Together, the system has 1,520 hospital beds, more than 800 physicians, and 125 outpatient locations serving the three million people in the region. A longstanding affiliation with the Albany Visiting Nurses further supports the System. According to the AMHS website, 16,000 dedicated employees are committed to improving health by providing the highest quality standards in health care delivery, education, and research initiatives (*Albany Med Health System Our Story*, 2021). As AMHS is a new venture, the system is working to standardize policies, practices, and procedures. Additionally, they are moving to a unified Electronic Medical Record (EMR) in 2024, further standardizing the data collection points of all campuses and ambulatory centers. With increased focus on collaboration and standardization of evidence-based practices, it is the optimal time for equity program development and implementation.

According to the CDC, health equity is the state in which everyone has a fair and just opportunity to attain their highest level of health (*What Is Health Equity?*, 2023). Minority populations ranging from racial/ethnic, sex/gender, LGBTQ+, socioeconomic, and persons with physical or mental disabilities have suffered injustices at the helm of inequitable access to the opportunity of achieving the highest level of health (Chanoff & Sullivan, 2022; *Racism and Health*, 2021; *Supporting Women with Disabilities to Achieve Optimal Health | Health Equity Features | CDC*, 2023). With each system or institution that seeks to address these moral injustices, the closer the public can come to the definition of health equity. Climbing the socioeconomic ladder and defeating inherited

disadvantage requires, at its core, good health (P. Braveman, 2006; P. A. Braveman et al., 2011). Ultimately, referring to the 1978 United Nations declaration, health equity is a fundamental human right.

The United States has a particularly dark medical history with minority groups. From forced sterilization of roughly 1 in 4 Indigenous women in the 1960s and 1970s (Lawrence, 2000) to the well-documented Tuskegee Experiments where 399 black men went untreated were watched with syphilis for more than four decades to see the impact of disease long term (Brandt, 1978). While these are just two horrific examples, reports of institutional, structural racism and the withholding of specific medical interventions in transgender individuals continue long into the twenty-first century. Each equity program is an opportunity to earn back people's lost trust in healthcare today.

The foundations of equity programs are education, identification, and cultural sensitivity. Ignorance of one's behaviors is commonplace; we do not know what we do not know. Coupled with inherent and implicit bias, healthcare workers are just as likely as anyone else to have insensitive tendencies or unknowingly place obstacles on our patients and each other. This project's program design and implementation will increase awareness of and educate about the inequities in healthcare and our communities.

Numerous bodies of evidence have demonstrated the disparities between groups of individuals and their outcomes in diseases such as hypertension, diabetes, heart disease, maternal health, birth rates, and even life expectancies. (P. Braveman, 2014; *What Is Health Equity?*, 2023). This project targets eliminating disparities through

advancing health equity and access to persons of all ilk. Designed to identify those populations most impacted by the Albany Med Health System, the outcomes will be seen post-implementation.

The purpose of this dissertation is to attempt to provide resources to address the moral injustice of inequitable access to healthcare by examining the challenges and complexities surrounding the definition and implementation of health equity, with a focus on the principles outlined by Margaret Whitehead in 1991. Furthermore, this study aims to develop guidelines tailored to the unique needs of rural and small health systems, using the Albany Med Health System as a case study, to ensure that all individuals receive equal access to high-quality healthcare, especially in regions experiencing demographic shifts and systemic changes.

Overview of Specific Aims:

The dissertation has three specific aims: Evaluate existing health equity programs and literature. Develop a health equity program. Create an implementation toolkit for AMHS to further the systems' value of "A diverse, equitable, inclusive, and welcoming System." ((*Albany Med Health System Our Story*, 2021). Each is discussed further below.

1. The first objective is to conduct a systematic scoping literature review to fully assess and evaluate current equity programs identified in other healthcare settings, systems, or institutions. Many of these programs have yet to be submitted for peer-review publication. However, organizations have made their programs, initiatives, and successes known through media presentations,

interviews, and formal written works such as impact reports. These efforts appear limited to large metropolitan areas and significant acute care systems. Additional research is required to evaluate the extent of these programs to a broader range of communities. The second objective is to synthesize the currently available literature via a systematic review utilizing the PRISMA-E extension promoted through the Cochrane Collaborative.

2. To achieve the second aim, secondary data analysis included United States Census Data, which draws from the American Community Survey results, and the County Health Rankings established current community attributes and demographics specific to the service catchment area of AMHS.
3. Finally, the third aim involved the assessment of each institution's Community Health Needs Assessment (CHNA) and Community Health Improvement Plan (CHIP), defining the goal, assessing and preparing for risk points using established performance improvement tools such as a Failure Modes Effects Analysis, establishing a timeline with milestones, establishing responsibilities and roles, and identifying resources for an implementation toolkit.

This research provides practical tools for policymakers seeking to implement equity programs in their regions, enhancing Americans' access to quality healthcare. In the short term, it has the potential to impact millions of lives in Upstate New York, influencing how they receive and perceive healthcare. In the long term, this dissertation will offer a user-friendly framework for individuals and institutions with limited resources or statistical expertise, enabling them to successfully implement equity

programs within their networks. This accessible framework aims to empower users to take charge of promoting health equity within their institutions, fostering flexibility and adaptability to various environments. Ultimately, the goal is to democratize the implementation of health equity programs, ensuring that all individuals have access to equitable healthcare.

Doctor of Public Health Competencies

The following core competencies were utilized:

1. Explain the use and limitations of surveillance systems and national surveys in assessing, monitoring, and evaluating policies and programs and addressing a population's health. This competency is most prominent in the results and discussion chapters, while the methodology chapter discusses the analysis.
2. Propose strategies for health improvement and eliminating health inequities by organizing stakeholders, including researchers, practitioners, community leaders, and other partners. Competency two is demonstrated in the results, implementation, and discussion chapters.
3. Integrate knowledge, approaches, methods, values, and potential contributions from multiple professions and systems in addressing public health problems. Competency three can be seen in the results, implementation, and discussion chapters.
4. Propose strategies to promote inclusion and equity within public health programs, policies, and systems. Competency four is addressed in the implementation and discussion chapters.

In addition to the core competencies, the following epidemiological competencies will be utilized:

1. Select and use appropriate epidemiologic data and analytic methods and interpret the results to inform public health research and practice. Core competency number one is represented in the discussion chapter.
2. Incorporate ethical principles and cultural sensitivity into the design, implementation, analysis, and dissemination of public health research and practice. Core competency number two is utilized in the implementation chapter.
3. Communicate epidemiologic concepts and findings orally and in writing by professional standards to professional audiences, policymakers, and the public. Core competency number three is represented throughout this document, within the oral presentations provided to the host organization and the academic institute, and throughout the study.

CHAPTER 2:

LITERATURE REVIEW AND REVALENCE TO IMPROVEING THE HEALTH OF THE PUBLIC

Healthcare and Coverage in America: A Brief Review

In the mid-1800s, hospitals began entering American history. These formal institutions were replacing almshouses, which had for much of the previous century been the only reprieve for vulnerable persons who lacked financial means, had been abandoned, or were otherwise destitute (*Almshouse | Definition & History in the United States | Britannica*, 2023). Mainly in urban areas, hospitals were designed to care for the sick and often very poor who could not afford house calls by physicians. Even though America's most disadvantaged populations were the center of care in these institutions, they were only white-inclusive. America's Black population was surviving with little to no proper medical care, and when it was available, it was not equitable in distance, comprehensiveness, magnitude, or scope (Chanoff & Sullivan, 2022).

Insurance coverage established the haves and have-nots, exacerbating the racial and socioeconomic divide. Healthcare coverage in the form of insurance became the topic of discussion in the first decade of the 20th century, with then-President Teddy Roosevelt supporting universal coverage. During this same ten-year period, higher expectations of student outcomes related to medical education in each institution are outlined in the Flexner report, further placing Black Americans at a disadvantage by forcing the closure of all but two of the seven medical colleges with claims of inadequate educational provisions (Chanoff & Sullivan, 2022; *Health Care Timeline* –

(Health Over Profit, n.d.). These closures resulted in fewer Black physicians in circulation and fewer medical professionals for the community.

In 1929, Blue Cross opened its first plan in partnership with Baylor University Hospital in Texas. This was designed to make healthcare more affordable for individuals. In less than a dozen years, the company had six million subscribers. Five years later, in 1945, President Harry S. Truman proposed universal insurance coverage for all US citizens with five goals:

1. Address the lack of trained healthcare professionals in all communities.
2. Grow public health services.
3. Increase funding for medical research and education.
4. Lower the cost of individual medical care.
5. Bring attention to the loss of income when severe illness takes hold. (*The Challenge of National Healthcare | Harry S. Truman*, n.d.).

Addressing Congress on November 19th, 1945, President Truman identified the business case for health equity by stating, "…We should resolve now that the health of this Nation is a national concern; that financial barriers in the way of attaining health shall be removed; that the health of all its citizens deserves the help of all the Nation….By preventing illness, by assuring access to needed community and personal health services, by promoting medical research, and by protecting our people against the loss caused by sickness, we shall strengthen our national health, our national defense, and our economic productivity. We shall increase the professional and economic opportunities of our physicians, dentists, and nurses. We shall increase the

effectiveness of our hospitals and public health agencies. We shall bring new security to our people." (Helmig, 2017). With fierce opposition from the American Medical Association, Truman was unsuccessful, although he was said to have paved the way for healthcare reform. Following his footsteps, Presidents Kennedy, Johnson, Clinton, and Obama sought reform during their presidencies. Other reform advances were seen in Medicare and, subsequently, Medicaid, but none so radically advanced as the Affordable Care Act.

The Affordable Care Act (ACA)– enacted in March 2010, known formally as the Patient Protection & Affordable Care Act law, outlined three goals:

1. Make health insurance more affordable and income-driven.
2. Expand Medicaid programs in States (though not all chose to do so).
3. Lower general healthcare costs through alternative delivery models (Affairs (ASPA), 2013).

An impact analysis conducted by Courtemanche et al. 2019 examined the three-year implementation and projection of the ACA. They found that the US closed race, age, income, and marital status gaps by expanding insurance coverage. The study observed that the populations that gained the most were minorities, women, low-income individuals, rural people, and younger-generation individuals (Courtemanche et al., 2019).

Equity in Medicine: A Historical Context

In 1946, the concept of health equity was introduced in the World Health Organization's (WHO) Constitution at the International Health Conference. In its original

version, the second core principle was “The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.” (World Health Organization, 1946). While not expressly labeled equity, this sentence launched the concept of moral justice regarding health access and outcomes. The United Nations further reinforced this in 1948 with the Universal Declaration of Human Rights, Article 25, section 1, stating, “Everyone has the right to a standard of living adequate for the health and well-being of himself and his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.” (Nations, 1948).

Margaret Whitehead, a consultant hired by the WHO, pioneered standardizing a definition of equity in the early 1990s in her sentinel work entitled “The Concepts and Principles of Equity and Health” (WHITEHEAD, 1991). It was after this that the equity movement took shape, especially in America with the Healthy People 2010 overarching goal “Reduce Health Disparities” released in January 2000 (*Healthy People - Healthy People 2010*, 2021), and the Public Health Law 106-525 (Sen. Kennedy, 2000). Public Health Law 106-525, also known as the "Minority Health and Health Disparities Research and Education Act of 2000," aimed to address disparities in health among minority populations in the United States. The Act established the National Center on Minority Health and Health Disparities (NCMHD), which later became the National Institute on Minority Health and Health Disparities (NIMHD) within the National

Institutes of Health (NIH). This legislation facilitated increased funding and resources for research and education initiatives focused on understanding and addressing health disparities experienced by minority populations, including racial and ethnic minorities, socioeconomically disadvantaged groups, and underserved communities. The Act supported efforts to conduct research on the root causes of health disparities, develop interventions to reduce disparities, and promote health equity for all individuals, regardless of race, ethnicity, or socioeconomic status. Overall, the Healthy People 2010 goal and the Public Health Law 106-525 played a significant role in advancing efforts to achieve health equity and reduce disparities in healthcare access, treatment, and outcomes across the United States.

In 2005, the WHO established the Commission on Social Determinants of Health (CSDOH), solidifying the research foundation for the next twenty years. This commission focused on understanding the intricate interplay between societal factors and health outcomes, shaping global discourse and policy directions. Social Determinants of Health (SDH) encompass a broad range of non-medical influences, including socioeconomic status, education, employment, housing, and environmental conditions. These factors, deeply rooted in the systems and structures of society, exert profound effects on individuals' health throughout their lives, from birth and childhood development to adult well-being and longevity. Through the CSDOH's work, the global health community has gained insights into the multifaceted nature of health disparities and the imperative of addressing underlying social inequalities to achieve meaningful improvements in population health outcomes.

In 2003, The Institute of Medicine (IOM) released the landmark report Unequal Treatment: Confronting Racial/Ethnic Disparities in Health Care. The authors took an unapologetic look at prior and current practices leading to adverse outcomes in minority populations. Examining factors from the healthcare environment, patient and system level factors to clinical encounters and interventions, in just under 800 pages, they provide data, research, history, and recommendations and identify where there were still significant gaps in research, including the hospital and hospital systems. Research needs were identified in bias, data collection, the roles of non-physician providers, minority studies in disparities, assessing effectiveness, and mechanisms to improve monitoring disparities. Two decades later, we still need systems prioritizing equity as a central focus (Smedley et al., 2003).

Federal Strategies Take Aim:

The most prolific healthcare payment model has been the Fee-For-Service model, where providers are reimbursed for the number of services they provide. The more patients are seen, the more providers are paid based on volumes. The Centers for Medicare and Medicaid Services (CMS) took steps to improve the quality of care through the value-based care (VBC) transition after the ACA's enactment. VBC is a payment model that provides reimbursement to providers based on the health outcomes of the patients served. When patients have poor outcomes, the providers and institutions are penalized. Conversely, there is a monetary incentive for good patient outcomes. Moving from a fee-for-service model allowed CMS to emphasize patient outcomes in effective and timely care over volumes. After a decade of VBC, CMS is

introducing requirements surrounding health equity measures, social determinants of health, and maternal outcomes, and the results are tied directly to hospital payments. The health equity SDOH measures CMS rollout, capturing patient-level data regarding transportation, housing, food security, utility difficulty, and interpersonal safety (Affairs (ASPA), 2022).

The 2023 CMS Calendar year equity measures include ensuring hospitals capture data and create action plans related to strategic planning, data collection, data analysis, quality improvement, and leadership engagement (Affairs (ASPA), 2022). The financial impact of the equity measures will not be seen in the hospital's bottom line until the payment year 2025, as payment determination is on a two-year cycle behind results. In the 2024 calendar year, the SDOH measures required hospitals to collect information on patients' housing and food insecurities, transportation and utility needs, and interpersonal safety (Affairs (ASPA), 2022; *FY 2023 Hospital Inpatient Prospective Payment System (IPPS) and Long Term Care Hospitals (LTCH PPS) Proposed Rule - CMS-1771-P | CMS*, n.d.). The broad sweeping requirements of hospitals to enact data collection or lose up to 4.3% of their overall reimbursement Medicare dollars on these measures (*CMS Medicare Payment Systems - January 2023*, 2023) will inevitably propel some efforts of institutions with a high federal payor mix concerned with the financial strain. However, there remains a gap in understanding how to start the endeavor.

Past and Present Healthcare System Strategies

Several major healthcare systems have implemented strategies based on the six domains of healthcare quality set forth by the Institute of Medicine sentinel published

work “Crossing the Quality Chasm; A New Health System for the 21st Century” (Institute of Medicine (US) Committee on Quality of Health Care in America, 2001). In it, the six domains are identified as Safe, Effective, Patient-Centered, Timely, Efficient, and the sixth is Equitable. The IOM identifies equitable as “Providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status.” (Institute of Medicine (US) Committee on Quality of Health Care in America, 2001).

The following three institutions implementing successful operationalization of health equity programs:

1. One of the early adopters, the Henry Ford Health System (HFHS) in Detroit, MI, has been working to improve health equity and reduce disparate outcomes since 2009. They have focused heavily on Social Determinants of Health and, through their Women-Inspired Network (WIN) of community health workers partnership launched in 2011, had significant reductions in infant mortality, low birth weight, and pre-term births compared to Detroit data from outside the system. Additionally, HFHS launched the “We Ask Because We Care” Campaign to improve the Race, Ethnicity, and Language (REaL) data collection, resulting in a 90% collection rate in 2016 throughout the system (*Health Equity Snapshot*, 2020).
2. Three years after launching a committee to address the findings of “Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare,” Massachusetts General Hospital founded its Disparities Solution Center (DSC) and

eventually published a 10-point plan-outlining ten initiatives they would take to reduce disparities and strive toward equity (*Mass General's Plan to Address Structural Equity*, 2020). The DSC now offers training for healthcare leaders interested in implementing equitable programs in their institutions and has released its tenth Annual Report on Equity and Healthcare Quality in 2021.

3. In 2016, using the Community Health Needs Assessment (CHNA) as a baseline, Rush University Medical Center (RUMC) began working toward reducing disparities in life expectancies through community partnerships, grassroots campaigns, and strategic planning. Through the initiation of five strategic pillars
    a. Naming racism
    b. Anchor Missions
    c. Our employees are our "First Community,"
    d. Address healthcare inequities,
    e. Address social and structural determinants of health), RUMC took an introspective look at their employees, how they were impacting the community surrounding them, and how they could change key metrics like HIV/AIDS prevention programs, breast cancer mortality, and pre-term birth rates for Black and Latinx patients. Expanding further during the pandemic, RUMC provided blood pressure (BP) cuffs, education on BP monitoring for vulnerable community members, and hundreds of thousands of dollars for social needs such as food pantries (Ansell et al., 2021).

All of these institutions have several components in common: they are large systems, they are in substantial metropolitan regions, and they are all tied to academic medical colleges. These attributes provide a launching point for successful programs. Most United States acute care centers are located in urban settings and have different human, infrastructure, educational, or financial resources compared to their suburban and rural counterparts. There are 6,129 hospitals in the US; of those, 5,157 are community hospitals, and 3,514 are part of a system (*Fast Facts on U.S. Hospitals, 2022 | AHA*, n.d.). This leaves almost 32% of community hospitals and 24% of the total hospital beds in the United States at a disadvantage without the resources, economic stability, and benefits of a system strategy.

Bridging Knowledge Gaps: Addressing Disparities in Healthcare Equity Programs

The most significant gap identified is contextual. The contextual gap refers to the specific environments in which equity programs operate. These programs are predominantly found in large metropolitan areas, where healthcare institutions are interconnected within extensive networks. Contrasting sharply with rural settings, the dynamics and challenges in these urban environments are vastly different. For instance, initiatives aimed at reducing disparities often evolve, with programs such as those implemented by RUMC initially focusing on life expectancy but later expanding to address various issues like maternal mortality, breastfeeding, high blood pressure, and community engagement based on emerging needs, available opportunities, and financial support.

A second prominent gap is a lack of literature and targeted systematic equity reviews to inform research priorities and drive the healthcare sector toward more targeted initiatives. These resources are crucial for informing research agendas and guiding the healthcare sector toward more precise and effective initiatives. There is a dearth of in-depth analyses that systematically evaluate equity programs, identify their strengths and weaknesses, and provide evidence-based recommendations for improvement. Without such literature, healthcare providers, policymakers, and researchers lack the necessary guidance to strategically allocate resources and implement interventions that address the root causes of health disparities. Consequently, developing targeted equity reviews is essential to drive evidence-based decision-making and foster innovation in healthcare delivery.

Finally, the third gap is the need for an implementation guide that institutions can use and modify to meet the needs of their populations. The current frameworks from CMS, AHA, and the American Public Health Association (APHA) identify arenas to explore without action plans, pathways, or goals. Overarchingly, there remains a lack of understanding of intersectionality (Bowleg, 2012). While researchers tend to evaluate and study the *or's* (male or female; Black or White; Cis or trans), we leave behind the *and's*, those individuals who might be a black transgender female, and how those layers of 'minority' groups have a triple or quadruple effect on barrier access and outcomes.

Contributions to the Organization

As a partner in this project, Albany Med Health System (AMHS) can expect three direct impacts: internal, external, and financial. Internal impacts refer to the effects

within Albany Med Health System (AMHS) itself, such as changes in organizational culture, employee morale, and workflow efficiency resulting from participating in the project. External impacts involve the influence of the project on stakeholders outside the organization, including patients, community members, and collaborating institutions. Financial impacts encompass the financial outcomes of the project for AMHS, such as potential cost savings, revenue generation, or investment returns resulting from improved healthcare delivery, increased patient satisfaction, or expanded services.

Unintended and unexpected positive internal impacts were disclosed in each institution discussed earlier (Rush University, Henry Ford Health System, and Massachusetts General Hospital). They remarked on increased employee engagement after implementing equity programs (Ansell et al., 2021; *Health Equity Snapshot*, 2020; *Mass General's Plan to Address Structural Equity*, 2020). During implementation, the Edwin Locke Process Motivation Theory will aid in promoting buy-in by setting challenging but realistic goals for all levels of engagement, enthusiasm, and drive (*The Motivation Sequence, the Motivation Hub, and the Motivation Core - [PDF Document]*, n.d.). This goal-setting type of leadership is the primary driver of employee engagement. These programs enabled a natural product and elevation of social capital for employees. Externally, the organization can anticipate increased patient satisfaction scores (Bathija & Reynolds, 2019), lending to the financial impact, community engagement, and marketing opportunities.

From a financial perspective, there is significant potential for return on investment. By mitigating disparities in access to healthcare, patients are likely to achieve better health outcomes. This improvement directly influences pay-for-performance metrics that federal and private funding are linked to, as highlighted in reports such as the CMS Medicare Payment Systems (January 2023) and discussions on the complexities of value-based care contracts (*How Value-Based Care Is Making Payor Contracts Even More Complex*, 2022). Enhanced outcomes positively affect critical evaluation criteria such as CMS Star ratings, Leapfrog assessments, and other safety measures monitored by watchdog organizations, alongside patient satisfaction scores.

Improving the Health of the Public

This research project extends the principles of continuous improvement. It advances the public health field by focusing on health equity, widely recognized as a cornerstone of modern public health initiatives (APHA Health Equity, 2022). The historical mistreatment of racial and ethnic minorities in America has eroded trust in healthcare systems, underscoring the importance of equity programs in rebuilding these relationships. By raising awareness about the challenges faced by socially disadvantaged groups, this work enhances public understanding and empowers individuals to identify areas for improvement. Moreover, following the lead of institutions like RUMC, MGH, and HFHS in addressing preventable health disparities contributes to the broader goal of eliminating inequities in healthcare access and outcomes (Ansell et al., 2021; Health Equity Snapshot, 2020; Mass General's Plan to Address Structural Equity, 2020).

Introducing a standardized approach to health equity, this project implements formal data collection, rigorous analysis, and evidence-based change management processes. Despite variations in focus among the campuses – with AMC concentrating on inpatient programs, GFH on outpatient initiatives, and TSH on community access to healthy food – none have a comprehensive equity program outline. By systematically collecting data, conducting thorough analysis, and leveraging evidence-based change management strategies, this project aims to establish a unified framework for addressing health equity across all campuses within the system, ensuring consistency, efficiency, and effectiveness in tackling disparities and promoting equitable access to healthcare services and resources.

This research endeavors to uphold the principles of public health through practical research and implementation efforts with real-world applications. Although confined to one region in Upstate New York, its implications have the potential to resonate across time and space. By exploring, implementing, and taking affirmative action to address the fundamental human right of health equity, this work aims to create a ripple effect that transcends boundaries and contributes to a more equitable future for all.

CHAPTER 3:

METHOLOGY AND PROJECT DESIGN

Study Design

Specific Aim 1: Evaluation of existing health equity programs and literature

To achieve the first aim, a scoping literature review was conducted with the PRISMA-E extension promoted through the Cochrane Collaborative and includes literature based on the United States population, journal articles available in English, and published in the last decade (approximately 2013-2023). The scoping review, as described by Grant & Booth, is most appropriate in assessing what is currently known about equity programs in acute care settings utilizing systematic review methodology in a time-limited setting, using the PRISMA PROGRESS+ discussed below a tabular representation of the findings further supports the scoping review (Grant & Booth, 2009).

The primary databases utilized included Google Scholar, PubMed, Embase, and CINAHL. For the comprehensive exploration of biomedical sciences and allied health practice resources, Google Scholar, PubMed, Embase, and CINAHL were the primary databases harnessed for information retrieval. These databases were strategically chosen to encompass a broad spectrum of scholarly literature, ensuring a thorough examination of topics ranging from core biomedical research to allied health disciplines and practical healthcare applications.

- **Google Scholar** was employed to cast a broad net, capturing a diverse range of scholarly articles, conference papers, and other academic

resources. Its extensive coverage across various disciplines contributed to a holistic understanding of the subject matter.

- **PubMed**, renowned for its biomedical and life sciences specialization, was pivotal in sourcing peer-reviewed articles, clinical studies, and research findings. Its emphasis on medicine and healthcare literature enriched the scope of the investigation.
- **Embase**, chosen for its focus on pharmacology and biomedical literature, provided a valuable resource for accessing pharmaceutical and therapeutic research. Its inclusion aimed to enhance the comprehensiveness of the review, particularly in the context of pharmacological interventions.
- **CINAHL** (Cumulative Index to Nursing and Allied Health Literature) was a key database selected to ensure a comprehensive exploration of allied health and nursing literature. This database contributed to a well-rounded perspective, incorporating research and insights from the allied health professions.

By strategically incorporating these databases, the research framework sought to assemble a diverse and thorough collection of scholarly materials, fostering a nuanced understanding of biomedical sciences and allied health practices. This approach not only enriched the breadth of information but also ensured a multifaceted examination of the subject matter from various academic and practical perspectives.

The search strategy for PubMed included: (Health Equity"[Mesh]” OR "Health Services Accessibility"[Mesh]” OR "Healthcare Disparities"[Mesh]”), utilizing limiters: United States, English language, and 2013-2023. The CINAHL search strategy included Health equity AND Health services accessibility AND health disparities with the following limiters: Research Article; Exclude MEDLINE records; Geographic Subset: USA; Language: English, 2013-2023. The Embase search strategy, like the others, included: Query ('health equity' OR 'health services accessibility' OR 'health access') AND 'acute care' AND 'united states' AND ([article]/lim OR [review]/lim) AND [english]/lim AND [embase]/lim AND [2013-2023]/py with the limiters built into the search field.

PRISMA is an acronym for Preferred Reporting Items for Systematic Reviews and Meta-Analysis. This is an evidence-based standard for systematic and meta-analysis reporting. Utilizing the PRISMA 2020 flow diagram (see Figure 1)(*PRISMA*, 2020), the literature is identified, screened, and included in the final review based on appropriateness. Regarding inclusion or exclusion criteria, the PRISMA-E or Equity Extension of PRISMA was utilized to include the PROGRESS+ equity framework (see Table 1). This consists of assessing each article for its inclusion of equity principles (Welch et al., 2012):

Table 1: PROGRESS+ Equity Framework

Letter	Designation/Definition
P	Place of residency
R	Race, ethnicity, culture, language
O	Occupation
G	Gender/Sex
R	Religion
E	Education
S	Socioeconomic status
S	Social Capital
+	LGBTQ+, disability, or other vulnerable person status

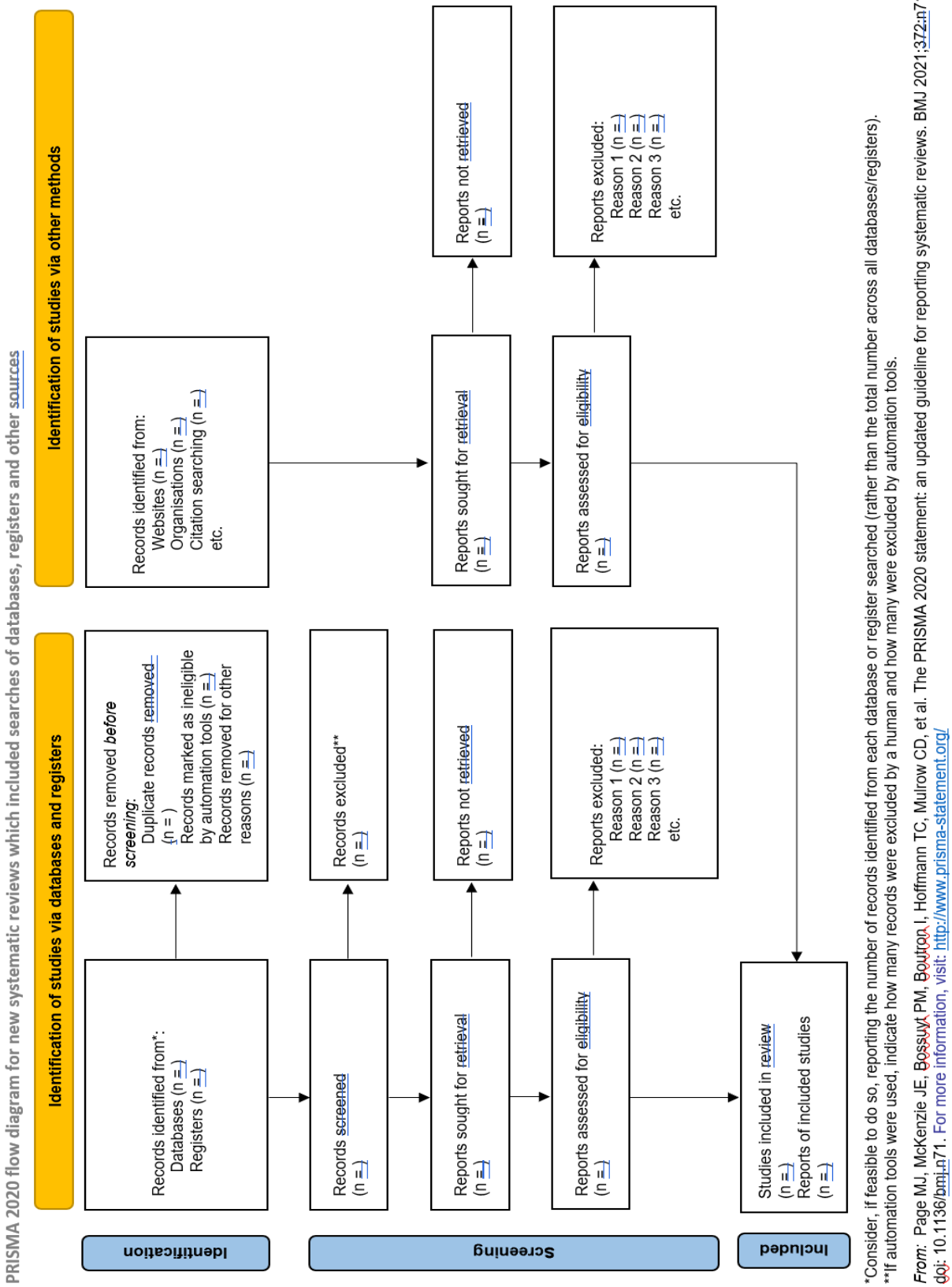
Literature lacking at least two PROGRESS+ measures was excluded from the systemic review to strengthen internal validity. Those meeting criteria were included in the literature review and placed in a chart identifying how many of each principle the article addressed and which topics for future studies. The presentation of data collected included the PRISMA flow diagram and the PRISMA Equity extension PROGRESS+ literature review tables.

Recognizing the limited availability of published literature addressing health equity implementation, the research strategy extended beyond traditional academic databases. In addition to consulting the previously mentioned databases, the investigation included resources provided by organizational initiatives, guidelines, and published findings. This multifaceted approach sought insights from scholarly literature and authoritative bodies actively shaping health equity practices. Several vital organizations were explicitly considered for their contributions to the field, including:

1. The AHA Institute for Diversity and Health Equity offered guidelines and resources dedicated to fostering diversity and equity within healthcare institutions.
2. Institute for Healthcare Improvement: developed frameworks and methodologies integral to understanding and implementing health equity practices in clinical settings.
3. Centers for Disease Control and Prevention (CDC): Provided evidence-based information and guidelines related to public health and practical insights for healthcare implementation.
4. The Robert Wood Johnson Foundation is a prominent health and healthcare equity advocate. Its resources, including frameworks and initiatives, contribute significantly to the understanding of evidence-based practices aimed at achieving health equity.
5. Centers for Medicare and Medicaid Services (CMS): CMS plays a crucial role in shaping healthcare policies and practices. Its guidelines and pathways for health equity contribute to the establishment of evidence-based practices within the United States healthcare system.

By incorporating resources from these esteemed organizations, the research addressed the scarcity of published literature and drew on the wealth of knowledge, guidelines, frameworks, and pathways they offer. These sources collectively contributed to establishing the current evidence-based practices in the United States, enriching the understanding and implementation of health equity in diverse healthcare settings.

Figure 1 PRISMA Flow Diagram, (PRISMA 2020)



Specific Aim 2: Health equity program development

The second aim developing a health equity program, a descriptive analysis aided in identifying potentially vulnerable population hubs and allowed for more targeted assessment and planning of programmatic activities. This level of specificity amongst the populations served is vital as the hospitals span eighty-five miles, and their respective catchment areas are even more expansive. Each institution may have a different focus area based on the catchment area characteristics while the entire system rolls out its equity program. The resulting data will be compared to New York State and again to the Nation for a proportional understanding of population distribution. Table 2 below denotes the availability of variables within each dataset utilized in the initial program analysis. Using national data, an additional secondary analysis will include the critical indicators from the County Health Ranking & Roadmaps (Table 3: County Health Ranking Descriptions). This provides an analysis of initial data generalizable to the region and will aid a jumping-off point while AMHS gathers patient-level data.

Table 2 Census and American Survey Data

Variable	*2021 ACS 1-Yr Estimate*	*2020 Decennial Census*
Sex		X
Race/Ethnicity		X
Age	X	X
Educational attainment	X	
Family income/poverty	X	
Disability status	X	
Geographic location		X
County Population		X
New York State Population		X
Employment	X	
*Housing**	X*	X
Health Disabilities	X	
Health Insurance	X	
Ancestry	X	
Language	X	
Native/Foreign Born	X	

Table 3 County Health Ranking Descriptions

Social and Economic Factors			
Focus	Measure	Description	Source
Education	High School Completion	Percentage of adults ≥25 y/o with HS diploma or equivalent	American Community Survey, 5-year estimates
	Some College	Percentage of adults 25-44 with some post-secondary education	
Employment	Unemployment	Percentage of the population ≥16 y/o unemployed but seeking work	Bureau of Labor Statistics
Income	Children in Poverty*	Percentage of people under 18 in poverty	Small area income and poverty estimates
	Income Inequality	The ratio of household income at the 80th percentile to income at the 20th percentile	American Community Survey, 5-year estimates
Family and Social Support	Children in Single-parent households	Percentage of children that live in a household headed by a single parent	American Community Survey, 5-year estimates
	Social associations	Number of membership associations per 10,000 population	County Business Partners
Community Safety	Injury Deaths*	Number of deaths due to injury per 100,000 population	National Center for Health Statistics-Mortality Files

Table 3 Cont. County Health Ranking Descriptions			
Physical Environment			
Air and Water Quality	Air pollution-Particulate Matter	Average daily density of the fine particulate matter in microorganisms per cubic meter (PM2.5)	Environmental Public Health Tracking Network
	Drinking Water Violations+	Indicator of the presence of health-related drinking water violations	Safe Drinking Water Information System
Housing and Transit	Severe Housing Problems	Percentages of households with at least ¼ housing problems: overcrowding, high housing costs, lack of kitchen facilities, or lack of plumbing facilities	Comprehensive Housing Affordability Strategy (CHAS) data
	Driving Alone to Work*	Percentage of the workforce that drives alone to work	American Community Survey, 5-year estimates
	Long Commute-Driving Alone	Among workers who commute in their car alone, the percentage that commutes more than 30 minutes	American Community Survey, 5-year estimates
Health Outcomes			
Length of Life	Premature Death*	Years of potential life lost before the age of 75 per 100,000 population (age-adjusted)	National Center for Health Statistics-Mortality Files
Quality of Life	Poor or Fair Health	Percentage of adults reporting fair or poor health (age-adjusted)	Behavioral Risk Factor Surveillance System
	Poor Physical Health Days	Average number of physically unhealthy days reported in the past 30 days (age-adjusted)	Behavioral Risk Factor Surveillance System
	Poor Days of Mental Health	Average number of mentally unhealthy days reported in the past 30 days (age-adjusted)	Behavioral Risk Factor Surveillance System
	Low Birthweight*	Percentage of live births with low birthweight (<2,500 grams)	National Center for Health Statistics- Natality Files

Table 3 Cont. County Health Ranking Descriptions			
Health Factors			
Health Behaviors			
Tobacco Use	Adult Smoking	Percentage of adults who are current smokers (age-adjusted)	Behavioral Risk Factor Surveillance System
Diet and Exercise	Adult Obesity	Percentage of adult population (age ≥18) that reports body mass index (BMI) ≥30kg/m2 (age-adjusted)	Behavioral Risk Factor Surveillance System
	Food Environment Index	Index of factors that contribute to a healthy food environment, from 0 (worse) to 10 (best)	USDA Food Environment Atlas; Map the Meal Gap from Feeding America
	Physical Inactivity	Percentage of adults ≥18 reporting no leisure-time physical activity (age-adjusted)	Behavioral Risk Factor Surveillance System
	Access to Exercise Opportunities	Percentage of population with adequate access to locations for physical activity	ArcGIS Business Analyst and Living Atlas of the World; YMCA; US Census Tiger Line/Shapefiles
Alcohol and Drug Use	Excessive Drinking	Percentage of adults reporting binge or heavy drinking (age-adjusted)	Behavioral Risk Factor Surveillance System
	Alcohol-Impaired Driving Deaths	Percentage of driving deaths with alcohol involvement	Fatality Analysis Reporting System
Sexual Activity	Sexually transmitted Infections	Number of newly diagnosed chlamydia cases per 100,000 population	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
	Teen Births*	Number of births per 1,000 female population ages 15-19	National Center for Health Statistics- Natality Files

Table 3 Cont. County Health Ranking Descriptions			
Clinical Care			
Access to Care	Uninsured	Percentage of the population under 65 without health insurance	Small Area Health Insurance Estimates
	Primary Care Physicians	The ratio of population to primary care physicians	Area Health Resource File/American Medical Association
	Dentists	The ratio of population to dentists	Area Health Resource File/National Provider Identifier Downloadable File
	Mental Health Provider	The ratio of population to mental health providers	CMS, National Provider Identifier
Quality of Care	Preventable Hospital Stays*	Rate of hospital stays for ambulatory-care sensitive conditions per 100,000 Medicare enrollees.	Mapping Medicare Disparities Tool
	Mammography Screening*	Percentage of female Medicare enrollees ages 65-74 that received an annual mammography screening.	Mapping Medicare Disparities Tool
	Flu Vaccinations	Percentage of fee-for-service (FFS) Medicare enrollees that had an annual flu vaccination	Mapping Medicare Disparities Tool

***Indicated subgroup data by race and ethnicity is available**

+Not available in all states.

Secondary data provides the descriptive statistical analysis of the population served through the Albany Med Health System catchment area. The catchment area consists of the New York “Capital Region,”. The respective county catchment areas, as defined by physical plant locations, are outlined in Table 4: AMHS Catchment Area.

Table 4 AMHS Catchment Area

Region/Catchment Area	Included Counties
NYS Capital Region	Albany, Columbia, Dutchess, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Ulster, Warren, and Washington
Albany Medical Center catchment region	Montgomery, Schenectady, Saratoga, Rensselaer, Ulster, and Albany Counties
Columbia Memorial Health catchment region	Columbia, Greene, and Dutchess Counties
Glens Falls Hospital catchment region	Saratoga, Warren, and Washington Counties
The Saratoga Hospital catchment region	Saratoga County

The primary data sources identified for external validity include the United States Census Bureau, with the decennial census survey obtained in 2020, and the Community Health Rankings 2023 data release. These data provide estimates of current state demographics, including population, education, income, housing, poverty, employment, healthcare coverage, living arrangements, race, ethnicity, age, sex, language, native or foreign birth, disability, and fertility status. These individuals in the capital region comprise the target population and provide an approximate sample representation of the Nation. Data tables consist of census data by catchment region,

population estimates, gender, income, educational attainment, race, ethnicity, language, disability, computer access at home, broadband internet access at home, and health insurance coverage.

Utilizing raw data from the County Health Ranking, Tableau Creator Desktop version 2022.1.3, a leading data visualization software, was employed to transform raw data into visually engaging and informative representations. Leveraging Tableau's powerful capabilities, the data was organized and visualized to facilitate straightforward interpretation and exploration of trends and patterns across the different counties.

Specifically, the data was presented in a geographic format, utilizing maps to highlight the geographical distribution of health outcomes and disparities within New York State. Each county was represented on the map, with color gradation applied to reflect the respective health ranking in each category. This color gradation provided a visual cue, allowing stakeholders to quickly discern areas of strength and areas in need of improvement across the state. Once the visualizations were finalized in Tableau, the next step involved exporting the data package into Microsoft PowerPoint. This ensured imaging compatibility and facilitated seamless integration into presentations and reports. The exported visuals retained their dynamic properties to deliver engaging and informative presentations that effectively conveyed the essential findings and implications of the County Health Ranking data (See Figures 4-9). Each of the six ranked measures, along with the years of data sets, is as follows:

- Length of Life (LoL), measuring premature death and years of potential life lost before the age of 75 per 100,000 population from 2018-2020.

- Quality of Life (QoL) includes poor or fair health, poor physical health days, poor mental health days, all measured within 2020, and low birth weight measured in 2014-2020.
- The LoL and QoL measures are weighted to create the Health Outcomes category.

Health Behaviors (HB) subcategory includes:

  - Tobacco use in 2020, adult obesity (BMI ≥30 kg/m2) in 2020,
  - Food environmental index in 2019-2020,
  - Physical inactivity in 2020,
  - Access to exercise opportunities 2020 & 2022,
  - Excessive drinking in 2020, alcohol-impaired driving deaths from 2016-2020,
  - Sexually transmitted infections in 2020, and
  - Teen births from 2014-2020.

The Clinical Care (CC) subcategory includes:

- Uninsured and primary care physicians measured in 2020,
- Dentists in 2021,
- Mental health providers in 2022,
- Preventable hospital stays, mammography screening, and influenza vaccinations in 2020.

The Social and Economic Factors (SEF) include:

- High school completion and some college from 2017-2021,
- Unemployment and children in poverty in 2021,
- Income inequality and children in single-parent homes from 2017-2021,
- Social associations in 2020 and injury deaths from 2016-2020.

The final of the six categories is Physical Environment (PE). The measures are:

- air pollution in 2019,
- drinking water violations in 2021,
- severe housing problems from 2015-2019,
- driving alone to work and long commute- driving alone from 2017-2021

Each of the six categories (LoL, QoL, HB, CC, SEF, and PE) z-scores by county are combined by catchment region for an institutional composite z-score in each of the six categories for each of the four catchment regions. Developing the composite variable, which in this instance was a composite Z-Score representing the combined average of all counties within the catchment region. Subsequently, each composite Z-Score underwent benchmarking against other catchment regions to determine an AMHS ranking. These rankings were then compared to the total quartile scoring of New York State to ascertain relative performance levels. The benchmarking process for the catchment regions was facilitated using the QUARTILE.INC function within Microsoft Excel, allowing for quartile marking against the comprehensive New York State dataset. This approach enabled a comparative analysis of each catchment region in relation to the state.

Developing a Solution:

Specific Aim 3: An implementation toolkit

Aim three was to develop an implementation guide and toolkit for the AMHS. Before delving into the development of solutions, grounding the implementation approach within a structured framework is imperative; this facilitates the translation of knowledge into actionable steps.

The Knowledge-to-Action Framework by Graham et al., introduced in 2006, provides a systematic approach to bridging the gap between research findings and practical implementation in real-world settings such as healthcare institutions. It encompasses multiple phases, including identifying knowledge gaps, synthesizing evidence, adapting knowledge to local contexts, assessing barriers and facilitators, implementing interventions, monitoring outcomes, and sustaining change over time (Graham et al., 2006).

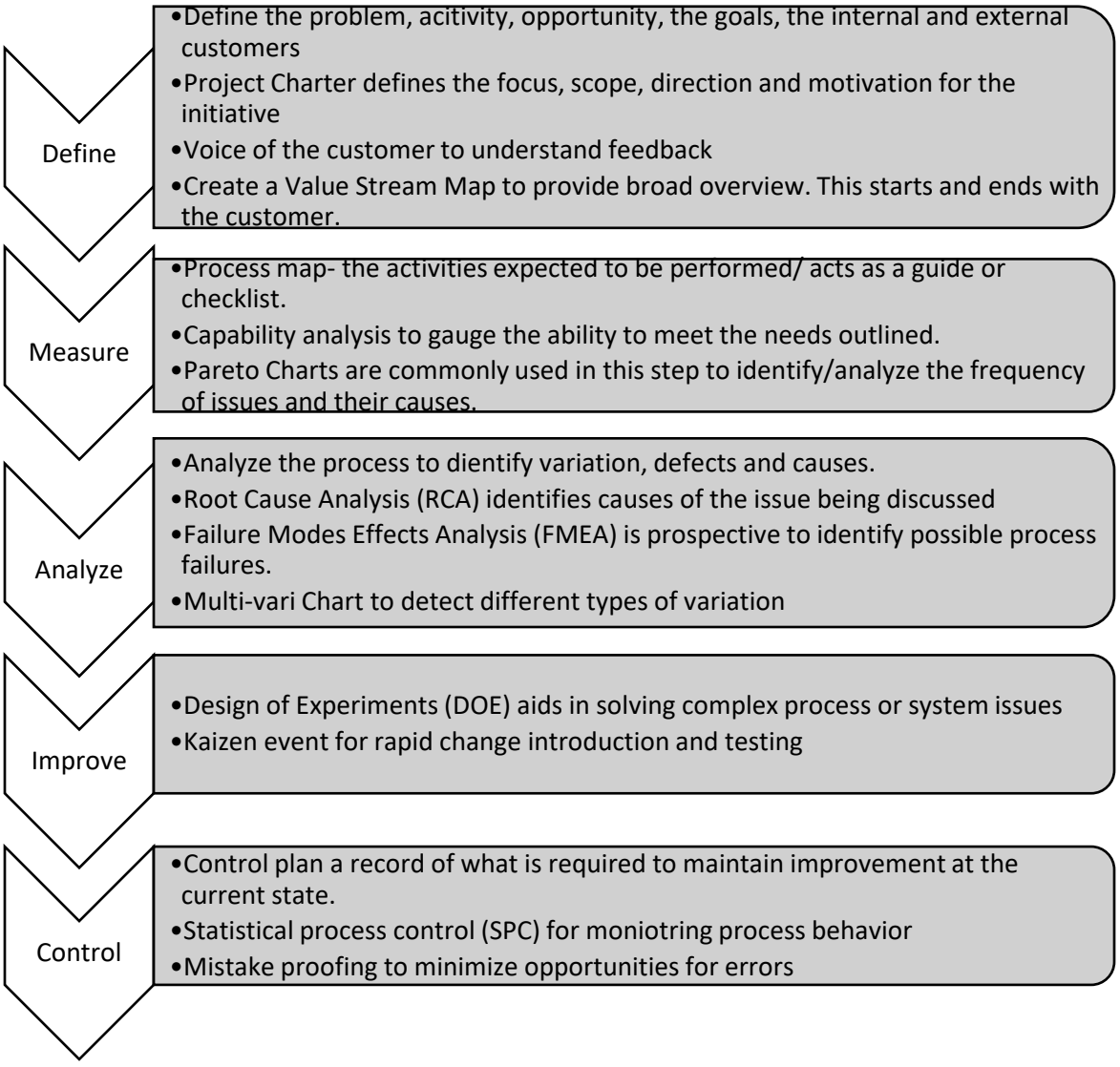
Utilizing this framework as a blueprint guarantees that initiatives aimed at tackling community health needs concerning equitable healthcare access are founded on evidence, tailored to the specific context, and strategically executed. Integrating the principles of the Knowledge-to-Action Framework (KTA) into the methodology enhances the process of devising solutions and maximizing the impact of interventions.

To develop solutions and achieve the third aim, informed by the KTA framework principles, each institution's Community Health Needs Assessment (CHNA)/Community Health Improvement Plan (CHIP) will be brought to the leadership team with the systematic literature review and secondary analysis findings. The CHNA/CHIP of each

institution is used as a primary source of needs for the campus catchment area and identification of the established community partnerships. For example, the southernmost campuses exhibit a more racially diverse population and economic homogeneity, whereas the two northernmost campuses display significant socioeconomic distribution and have racial homogeneity.

To establish the implementation plan, the data-driven quality strategy known in the Six Sigma specialty as DMAIC, an acronym for the processes of Define, Measure, Analyze, Improve, and Control, was employed. Each of these processes is a stage in the improvement model. While not every bullet point in each stage may apply to the health equity implementation, they are outlined below as described by the American Society for Quality (*Excellence Through Quality | ASQ*, n.d.).

Figure 2 DMAIC



The leadership styles within the organization needed to adapt accordingly during the phases of development and will continue to do so during implementation. Contingency Leadership Theories, notably Norman Vroom's Normative Leadership Model (Vroom & Yetton, 1973), advocate for utilizing delegation and facilitative leadership styles by senior leaders. These approaches were crucial in promptly obtaining

essential information, such as the Community Health Needs Assessments (CHNAs), and identifying Subject Matter Experts at each site.

CHAPTER 4:

RESULTS

Specific Aim 1: Evaluation of existing health equity programs and literature

Aim 1: Evaluate existing literature and programs and synthesize the current peer reviews via a scoping literature review utilizing the PRISMA and PRISMA-E Extension for scoping reviews promoted through the Cochrane Collaborative. The literature findings are as follows (for a tabular visual, see Figure 3: Completed PRIMA Flow Diagram). The PubMed search strategy resulted in 474 records identified; two were removed as duplicates, and 94 were removed for appropriateness. This resulted in 378 records being screened and sought for retrieval; 20 could not be retrieved due to inaccessibility. A total of 358 were assessed for eligibility; 41 were excluded due to not being based in the United States, an originally selected limiter, 54 were excluded due to being editorials, and 173 lacked equal to or greater than two PROGRESS+ measures being addressed within the document. A total of 85 studies and two reports were included in the final analysis. The CINAHL search strategy resulted in 30 records being identified, and one was removed as a duplicate. Twenty-nine records were screened, with 18 being removed for appropriateness. A total of 11 records were sought for retrieval; four could not be retrieved. The final seven were assessed for eligibility; four lacked equal to or greater than two PROGRESS+ measures being addressed within the document. A final total of four studies were included in the final analysis. The Embase search strategy resulted in 102 records being identified, and zero duplicates were found. All 102 records were screened, and 75 were removed for appropriateness. Twenty-seven records were

sought for retrieval, and two of those could not be retrieved due to inaccessibility. A total of twenty-five records were assessed for eligibility; seventeen were excluded for lacking greater than or equal to two PROGRESS+ measures. A total of 8 studies were included in the final analysis. Between the three databases, the final inclusion tally was ninety-six.

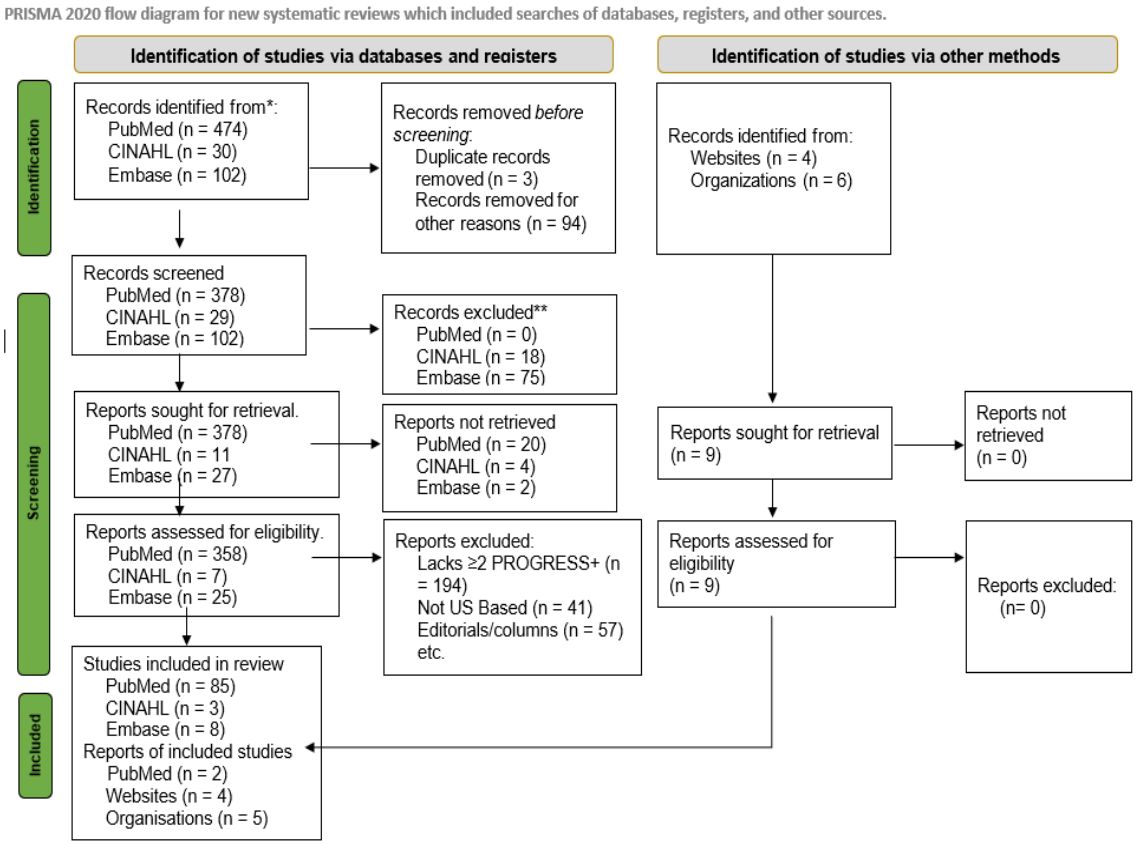
Six organizational resources from The American Hospital Association (AHA), the Institute for Healthcare Improvement (IHI), the Centers for Disease Control & Prevention (CDC), the Centers for Medicare and Medicaid Services (CMS), Health and Human Services (HHS) National Culturally and Linguistically Appropriate Services (CLAS) Standards and the Hospital Association of New York State (HANYS) in addition to four website healthcare institutional resources including the Robert Wood Johnson Foundation, Massachusetts General Hospital, Henry Ford Health System, and Rush University Medical Center are also included in the final analysis of the literature available.

The available frameworks and guidelines from organizations such as the American Hospital Association (AHA), Institute for Healthcare Improvement (IHI), Centers for Disease Control and Prevention (CDC), and Centers for Medicare & Medicaid Services (CMS) collectively underscore six key overlapping themes. These themes, presented in no particular order, encompass culturally appropriate patient care (AHA, CMS), the integration of equity into strategic and organizational policies (AHA, IHI, CDC, CMS), utilization of data for targeted interventions among diverse populations (AHA, CMS), fostering community partnerships and engagement (AHA, IHI, CDC), addressing

issues of racism (IHI, CDC), and establishing enduring infrastructure to sustain efforts toward health equity within the organization (IHI, CDC, CMS, AHA).

Employing the PRISMA-E, or Equity Extension of PRISMA, aided in establishing inclusion or exclusion criteria by integrating the PROGRESS+ equity framework. This involved assessing each article for adherence to equity principles (Welch et al., 2012). The final literature review included studies addressing two or more equity principles, as detailed in Table 5: PROGRESS+ Measure by Database. Out of the ninety-six studies analyzed, a total of 487 progress measures were identified. Notably, four studies encompassed seven or more measures, with the majority focusing on three equity

Figure 3 Completed PRISMA Flow Diagram



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71. For more information, visit: http://www.prisma-statement.org/

dimensions. The breakdown by database is provided in Table 5 PROGRESS+ Measure by Database below and elaborated upon in Chapter Six: Discussion.

Table 5 PROGRESS+ Measure by Database

		PubMed	*CINAHL*	*Embase*	*Total*
P	Place of Residency	66	2	4	71
R	Race, Ethnicity, culture & language	156	3	13	172
O	Occupation	14	0	0	14
G	Gender/Sex	54	1	3	58
R	Religion	0	0	0	0
E	Education	16	0	1	17
S	Socioeconomic Status	74	2	9	85
S	Social Capital	46	0	0	46
+	LGBTQ+, disability, or other vulnerable person status	24	0	0	24

Specific Aim 2: Health equity program development

To fulfill the second aim of programmatic development, secondary data analysis encompassed census data, American Community Survey findings, and the County Health Rankings. This was done to delineate the prevailing community characteristics pertinent to the AMHS service area.

United States Census Catchment Area Population Data: (U.S. Census Bureau QuickFacts, n.d.)

The Flagship Teaching Hospital Albany Medical Center (AMC) serves a total population in the catchment area of 1,106,496 throughout six counties. The Southernmost community hospital, Columbia Memorial Health (CMH), has the second largest population served at 406,892 within three counties; the northernmost community, Glens Falls Hospital (GFH), serves 365,237 in its three counties, and the smallest population catchment area is served by the final community hospital, The

Saratoga Hospital (TSH) with 238,797 served in the County. The median household income between the catchment regions spans a difference of $18,165.83, with Albany Medical Center at the lowest point ($72,634.17), followed by Columbia Memorial Health ($74,329.00), Glens Falls Hospital ($74,478.00) and The Saratoga Hospital ($90,800.00), details including standard deviation is found in Table 6: Economic Data by Catchment Region.

Table 6 Economic Data by Catchment Region

	GFH[1]	TSH[2]	AMC[3]	CMH[4]	NYS[5]	US[6]
Median household income (in 2021 dollars), 2017-2021	$74,478	$90,800	$72,634	$74,329	$75,157	$69,021
STDV	$11,713		$10,977	$9,961		
Per capita income in past 12 months (in 2021 dollars), 2017-2021	$39,898	$47,902	$38,406	$40,531	$43,208	$37,638
Per capital income STDV	$7,149		$5,993.87	$4,756		
Persons in poverty, percent	10.70%	7.70%	11.85%	10.63%	13.90%	11.60%
Persons in Poverty STDV	1.88%		2.19%	0.82%		

[1] Glens Falls Hospital
[2] The Saratoga Hospital
[3] Albany Medical Center
[4] Columbia Memorial Health
[5] New York State
[6] United States

The oldest catchment region is GFH, with 21.22% of individuals being over the age of 65 years. The youngest is AMC, with 4.77% of its population under 5 and 18.68% under 18 years. The entire AMHS age range is higher than that of both New York State (NYS) and the United States, with higher percentages in both the under-five age category and the under-eighteen age category and lower percentages in the over sixty-five age categories comparatively (see “Age” in Table 7 US Census PROGRESS Measures).

Gender, specifically female persons, is between 49.79- 51.10% between the catchment regions, NYS, and the US.

Race and Ethnicity data between the catchment areas hold the more significant differentiation, with the most heterogeneity in the CMH and AMC catchment regions, the two southernmost institutions, and the most homogeneity in the northernmost TSH and GFH catchment regions. None of the four catchment regions fully represent the diversity in NYS and the US. CMH has the most significant Hispanic/Latino population at 12.3%, still less than the US at 19.1% and NYS at 19.7%. AMC has the greatest proportion of individuals reporting as more than one race at 2.99% compared to the US at 3% and greater than NYS at 2.8%. These statistics translate directly to the primary language spoken at home, with CMH reporting 13.15% of homes speaking a language other than English in the home; this is less than half of NYS, with 30.5% of households having a language other than English, yet more than the US at 21.7%. This number drops to 5.95% in the GFH catchment region, 6.7% in TSH, and 10.09% in AMC. NYS has a much more significant proportion of foreign-born residents at 22.5% than any of the catchment regions, with CMH reaching 9.87%, AMC at 8.06%, TSH at 5.70%, and GFH at 4.81%.

The results of the social determinants available through the US Census dataset as they relate to access to health care are as follows. Those households with a computer in the household are all over 92% for all catchment regions, NYS, and the US. Those with broadband internet subscriptions are not. TSH catchment area is highest, even over the US and NYS households, at 90.9%, where CMH, GFH, and AMC are 88.1%, 88.77%, and

88.12%, respectively. These are greater than NYS (86.9%) and US (87%). Each of the four catchment areas has higher rates of high school graduation and beyond rates than NYS (87.4%), US (88.9%) with GFH 92.47%, TSH 93.7%, AMC 92.29%, and CMH 91.03%. Further education, those with a bachelor's or higher, is greatest in TSH 42.7%, and lowest in the CMH catchment region 35.85%, higher than the US 33.7%, but lower than NYS 38.10%. Conversely, those with a disability under the age of 65 years are greater than NYS at 7.7%, in the GFH catchment at 8.68%, AMC at 8.9%, and CMH at 8.51%. The only catchment area lower than NYS is TSH at 7.4%. The most positive measure universally for all four catchment regions is those without health insurance, ranging from 4.1%-5.2%, lower than the 6.10% for NYS and considerably lower than the national average, with the US at 9.8%.

Table 7 US Census PROGRESS Measures

Age	**GFH**	**TSH**	**AMC**	**CMH**	**NYS**	**US**
Persons under 5 years, percent	4.43%	4.50%	4.77%	4.37%	5.40%	5.60%
Persons under 18 years, percent	18.41%	18.80%	18.68%	17.45%	20.30%	21.70%
Persons 65 years and over, percent	21.22%	20.20%	19.39%	21.15%	18.10%	17.30%
Gender	**GFH**	**TSH**	**AMC**	**CMH**	**NYS**	**US**
Female persons, percent	49.97%	50.30%	50.58%	49.79%	51.10%	50.40%
Male persons, percent	50.03%	49.70%	49.42%	50.21%	48.90%	49.60%
Race	**GFH**	**TSH**	**AMC**	**CMH**	**NYS**	**US**
White alone, percent	93.12%	92.20%	82.68%	82.72%	68.60%	75.50%
Black or African American alone, percent	2.29%	2.30%	9.32%	10.56%	17.70%	13.60%
American Indian and Alaska Native alone, percent	0.32%	0.30%	0.44%	0.56%	1.00%	1.30%
Asian alone, percent	2.24%	3.00%	4.45%	3.29%	9.60%	6.30%
Native Hawaiians and Other Pacific Islanders alone, percent	0.07%	0.10%	0.13%	0.09%	0.10%	0.30%
Two or More Races, percent	1.95%	2.10%	2.99%	2.78%	2.80%	3.00%

Table 7 Cont. US Census PROGRESS Measures

Ethnicity	**GFH**	**TSH**	**AMC**	**CMH**	**NYS**	**US**
Hispanic or Latino, percent	3.54%	3.80%	7.39%	12.30%	19.70%	19.10%
White alone, not Hispanic or Latino, percent	90.36%	89.20%	77.33%	73.00%	54.20%	58.90%
Culture/Language	**GFH**	**TSH**	**AMC**	**CMH**	**NYS**	**US**
Language other than English spoken at home, percent of persons age 5 years+, 2017-2021	5.95%	6.70%	10.09%	13.15%	30.50%	21.70%
Foreign-born persons, percent, 2017-2021	4.81%	5.70%	8.06%	9.87%	22.50%	13.60%
Social Determinants	**GFH**	**TSH**	**AMC**	**CMH**	**NYS**	**US**
Households with a computer, percent, 2017-2021	92.95%	94.20%	93.03%	92.77%	92.20%	93.10%
Households with a broadband Internet subscription, percent, 2017-2021	88.77%	90.90%	88.12%	88.10%	86.90%	87.00%
High school graduate or higher, percent of persons age 25 years+, 2017-2021	92.47%	93.70%	92.29%	91.03%	87.40%	88.90%
Bachelor's degree or higher, percent of persons age 25 years+, 2017-2021	37.29%	42.70%	38.18%	35.85%	38.10%	33.70%
With a disability, under age 65 years, percent, 2017-2021	8.68%	7.40%	8.90%	8.51%	7.70%	8.70%
Persons without health insurance, under age 65 years, percent	4.51%	4.10%	4.90%	5.20%	6.10%	9.80%

[1] Glens Falls Hospital
[2] The Saratoga Hospital
[3] Albany Medical Center
[4] Columbia Memorial Health
[5] New York State
[6] United States

County Health Rankings

Composite z-scores for the six categorical County Health sub rankings: Length of life (LoL), Quality of Life (QoL), Health Behaviors (HB), Clinical Care (CC), Social and Economic Factors (SEF), and Physical Environment (PE) in the catchment regions are

shown in Table 8: County Health Rankings Composite Scores, lower scores are better outcomes. For the periods of data availability as outlined in Chapter 3 Methodology and Project Design, the TSH catchment region ranks first, as compared to the other three catchment regions in LoL, QoL, HB, CC, and SEF, and within the state quartiles, holds a place in the top 25th percentile in the same categories. GFH ranks first in PE and the top 50th percentile statewide; CMH, AMC, and TSH all tie for second place in the 75th percentile compared to the state. CMH catchment region ranks second behind TSH in HB, third behind GFH in QoL, fourth behind AMC in LoL, fourth behind GFH and AMC tied in CC, and fourth behind SEF behind AMC.

Table 8 County Health Rankings Composite Scores

	GFH	*TSH*	*AMC*	*CMH*	*25th*	*50th*	*75th*	*Highest*
LoL	-0.27	-0.84	-0.06	0.07	-1.05	0.00	0.90	1.00
QoL	-0.28	-0.70	-0.03	-0.10	-0.17	-0.03	0.18	1.10
HB	-0.07	-0.21	-0.06	-0.08	-0.11	0.04	0.14	0.34
CC	-0.07	-0.21	-0.07	0.00	-0.08	0.01	0.07	0.33
SEF	-0.22	-0.47	-0.14	-0.04	-0.14	0.00	0.11	1.27
PE	0.01	0.03	0.03	0.03	-0.03	0.00	0.03	0.11

The data presentation encompasses the depiction of each of the six categorical rankings by county, meticulously presented in Figures 4-9 under the title "County Health Ranking by NYS County." Counties are meticulously visualized utilizing a sophisticated color gradation scheme. This discernible color gradation serves as a visual cue, enabling

stakeholders to swiftly identify areas of strength and areas necessitating improvement throughout the state. Moreover, numerical scores accompany the visual representation, precisely illustrating each county's ranking in relation to others within New York State. Detailed explanations of the color scheme and numerical scales are conveniently located in the key in each map's lower-left corner. These visuals offer a comprehensive snapshot, revealing that while the state's northeast region excels in length and quality of life metrics, it occupies a midrange position concerning clinical, physical, social/economic factors and health behaviors, as well as vast differences between neighboring counties.

Figure 4 County Health Rankings NYS County Length of Life

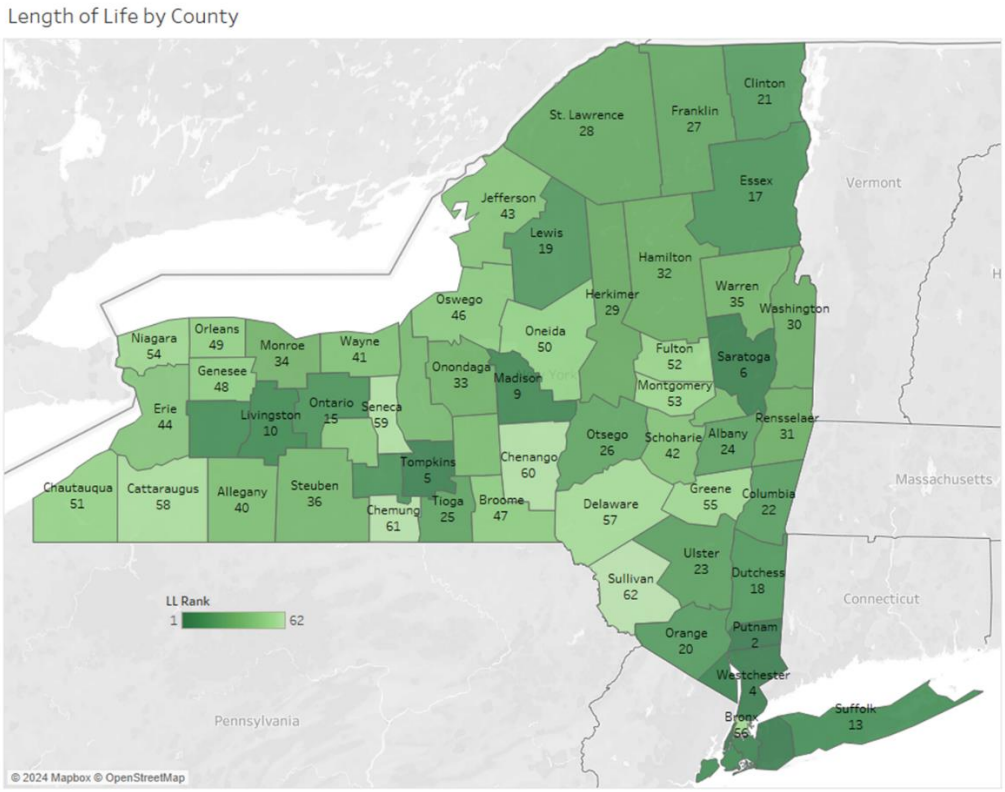


Figure 5 County Health Ranking by NYS County Quality of Life

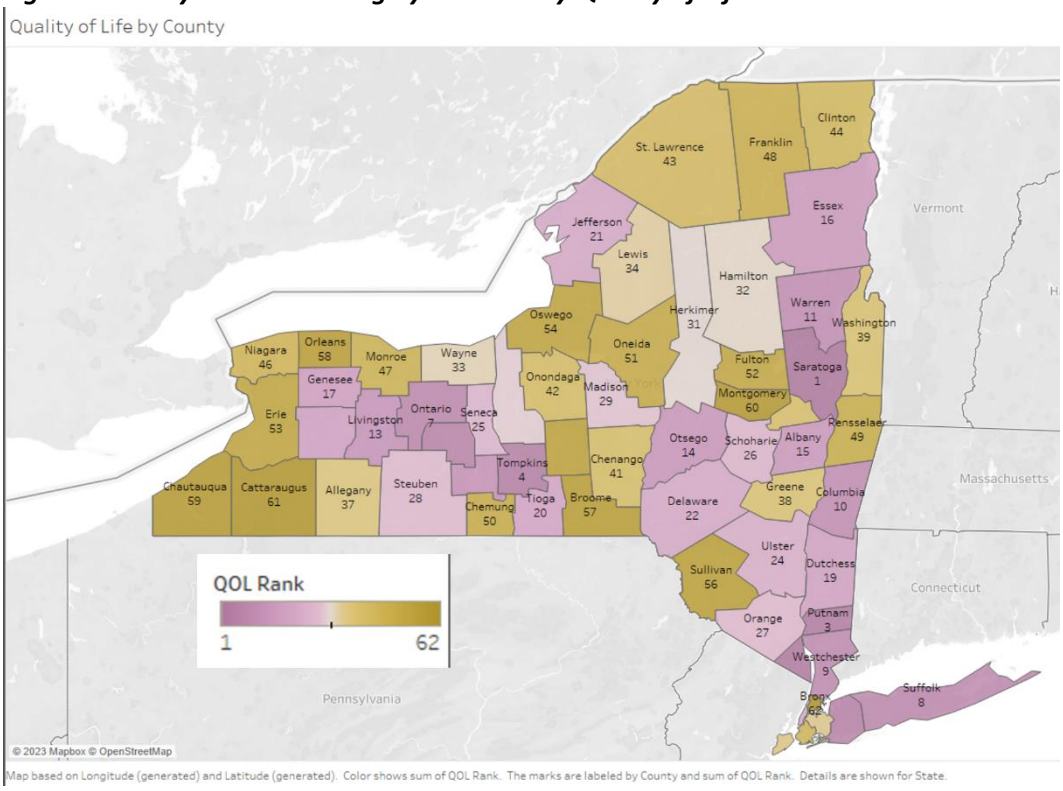


Figure 6 County Health Ranking by NYS County Health Behaviors

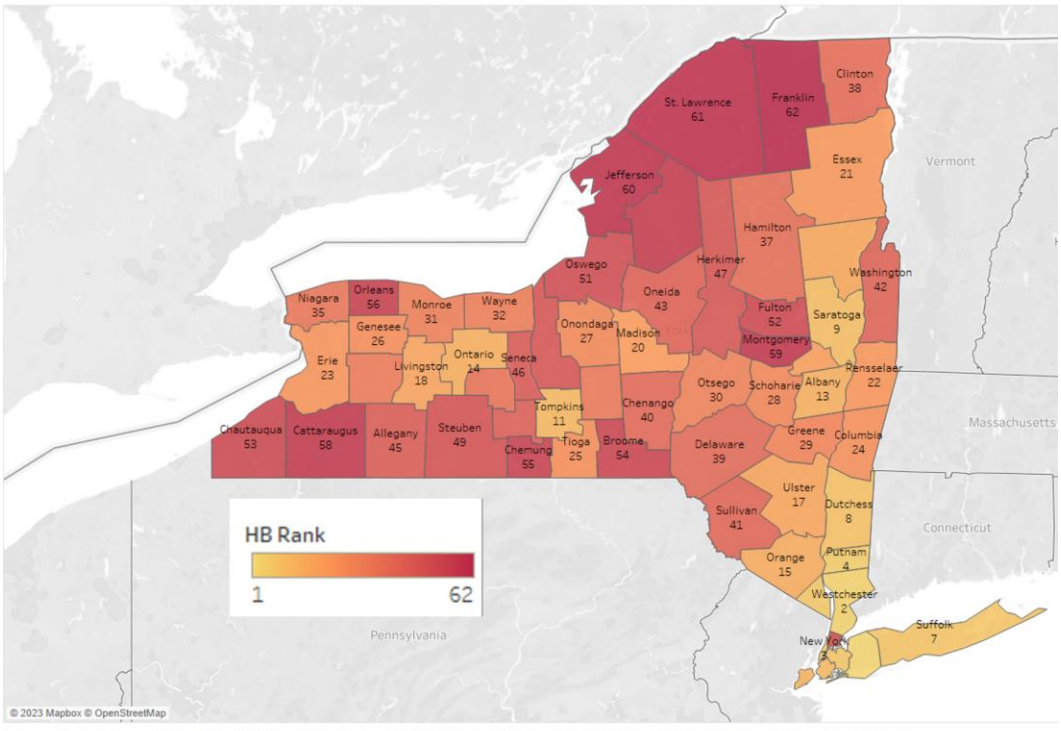
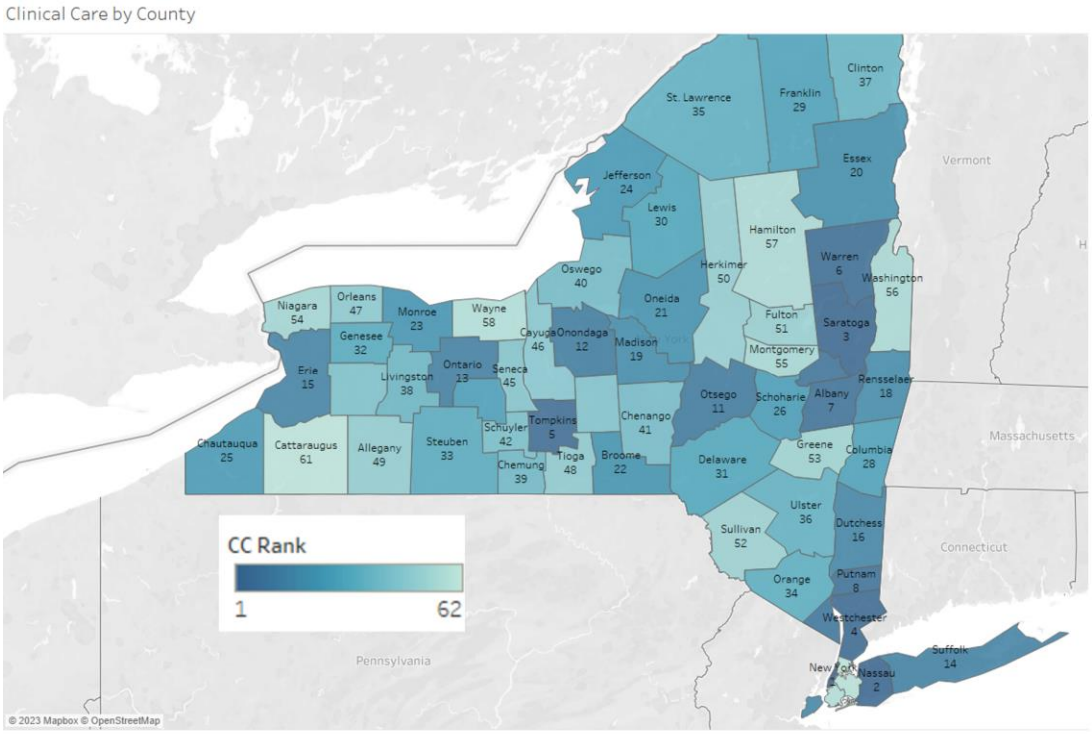
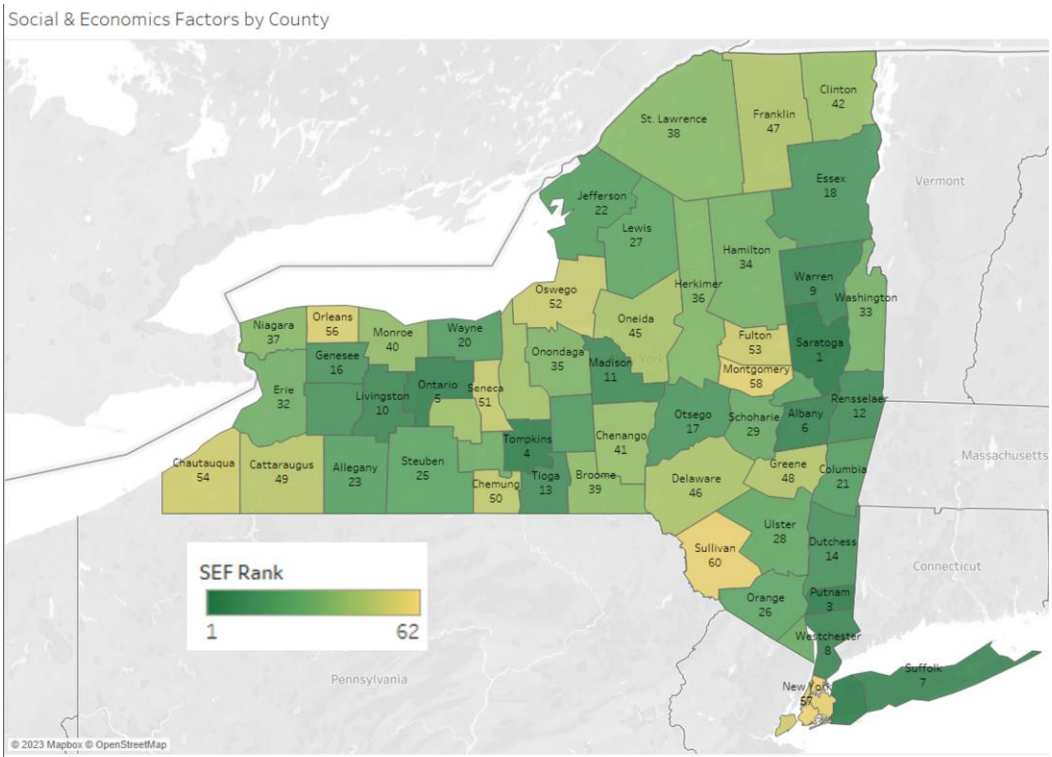


Figure 7 County Health Ranking by NYS County Clinical Care



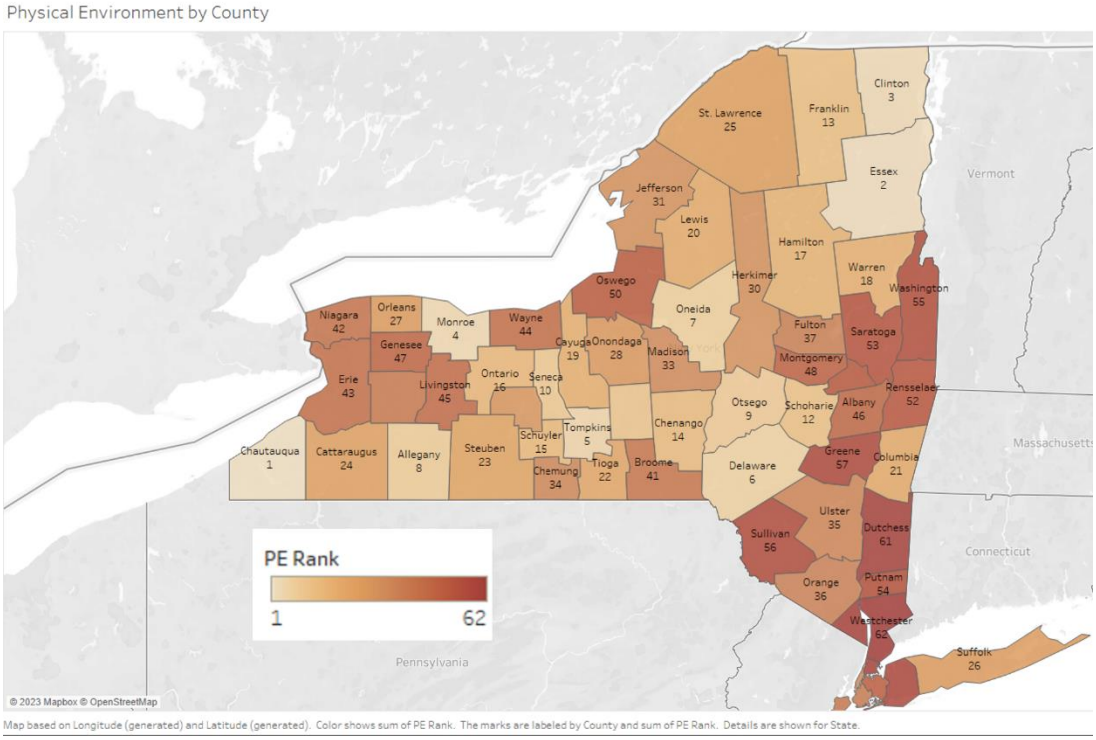
Map based on Longitude (generated) and Latitude (generated). Color shows sum of CC Rank. The marks are labeled by County and sum of CC Rank. Details are shown for State.

Figure 8 County Health Ranking by NYS County Social & Economic Factors



Map based on Longitude (generated) and Latitude (generated). Color shows sum of SEF Rank. The marks are labeled by County and sum of SEF Rank. Details are shown for State.

Figure 9 County Health Ranking by NYS County Physical Environment



Specific Aim 3: An implementation toolkit

The third aim involves evaluating each institution's Community Health Needs Assessment (CHNA) and Community Health Improvement Plan (CHIP). This entails defining goals, assessing risks, and preparing for potential challenges using established performance improvement tools like Define, Measure, Analyze, Improve, Control (DMAIC) and Failure Modes & Effects Analysis (FMEA). Additionally, it includes establishing a timeline with milestones, delineating responsibilities and roles, and identifying resources for the implementation guide and toolkit.

Community Health Needs Assessments/Community Health Improvement Plans

Hospitals operating in New York State are mandated to conduct a comprehensive Community Health Needs Assessment every three years, each maintaining the same cycle. The most recent cycle is from 2022-2024. Each of the

Campuses has made their CHNA/CHIPs publicly available on their websites. Albany Medical Center, The Saratoga Hospital, and Columbia Memorial Health all utilized the Health Capital District to manage and edit the presentation findings of the Community Health Needs Assessments. As each of these were written by the same three principal authors, all utilized the following data sources, and indicator selections; 2014-2018 Statewide Planning and Research Cooperative System (SPARCS) data, Prevention Agenda 2019-2024 Dashboard of Tracking Indicators (2016-2018), Community Health Indicator Reports Dashboard (2016-2018), County Health Indicators by Race/Ethnicity (2016-2018), County Perinatal Profiles (2016-2018), Vital Statistics Annual Reports (2018), Behavioral Risk Factor Surveillance System (BRFSS) and Expanded BRFSS (2016, 2018), Cancer Registry, New York State (2014-2018), Prevention Quality Indicators (2016-2018), Communicable Disease Annual Reports (2013-2018), The Pediatric Nutrition Surveillance System (PedNSS) (2015-2017), Student Weight Status Category Reporting System (2017-2019) , County Opioid Quarterly Reports (January 2020-October 2021), New York State Opioid Data Dashboard (2017-2019), New York State Child Health Lead Poisoning Prevention Program (2015 birth cohort; 2016-2018), New York State Kids' Well-being Indicator Clearinghouse (KWIC) (2016-2018), County Health Rankings (2021), NYS Division of Criminal Justice County Crime Rates (2019-2020), Bureau of Census, Tables and Maps (https://www.census.gov/data.html) (2019), Bureau of Census, and the American Community Survey (2015-2019). Glens Falls Hospital utilized the Adirondack Rural Health Network (ARHN), which is a program of the Accountable Care Organization (ACO) Adirondack Health Institute (AHI). The data sources include NYS

Prevention Agenda Dashboard, County Health Indicator Data, Adirondack Rural Health Network Regional Community Stakeholder Survey, County Health Rankings & Roadmaps, New York State Cancer Registry, 2011-2015 Governor's Cancer Research Initiative – Warren County Cancer Incidence Report, New York State Tobacco Control Program - Tobacco Reports.

Each of the CHIPs includes at least three priority/focus projects. There are consistent themes among the focus areas, and New York State provides those under Public Health Law 2803. Each tax-exempt hospital community service plan must include two state prevention agenda priorities and address how the organization will address those priorities within the three-year implementation action plan (*Prevention Agenda 2019-2024: New York State's Health Improvement Plan*, n.d.). Each of the organization's improvement plans is summarized below at a high level. While all CHIPs include actions performed by stakeholders and partners, only those directly performed by the respective institution are discussed.

TSH has two overarching project goals: 1. Improve mental health and behavioral health outcomes, and 2. Improve substance use behavior outcomes. To achieve these, the projects are to conduct community Narcan training days engaging 100 people between 17 target locations, increase inpatient alcohol treatment referrals, community health centers, and from the emergency department to 80%, and ensure target attendance at behavioral health taskforce meetings to 80%, survey 90% of county school district superintendents (n=12), and survey 75% of county school district principals (n=208).

AMC chose four project focus areas:

1. Promote Well-Being and Prevent Mental and Substance Use Disorders by increasing access to in/outpatient services for all ages, reducing the age-adjusted suicide mortality rate by 2%, preventing opioid overdose deaths, and reducing opioid-related emergency department visits by 2%.
2. Communicable diseases, specifically COVID-19, by promoting vaccination for first and booster/ongoing vaccinations in the capital region.
3. Promote tobacco and vaping cessation and promote evidence-based care in preventing and managing lung disease. The objectives are to decrease the smoking/vaping prevalence of 18+ years old by 2% and decrease asthma-associated ED visits for all age groups.
4. Promote healthy women, infants, and children by ensuring all low-income mother-child pairs received the *First 1,000 Days* referral, a NYS /Medicaid initiative (*First 1000 Days Preventative Pediatric Care Clinical Advisory Group*, n.d.), and to provide equitable care for pregnant, birthing, and postpartum mothers and their infants.

GFH identified three overarching priority areas: prevent communicable diseases, prevent chronic diseases, promote well-being, and prevent mental and substance use disorders; within these three are nine projects. In preventing communicable diseases, improve HPV vaccination rates by increasing by at least 25 community educational interventions, and reduce multidrug-resistant organisms with participation in the

National Health and Safety Networks Antimicrobial Use and Antimicrobial Resistant modules for benchmarking and analysis. In preventing chronic diseases, priorities are:

1. Increase cancer screening rates by 20% across vulnerable populations identified.
2. Promote evidence-based care to prevent and manage chronic diseases (asthma, arthritis, cardiovascular disease, diabetes/prediabetes, and obesity) by completing 75% of all assessments and increasing enrollment to HARP by 5% annually.
3. Improve access to care by providing complimentary accommodations to parents and their families of GFH patients to provide 1000 nights of service.
4. Provide free wigs and hair services to patients of the C.R. Wood Cancer Center, annually providing service to 300 people.
5. Provide a weekend retreat for patients to share concerns, fears, and worries and to gain support, education, and tools to live with and beyond a diagnosis of cancer, especially those with limited access to other clinical/community supports: two semi-annual retreats with 12 women per retreat.
6. Provide emotional support and coping mechanisms for children and families; the annual camp for children who have experienced death, a minimum attendance of fifteen and a maximum of thirty; an additional camp for families dealing with the emotional distress of having one parent with a cancer diagnosis is provided annually.

7. Increase the rate of skin cancer screenings to improve the health of people in the greater Glens Falls region by screening at least 100 at the annual free skin cancer screening event.
8. Promote earlier diagnosis and management of Alzheimer's Disease and related dementias for community members while supporting patients and caregivers, acting as a conduit to community resources, and serving as a leader in education for providers, patients, and families, by performing 1000 assessments, 5000 referrals to community resources, ten educational and training programs to sixty-five primary care physicians, twenty-five specialty care physicians, three hundred non-physician health care providers, and twenty public outreach events.
9. Promote tobacco cessation public health partnership to increase the number of medical health care organizations adopting public health service guidelines by 50%. While internally providing support for smoking cessation to observe a decrease in usage by 20%.
10. Improve the health of people in the GFH region by preventing obesity and related chronic conditions and, more specifically, increase access to healthy and affordable foods and beverages by increasing the number of worksites and community settings that implement food service guidelines by fifteen. Improve community environments that support active transportation and recreational physical activity for people of all ages and abilities by increasing the number of municipalities that adopt and implement community planning

and active transportation interventions to increase safe and accessible physical activity by thirteen. Promote school, childcare, and worksite environments that increase physical activity by increasing the number of childcare providers that improve policies, practices, and environments for physical activity and nutrition by eighteen, increase the number of school districts that improve policies, practices, and environments for physical activity and nutrition by ten.

11. Reduce the mortality gap between those living with serious mental illness and the general population by having 50% of target behavioral health providers adopt the PHS Guideline comprehensive policies that improve tobacco dependence delivery.

CMH identified the first priority as preventing chronic disease with three focus areas: healthy eating and food security, physical activity, chronic disease preventive care, and management. Under the goal of reducing obesity and the risk of chronic disease, those in the inpatient psychiatric unit will receive one-to-one and group-setting nutritional education and an exercise program. Under the goal of promoting evidence-based care to prevent and manage chronic diseases, including asthma, arthritis, cardiovascular disease, diabetes prediabetes, and obesity, actions include decreasing uncontrolled HbA1c blood levels and increasing the percentage of adults given diabetes action plans by 10%. The second priority area is to promote well-being and prevent mental/substance use disorders, to prevent opioid and other substance misuse and deaths by building support systems to care for opioid users or others at risk, embedding

behaviorists in outpatient settings to aid with goalsetting, screening, and referrals and coordinate consultations between primary care prescribers and psychiatry, and expand mental health service capacity by contracting with a third-party virtual provider. Priority area #3 preventing communicable disease by-

1. Improve COVID-19 vaccination rates by promoting vaccination at CMH's clinical service sites.
2. Improve infection control in healthcare facilities by preventing and mitigating COVID-19 transmissions among the CMH workforce and patients through testing, Personal Protective Equipment (PPE), and masking in public/clinical areas.

Neither health equity nor principles of disparities are addressed in the mission, vision, or values of TSH, GFH, or CMH. AMC shares the same mission, vision, and values as reported on the System webpage, and one of the values is "A diverse, equitable, inclusive, and welcoming system." Both equity and the principles of disparities are mentioned in the CHNA/CHIP of GFH, AMC, and CMH, but not TSH. Inclusion includes mentioning disparity reduction, acknowledgment, inequities, and targeted improvement initiatives.

Stakeholders, Partners, and Community Assets:

County health departments partnering with the AMHS as identified in the CHNA/CHIPs include Albany County Department of Health, Rensselaer County Department of Health, Saratoga County Department of Health, Columbia County Department of Health, Greene County Department of Health, Clinton County Health

Department, Essex County Public Health, Franklin County Public Health, Fulton County Public Health, Hamilton County Public Health Services, Warren County Health Services, and Washington County Public Health Services. Those not identified but part of the catchment region includes Montgomery County Public Health, Rensselaer County Health Department, and Dutchess County Department of Health.

Glens Falls Hospital is the only AMHS campus associated with an Accountable Care Organization (ACO). Adirondack Health Institute (AHI) comprises Adirondack Health, Glens Falls Hospital, Hudson Headwaters Health Network, St. Lawrence Health System, and The University of Vermont Health Network- Champlain Valley Physicians Hospital. AHI serves a limited number of counties in northeastern New York (Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, St. Lawrence, Warren, and Washington Counties)(*Adirondack Health Institute*, 2023)

Partners identified from the AMC Community Health Improvement Plans are St. Peter's Health Partners, Capital District YMCA, Healthy Capital District Initiative (HCDI), Boys and Girls Club, Catholic Charities HCD, Albany County Department of Children, Youth and Families, as well as the surrounding county health departments listed above. Those identified by the TSH CHIP are Saratoga County Sheriff, Healing Springs Recovery, and Community Health Center.

Partners and stakeholders identified in GFH CHIP are seven surrounding healthcare providers and patients, the New York State Human Papilloma Virus Coalition, in addition to community recources such as; Glens Falls Hospital Foundation, Silverbay YMCA, Double H Hole in the Woods Ranch, Gateway Dermatology Volunteers, The

Akwesasne Nation, Adirondack Mercy Care, The Alzheimer's Association, The Alzheimer's Disease Caregiver Support Initiative, The Rotery Organization, Comfort Foods, LEAP, Early Childcare Centers, Home Daycares, Preschools, Child Care Resource and Referral Network. Organizations in the community that work with active transportation such as but not limited to Promote Fort Edward, Feeder Canal Trail Alliance, Champlain Canal Trail Alliance, Bike Glens Falls, Adirondack Glens Falls Transportation Council, Washington and Warren County Planning Departments, Warren County Bikeway, Safe Routes to Schools, East End Action Committee, Adirondack Cycling Group, Food pantries, local farm to library programs, and the five surround county health departments.

The most comprehensive analysis of partnerships, stakeholders, and assets is written in the CMH CHIP. This campus chose to identify the stakeholders and assets by the priority under analysis. Those associated with priority #1:

- Over twenty food safety organizations ranging from County recourses to secular and non-secular community partners.

Stakeholders and assets associated with priority #2:

- Numerous community safety networks including Alliance for Better Health, American Foundation for Suicide Prevention-Capital Region Chapter, Apogee Center, Berkshire Farms to name a few
- An additional eleven County mental health support teams and Mobile Crisis Assessment Team (MCAT), a program of the Mental Health Association, National Alliance on Mental Illness (NAMI), Northeast Career

Planning, Project Safe Point, Twin County Recovery Services, Water Street Studio (a program of MHA), and Youth Clubhouses (a program of MHA).

Stakeholders and assets associated with priority #3:

- A.B. Shaw Fire Department, Columbia-Greene Community College (CGCC), Pharmacies, Vaccination, and POD Host Sites.

Implementing a health equity program includes additional stakeholders and partners that were not discussed in the CHNAs and CHIPs. Most AMHS campuses identify the external partners well, but the internal customers are not highlighted. These include the executive teams, the staff, volunteers within the campuses, and, while not expressly mentioned, the patients. Each CHNA/CHIP either conducted a community survey to inform the results or planned to as part of the 2022-2024 implementation plan.

Challenges & Solutions

Specific Aim 1: Evaluation of existing health equity programs and literature

The greatest challenge to Aim #1 is the lack of peer-reviewed literature addressing health equity and access to care. Many studies focus on outcomes and addressing condition-specific disparities; while this is an essential area of research, it creates a gap for researchers in the position of implementation. The solution has been to reach outside the databases commonly used for literature reviews and focus on implementation research provided by institutions seeking to impact health equity.

Specific Aim 2: Health equity program development

The primary challenge to Aim #2 is the lack of current population-specific data access with six legacy electronic health record systems. The AMHS is standardizing to a single electronic health record, with AMC rolling out implementation in March 2024, and CMH, TSH, and GFH will implement simultaneously in September 2024. Once each campus is united in the collection of data points and frequency, a much more targeted analysis of the population served can be conducted annually.

Specific Aim 3: An implementation toolkit

Aim #3 challenge is an indirect issue. The NYS Prevention Agenda does not directly address or require addressing health equity- the only measure that comes close is Focus Area 1. Vaccine-Preventable Diseases; Goal 1.2 Reduce vaccination coverage disparities (*Prevention Agenda 2019-2024: New York State's Health Improvement Plan*, n.d.). This disincentivizes, or at least does not provide, the opportunity for NYS organizations to prioritize health equity in their CHNAs/CHIPs. Alternatively, organizations need to prioritize health equity in addition to what is required or embed it into the institution's operations.

CHAPTER 5:

IMPLEMENTATION PLAN

Establishing a health equity program within a multi-hospital system is a multifaceted endeavor that demands careful planning and strategic execution across various stages. The groundwork for such initiatives has been laid by pioneering institutions like The Henry Ford Health System, which demonstrated the feasibility of system-wide implementation plans as early as 2016. Similarly, Massachusetts General Hospital and Rush University Medical Center underscored the intricacies and importance of a systematic approach, as evidenced by their comprehensive ten-point plan and five-pillar framework. Informed by the insights from the research detailed in Chapter 4: Results, this proposed implementation plan aims to build upon these foundations and pave the way for effective action toward health equity.

Strategy and Policy

The initial implementation phase lays the essential groundwork for advancing health equity within the Albany Med Health System (AMHS). This foundational stage necessitates thoroughly examining the organization's Mission, Vision, and Values to assess the explicit integration of equity principles. AMHS must then consolidate existing policies pertaining to patient data collection, inclusivity, patient care standards, and educational/training protocols. AMHS sets the stage for comprehensive engagement with internal stakeholders and community partners by aligning these foundational elements. Established in 2024, this groundwork serves as a catalyst for informing the

organization's contributions to the Community Health Needs Assessment and facilitating targeted interventions outlined in the three-year Community Health Improvement Plan.

Each of the four campuses has a different mission, vision, and values, with only an AMHS value that mentions equity. Making health equity a strategic priority and embracing equity as a foundation of organizational commitment is a crucial component, as shown by the American Hospital Association (AHA) Six Levers of Transformation (*Health Equity Snapshot*, 2020), The Institute for Healthcare Improvement (IHI) (*Achieving Health Equity*, 2016), and demonstrated by the Henry Ford Health System, Rush University Medical Center, and Massachusetts General Hospital. Each of the campuses is affiliated and does not have one unified umbrella, as the Henry Ford Health System, so each will likely choose to address this goal independently.

The imperative highlighted by leading authorities such as the American Hospital Association (AHA), the Institute for Healthcare Improvement (IHI), the Centers for Disease Control and Prevention (CDC)(*Foundations of Health Equity Self-Guided Training Plan | Health Equity | CDC*, 2023), and the Centers for Medicare and Medicaid Services (CMS) (*CMS Framework for Health Equity | CMS*, 2023) underscores the critical importance of actively addressing policies to advance health equity. Paramount among these priorities is the meticulous examination and optimization of patient data collection protocols, encompassing considerations such as the nature, timing, responsible parties, conditions, and utilization/security protocols for collected data. A closely aligned focus is the establishment of robust training requirements for personnel involved in data collection, ensuring initial competency and ongoing maintenance and

proficiency expectations. Moreover, organizational inclusivity policies must comprehensively address the needs of patients, staff, volunteers, and visitors, ensuring equitable treatment and access across all interactions with the institution. Furthermore, patient care policies must explicitly delineate the imperative for culturally and linguistically appropriate standards, reflecting a commitment to delivering care that respects and responds to diverse patient needs and backgrounds.

Community Health Needs Assessment/Community Health Improvement Plans

As referenced in *Chapter 4: Results*, three campuses directly referenced the need to explore disparities and address inequities. Also, three campuses utilized the same organization to compile and write the CHNA. There is an opportunity for standardization in addressing health equity in the CHIP while utilizing the data obtained from the CHNA and the data collected on the hospital population from the electronic health record (EHR). The most comprehensive analysis of community partners was shown in the CHIP for CMH; it exemplified the AHA, IHI, and CDC recommendations on fully engaging and mobilizing community partners by showing representation for each priority area, the community partner and how the community partner contributes to the goal(s).

By building health equity principles into the strategy, AMHS ensures commitment to establishing and maintaining infrastructure to support systemic shared accountability and drive health equity work shown to be important by AHA (*Health Equity Snapshot*, 2020), IHI (*Achieving Health Equity*, 2016), CDC (*Foundations of Health Equity Self-Guided Training Plan | Health Equity | CDC*, 2023), and CMS (*CMS Framework for Health Equity | CMS*, 2023). To aid in planning and decision-making, the Strengths,

Weaknesses, Opportunities and Threats (SWOT) analysis for health equity program inclusion as seen in Figure 11: AMHS SWOT. In the Strengths box, AMHS is the largest employer in each respective region and holds a large coverage area spanning the Capital region and stretching into the Adirondacks in North County. Both findings mean AMHS has an incredible opportunity to impact health equity in Northeastern New York. As for weaknesses, as the system is in its first few years, system mentality is not solidified and shows in the individual campuses wanting to maintain what each knows to be the status quo. Additionally, with each year that passes, the population of the AMHS catchment region changes. During the pandemic, there was a migration away from cities into North County. This changed landscape of internal and external customers has yet to be captured in the data analysis provided in Chapter 4 Results. The opportunities related to the strengths and weaknesses are the standardization of the EHR, policies, data collection, CHNA, and CHIPs. The qualitative and quantitative data collection will inform AMHS of the customers' needs. Finally, the threats section includes external concerns that the system has no control over and can derail the health equity program. Those threats include the current financial climate; as the region’s most extensive non-profit health system, just out of a pandemic, implementing an enormous EHR project, the financial situation remains constrained. Also contributing to the financial constraint are the payor mixes, which can fluctuate to as high as 85% for federal payors and 15% for commercial payors.

The three-year program cycle will be completed at the end of 2024, the year of analysis and electronic health record implementation, which means patient-level data will only be available for approximately nine months for AMC and three to four months for the remaining three campuses. The lack of robust patient-level data for the 2025-2027 CHNA/CHIP demonstrates the need to be based on available data, like that analyzed in Chapter 4: Results. A system-level focus can also be utilized for a strategic plan of resources with each of the populations in the catchment regions exhibiting growth from 2020 to 2022. Interventions seeking to ensure access for those over 65

Figure 10 AMHS SWOT Analysis

should be considered as ~20% of each catchment region's population is in this category. Each campus should independently evaluate its catchment region as the data shows heterogeneity of race, ethnicity, culture, language, and socio-economic status.

Cultural and Linguistic Sensitivity Training

The collection of very personal, highly intimate information to be captured in an electronic health record needs to be done in a manner that is appropriate for the individual whose data is being measured. Data collected include social risk factors and individual factors such as gender identity, sex, race, ethnicity, language, sexual orientation, disability status, and safety. This collection is supported by the available frameworks from AHA (*Health Equity Snapshot*, 2020), IHI (*Achieving Health Equity*, 2016), CDC (*Foundations of Health Equity Self-Guided Training Plan | Health Equity | CDC*, 2023), and CMS (*CMS Framework for Health Equity | CMS*, 2023). Indeed, CMS required data collection and action beginning in CY2024 (*CMS Medicare Payment Systems - January* 2023). Even without the federal policy requirements to collect, this data will ultimately give rise to targeted interventions for the population in the capital region.

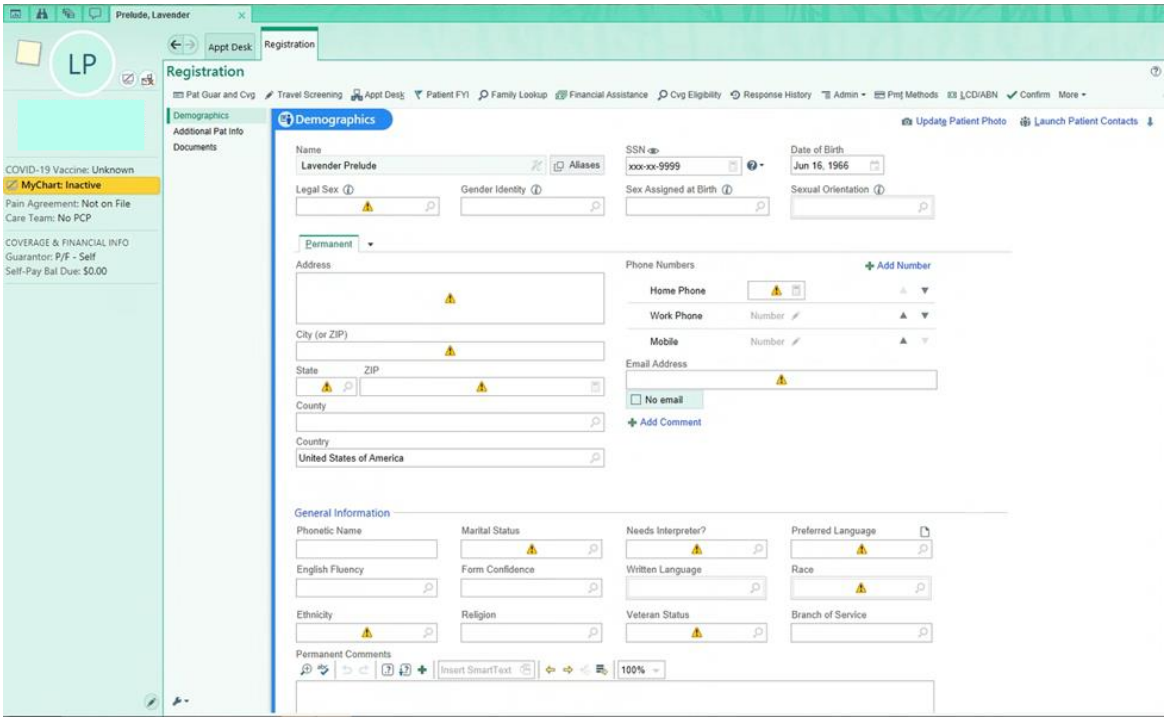
The Henry Ford Health Systems "We ask because we care" campaign (*Health Equity Snapshot*, 2020) was targeting not only the patients to answer why but also the staff in understanding why the training was required, how it could make the patients feel being asked these question, where were the appropriate locations and circumstances to make the inquiries, and what information was necessary, as previously noted resulting in a 90% collection rate throughout the system. Culturally and linguistically Appropriate Services (CLAS) (*What Is CLAS?*, n.d.) are designed expressly for the healthcare setting to advance health equity and should be included in the AMHS policy considerations. Following CLAS training, in two waves, as with the Epic go live (see

section A Unified Electronic Health Record), each campus should perform a Culture of Safety Survey (COSS), a survey performed at least every twenty-four months to garner the cultural perception of the institution from the staff point of view and included in the COSS equity and inclusivity questions to gauge strengths and weakness of each campus.

A Unified Electronic Health Record (EHR)

Epic was chosen as the unifying EHR independent of this study in 2021. This program has been building since 2022, and the implementation timeline is for AMC to go live in March 2024 and CMH, TSH, and GFH to go live in September 2024. Epic's equity dashboard measures individual and social determinants of health factors. In the course of this research, several fact-finding sessions with Epic analysts allowed for in-product screenshots of what the demographics will look like (Figure 11: Epic Demographics), which will capture Place of residence, Race, ethnicity, language, Occupation (if veteran status and branch), Gender/sex, Religion, and LGBTQ+, it will not however capture Education, Socio-economic status, or Social capital (the PROGRESS + measures). The EMR project and implementation plan are unique and distinct from this dissertation, and their implementation, as well as their ability to be complementary, was a matter of timing convenience.

Figure 11 Epic Demographics



The literature database search revealed a predominant focus on certain Social Determinants of Health (SDOH) data points, with Race, Ethnicity, Culture, and Language emerging as the most frequently referenced attributes across 172 articles. Following closely were socioeconomic status, with 85 mentions; place of residency, with 71; and Gender/Sex, with 58. Conversely, certain SDOH factors were notably underrepresented in the literature. Religion was not mentioned in articles, while occupation and education were cited in only 14 and 17 articles, respectively. This distribution of mentions underscores the variability in emphasis on different SDOH measures within the research landscape. It highlights potential areas for further exploration and data collection efforts to comprehensively address the multifaceted determinants of health outcomes. (Refer to Table 5: PROGRESS+ Measure by Database for a comprehensive breakdown). Socioeconomic status, education, and social capital measures can be captured with the

CMS implementation of ICD-10 Z codes as part of the equity requirements introduced in January 2024 (Affairs (ASPA), 2022).

Data-Driven Strategies: DMAIC

As discussed in Chapter 3: Methodology, the AMHS utilizes and promotes Six Sigma and Lean principles for data-driven change management strategies. One such quality improvement tool is the DMAIC (see Figure 2: DMAIC for explanation).

In the first step:

- Define the project charter and describe the business case, problems, opportunities, scope, constraints, assumptions, goal, team members, and target dates, with actual dates to be filled in as each is completed (Table 9: Define-Project Charter).
- Measure is the second stage, carried out via process mapping, a planning and management tool that identifies critical activities and who is responsible (Figure 12: Measure-Process Map).
- The third stage in DMAIC is Analyze; in this, a Failure Modes Effects Analysis (FMEA) is performed to anticipate failures and seek to prevent the occurrence or minimize the effect Table 10: Analyze- FMEA). Utilizing the IHI FMEA tool, each stage of the process from the process map is identified with the failure mode (what could go wrong), the failure cause (why would the failure happen?), the failure effects (What are the consequences of that failure?), the likelihood of occurrence (1-10, 1 being not at all likely and 10 being very likely), and what is the likelihood of

detection (same 1-10 scale), and finally the severity of the effect (1-10 scale). These provide a numeric value by multiplying each or a risk priority number, providing a prioritization list (*Failure Modes and Effects Analysis (FMEA) Tool | IHI - Institute for Healthcare Improvement*, n.d.). The two-wave Epic go-live was removed from the FMEA as those implementations are outside this work's scope.

- The improve stage will be conducted twice, once after the first Epic go-live at AMC, then again after the second go-live at CMH, TSH, and GFH. This process, known as the Kaizen 5's, identifies waste, reduces defects, increases productivity, understands and better utilizes assets, and engages users in improvement activity and decision-making (Figure 13: Kaizen- 5's).
- The final step is control; this will be determined from what is learned and lived from the implementation and DMAI stages.

Table 9 Define Project Charter

<table>
<tr><td colspan="4">Project Charter</td></tr>
<tr><td colspan="4">Project Name:</td></tr>
<tr><td colspan="4">Health Equity: Accessibility</td></tr>
<tr><td colspan="4">Business Case:</td></tr>
<tr><td colspan="4">Social capital in employees, increased employee engagement, increased patient satisfaction, improved patient outcomes, opportunity for greater reimbursement with pay-for-performance, conformance with CMS incoming requirements, improved hospital ratings and standards.</td></tr>
<tr><td colspan="2">Problem/Opportunity</td><td colspan="2">Scope, Constraints, Assumptions:</td></tr>
<tr><td>1. Disparate EHR. 2. Duplicative efforts.
3. Four distinct program interventions</td><td>1. Data collection standardization.
2. Pooled resource capability.
3. Targeted intervention</td><td colspan="2">Scope: AMHS
Constraints: Timetable with Epic implementation requiring mass resources.
Assumptions: financial resources for training, engagement of senior leaders, and staff. Community support.</td></tr>
<tr><td colspan="2">Goal:</td><td colspan="2">Team Members:</td></tr>
<tr><td colspan="2">Health equity program implementation</td><td colspan="2">AMHS, Community Partners, internal and external customers (Staff, volunteers, and patients)</td></tr>
<tr><td colspan="2">Preliminary Project Plan:</td><td>Target Date</td><td>Actual Date</td></tr>
<tr><td colspan="2">Define: Project charter</td><td>October 2023</td><td>September 2023</td></tr>
<tr><td colspan="2">Measure: Process Map</td><td>December 2023</td><td>October 2023</td></tr>
<tr><td colspan="2">Analyze: FMEA</td><td>December 2023</td><td>January 2024</td></tr>
<tr><td colspan="2">Improve: Kaizen event (AMC first)</td><td>Mar-May 2024</td><td>TBD</td></tr>
<tr><td colspan="2">Control: TBD based on D, M, A, and I</td><td>January 2025</td><td>TBD</td></tr>
<tr><td colspan="2">Prepared By: H. Alycon</td><td colspan="2">Approved by:</td></tr>
</table>

Figure 12 Measure Process Map

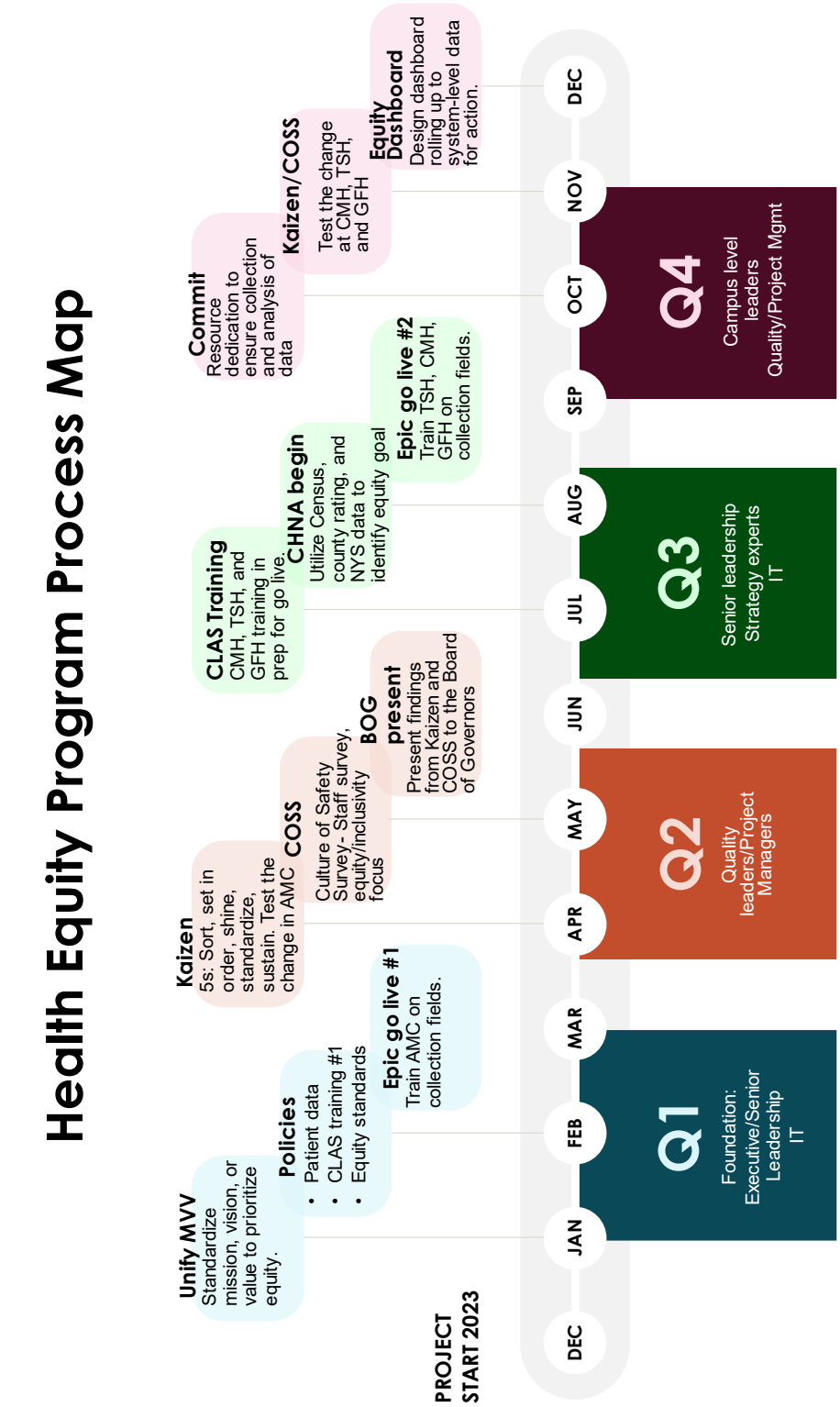


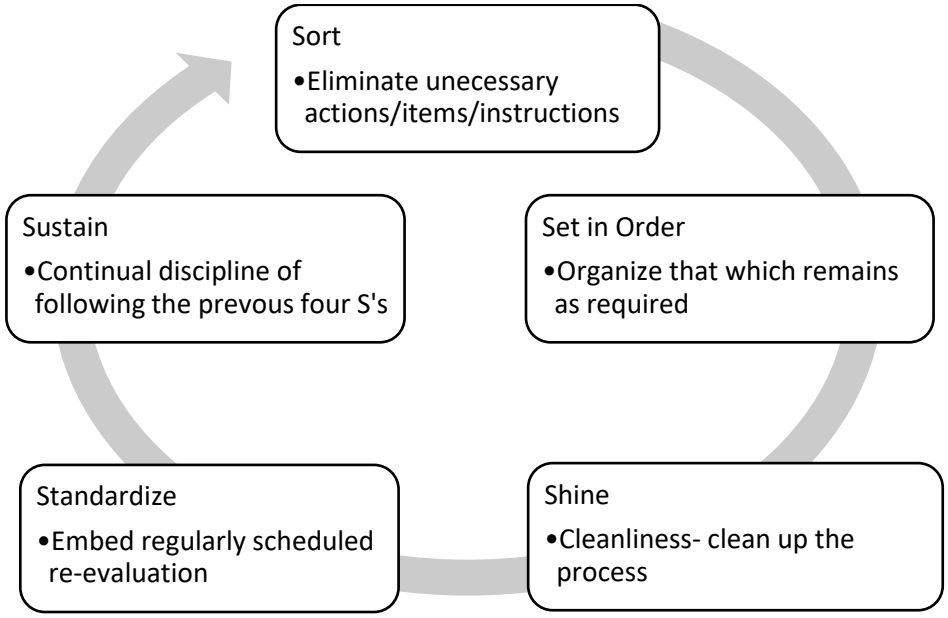
Table 10 Analyze FMEA

Step in the Process	Failure Mode	Failure Cause	Failure Effect	Likelihood of Failure (1-10)	Likelihood of detection (1-10)	Severity (1-10)	Risk Profile #	Action to Reduce Occurance of Failure
Unify MVV	Exec disagreement, campus openness to changing Mission or Vision (large undertaking)	Lack of consensus or resources	Lack of foundational commitment to equity	3	10	5	150	Compromise on creating an equity value., or including ina current value.
Policy management / creation	System policy manager	Lack of single platform for policy management	Disparate policies	2	10	3	60	System platform under consideration currently
Epic go-live #1							0	Out of scope
Kaizen AMC	This analysis gets overlooked.	Lack of accountability	Process improvement isnt completed on data collection	3	8	5	120	Assign responsibility in advance to Quality/Project Management leaders.
COSS AMC	The survey isnt completed	Lack of accountability	Internal stakeholder voices not heard	4	8	5	160	Assign responsibility to Risk Management @AMC
BOG Presentation	Board members misunderstanding the importance	Lack of inclusion in process	Denial of continued efforts	3	5	8	120	Engagement of BOG beginning in January 2023- standing agenda item
CLAS Training	Missed individuals	Inappropriate collection tactics/behaviors	Lost trust of patients, lack of data vailidity	3	3	10	90	Employ a training tactic by role, with competencies that is maintained in Human Resources.

Table 11 Analyze FMEA cont.

Step in the Process	Failure Mode	Failure Cause	Failure Effect	Likelihood of Failure (1-10)	Likelihood of detection	Severity (1-10)	Risk Profile #	Action to Reduce Occurance of Failure
CHNA Begin	Failure to include equitable measures	Lack of direction	program failure at campus for 3-year cycle.	2	8	6	96	Ensure CEO engagement in both Equity program and CHNA development.
Epic go-live #2							0	Out of scope
Commit resources	Analysts do not understand CLAS data.	Inappropriate analysis and relationships or themes	Misguided program direction	1	10	4	40	Include analysts in CLAS training and provide resources for SDOH understanding.
Kaizen / COSS CMH, TSH, GFH	The analysis is overlooked, and the survey isnt completed	Lack of accountability	Lack of PI, and lack of internal voice of the costumer	4	8	5	160	Assign responsibility in advance to Quality/Project Management leaders. @CMH, TSH, GFH
Equity Dashboard	Data collection without dissemination	Lack of direction	lack of wide understanding of population served	2	7	4	56	Establish standing agenda item in BOG, PI, and system Quality Council meetings.

Figure 13 Improve- The Kaizen 5's



Implementing a health equity program throughout AMHS will require numerous human resources. However, no new full-time employees (FTEs) will be necessary, and a daily inclusion of equity data collection points in the EHR. As the EHR is already accounted for within the system for resource requirements, no additional Information Technology (IT), Health Information Management (HIM), or Medical Records (MR) requirements are identified in the implementation. Executive teams will be responsible for embedding equity into the foundation of each campus and requiring their senior leaders to develop, standardize, and enforce policies relating to health equity and inclusivity. Continued executive and senior leadership support is required to approve the financial burden, both directly through the purchase of and indirectly by approving wages paid to complete the CLAS training at the onboarding and at least annually after that. The Human Resources departments must add and maintain training and

competency records. The Quality Management (CMH, TSH, and GFH) departments will be responsible for process improvement tools and actions (including but not limited to Kaizen, 5s, and COSS). At AMC, the Risk Management Department handles the COSS. A partnership between the Quality and Senior Leadership teams responsible for evaluating the ongoing federal mandate changes from CMS and NYS level for equity requirements for hospitals.

Anticipated Outcomes:

The anticipated outcome of implementing this program is establishing a system-wide equity program aimed at guiding data-driven decision-making at the institutional level. This entails achieving uniformity across the system in terms of patient data collection methods, including standardized procedures for collection timing, locations, and frequency, as well as consistent educational requirements for employees, facilitated by the implementation of a unified Electronic Medical Record (EMR) system. While the four institutions may share standard data collection practices, differences in patient demographics may lead to variations in data outcomes, potentially necessitating tailored program implementations to address disparities and enhance equitable access. Additionally, disparities in community resources across locations may influence partnership strategies.

CHAPTER 6:

DISCUSSION

This research sought to achieve three aims to result in an informed implementation strategy for a health equity program in a small acute care system. The primary aim identified was to conduct a systematic scoping literature review to assess current equity programs identified in other healthcare settings fully. The second aim included secondary data analysis to assess the AMHS catchment area's community attributes preliminarily. The third aim was to assess the Community Health Needs Assessments and Community Health Improvement plans to identify established resources, partnerships, and integrated equity initiatives that would aid in driving data-decision decision-making through performance improvement tools. The methodology, results, and implementation sections have discussed these objectively.

The key findings within each of the aims demonstrated clear themes. Within aim one, the common theme the data supports was a lack of publicly available health equity implementation programs. Much of the literature focused on specific indicators of outcome disparities, focusing on a single attribute in the PROGRESS+ measure. This research is paramount in improving individual outcomes; however, it leaves smaller hospital systems without peer-reviewed data on improving access. The second aim and data analysis demonstrated a wide heterogeneity between the catchment regions for specific characteristics while also having swaths of homogeneity in others, showing the complexity of the capital region populace. Finally, the shared relationship identified while researching aim three is that while CMH has a comprehensive view of disparities

and equity principles in the CHNA/CHIP, AMC has inpatient programs to focus on disparate outcomes in their maternal health program, GFH has several outpatient equitable access components built into their outpatient cancer program, and TSH focuses on community access to healthy food, none of the campuses have a formal health equity program, nor foundational commitment.

Aims Discussion

Specific Aim 1: Evaluation of existing health equity programs and literature

Aim 1: A literature review. Of the ninety-six studies included in the final analysis, 487 PROGRESS+ measures were identified. The most noted and studied equity indicators are place of residence and race/ethnicity. This is historically appropriate and aligns with the literature review covered in Chapter 2: *Literature Review and Relevance to Improving the Health of the Public,* where systemic and structural racism is evident across time and space in the United States, including today. Many articles covered at least two measures, and only four examined seven or more. This data suggests that there is opportunity in equity research fields surrounding the intersectionality of factors and how they relate to enabling or inhibiting one's enjoyment of the highest attainable health status. Unexpectedly, there remains a gap in several PROGRESS+ measures, including religion, which is especially timely and relevant in the current US climate, occupation, LQBTQ+, disability, or other vulnerable person status. Religion often plays a direct role in healthcare decisions, and as such, this researcher anticipated a higher number of studies reflecting that cultural imperative.

The organizational resources are an asset in guiding considerations for healthcare institutions seeking to prioritize health equity; the lack of specificity in steps or opportunities could be seen as a barrier for those without confidence or expertise in the field. The common themes among the organization resources previously discussed, including making health equity a strategic priority, focusing on policy implementation, establishing an infrastructure that will enable ongoing success, and systemic and shared accountability, prove to support a strong foundation in an equity program. When taken in conjunction with the institutional releases of successes shared by Massachusetts General, The Henry Ford Health System, and Rush University Medical Center, one can compile a general outline for a program without including data. The average organization may or may not have the resources to research and place these two components together and highlight data resources included in aim two.

Specific Aim 2: Health equity program development

Aim 2: Data review. The analysis of the catchment regions provided invaluable information regarding where AMHS can unite on initiatives where the populations are similar but also highlighted the need for a level of independence in equity program interventions going forward. All four regions are actively experiencing population growth; this impacts the entire system, on available services, what age groups are rising, and which may be falling. All regions also experience a lower than the national rate of uninsured individuals; thus, placing resources into navigators may not yield the impact that ensuring health literacy reading levels would, with 10% of the population without a high school diploma or GED and 57-62% without secondary education. Individually, with

more than three times the Hispanic and Latino population, CMH may need to focus more on culturally specific interventions than GFH. Interestingly, the primary language spoken in the household shows a north-to-south positive gradation from a low of 5.95% at GFH in the Adirondacks, increasing to 13.15% at CMH in the Hudson Valley to the south. In seeking to understand where there is homogeneity and heterogeneity, the available data support both ends and patient-level data will only make this information more valid and strengthen the lens of opportunity. Combining county-level and catchment region-level data provided a pathway to standardizing and unifying the campuses in a common cause; in numbers, there is strength. Targeted interventions and the unique perspective of each catchment region ensure AMHS meets the needs of those it serves.

Specific Aim 3: An implementation toolkit

Aim 3: CHNA/CHIP assessment and program design. Community engagement and assessment are well demonstrated and exemplified in each CHNA/CHIP, with three institutions engaging the public in CHNA surveys and one with ongoing surveys during the improvement plan. The most comprehensive analysis of partnerships and stakeholders was performed by CMH, identifying each within the specific priority project. This effort offers a robust template for the other campuses. An additional CHNA/CHIP cycle will continue before the health equity program implementation can offer detailed patient-level data. However, by embedding health equity as a foundational priority in the system, the CHNA/CHIPs can play a more significant role in tying community efforts to the organizational strategy.

Utilizing Lean and Six Sigma principles, widely available and quickly explained interventions offer other institutions interested in equity program implementation a playbook to get started. The evidence-based data-driven decision-making models answer the question, *where do I go from here*? Much of what was found in the literature for equity program implementation was foundational and a great mechanism to start a program; however, it could have left organizations asking *where they should go from here.*

Limitations

The findings of this research should be considered under the following described limitations. First, the data captured from the US Census Bureau, referencing the American Community Survey and the County Health Rankings, do not represent the actual market share of individuals served by the AMHS. The data utilized, discussed, and analyzed is the most current and accurate. Future analysis will be able to be conducted with patient-level data and directly reflect those served; at this time, that software is not yet available for the system. The second identified limitation is that findings may not be generalizable to other hospitals of equal or smaller size. This analysis is specific to AMHS regional data, CHNA/CHIPs, and organizational culture. The steps chosen are generalizable and have been designed with the intention of other institutions without exorbitant means of analysts or experts to be able to replicate the steps and design a health equity program to suit their needs. The third limitation is the migration during the pandemic; due to this study's time and human resource constraints, a pre-pandemic versus post-pandemic analysis could not be conducted. Over the next few years, a

genuine retrospective review of population migration in pre-pandemic (before 2020) and post-pandemic (after 2023) would prove valuable in understanding the change and potential long-term implications. The shift in population and health status should be further explored to address the needs of those served adequately and to ensure health equity. The fourth and final limitation considered is geographic area per person analysis. This analysis was not conducted during this study, and the GFH catchment region is much more rural and dispersed than the other three locations; this may or may not result in transportation issues when considering equitable access. Once patient-specific level data is available, this component needs to be studied.

Practical Applications

Of the more than six thousand hospitals referenced in Chapter 1, the principles and methodologies outlined in this research offer a replicable framework for designing and implementing health equity programs within any institution or healthcare system. This study's implementation section (Chapter 5) provides a blueprint that can be adapted to suit the unique needs of various healthcare settings. The imperative of ensuring equitable access to acute care extends beyond individual health outcomes to encompass broader population health considerations.

In the context of the Albany Med Health System (AMHS), this research serves to streamline resource compilation and enhance operational efficiency, particularly given the overlapping catchment areas of adjacent campuses. As the system progresses towards complete alignment with a unified policy platform and electronic health record system, implementing a cohesive strategic health equity strategy will reinforce the

connection between campuses and their respective communities while fostering improved health outcomes for served populations. Ultimately, this initiative aligns with the overarching value of fostering a diverse, equitable, inclusive, and welcoming healthcare system, as articulated on the system's webpage (Albany Med Health System Our Story, 2021).

Future Research

The spotlight on opportunities for health equity implementation has intensified, particularly following a thorough examination of the disparities in SARS-CoV-2 outcomes and vaccination rates worldwide. Future research endeavors will focus on further solidifying and disseminating a comprehensive toolkit tailored for acute care and other healthcare settings, presented in a format that is easily accessible and actionable. The objective is to furnish resources and practical steps to individuals or organizations interested in initiating independent health equity programs within their institutions.

As previously noted in the limitations section, there exists an opportunity for conducting direct comparisons of populations, their demographic characteristics, and health statuses between pre-pandemic, pandemic, and post-pandemic periods. This research endeavor holds the potential to furnish valuable insights to scientists, facilitating a deeper understanding of the trajectory, projection, and potential interventions required to address health equity and mitigate disparate outcomes.

Despite its historical complexity, achieving health equity is not an insurmountable task. Acute healthcare facilities can establish robust health equity programs with minimal additional resources, particularly those engaging in Community

Health Needs Assessments and Community Health Improvement Plans. Collaborative partnerships with community health organizations, departments of health, and public health departments play a crucial role in identifying and addressing community needs. This research underscores the practical application of readily available resources for program development in any healthcare setting.

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UNMC DrPH Program
DrPH Dissertation Final Approval Form

Addressing Equitable Access in a Safety-Net Hospital System: An Implementation Framework

By

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