ADVANCING THE IMPLEMENTATION OF CLAS STANDARDS TO SUPPORT HEALTH OF SOUTH ASIAN AMERICANS

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Submitted to the faculty of the Richard M. Fairbanks School of Public Health
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Accepted by the Richard M. Fairbanks School of Public Health of Indiana University, in partial
fulfillment of the requirements for the degree of Doctor of Public Health

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DEDICATION

This dissertation is dedicated to my best friend and biggest cheerleader, my brother, Ronald Benjamin. He was the first to know I was applying to the DrPH program, the one who encouraged me to absolutely go for it when accepted, and the one who had no doubts I would see it through. Many of my assignments during the first year were done with him on the other end of the phone, sometimes in simple silence as we both worked, but most often with laughter when he sensed my stress and anxiety and tried to lighten my mood. How I wish he was here now to see the end. I know he would be profoundly proud as I use this work to help raise awareness for other South Asian families, so they are spared from a similar tragedy and loss. Gone way too soon but forever and infinitely in my heart. I am eternally grateful for the special bond we shared, and for the love, laughs, encouragement, and inspiration. Rest in peace and love, Bro.

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ADVANCING THE IMPLEMENTATION OF CLAS STANDARDS TO SUPPORT HEALTH OF SOUTH ASIAN AMERICANS

Asian Americans are the fastest-growing racial and ethnic group in the United States, projected to reach nearly 34 million by 2050. A subset of Asian Americans, South Asians, face tremendous cultural, socioeconomic, linguistic, and structural obstacles to achieving good health. In 2018, the Office of Minority Health established the National Culturally and Linguistically Appropriate Services Standards (CLAS) framework for improving healthcare quality and advancing health equity for increasingly diverse communities, including South Asians.

The purpose of this qualitative study is to understand how providers in California, a state with a large South Asian population, are implementing the CLAS Standard. California is one of ten states that enacted legislation requiring mandatory cultural competency training in accordance with the CLAS standards. Semi-structured interviewers were conducted with a range of providers (n=12) in California to identify facilitators and barriers to successful implementation and inform strategies to advance the CLAS standard to support the health of South Asians.

Responses were categorized within the three *elements* of Solberg's (2007) framework for quality improvement: Compliance and Enforcement of the CLAS Standard (*priority*), Cultural Competence Training and Adherence to the CLAS Standard (*change process capability*); and Support for the Health of South Asian Americans (*care process content*). Within each element, responses were identified as facilitators or

barriers, including examples from multiple participants. Findings show that while there is enforcement of cultural competency training in the workplace, lack of clear understanding and/or delineation between CLAS and other training promoting health equity is evident amongst providers. Further, providers value supporting South Asian Americans by advocating for proper inclusion and health data that is representative and disaggregated for this population. A plan for change to advance the implementation of the CLAS Standard is presented guided by Kotter's Change Management Model.

Cynthia Stone, DrPH, Chair

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CHAPTER ONE: INTRODUCTION

Background

Asian Americans are the fastest-growing racial and ethnic group in the United States, with a population of more than 18 million that is projected to reach nearly 34 million by 2050 (Jose et.al, 2014). The six (6) largest Asian American subgroups in the United States are Asian Indians, Chinese, Filipinos, Japanese, Koreans, and Vietnamese and these six (6) subgroups make up 84% of Asians in the United States based on the 2010 Census data (Jose et.al, 2014).

A subset of the larger Asian American racial and ethnic group is South Asians. People of South Asian descent include individuals who can trace their ancestry to the countries of India, Pakistan, Nepal, Bangladesh, Bhutan, the Maldives, and Sri Lanka. Most South Asians in the United States are of Asian Indian origin (~80%), with rapidly growing Bhutanese and Nepali populations (Volgman et.al, 2018). The South Asian population grew roughly by 40% between 2010 and 2017 (South Asian Americans Leading Together, 2019). Nearly 5.4 million South Asians live in the United States based on the 2017 American Community Survey, up from 3.5 million counted in the Census 2010 (South Asian Americans Leading Together, 2019). The five states with the largest South Asian populations are in California, New York, New Jersey, Texas, and Illinois (South Asian Americans Leading Together, 2015).

According to Gany et.al (2019), the diverse South Asian population often faces tremendous cultural, socioeconomic, linguistic, and structural obstacles to achieving good health. The authors suggest that key considerations in addressing South Asian health disparities are socioeconomic variables such as culture, language, living conditions,

education, income, social norms, social status, migration, and acculturation (Gany et.al, 2019). They further report that these socioeconomic variables can have a significant impact on disease prevalence and outcomes and may even act to confound outcomes (Gany et.al, 2019).

The subsequent sections will outline some of the staggering biological and non-biological disease burdens in the South Asian population to better understand why it is important for healthcare providers to advance Culturally and Linguistically Appropriate Services (CLAS) Standards established by the United States Office of Minority Health (OMH) to support the health of this growing population.

Disease Burden

Cardiovascular Disease

Researchers started observing Atherosclerotic Cardiovascular Disease (ASCVD) among South Asians at the turn of the 21st century (Volgman et.al, 2018). An analysis of a patient cohort from 1978 to 1985 in Northern California revealed significantly higher rates of hospitalization for ASCVD among South Asians in a longitudinal follow-up compared with seven (7) other racial and ethnic minority groups, with a hazard ratio of 2.4 compared with Non-Hispanic Whites (Volgman et. al, 2018). According to Kanaya et. al (2019), South Asians have a unique phenotype with a high prevalence of early-onset cardiovascular disease (CVD) where conventional risk factors (age, sex, smoking, obesity, diabetes, cholesterol, and hypertension) do not fully explain this heightened disease risk. The two cardinal features of coronary heart disease (CHD) in South Asians in the United States are prematurity and heightened severity. In large-scale studies, the

mean age of diagnosis of CHD in South Asians was lower compared to the general United States population (Palaniappan, 2018).

Diabetes

The greatest risk factor disparity in South Asians is seen in the occurrence of Type 2 Diabetes Mellitus (T2DM) and impaired glucose tolerance (Volgman et.al, 2018). Studies have shown that regardless of Body Mass Index (BMI) classification, South Asians have the highest BMI-specific prevalence of T2DM among all ethnic groups in the United States (Gujral et.al, 2013). A randomized population-based study of South Asians in the United States reported an overall T2DM prevalence of 17.4% in South Asian adults, greatly exceeding those in non-Hispanic whites (7.8%), non-Hispanic blacks (13%) and Hispanic Latinos (10.2%) (Gujral et.al, 2013). This is more than a two-fold higher prevalence of T2DM in the South Asian population.

The Mediators of Atherosclerosis in South Asians Living in America (MASALA) study, the first prospective cohort longitudinal study of South Asians in the United States, has noted that 9.7% of participants reported gestational diabetes and women with gestational diabetes were 3.2 times more likely to develop diabetes than those without (Volgman et.al, 2018).

Metabolic Syndrome and Insulin Resistance

There is a disproportionately high prevalence of metabolic syndrome (MetS) and insulin resistance in South Asians which may explain the higher prevalence of T2DM and ASCVD (Volgman et.al, 2018). MetS is characterized by increased abdominal adiposity, elevated blood pressure, high triglycerides, low HDL, and high blood fasting glucose level. It is evidenced that glucose levels are similar between South Asians and Non-

Hispanic Whites (NHWs), however, South Asians have higher fasting insulin levels and greater insulin resistance (Volgman et. al, 2018).

Acculturation and Health Behaviors

The migration of South Asians to the United States has reflected a combination of traditional cultural cuisines and acculturation to the developed Western world. Acculturation is defined as the adoption of the customs, beliefs, principles, and actions of one cultural group by members of a different cultural group (Volgman et. al, 2018). There is a lack of research to better understand the direct impact of acculturation on South Asian's health, however, among all Asians in the United States, South Asians have the highest rates of truncal obesity (Volgman, 2018). Truncal obesity is linked to dietary choices. Acculturation in other migrant groups has been shown to be associated with poor health behaviors and higher rates of developing hypertension, T2DM, obesity, and CVD (Diez et al, 2005).

Inactivity and Diet

A low level of physical activity, a significant risk for many chronic diseases, is independently associated with the development of T2DM in South Asians (Volgman et.al, 2018). South Asians had less total lean abdominal muscle mass compared with all other racial/ethnic minority groups (Volgman et. al, 2018). The South Asian diet typically has a high percentage of foods from the carbohydrate group and saturated fats. This is even more apparent in many South Asians who adopt vegetarianism for religious and/or cultural purposes (Volgman et.al, 2018). The tendency is to increase fat in their diet to make up for the absence of meat.

CLAS Standards

National CLAS Standards established by the OMH aim to improve healthcare quality and advance health equity by establishing a framework for organizations to serve the nation's increasingly diverse communities (OHM, 2018). There are a set of 15 action steps in the National CLAS Standards divided among four (4) broad themes: 1) Principal Standard; 2) Governance, Leadership, and Workforce; 3) Communication and Language Assistance; and 4) Engagement, Continuous Improvement, and Accountability. This study's focus is on the Principal Standard which has only one action step; to provide effective, equitable, understandable, and respectful quality care and service that are responsive to diverse cultural health beliefs and practices, preferred languages, health literacy, and other communication needs.

The Principal Standard is a part of the Enhanced National CLAS Standards established in 2013 to include a new definition for cultural identities beyond race and ethnicities (such as sexual orientation), an organizational blueprint of exemplary practices, and recommendations to adopt the standards in public health organizations (Aggarwal et. al, 2018).

Rationale

Behavioral, cultural, religious, ethnic, and linguistic diversity exists in the South Asian population. These can be barriers to establishing effective communication with healthcare providers leading to prolonged diagnosis, ineffective preventative care, and/or disease management. Language barriers are reported to exist in older South Asian adults who may have difficulty understanding not only English, but possibly other South Asian languages not native to them even if a translator were to be availed since there are 22

official languages spoken in India alone (Agrawal, 2013). This is important to note because it can have a profound impact on access to proper healthcare. Cultural competency is a broad concept used to describe a variety of interventions that aim to improve the accessibility and effectiveness of healthcare services for people from racial/ethnic minorities (Truong, Paradies & Priest, 2014). Studies have shown that healthcare provider interventions found evidence of improvement in health outcomes (Truong, Paradies & Priest, 2014).

Despite the growing size of the South Asian population in the United States, the risk of death from heart disease, for example, has been largely shrouded by the scarcity of racial and ethnic-specific data. Gany et. al (2019) state data that are nationally representative and disaggregated according to the South Asian subgroups are lacking. This limits researchers and community members in their ability to accurately understand and address areas of need and subsequently, how best to develop and implement culturally tailored, evidence-based interventions (Gany et. al, 2019).

California is the focal point for this study because it is one of five (5) states with the largest South Asian population. California is also the state with the largest Asian American population in the United States (OMH, 2018). Additionally, the state of California is one of ten (10) states that enacted legislation requiring mandatory cultural competency training in accordance with the CLAS standards initiative in the practice of medicine (HHS, n.d.).

Proposed Study

The overarching research question for this study is "How best can providers in California advance the implementation of the United States Office of Minority Health's

CLAS Principal Standard to support health of South Asian Americans?" For the context of this study, providers are physicians, mid-level healthcare providers defined as Nurse Practitioners (NP) and Physicians Assistants (PA), and community-based service providers.

The variables or concepts we researched for this study are providers, CLAS Standards, and the health of South Asian Americans in California. With this context in mind, our intent is to use literature review and key informant interviews to help answer the following sub-questions (or aims): The objective of the study is to seek answers to the following sub-questions (or aims) from the perspective of providers:

1. How has California implemented the CLAS Standard?
2. What are facilitators and barriers to successful implementation?
3. What is the best strategy to advance the CLAS standard?

Conceptual Framework

This study is guided by the conceptual framework for improving medical practice constructed by Leif Solberg (Appendix 1). The framework focuses on three (3) main elements that must all be present to a substantial degree in order for the desired improvements in the quality-of-care processes and patient outcomes to be produced (Solberg, 2007). The three elements are 1) *priority,* 2) *change process capability*, and 3) *care process content*. Solberg argues that a particularly important feature of this framework which is seemingly missing from other efforts to improve care is its emphasis on a clear separation of the change process from the care process content (Solberg, 2007).

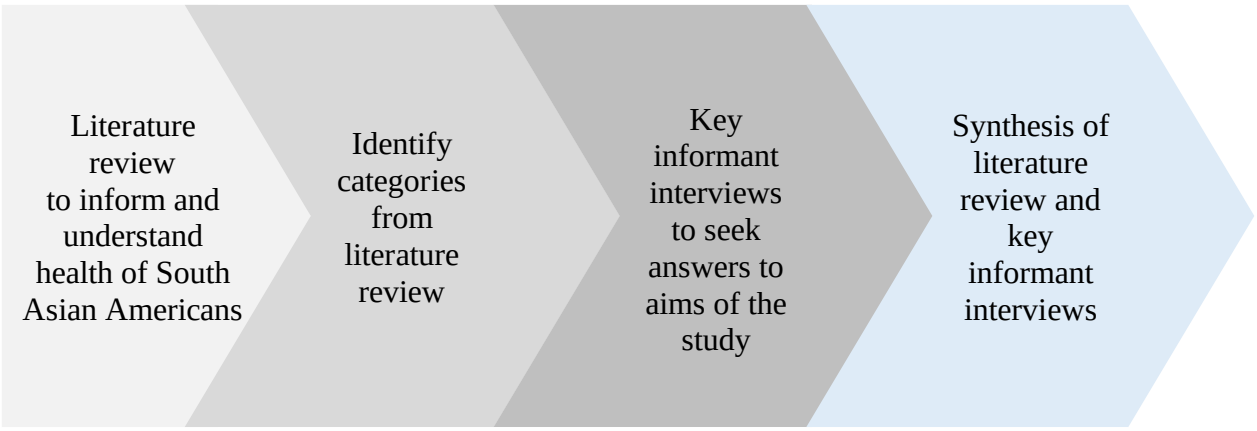
In this study, the *priority* element will be used to identify the current environment of providers in California. Our aim is to understand how the practice of the CLAS

Standard has been implemented. Solberg states that it is not enough for leaders to merely state that a particular change is a priority, rather, that priority must be shared by other personnel at all levels and be reinformed by focused actions and commitment of resources (Solberg, 2007). We will identify the facilitators and the barriers for providers to prioritize the practice of the CLAS Standard. The *change process capability* element will help identify barriers, if any, to advance the successful implementation of the CLAS Standard and in the absence of barriers, identify strategies that have been successful in advancing the CLAS Standard. This requires an understanding of the current strategies in place. Lastly, the *care process content* will explore current understanding and practice in providing care for the South Asian American population, and address how the CLAS Standard can be advanced in healthcare delivery by providers to improve health outcomes in this population. The goal is to advance the implementation of the CLAS Standard to support the health of South Asian Americans in California.

CHAPTER TWO: REVIEW OF THE LITERATURE

The purpose of the literature review was to gain insight into the current understanding of how best providers in California can advance the implementation of the CLAS Principal Standard to support the health of South Asian Americans. Additionally, the literature review was used to navigate next steps in identifying the appropriate research design to collect data, answer relevant key questions and provide the basic pathway to data generation as illustrated by Figure 1 below. This literature review was not date restricted. PubMed, Embase, and Google Scholar databases were the primary data sources used for this review. Only articles in English were searched.

Figure 1. Pathway to data generation



Search Strategy

The search strategy used "Boolean" AND/OR search functionality and Mesh terms. Search results using this strategy from the three (3) main data sources are listed below (Table 1).

Table 1. List of literature sources

Data Sources	Search	Type
PubMed	("Asian Americans"[Mesh]) AND ("Minority Groups"[Mesh])	381 Articles
	("Asian Americans" OR "south asians" OR "indian americans") AND ("minority health") AND (america OR "united states")	91 Articles
	("Asian Americans" OR "south asians" OR "indian americans") AND ("minority health") AND (america OR "united states") AND California	20 Articles
Embase	('south asians' OR 'south asian' OR 'asian american' OR 'indian american') AND 'california' AND 'minority health'	118 Articles
Google Scholar	("south asians" OR "south asian"OR "asian american" OR "indian american") AND "california" AND "minority health" AND "CLAS"	437 Articles
HHS.gov	Office of Minority Health	Data & Statistics
phpartners.org	State Health Data	Data & Statistics
Phpartners.org	State Legislation and Policy	Health Disparities: State Laws
SAALT.org	South Asian Demographics	Data (resources and fact sheets) & Statistics

Keywords and Terms

This literature review search was conducted mainly in PubMed using keywords primarily, and MeSH terms. Keywords were identified by main concepts from the research question and are listed below in Table 2. Using MeSH terms "Asian Americans" and "Minority Groups" in this search resulted in 381 hits. The main concepts were then searched first using keywords only and then combined with "OR" and "AND" to narrow the search. The initial search resulted in 91 hits and upon further use of "California" as a keyword, the search narrowed down to 20 hits in PubMed. Using similar keywords, Quick Search in EMBASE produced 118 hits. Google Scholar search resulted in 437 hits. The HHS.gov website produced data and statistics on CLAS standards. SAALT.org produced data for South Asian demographics in the United States. It is also a site for resources and facts sheets. phpartners.org produced data, statistics, and state laws for health disparities. List of study keywords and terms are outlined in Table 2 below.

Table 2. List of study keywords and terms

Concept	Synonyms or Related Terms
Primary Healthcare Providers	Healthcare; Healthcare providers; Primary Care; Primary Healthcare; Primary Care Providers; Physicians; Doctors; Nurse Practitioners; Physician Assistants
Culturally and Linguistically Appropriate Services (CLAS) standards	CLAS; CLAS standard; National CLAS Standards; Cultural Services; Linguistic services; Minority Health; Cultural competency
South Asians	South Asian; Asian Americans; Asian American; Indian Americans

Inclusion and Exclusion Criteria

The inclusion criteria for this study were used to select articles with content that must be present to answer the overarching research question and sub-questions. The inclusion criteria were carefully selected to ensure the articles included were relevant to the research question. The exclusion criteria were selected to exclude irrelevant articles, narrow the search, and minimize any potential error. Criteria for inclusion and exclusion are in Table 3 below.

Table 3. Inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
• Physicians • Nurse Practitioners • Physician Assistants • Primary Healthcare Providers • National CLAS standards • Principal CLAS standard • Minority Health • Strategies addressing racial/ethnic disparity by CLAS Standards • Culturally competent strategies • South Asian • South Asian ethnicity • Asian American • Asian Indian • California • United States • Quantitative and qualitative research • Peer-Reviewed journal articles • Full text • Grey literature • English	• Non CLAS standards • Strategies not addressing racial/ethnic disparity • Strategies addressing racial/ethnic disparity not including CLAS Standards • Not in the United States • Not peer reviewed • Full text unavailable • Newspaper articles • Editorials & Commentaries • Not in English

Paring down the literature by main concepts, contextually identified as providers (physicians, nurse practitioners, and physician assistants), CLAS Standards, and South

Asians in California, provided 15 studies and articles that are pertinent to the research topic. The literature included a collection of empirical studies and primary data collection through both qualitative and quantitative research methods. In addition, government websites and databases were also used. The 15 studies are from peer-reviewed and respectable journal publications.

Categories

Findings from the 15 articles were grouped into three broad content areas or categories. Three (3) articles aligned to category one; five (5) articles aligned to category two; and seven (7) articles aligned to category three. Classification of these categories are:

1. Lack of compliance and enforcement of CLAS Standards
2. Lack of cultural competency training and adherence to CLAS Standards
3. South Asian American population healthcare experiences

Category 1: Lack of Compliance and Enforcement of CLAS Standards

Payne (2012) reports that "while multiple organizations, scholars, and advocates promote CLAS mandates in their communities, a DHHS Office of Inspector General 2010 review stated that these CLAS Standards are not mandatory, and subsequently report that OMH officials mislabeled the CLAS Standards as mandates, but these standards are actually voluntary and simply recommended by OMH" (p. 969). Payne (2012) also states that "there is no enforcement mechanism discussed on the OMH website or in the report which punishes those who do not follow these so-called mandates" (p. 968). The 2013 Enhanced CLAS Standards Blueprint published by the OMH states that under Title VI of the Civil Rights Act of 1964, organizations receiving

federal funds must take *reasonable* steps to provide meaningful access to their programs for individuals with limited English language proficiency (OHM, 2013).

In the state of California, Assembly Bill No. 1195, passed in 2005, required that all continuing medical education (CME) courses contain a curriculum that includes cultural and linguistic competency in the practice of medicine (HHS, n.d.). In particular, physicians and surgeons were required to complete cultural and linguistic competency training as part of their CME requirements. According to Estrada and Messias (2015), "To date there have been no formal reviews of published literature on the implementation and assessment of the CLAS Standards" (p. 1090). In our own search, seven (7) years after these authors' publications, we were equally unable to find any formal reviews, particularly in the state of California even though a state mandate was passed in 2005. Estrada and Messias (2015) performed a scoping review of the literature for content, focus, conceptualization, and application of CLAS Standards and their findings state "CLAS as a federal mandate that *select* health care settings implement" (p. 1090). The existence of mandated CLAS Standards established by a United States governmental body, the Department of Health and Human Services, seemingly only *implies* compliance and enforcement. Estrada and Messias (2015) findings revealed a widespread lack of compliance with the mandated CLAS Standards and inconsistent regulation and enforcement.

Category 2: Lack of Cultural Competency Training and Adherence to CLAS Standards

Restructuring the health and healthcare organizational processes to better serve a diverse patient population requires the adoption of a holistic framework (Weech-

Maldonado et. al, 2012). Healthcare organizations (HCO) recognize that organizational leaders play an important role in the development and implementation of CLAS Standards (Weech-Maldanado et.al, 2012). A study from Weech-Maldanado et.al (2012) reports on frameworks to develop cultural competency assessment tools to evaluate HCO adherence to CLAS Standards and discuss the development of the Cultural Competency Assessment Tool for Hospitals (CCATH) (p. 3). The results from their study showed that Californian hospitals have better performance in patient-related cultural competency scales, such as data collection on inpatient populations, interpreter services, and clinical cultural competency practices (Weech-Maldanado et.al, 2012). However, California lagged in integrating cultural competency into management practices and community representation (Weech-Maldanado et.al, 2012). The authors found these results to be consistent in prior studies examining cultural competence activities in hospitals in Pennsylvania and Alabama (Weech-Maldanado et.al, 2012). This study also found that not-for-profit hospitals outperform for-profit hospitals in California with respect to cultural competency practices, suggesting the need for further research on the business case for cultural competency (Weech-Maldanado et.al, 2012). The new research could potentially show how organizational cultural competency activities may relate to patient satisfaction, revenues, and financial performance.

Mainous et. al (2020) conducted a study to determine the prevalence of US-based physicians who received training in cultural competency and to describe their behavior. In 2000, the Liaison Committee on Medical Education (LCME) added a standard for medical school education programs to include cultural competency education within their curricula (Mainous et.al, 2020). Mainous et.al (2020) report it is unclear how much

CLAS Standards and culturally competent behavior have been integrated into physician practice. The authors further claim that there is a gap in the understanding of the types of strategies that practicing physicians integrate into practice (Mainous et. al, 2020). Mainous et. al (2020) conducted a quantitative study utilizing data from the 2016 National Ambulatory Medical Care Survey (NAMCS), the most current national data on office practice. The results of this nationally representative survey of physicians indicated that fewer than half of practicing physicians reported receiving cultural and linguistic competency training in medical school or residency, and only 66% reported receiving them either in training or post-training (Mainous et.al, 2020). Additionally, only 35% of the respondents had heard of the CLAS Standards and only 19% of respondents said that their practice requires cultural competency training for new hires (Mainous et.al, 2020).

Truong, Paradies, & Priest (2014) and Jongen, McCalman, & Bainbridge (2018) studied health workforce cultural competency interventions by conducting systematic scoping reviews. Jongen, McCalman, & Bainbridge (2018) found that training and development of the health workforce remain a principal strategy towards the goal of improved cultural competence in health services and systems. The study found that one of the key issues across the cultural competence discipline is the lack of consistent terminology and an agreed upon definition of cultural competence and related concepts (Jongen, McCalman & Bainbridge, 2018). Their findings showed that the primary intervention strategies used were cultural competence training (across 69% of the included studies) and other professional development activities (Jongen, McCalman & Bainbridge, 2018). Similarly, Truong, Paradies, & Priest (2014) also found that there is

no uniform definition or framework of cultural competency and despite many potential outcomes from cultural competency interventions, there are very few validated tools to assess cultural competency in published literature.

Category 3: South Asian Population Healthcare Experiences

All seven (7) articles grouped in this broad category address healthcare experiences of Asian Americans, South Asians and/or ethnic minority. In a quantitative study examining a Health Maintenance Organization (HMO), Snyder et.al (2000) analyzed survey participants using members who had made at least one health care visit within the last 365 days to one of 48 physician groups under the HMO. The study found Asians and Pacific Islanders (AAPI) who used their health plans had the worse access to health care than whites, blacks, Hispanics, or people of other ethnicities, even though virtually all groups had some form of insurance (Snyder et.al, 2000). These results were consistent even after adjusting for a variety of important predisposing, enabling, and need factors (Snyder et. al, 2000). Snyder et.al (2000) further report that Asians appeared to rate access lowest in the domains of specialty or testing services, as well as on general and time-related measures and across the various measures of access there was a consistent pattern by race/ethnicity—after whites, Native Americans and others have the best access, followed by blacks, Hispanics, and, finally, Asians and Pacific Islanders.

Ngo-Metzger, Legedza & Phillips (2004) conducted a survey that queried non-Hispanic Whites and non-Hispanic Asian American participants about access to care and their healthcare experiences within a two (2) year time frame. The results found that Asian Americans were less likely than white respondents to report that a doctor has ever talked to them about lifestyle issues (such as smoking, nutrition, or exercise) or mental

health issues; and less likely to report that their doctor understands their background and values (Ngo-Metzger, Legedza & Phillips, 2004). The study also found that Asian Americans were more likely to report that the doctor at their last visit did not spend as much time with them, listen to them, or involve them in decisions about care as much as they wanted (Ngo-Metzger, Legedza & Phillips, 2004).

Shepard et.al (2018) and de Peralta et.al (2019) reported on the role of cultural competence in the health care of minority populations. Their findings posit a general theme and need for culturally competent healthcare that is characterized by care that respects the health beliefs, values, and behaviors of culturally diverse populations and individuals. de Peralta et.al (2019) also highlights The Affordable Care Act (ACA) which includes a mandate to practitioners to focus on "developing approaches to engage and monitor patients outside of the office" (p. 1104).

Lyles et. al (2011) and Shah et. al (2015) published on disease-specific care of South Asians, diabetes, and cardiovascular health respectively. Lyles et.al (2011) examined survey data from the Diabetes Study of Northern California (DISTANCE), using a race-stratified sample of Kaiser diabetes patients. The results of this study (n=17,795; 13% East Asians) showed that health care discrimination was more frequently reported by minorities and those with poorer health literacy, limited English literacy and depression (Lyles et.al, 2011). Shah et.al (2015) recruited South Asian participants from community organizations in Chicago, Illinois and used a qualitative design utilizing questionnaires to assess participants' knowledge and perceptions before and after a patient education program of a culture-specific, multimedia coronary heart disease prevention education. The results showed participants' knowledge and perceptions

regarding cardiovascular health improved significantly in the areas of smoking, cholesterol, blood pressure, and diabetes (Shah et.al, 2015). Overall, post-test scores significantly increased among participants with English proficiency and low acculturation (Shah et. al, 2015).

Results

The literature review brought to light ethical and practical reasons why providing culturally and linguistically appropriate services is important to the healthcare needs of the South Asian American population. As evident in the information provided in the Introduction chapter of this paper, Asian Americans are the fastest-growing racial and ethnic group in the United States and as one of the six largest subgroups in this group, the South Asian population often faces tremendous cultural, socioeconomic, linguistic, and structural obstacles to achieving good health (Gany et. al, 2019).

The United States Department of Health and Human Services defines health equity as the attainment of the highest level of health for all people (OMH, 2018). The agency exerts that individuals across the United States come from various cultural backgrounds and are unable to attain their highest level of health for several reasons, including the social determinants of health, or those conditions in which individuals are born, grow, live, work and age, such as socioeconomic status, education level, and the availability of health services (OMH, 2018). The agency further exerts that although health inequities are directly related to the existence of historical and current discrimination and social justice, one of the most modifiable factors is the lack of culturally and linguistically appropriate services (OMH, 2018). These services are broadly defined as care and services that are respectful of and responsive to the cultural

and linguistic needs of all individuals (OMH, 2018). This is the basis for the recommendation of the implementation of CLAS Standards.

Theoretically, the three broad categories and the studies that helped derive them should be able to provide considerable insight and answers to the sub-questions (or aims) that had been formulated to help answer the over-arching research question for this study. The sub-questions for this study are, first, how has California implemented the CLAS Standard? This question requires research and understanding of the current practice of the CLAS Standard. Secondly, what are facilitators, and barriers to successful implementation? Here we want to identify what strategies were used successfully and why did those strategies work; and if not implemented, what are the barriers to a successful CLAS implementation? And lastly, this study is intended to identify and address the best strategy to advance the CLAS Standard. Can the best strategy be generalized? This literature review while helpful, highlighted some gaps and challenges in finding published material that provided comprehensive answers to the first two aims of this study.

Health Environment of South Asians

The staggering biological and non-biological disease burdens in the South Asian population were described extensively in the Introduction chapter of this paper. The literature search and review was able to find seven (7) studies that aligned to the population healthcare experiences of Asian Americans, South Asians, and/or ethnic minorities. Of the seven studies, two (2) studies by Lyles et.al (2011) and Shah et.al (2015) published specifically on the experiences of South Asians in the United States. Lyle et.al (2011) showed health care discrimination was more frequently reported by

minorities and those with poorer health literacy, limited English literacy, and depression (Lyles et.al, 2011). Shah et.al (2015) showed participants' knowledge and perceptions regarding cardiovascular health improved significantly in the areas of smoking, cholesterol, blood pressure, and diabetes after a patient education program of a culture-specific multimedia coronary heart disease prevention education. Overall, post-test scores significantly increased among participants with English proficiency and low acculturation (Shah et. al, 2015).

Gany et. al (2019) conducted a three-part initiative to foster sustained community-academic forums among South Asian immigrant communities throughout the United States. First, by holding virtual working group meetings; second, a day-long-in-person convening of all the working group members; and third, five-community-academic forums to further engage the South Asian community in defining research priorities. Findings from Gany et. al (2019) showed that "data that are nationally representative and disaggregated according to the South Asian subgroups are lacking, which limits researchers and community members in their ability to accurately understand and address areas of need and how best to develop and implement culturally tailored, evidence-based interventions" (p. 2). More importantly, this study found that socioeconomic variables such as culture, language, living conditions, education, income, social norms, social status, migration, and acculturation can have a significant impact on disease prevalence and outcomes, and are key considerations in addressing South Asian health disparities (Gany et.al, 2019).

Overall, the reviewed studies were able to provide some research evidence that this population is impacted by a general lack of culturally and linguistically appropriate

services and that proper culture-specific interventions helped improve disease understanding and prevention.

Extent of CLAS Principal Standard Implementation in California

While the literature review was able to provide a wealth of information on CLAS Standards, one of the biggest challenges encountered was the lack of information on the CLAS Principal Standard in itself. The overarching research question for this study is "How best can providers in California advance the implementation of the United States Office of Minority Health's CLAS Principal Standard to support the health of South Asian Americans?" However, the literature review was unable to identify studies that specifically addressed "CLAS Principal Standard". Rather, studies addressed CLAS Standards in a general context.

OMH launched the National CLAS Standards Enhancement Initiative to update the original National CLAS Standards established in 2000 to address advancements, expand scope and improve clarity to ensure understanding and implementation (HHS, 2016). The 15 enhanced National CLAS Standards, established 13 years later in 2013, are organized into one Principal Standard which is "to provide effective, equitable, understandable, respectful, and quality care and services that are responsive to diverse cultural health beliefs and practices, preferred languages, health literacy, and other communication needs", and 14 remaining standards categorized into three themes: (1) governance, leadership, and workforce; (2) communication and language assistance; and (3) engagement, continuous improvement, and accountability (HHS, 2016). According to HHS (2016), if these 14 standards are met, the Principal Standard will be achieved.

Original CLAS Standards versus Enhanced National CLAS Standards

According to the OMH, all members of the health and healthcare community can benefit from the framework offered by the enhanced National CLAS Standards. The enhanced National CLAS Standards are directed toward a broader audience than the original Standards in order to address more fully every point of contact throughout the health care system services (OMH, 2013). As such, the enhanced National CLAS Standards have adopted an expanded, broader definition of "culture". This is an important fact and point of distinction because, in the literature search, two (2) of the three (3) studies found enforcement of CLAS Standards had a heavy emphasis on the linguistic component of the Standards as opposed to the cultural component. The two (2) studies were published in 2012 and 2015 respectively; one before and the other just after the enhanced National CLAS Standards were published.

Four (4) of the 14 original Standards, namely standards 4, 5, 6 & 7, pertained to healthcare organizations providing language assistance services such as bilingual staff and interpreter services and rights to both verbal offers and written notices informing patients of their right to receive language assistance services (Estrada & Messias, 2015). These four standards represented a comprehensive response to widespread evidence that language and cultural issues contribute to healthcare inequities and negatively affect the health outcomes of vulnerable populations (Estrada & Messias, 2015). Payne (2012) also reported on these four standards as "mandates" that were considered federal requirements for all recipients of federal funds (p. 968). The enhanced National CLAS Standards, on the other hand, place emphasis on broadening the understanding and application of

appropriate services to include communication needs and services, including sign language, braille, oral interpretation, and written translation (OMH, 2013).

CLAS Standards Implementation in California

Research through the Cultural Competency Assessment Tool for Hospitals (CCATH) study has shown that Californian hospitals have better performance in patient-related cultural competency scales, such as data collection on inpatient populations, interpreter services, and clinical cultural competency practices (Weech-Maldanado et.al, 2012). However, California lagged in integrating cultural competency into management practices and community representation (Weech-Maldanado et.al, 2012). The same study also found that not-for-profit hospitals outperform for-profit hospitals in California with respect to cultural competency practices (Weech-Maldanado et.al, 2012).

In the state of California, Assembly Bill No. 1195 required that all continuing medical education courses contain a curriculum that includes cultural and linguistic competency in the practice of medicine (HHS, n.d.). In particular, physicians and surgeons were required to complete cultural and linguistic competency training as part of their continuing medical education requirements. According to OMH, the California Department of Public Health incorporated the enhanced National CLAS Standards in California's Statewide Plan to Promote Health and Mental Health Equity in 2014 (HHS, 2016). Additionally, the Department of Health Care Services mandates that each county's mental health department develop and annually update a Cultural Competence Plan (HHS, 2016). However, data is lacking on the implementation, training, enforcement, and assessment of these adopted policies in the published literature as well as in secondary sources. The University of California Davis' Health Center for Reducing

Health Disparities has a curriculum titled “Providing Quality Health and Health Care with CLAS” (UC Davis, 2023). This appears to be the type of standardized platform by which healthcare organizations in California can implement primary healthcare provider training.

The literature review was able to provide an understanding of the health environment of the South Asian population. It was also able to provide a wealth of information regarding CLAS Standards, why healthcare organizations need to implement the framework; and how and why healthcare providers will benefit from the training as better caregivers and patients, as the recipients. However, the findings showed a lack of clarity on compliance, enforcement, and adherence of CLAS Standards.

Since published literature for these specific concepts are proving difficult to find, it is hypothesized that key informants’ interviews will help fill gaps in missing information. For maximum benefit to the study, informants will be chosen based on their professional roles and expertise in and of the community and health care industry. Key informant interviews will also help identify stakeholders, including but not limited to primary healthcare providers and community-based service providers from the South Asian community in California.

In summary, keywords and terms used in searches were selected based on groupings of concepts identified from the overarching research question. A total of 29 data references were identified for this literature review. Of the 29 references, four (4) are governmental websites where data, statistics, and information on credentialing and licensure were obtained; two (2) are from non-governmental organizations which provided facts and resources on the South Asian population; and the remaining 23 are

from peer-reviewed journal articles with a high level of information on CLAS Standards, primary healthcare provider CLAS Standard enforcement and lack of, as well as the overall health and disease burden of the South Asian population. The 23 peer-reviewed journal articles have a high level of reliability, are directly related to the research topic, and are from trusted journal sources. Due to the nature of this topic, a variety of disciplines from medicine to medical education and anthropology were utilized.

CHAPTER THREE: METHODOLOGY

The research question for this study is "How best can providers in California advance the implementation of the United States Office of Minority Health's CLAS Principal Standard to support health of South Asian Americans?" The objective of the study is to seek answers to the following aims from the perspective of providers:

1. How has California implemented the CLAS Standard?
2. What are facilitators and barriers to successful implementation?
3. What is the best strategy to advance the CLAS standard?

Qualitative Design

To seek answers to the research question, this study employed a qualitative research design using key informant interviews with a semi-structured format. The purpose for choosing a qualitative research design is because it was best aligned to identify barriers and gain an understanding of factors influencing CLAS-based care in the South Asian American population; barriers, strategies, and outcomes in implementing CLAS standards in the community; and recommendations to advance CLAS standards, if applicable. Qualitative key informant interviews were selected for this study because they provide an opportunity to understand, in an in-depth manner, the unique views and perceptions of the interviewees (McGrath et.al, 2018). According to McGarth et.al (2018), qualitative interviewing is a data-collection tool where it enables researchers to understand an interviewee's subjective perspective of a phenomenon, in context. Because the process of this design is focused on obtaining data through an open-ended, semi-structured format, it is the appropriate design to answer the research question and subsequent aims of this study.

Participants

Key informants interviewed for this study are physicians, Nurse Practitioners (NP), Physicians Assistants (PA), and community-based service providers to collect first-hand information, targeted knowledge, and understanding pertaining to CLAS Standards. Between January and February 2023, 12 semi-structured interviews were completed with providers from the state of California. We connected with two (2) other individuals but ultimately they were unable to participate in the study. The names of participants have been kept confidential. Table 4 below provides the participants' details.

Table 4. Key Informants

Profession	Informant	Years of experience	Institution Type
Physician	Ashley[a]	21	Large University Health Center
Physician	Penny[a]	16	Large University Health Center
Physician	Maddy[a]	15	Integrated Health Delivery Network
Physician	Stephen[a]	46	Large University Health Center
Nurse Practitioner	Laura[a]	4	Integrated Health Delivery Network
Nurse Practitioner	Mary[a]	7	Primary Care Medical Facility
Nurse Practitioner	Susan[a]	23	Integrated Health Delivery Network
Physician's Assistant	Mona[a]	7	Urgent Primary Care Facility
Physician's Assistant	George[a]	6	Primary Care Medical Facility
Community Service Provider	Helen[a]	7	South Asian Community Network
Community Service Provider	Jackie[a]	23	Large Public University
Community Service Provider	Ann[a]	3	South Asian Community Network

[a]Pseudonym

Participants had an estimated 178 total years of work experience, an average of 15 years per participant.

Recruitment Plan

Participants were selected using purposive sampling, chosen because of their professional roles and expertise in and of the communities they serve; and their knowledge and ability to provide in-depth information on all three aims listed previously.

In purposive sampling, the researcher aims to discover, understand, and gain insight from a sample from which most can be learned from participants' specific expertise and competencies (Merriam, 2009).

Participants (n=12) represented a range of primary healthcare providers and community service providers from the state of California, with the majority (n=8) of the participants from Southern California. The reasoning for this is that Southern California, particularly Los Angeles County, has the largest South Asian population in the state. Professional connections and word-of-mouth referrals from friends and family were used for recruiting most of our participants. Additionally, we also asked recruited participants to suggest additional informants.

As researchers, we adapted all necessary measures to study and understand each participant's background and expertise so that the interviews would yield deep and meaningful information to help answer the research question and aims of the study. The first participant we interviewed, Ashley, is a physician, a key informant, and an influential researcher and scholar who decided to point her research lens toward studying the reasons behind the devastating toll of heart disease and stroke amongst family members, friends, and others in the South Asian community. Ashley launched a useful and renowned study to better understand the factors leading to heart disease in South Asians in the United States. She is a scholar in this field and several of her publications were identified while conducting the literature review for this study. Ashley was able to provide depth and insight that addressed the purpose of this study.

Besides Ashley, two other physician participants, Penny, and Stephen, also have roles as researchers and/or professors in affiliation with the universities where they are

employed. Both individuals have in-depth knowledge of CLAS Standards as they are involved in teaching and crafting CLAS Standards curriculums. Subsequently, they were able to share more on the topic of CLAS Standards compared to other participants.

The remaining nine (9) participants who were purposively recruited for this study because of their varied experience and expertise, were able to provide a wealth of information to a point where we noticed the same themes and subthemes emerging repeatedly from their individual responses indicating thematic saturation. We stopped recruiting participants for the study when we ceased learning new information from their responses.

An invitation to participate was made via email (Appendix 2). Zoom interviews (30 min) were conducted at a mutually agreed upon time.

Consent

Prior to the start of the interview, the introduction script as outlined in the interview protocol (Appendix 3) was verbally read. Participants were informed both prior to the interview and before the start of the interview that they did not have to participate in the study if they did not want to, and that participation was fully voluntary. They were also informed that they may discontinue participation from the interview at any time and that there were no penalties or consequences of any kind if they decided to do so. Additionally, participants were informed that they did not have to answer any questions they did not want to. Consent for this study was obtained from the Indiana University Human Research Protection Office and the Biomedical Institutional Review Board (IRB). The principal investigator for this study is Dr. Cynthia Stone, and the co-principal investigators are Beatrice Barnabas and Celeste Nicholas.

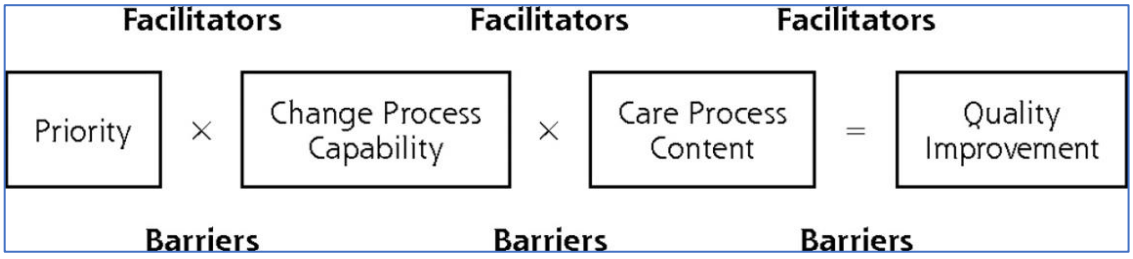
Confidentiality

All research records and electronic files (e.g., database, spreadsheet, etc.) containing identifiable information were password protected. Any computer hosting such files was also password protected to prevent access by unauthorized users. Only members of the research staff had access to the passwords. Data that is shared with others was coded to help protect the participant's identity.

Interview Procedure

The semi-structured interview protocol (Appendix 3) for providers was designed based on Solberg's conceptual framework (Figure 2) we first presented in the Introduction chapter.

Figure 2. Conceptual Framework for quality improvement (Solberg, 2007)



Each of the three elements, *priority*, *change process capability* and *care process content* have facilitators and barriers. Barriers help us understand resources that are lacking, while facilitators help us understand resources that can assist in setting correct and generalizable strategies for change. Our interview protocol was designed so that each of the elements and the corresponding barriers and facilitators are addressed.

The first element of the framework is stressed on *priority.* It is not enough for leaders to merely state that a particular change is a priority; rather, that priority must be shared by other personnel at all levels (Solberg, 2007). We constructed questions addressing the *priority* element by eliciting an understanding of participant's work

environment to understand necessary actions needed to bring about change (quality improvement). This is addressed in the "Compliance and Enforcement of CLAS Standards" section of the interview protocol where we ask participants to consider current processes in place at their place of employment in order for us to understand the key players and the barriers and facilitators that address compliance and enforcement of CLAS Standards.

The second element of the framework is *change process capability*, corresponding to "Cultural Competency Training and Adherence to CLAS Standards" section of the interview protocol. Because cultural competency is the basis of CLAS Standards, we chose questions to understand if providers are mindful of the services they provide based on a patient's racial/ethnic background. These questions will help inform useful strategies, and successful improvement experiences in order to address the change process capability of providers. We hoped participants' responses would provide insight about the extent to which cultural competency training, if taken, is being put into practice, and the specific barriers and challenges that were hindering the practice of CLAS-based care.

The third element is *care process content*. This element pertains to system-level changes in the practice environment and is addressed in the "South Asian Population Health Experience" section of the interview protocol. This section gathers a general sense of how many South Asian patients are regularly seen in the provider's practice, a general sense of their knowledge of this population's health, their understanding and relevancy of CLAS Standards training in their day-to-day practice and interactions.

Over a two-month period in January and February of 2023, 12 participants were interviewed via the Zoom video-conferencing platform. Interviews averaged 33 minutes, totaling 390 minutes for all participants. Audio and transcripts were recorded and saved to secure cloud-based storage.

Analytic Procedures

The initial Zoom transcript was corrected using the source audio to produce approximately 90 pages of single-spaced transcripts. Transcribed data was first read for good understanding. The data was then analyzed using both deductive and inductive processes. Responses were first sorted and organized by predetermined themes corresponding to Solberg (2007) framework's three elements, *priority, change process capability,* and *care process content.* Each of our three main themes corresponded to an element of the framework: "Compliance and enforcement of the CLAS Standard" (*priority*), "Cultural Competence Training and Adherence to the CLAS Standard" (*change process capability*), and "Support for the Health of South Asian Americans" (*care process content*). Within each of our main themes, we coded for subthemes by description of current practice, facilitators, and barriers. We coded by a fourth subtheme, recommendations to help support South Asian Americans, for our third main theme. We then open-coded the data by examples using tools of grounded theory. Charmaz (2006) indicates that coding is an emergent process where unexpected ideas emerge and keep emerging. We did constant comparative analysis and coded by grouping participants' responses by examples. Corbin and Strauss (2007) explain this analytic method as comparing and contrasting with previous information to fit all the pieces inductively

together into a larger puzzle as information is obtained. This iterative process was the basis of our thematic analysis strategy for this study.

A coding summary spreadsheet was created using Microsoft Excel documenting participants' responses to the themes, subthemes, and examples. Relevant quotes were extracted from the transcripts, sorted, and recorded on the coding summary worksheet. Quotes were selected based on how strongly a participant's words, ideas, and experiences illustrated the themes, subthemes, and examples. The coding summary worksheet was used to prepare a concise codebook to report our findings.

Reliability and validity

To ensure the validity of the findings, we chose quotes that were distributed equally across all participants so that they are representative of the data set. We triangulated findings by providing comparisons across multiple participants and roles. Additionally, multiple researchers agreed on the findings of this study based on the data. We were attentive to instances that did not fit the overall patterns of the data set although we were limited by how much participants were able to share either because they did not have the experience or could not speak to the topic. We collected data to the point where we noticed the same information emerging repeatedly from individual responses indicating saturation.

We took steps to ensure reliability. We provided rich context, both in the CLAS Standards and in individual participants, for others to be able to apply this work in similar settings. Additionally, a researcher conducting this study has personal experience from the repercussions of health concerns in the South Asian population and is therefore

deeply vested in the primary care provider and patient relationship in the context of CLAS Standards.

CHAPTER FOUR: FINDINGS

In this chapter, the findings from key informant interviews conducted using the methodology outlined in the previous chapter will be presented. To reiterate, the research question for this study is "How best can providers in California advance the implementation of the United States Office of Minority Health's CLAS Principal Standard to support health of South Asian Americans?" The objective of the study is to seek answers to the following aims from the perspective of the providers:

Aim 1: How has California implemented the CLAS Standard?

Aim 2: What are facilitators and barriers to successful implementation?

Aim 3: What is the best strategy to advance the CLAS standard?

Findings from key informants' interviews yielded information that was vast and varied, based on their experience and knowledge. Data is organized into three main themes, each theme corresponding to Solberg's three elements, *priority, change process capability,* and *care process content* (Figure 2). Within each of the three elements (or main themes), data is further categorized into subthemes corresponding to Solberg's model. There are three subthemes for each element: description of current practice, facilitators, and barriers. The final element, *care process content* includes participants' insights and recommendations to help support a specific vulnerable population, South Asian Americans. Illustrative examples are provided within each of the subthemes from a range of participants.

Aim 3 will be answered in Chapter 5 by providing a plan for change and how that plan can be evaluated upon implementation.

Theme 1: Compliance and Enforcement of the CLAS Standard

The first theme aligns with the *priority* element of Solberg's conceptual framework (2007) where rather than merely stating a particular change is a priority, we gathered data to better understand the current environment and practices of participants. Only a few participants (3/12) had a role within their organization in ensuring compliance and practice of the CLAS Standard. All 12 participants did not have a clear understanding as to who leads the process of enforcing the CLAS Standard, or how long the process had been in place within their place of employment.

Description of Current Practice

Half of the participants (6/12) felt that there is more **awareness of disparities in healthcare and renewed attention to health equity** in their places of employment. Many of the participants indicated that trainings are conducted within their organization to bring attention and raise awareness to health equity to reduce health disparities. On an institutional level, Ashley, a physician-researcher, explains that many universities and healthcare organizations are much more cognizant about frameworks that "promote Diversity, Equity, and Inclusion (DEI) in which a lot of CLAS Standards may be able to fit in terms of engagement and continuous improvement and accountability". She further explained, "DEI is more in our vocabulary now and I think universities are prioritizing, raising awareness, finding ways to mitigate, and looking at everything from the equity lens."

Penny, a physician-professor, indicated that because of recent social movements such as Black Lives Matter involving passionate citizens all over the country, there is more "inclusive awareness" in the workplace. Penny claimed that social media plays a

big role in bringing this awareness and the DEI-focused thinking provides yet another opportunity for providers to avoid judging patients simply because "we don't understand their race or ethnicity, or their abilities or disabilities."

Awareness of state requirements. Only the physicians (4/12) were aware of California's legislative requirement to complete cultural and linguistic competency training as part of continuing medical education (CME). One of the physicians, Stephen, commented that the requirement for CME on CLAS Standards is insufficient. He stated, "the CME on the CLAS Standards is what I would consider a spray painting. A first pass. There is not much that you can do with a two-hour of training. In-depth training is needed." Penny stated that while she teaches an Accreditation Council for Continuing Medical Education (ACME) certified course to fellow physicians, the definition of how the class is classified for CME is quite vague. She indicated:

> I think the closest that we get to the CME requirement is some DEI related training. They are using the terminology of culturally linguistic appropriate services which I have trained, but the mandate of that specific training is not as clearly enforced.

Compliance and enforcement. Most of the participants (9/12) indicated that their employer was complying and enforcing the CLAS Standard because it is a state requirement for license to practice. However, participants were unable to describe the title or specific content of the training they regarded as a state requirement for maintaining their professional license. Similarly, participants (9/12) indicated that they underwent some sort of training pertaining to CLAS Standards during their onboarding process and then annually thereafter to maintain compliance, they were unable to

remember the title or content of that training. This suggests that while participants may have fulfilled a training requirement, the content matter of the training was not remarkable or particularly memorable to them. When asked about compliance and enforcement, Maddy, a physician, stated, "we do have implicit bias discussions for everybody, but not cultural competence per se. We received a lot of cultural competency 'type' trainings at onboarding, but not annually." One participant indicated that the Joint Commission Accreditation of Hospital Organizations (JCAHO), the accrediting body of United States healthcare organizations and programs, has a strong accreditation focus on health equity, with some of the performance elements based on CLAS Standards.

Almost all participants (11/12) mentioned the provision of translators as evidence that their employer was complying and enforcing the CLAS Standard. Participants indicated that translators facilitated their ability to provide care based on CLAS Standards. Translators were made available to them either in person or via video technology. For some participants, their sole experiences with translators were via video conferencing to help them bridge the language gap. A small number of participants used Google Translate, an easily available free online translation tool. While it has limitations, such as dependency on network availability and connectivity, they are grateful to use it in dire circumstances when no other options were available. All participants were aware that studies have shown interventions like these improve patient outcomes. Laura, an experienced Nurse Practitioner claims, "as far as talking to people, language should not be a barrier to their health anymore. We can get on the phone or an iPad and have a face-to-face meeting with an interpreter in whatever language is needed."

Facilitators to Compliance and Enforcement of the CLAS Standard

Half (6/12) of the participants (all primary care providers) indicated **Electronic Health Records (EHR) systems** as a support tool. Even though the participants' places of employment varied from an office practice to large healthcare organizations, they found that having the patient's demographic information (including ethnicity) and the patient's health history easily accessible in one electronic platform helpful in providing and complying with CLAS-based care. Participants explained that EHR systems eliminate some of the barriers related to communication regarding medication, hospitalization, and family history, including susceptibility to increased risk factors such as early onset of chronic conditions. Ashley said, "for people who are at high risk for a condition, physicians can indicate it as a red flag in the EHR. For example, a family history of heart disease could be something that defines a person." Ashley further stated that this kind of electronic record-keeping not only brings attention to a specific health problem but also allows for continuity of care. Participants expressed that EHR systems help prepare them for an upcoming visit. Reflecting on how the EHR system helps, Laura said:

> Before walking into a room to see a patient, I look at their chart. Our charts have all the information, including demographic and ethnicity information. When I walk in the room of somebody from the Middle East, for instance, I may see a patient wearing a hijab, or who may not talk to me very candidly about her issues. I might expect a male companion to be around, maybe her husband, who might be more in charge or in control of

> the conversation. So those nuances are already present in my mind when I walk into this room, but I am prepared to address them.

One important aspect of the EHR system was brought up by Maddy who said, "if the chart says the patient needs an interpreter, then you have to document, as a provider, if you provided one or not." Maddy's comments evidence this is critical to note on two accounts: first, accountability of the healthcare provider, and second, ensuring consistency in the care for the patient.

Participants also viewed **leadership support and workplace culture** as a facilitator to the enforcement and compliance of the CLAS Standard. Most of the participants (8/12) felt "champions" within their organizations encourage and forward the importance, practice, and utility of CLAS Standards. The participants felt that strong leadership support is crucial because it sets the tone for the culture of the organization and promotes "top-down" efforts in advancing health equity within the organization. Ashley indicated that even with budget and funding constraints, it is motivating when employers make conscious decisions to fund continuing education programs to support the advancement of CLAS Standards-type training for providers. Ashley commented:

> We have faculty champions, and we have a lot of DEI and cultural competency training, all done from different departments and divisions across the campus, and lots of faculty champions who are supported for their time in leading these efforts and administrative help as well.

Stephen indicated that "if you focus with the top leadership in organizations, you can really put CLAS Standards in the center of those organizations' advancing health equity. A North Star of all efforts." Mary, a Nurse Practitioner, is one of the few participants

(4/12) who indicated that the overall organizational workplace culture is a strong facilitator to compliance and enforcement of the CLAS Standard. Speaking about her organization as an example, she explained:

> I feel that it is how they want the organization to be seen overall and realizing we have a multi-cultural system, especially living in Southern California, they just want everything to be unbiased, and for what we do, it needs to be set up that way. That is what allows me to go to work for this organization for so many years.

Other facilitators noted by participants included having an **appropriate training curriculum** that fits the internal and external needs of the organization, resources to first integrate the training curriculum into the organization, followed by resources to maintain continuity once training is in place. Stephen commented:

> I am a little bit leery of just having one curriculum fits all because there are so many differences in organizations, and it's so important to tailor a curriculum to their needs. And because this is such a dynamic process, I think that what we need is the richness of new things. This is an evolving process and so I think that it is important to open up the conversation for different ideas catered to different groups. Otherwise, we can stifle development.

Participants indicated that when an employer provides and initiates trainings, it sends a strong message that the organization is supporting CLAS Standards at its core and transforming systems of care. Stephen added, "to fully support CLAS Standards, both inclusion and participation, as well as the active participation of leaders is of critical

importance." Susan, a nurse practitioner, indicated that the organization she works for "makes sure that the cultural competence training changes with time and it's not always the same instructional video that you're watching over and over." She adds that the videos are interactive. This, she says, requires her to be "engaged and unable to simply turn on and walk away."

Barriers to the Compliance and Enforcement of the CLAS Standard

One of the main barriers described by participants is **competing priorities, time, and resources.** Participants indicated that awareness surrounding the specifics of the CLAS Standard is lacking within their organizations. However, collecting, and interpreting data on how to best educate the workforce is challenging. Penny indicated that there is much work to be done by healthcare organizations to understand the needs of a given community and how the workforce can support those deficiencies. She said:

> What are the stories that we are missing? The answer might come from asking the community what can be done better. And being willing to listen to the areas where we are not perfect. We live in a society that is really excited to celebrate achievements, and hesitant to look at those parts that are embarrassing. But that is where the growth is. Pushing out of the comfort zone for the system to work.

Ashley provided some insight from her perspective as a physician on how competing priorities impact the compliance and enforcement of the CLAS Standard. She commented:

> Probably the number one reason for lack of enforcement is time and money and having those resources taken away from something else.

> When you're talking about busy clinicians whose priority is to see patients and do the other things they have to do for their jobs, finding a way for organizations to build in a curriculum that would be feasible, as well as something that would be important enough that physicians would buy into and do the training with an open mind is challenging. There are many competing priorities.

We felt participants implied that because it is expensive to hire and train skilled language interpreters, the iPad communication technology is utilized as an alternative. Participants also implied they do not foresee their leadership making implementation of the CLAS Standard a priority over other pressing needs such as investment in personnel, technology, and infrastructure although they did not expand on this particular point.

A few participants (4/12) noted that there is a **lack of understanding and confusion** surrounding the CLAS Standard. The terminology is murky and often muddled with other awareness programs in the workplace such as DEI, Implicit Bias, and Ethics - all programs that have a similar focus towards attaining health equity. Ashley said, "I think, we are much more aware of disparities and much more aware of DEI and groups of people because of intrinsic or extrinsic factors, whether it is implicit bias or other extrinsic social factors and structural factors." Despite this, participants' comments evidenced lack of familiarity when asked specifically about the CLAS Standard. Maddy said, "I know we do get trainings for all, not only for the Asian culture, but every other culture. But I do not recall exactly the name of what you just said." Similarly, George, a Physician's Assistant said "No, I do not know anything about that. I know like what they are kind of. It is something to do with cultural standards."

One other barrier from the perspective of some participants (6/12) is the **experience in treating diverse populations.** Ashley explained that even in California, the diversity of both the workforce and patient population can vastly differ depending on regions in the state. Similarly, she explains that certain geographical parts of the United States experience the same differing diversity. She said:

> I think enforcement of CLAS Standards will be very helpful for providers who do not see a lot of diverse types of patients, right? Kind of like giving them a playbook on the tools. I think it is extremely important to get those tools in the right hands.

George further states, "It is harder to relate to someone who is not of your culture." Susan, a Nurse Practitioner, stated that because she is a minority herself helps relate to people coming from different cultural backgrounds, implying that it would be harder to relate to her patients otherwise. She said:

> I am a minority too. I am a woman. And I am having to constantly defend myself, or my qualifications. I cannot expect other people to assume that I am like other people of my culture, because I am not the same, and I am myself. I do not expect people to be judgmental of me or assume things about me and so I should not assume the same for other people as well.

Summary

Participant's comments about compliance and enforcement of the CLAS Standard were indicative of a general sense of increased awareness and consciousness towards achieving health equity in their practices, the presence of leadership support and some change in workplace culture, and how competing priorities for resources pose problems

towards compliance and enforcement of the CLAS Standard. Physicians, while aware of the AB1195 requirement in California as part of their CME, indicated that CLAS-specific training is not as clearly enforced, rather the training is more DEI-focused. In general, there was not a clear understanding of CLAS Standard-specific type compliance and enforcement in the workplace.

Theme 2: Cultural Competence Training and Adherence to the CLAS Standard

The second theme aligns with the *change process capability* element of Solberg's conceptual framework (2007). We addressed this theme by gathering data to better understand participants' current practice in adherence to cultural competency training at their places of employment, and the facilitators and barriers to successful adherence to the CLAS Standard from their perspective.

Description of Current Cultural Competence Training

In general, participants were not aware of one singular, established cultural competence training per se, however, most of the participants (8/12) recall receiving **some form of training** on how to be aware, inclusive, and open-minded of patient's cultural differences and beliefs in order to improve health equity. Participants indicated that there is an expectation by their employer that they undergo required cultural competency training at regular intervals. Participants recall the training to be an annual requirement. Mona said, "We have to do different trainings yearly. So, it's usually like a video that we watch that has certain scenarios and then you have to answer questions at the end." Similarly, other participants indicated that their trainings were also offered using an **online interactive training module**. These interactive training modules are equipped with situational scenarios catered to providers based on their roles and

responsibility within the organization. As an example, Laura, a Nurse Practitioner, indicated that a Medical Assistant's (MA) training may be geared more towards a CLAS-based approach to changing a patient's soiled linen, whereas a Nurse Practitioner's training may focus on how to respectfully address a patient if they were wearing a head scarf and the provider needed to examine their ears. The interactive training modules ask the trainee to respond to a series of questions related to the scenario and provide guidance if any of the questions were answered incorrectly.

Some of the participants (6/12) indicated that **mandatory cultural competence training may be ineffective** when enforced at their places of employment. Two participants, who are both physicians, curriculum curators, and champions of CLAS Standards training, indicated that rather than making the CLAS Standards training mandatory, they preferred when leaders of departments let staff know that the training is a team-building type exercise. Stephen said, "I would ask the leaders of departments to tell faculty this is something we are doing together as a group and I, as your leader, would like you all to do it together rather than using the terminology 'mandatory'". According to Penny, the term 'mandatory' can be polarizing and have the opposite effect of the intent of this type of training. Penny commented, "I think studies have shown that if you mandate it and people are unwilling, and if the leadership is not invested, more damage can be caused."

Facilitators to Cultural Competence Training and Adherence to the CLAS Standard

Half of the participants (6/12) described utilizing an outside entity to provide cultural competence training as a great facilitator to successful adherence to the CLAS Standard. They indicated that **hiring consultants** to do that work meant that the training

would be administered by a neutral professional party, and therefore, more conducive to learning and adapting tools to practice and adhere to the CLAS Standard. Helen, a community service provider said, "we hire consultants to do that work because it does not make sense for me or the Executive Director to be conducting that training because we are a part of the staff, and we need training too."

In addition to utilizing an outside entity to provide cultural competence training, participants (6/12) also indicated utilizing a training **curriculum provided by external entity** as a facilitator to adherence of the CLAS Standard. Participants indicated that choosing this option would allow for organizations to have a curriculum created according to their specific organizational needs and patient population. Helen said, "One of the organizations we work with have specific curriculums, and we tell them what we are looking for, and they cater the training towards that."

A few of the participants (3/12) indicated some advantage in having leadership undergo cultural competence **training specifically designed for administrators**. They felt that it was important for decision makers within an organization to experience this training first because leadership can be "early adopters" of the training, and this is important for practice and adherence to the CLAS Standard within an organization. Stephen indicated, "They (administrators) are in a key position to be early adopters of this training. We are interested in those who have a high level of readiness to implement this in the work that they do." Participants saw this as a catalyst to forward and implement cultural competence training in the workplace.

Barriers to Cultural Competence Training and Adherence to the CLAS Standard

Half of the participants (6/12) indicated that even if cultural competency **training was in place within their organization, it is insufficient** to practice and adhere to the CLAS Standard. Physicians amongst this group who are required to take cultural competency training as part of their CME, indicated that it is difficult to retain all aspects of CLAS in a 2-hour training, rather, there needs to be a more structured in-depth training. They indicated that it is not about taking a training class and checking it off the list, but rather about really listening to patient needs. Jackie, a community service provider, said regardless of who the provider is and what their job title may be, it is about trying to identify what it is that providers can do to help foster the best care. She said, "the person whom I am treating for whatever reason, whether it is physical, mental, or dental, it is about them being able to access care in the same manner as a predominantly English-speaking person can access care."

Another barrier identified by participants is the **lack of a tracking mechanism and lack of repercussions** for trainings required, completed, or missed in their workplace. A few participants indicated that they would like to be able to access a training portal to see what trainings were required, rather than wait for an email prompting them to complete training by a certain date. Participants felt that this approach is what leads to the "checking the list off" mentality in an employee. Subsequently, participants indicated that the current system does not inflict any repercussions on staff who may choose to forgo training or did not take the training in a timely manner. When questioned Ashley said, "I don't know if there are any repercussions. I think it is most strongly suggested that everyone takes it."

Although almost all participants were in favor of cultural competence training, a few participants (3/12) were **guarded about having a standardized curriculum** because they do not see the answer to the CLAS Standards adherence issue having a "one size fits all" solution. Laura explains, "I don't think it should be a standardized training, rather it should be sensitive to what is in the environment. Otherwise, you are taking a cookie-cutter training. It might not even apply to you." They indicated that because there are so many differences within organizations, administrative or otherwise, it is important to tailor the cultural competency training according to the needs of the organization.

A few of the participants (3/12) also indicated that currently there is **absence of a curriculum that is feasible** and important enough for providers to buy into it. George provided an analogy indicating, "They changed board exams so you can do it by specialty. If I am a surgeon, it's not going to help to take occupational medicine training." Penny indicated:

> I think that if we live in an ideal universe with everybody starting at the same time, sure, everyone going through the same training and everyone being from the same light makes sense. But we are losing diversity of thought. So, I think, embracing the messiness is the best solution forward. Let's embrace that we are coming from different training links and create a community that can honor and have humility for each other with all our diversity and richness but have some policies and best practices in place.

Summary

Participants' comments about cultural competence training and adherence to the CLAS Standard centered around existing training curriculums, how curriculums can be

made more effective in supporting adherence of the CLAS Standard, and how the lack of proper accountability hinders adherence to the CLAS Standard. In sum, participants emphasized that cultural competency trainings must be curated in a way that makes the most sense for the workplace culture of any given organization.

Theme 3: Support for the Health of South Asian Americans

Finally, we wanted to know how participants applied cultural competency principles, including the CLAS Standard, in the context of their practice. In doing so, we asked participants about a specific vulnerable group with a large population in their area, South Asians. Consistent with Solberg's *care process content* element, we gathered a general sense of the participant's knowledge of South Asians' health, their interactions with this population, and how, from their perspective, cultural competence training can help support the health of this population

Description of Current Practice

In general, participants were not able to comment with confidence on the number of South Asian patients they see. Primary healthcare providers' responses varied from "few per week" to "few per month". However, all participants reported that they have, or have had interactions with this population regarding their health. Some participants (5/12) were **aware of the disease burden,** for example, high prevalence of diabetes and coronary heart disease (CHD) in South Asians in the United States, however, they were unaware of the specifics such as that CHD may occur prematurely and with heightened severity. Only one participant was aware.

In general, participants (10/12) were **unable to provide specific information** when asked about how their organization supports the larger Asian American population.

However, when questioned about their general sense of knowledge about the South Asian subgroup, most participants tended to describe patients from the larger Asian community rather than the South Asian subgroup. A few participants (3/12) indicated that patients from the larger Asian community in general, were probably the best at listening and compliant with instructions, however, they would only visit their provider if they were truly ill.

Collectively, primary care providers described treating the South Asian American subgroup of patients the same as they would any other patient population. They indicated **no distinction in treatment**. When asked how they could support this subgroup of patients, George commented, "I don't think we necessarily have a defined process in our practice, it is pretty much down to the individual provider. It depends on how open providers are to different cultures."

Facilitators to Supporting the Health of South Asian Americans

Participants felt that **building a trusting relationship** by asking the right questions is pertinent to providing good healthcare, regardless of the patient population, but particularly in populations with increased health concerns. Participants indicated that having patients share their own identities, whether it's their gender, race, ethnicity, degree of acculturation or sexuality, open and honest conversations are extremely important. However, participants were fully cognizant that conversations like these can only happen if there is a level of trust and a strong patient-provider relationship. Ashley said:

> Building a relationship is really about being open, asking the right questions, and having people share their own identities, understanding the

> intersectionality or the different ways they identify themselves, whether it's by race, ethnicity, degree of acculturation, sexuality, or gender identity.

A majority (9/12) of the participants indicated that it's the provider's role, not the patient's, to **arrange for an interpreter** if it is clear that language is a barrier. Participants' comments are consistent with cultural competence training. Participants indicated that if patients did not have access to language services through their organization, they referred them to their insurance provider. Participants were confident that while interpreters cannot break down all barriers, it is an important step for patients to access the care they need. Jackie, a community service provider, said:

> California does a really good job of setting policies. Patients do not have to be responsible for providing their interpreters, nor should they be and if providers cannot provide them because they do not have access to language services, even though they should, they have that access through the patient's insurance company.

A few participants recognized that because of the state of California's rich diversity and culture, particularly in Southern California, **community help** is a strong facilitator to support the health of South Asian Americans. The informants who are community service providers, in particular, indicated that networking within the community can help with the acculturation aspect. Ann indicated that some of her clients will bring a friend, or an acquaintance they met locally, who speaks their native language, to accompany them for visits if they are not proficient in English. She commented:

> We have a person who works in immigration. She does citizenship applications. We have a mental health therapist who sees clients of her

> own. We offer public benefit enrollment services. I believe each week we receive 20 to 30 percent of clients who come in for these types of services, and then approximately 60 to 70 percent who are repeat clients needing more help with these types of resources.

California has several South Asian non-profit organizations who help advocate in this manner for this population.

Barriers to Supporting the Health of South Asian Americans

When we presented participants with some of the health concerns specific to the South Asian subgroup and asked them if they were aware, most participants (10/12) were not. They responded that health data that is representative and disaggregated according to the South Asian population is needed to raise awareness. Participants (5/12) indicated that inclusivity is a key factor in the CLAS Standard, but this population is suffering from **lack of proper inclusion, or data representation**. A few primary care providers (3/12) indicated that this issue limits their ability to accurately understand and address the health needs of this population. If culturally tailored, evidence-based intervention data were available for this population, participants agreed that they can help address some of the major health concerns in this population. George explained, "Some of the smaller minority populations fall by the wayside, as they are not as popular as some others, and they do not receive the same attention in studies."

Community service providers also indicated that not having **South Asian languages represented in legal forms** is a barrier, especially for South Asian immigrant communities who are trying to assimilate into the American way of life. Participants indicated that there is a level of stratification seen even within the smaller minority

groups. With reference to filling out legal forms, Ann, a community-service provider who primarily caters to and advocates for the needs of South Asians said:

> When there are specific services that my organization cannot offer to our clients, we try to outsource or refer them out to other agencies, but the options are very limited. Not everybody caters to South Asian languages, which is where their linkage to us just stops because we cannot help them out. Lack of linguistic access is a problem when we are trying to refer them to somebody else.

Ann further explained, "Organizations and government entities should put in more effort and make things accessible to all minority community members, not just the larger, or more well-known minority groups...it boils down to helping out all minority communities." Mona said that in her experience and interactions with South Asian patients, the need for a translator varies based on how long they have lived in the United States.

Recommendations to Help Support the Health of South Asian Americans

Participants (6/12) stressed the **importance of preventative care** for the South Asian population given increased susceptibility to serious health concerns such as coronary heart disease and diabetes. Helen, a community service provider, commented that "health educational workshops in South Asian languages and educational materials for the community can be a start for them to understand what is right."

Two community service providers indicated that instead of using concerning language like "high prevalence of diabetes and cardiovascular disease", they take the approach of

offering **wellness and physical activity classes** to improve health outcomes in the South Asian population. Ann indicated:

> We are trying to host yoga classes because we know physical activity is an issue. We don't put it out there that there's a high prevalence of diabetes and cardiovascular diseases so come out and do yoga, but rather we're putting it out there to improve those statistics.

The key to increasing preventative care visits is **raising awareness**. Ashley, who has in-depth knowledge about health concerns in this population, commented:

> I think that would really help in many ways is showing health data and having people be aware and just raising that consciousness, that this is a real problem. The rates of heart disease are going down in every single group around the United States but they're going up in Asian Indians. Men and women are both dying at higher rates of heart disease than in any other group. And so, these kinds of things should be eyebrow-raising.

As for raising awareness among providers, Ashley suggested that having an informative module, a seminar, or a continuing medical education course of some sort would be very helpful.

Participants (4/12) discussed one interesting cultural aspect of this population which is the fear that they may lose patient confidentiality if their provider is from the same cultural background or community as them. Penny said. "When talking about the South Asian population, there is fear that if a provider is from a similar background, they may be too close to be safe for confidentiality. They may be actually a threat." Therefore, while one may think that recommending a South Asian provider is helpful, it

may be detrimental. This begs the importance of **building a relationship and earning the trust** of the patient population over time according to many of the participants (8/12). Jackie said, "It's about being strategic and getting to know people over time and learning about their experiences."

Maddy, a physician who has significant experience with South Asian patients from India, provided some insight into this patient population. In her experience, some South Asian (Indian) patients prefer that she make decisions about their health rather than weighing the risks and benefits themselves, unlike most of her other patients.

Jackie suggested "convening a group of patients to be able to share their experiences and honestly listen. What are the issues that the communities are identifying?" And having conversations with "an open mind, really listening to the community and not going in with presupposed answers." Similarly, Penny commented:

> Asking the community what can we do better. And being willing to listen where we are not perfect. We live in a society that is really excited to celebrate achievements, and maybe hesitant to look at those parts that maybe we are embarrassed about. But that is where the growth is - pushing out of the comfort zone for the system.

Summary

The data we gathered was informative in understanding participants' current understanding and perspective of the South Asian American subgroup. We found that while some participants were aware of the disease burden in the South Asian subgroup, they were unaware of the severity or seriousness of some. All participants claimed they had had interactions with members of this subgroup; however, they were unable to

comment on how they, or their organization, supports this population specifically, rather, they discussed the larger Asian American population. Generally, participants indicated that they treat patients from the South Asian subgroup the same as they would any other patient population. Participants identified a few facilitators that can help support this population such as building a trusting relationship, arranging for an interpreter, and banding with the community and South Asian non-profit organizations for help. Lack of proper inclusion and data representation was identified as a barrier to achieving better health outcomes for this subgroup. Not having South Asian languages represented in legal forms was identified as another barrier, especially for those in the community who are trying to assimilate into the American way of life. Participants recommended multiple ways to help support South Asian Americans. Participants stressed on the importance of preventative care, wellness, and physical activity classes, raising awareness and more importantly, building a trusting provider-patient relationship.

Table 5 below summarizes all three themes, their respective subthemes, examples, and example quotes.

Table 5. Summary of Qualitative Themes, Subthemes, Examples and Example Quotes

Solberg Element	Themes	Subthemes	Examples	Example Quotes
Priority	Compliance and Enforcement of the CLAS Standard	Description of current practice	Awareness of disparities in healthcare and renewed attention for health equity	*DEI is more in our vocabulary now and I think universities are prioritizing, raising awareness, finding ways to mitigate, and looking at everything from the equity lens.*
			Awareness of state requirements	*I think the closest that we get to the CME requirement is some DEI related training. You are using the terminology of culturally linguistic appropriate services which I have trained, but the mandate of that specific training is not as clearly enforced.*

			Compliance and enforcement	*As far as talking to people, language should not be a barrier to their health anymore. We can get on the phone or an iPad and have a face-to-face meeting with an interpreter in whatever language is needed.*
		Facilitators to enforcement and compliance of the CLAS Standard	Electronic Health Records	*Before walking into a room to see a patient, I look at their chart. Our charts have all the information, including demographic and ethnicity information. When I walk in the room of somebody from the Middle East, for instance, I may see a patient wearing a hijab, or who may not talk to me very candidly about her issues. I might expect a male companion to be around, maybe her husband, who might be more in charge or in control of the conversation. So those nuances are already present in my mind when I walk into this room, but I am prepared to address them.*
			Leadership support and workplace culture	*We have faculty champions, and we have a lot of DEI and cultural competency training, all done from different departments and divisions across the campus, and lots of faculty champions who are supported for their time in leading these efforts and administrative help as well* *I feel that it is how they want the organization to be seen overall and realizing we have a multi-cultural system, especially living in Southern California, they just want everything to be unbiased, and for what we do, it needs to be setup that way. That is what allows me to go to work for this organization for so many years.*
			Appropriate training curriculum	*I am a little bit leery of just having one curriculum fits all because there are so many differences in organizations, and it's so important to tailor a curriculum to their needs. And because this is such a dynamic process, I think that what we need is the richness of new things. This is an evolving process and so I think that it is important to open the conversation for different ideas catered to different groups. Otherwise, we can stifle development.*

		Barriers to enforcement and compliance of the CLAS Standard	Competing priorities, time, and resources	*What are the stories that we are missing? The answer might come from asking the community what can be done better. And being willing to listen to the areas where we are not perfect. We live in a society that is really excited to celebrate achievements, and hesitant to look at those parts that are embarrassing. But that is where the growth is. Pushing out of the comfort zone for the system to work.* *Probably the number one reason for lack of enforcement is time and money and having those resources taken away from something else. When you're talking about busy clinicians whose priority is to see patients and do the other things they have to do for their jobs, finding a way for organizations to build in a curriculum that would be feasible, as well as something that would be important enough that physicians would buy into and do the training with an open mind is challenging. There are many competing priorities.*
			Lack of understanding and confusion	*I know we do get trainings for all, not only for the Asian culture, but every other culture. But I do not recall exactly the name of what you just said.*
			Experience in treating diverse populations	*I think enforcement of CLAS Standards will be very helpful for providers who do not see a lot of diverse types of patients, right? Kind of like giving them a playbook on the tools. I think it is extremely important to get those tools in the right hands.* *I am a minority too. I am a woman. And I am having to constantly defend myself, or my qualifications. I cannot expect other people to assume that I am like other people of my culture, because I am not the same, and I am myself. I do not expect people to be judgmental of me or assume things about me and so I should not assume the same for other people as well.*
Change Process Capability	Cultural Competence Training and Adherence to the CLAS Standard	Description of current cultural competence training	Some form of training	*We have to do different trainings yearly. So, it's usually like a video that we watch that has certain scenarios and then you have to answer questions at the end.*
			Online interactive training module	*A Medical Assistant's (MA) training may be geared more towards a CLAS-based approach to changing a patient's soiled linen as opposed to a Nurse Practitioner's training which is focused more on how to respectfully address a patient if they were wearing a head scarf and the provider needed to examine their ears.*

			Mandatory cultural competence training may be ineffective	*I would ask the leaders of departments tell faculty this is something we are doing together as a group and I, as your leader, would like you all to do it together rather than using the terminology 'mandatory'.* *I think studies have shown that if you mandate it and people are unwilling, and if the leadership is not vested, the tighter that you need for the group to want it, the more damage can be caused.*
		Facilitators to adherence of the CLAS Standard	Hiring consultants	*We hire consultants to do that work because it does not make sense for me or the Executive Director to be conducting that training because we are a part of the staff, and we need training too.*
			Curriculum provided by external entity	*One of the organizations we work with have specific curriculums, and we tell them what we are looking for, and they cater the training towards that.*
			Training specifically designed for administrators	*They (administrators) are in a key position to be early adopters of this training. We are interested in those who have a high level of readiness to implement this in the work that they do.*
		Barriers to adherence of the CLAS Standard	Training in place within organization is insufficient	*The person whom I am treating for whatever reason, whether it is physical, mental, or dental, it is about them being able to access care in the same manner as a predominantly English-speaking person can access care.*
			Lack of tracking mechanism resulting in lack of repercussions	*I don't know if there are any repercussions. I think it is mostly strongly suggested that everyone takes it.*
			Guarded about a standardized curriculum	*I don't think it should be a standardized training, rather it should be sensitive to what is in the environment. Otherwise, you are taking a cookie cutter training. It might not even apply to you.*
			Absence of a curriculum that is feasible	*I think that if we live in an ideal universe with everybody starting at the same time, sure, everyone going through the same training and everyone being from the same light makes sense. But we are losing diversity of thought. So, I think, embracing the messiness is the best solution forward. Let's embrace that we are coming from different training links and create a community that can honor and have humility for each other with all our diversity and richness but have some policies and best practices in place.*

Care Process Content	Supporting the Health of South Asian Americans	Description of current practice	Aware of disease burden	
			Unable to provide specific information	*They would only come in if they were like super sick, like, bad. They don't like coming in to see the doctor.*
			No distinction in treatment	*I don't think we necessarily have a defined process in our practice, it is pretty much down to the individual provider. It depends on how open providers are to different cultures.*
		Facilitators to supporting the health of South Asian Americans	Building a trusting relationship	*Building a relationship is really about being open, asking the right questions, and having people share their own identities, understanding the intersectionality or the different ways they identify themselves, whether it's by race, ethnicity, degree of acculturation, sexuality, or gender identity.*
			Arrange for an interpreter	*California does a really good job of setting policies. Patients do not have to be responsible for providing their interpreters, nor should they be and if providers cannot provide them because they do not have access to language services, even though they should, they have that access through the patient's insurance company.*
			Community help	*We have a person who works in immigration. She does citizenship applications. We have a mental health therapist who sees clients of her own. We offer public benefit enrollment services. I believe each week we receive 20 to 30 percent of clients who come in for these types of services, and then approximately 60 to 70 percent who are repeat clients needing more help with these types of resources.*
		Barriers to supporting the health of South Asian Americans	Lack of proper inclusion, or data representation	*Some of the smaller minority populations fall by the wayside, as they are not as popular as some others, and they do not receive the same attention in studies.*
			South Asian languages represented in legal forms	*When there are specific services that my organization cannot offer to our clients, we try to outsource or refer them out to other agencies, but the options are very limited. Not everybody caters to South Asian languages, which is where their linkage to us just stops because we cannot help them out. Lack of linguistic access is a problem when we are trying to refer them to somebody else.*

		Recommendations to help support South Asian Americans	Importance of preventative care	*Health educational workshops in South Asian languages and educational materials for the community can be a start for them to understand what is right.*
			Wellness and physical activity classes	*We are trying to host yoga classes because we know physical activity is an issue. We don't put it out there that there's a high prevalence of diabetes and cardiovascular diseases so come out and do yoga, but rather we're putting it out there to improve those statistics.*
			Raising awareness	*I think that would really help in many ways is showing health data and having people be aware and just raising that consciousness, that this is a real problem. The rates of heart disease are going down in every single group around the United States but they're going up in Asian Indians. Men and women are both dying at higher rates of heart disease than in any other group. And so, these kinds of things should be eyebrow raising*
			Building a relationship and earning trust	*Asking the community what can we do better? And being willing to listen where we are not perfect. We live in a society that is really excited to celebrate achievements, and maybe hesitant to look at those parts that maybe we are embarrassed about. But that is where the growth is - pushing out of the comfort zone for the system.*

CHAPTER FIVE: THE PLAN FOR CHANGE

We were able to answer the first two aims of this study from the data collected through 12 semi-structured key informant interviews. The two aims are:

Aim 1: How has California implemented the CLAS Standard?

Aim 2: What are facilitators and barriers to successful implementation?

This chapter will address Aim 3, which seeks to answer: What is the best strategy to advance the CLAS standard?

The *care process content* element, the third element of the Solberg framework, is based on using successful strategies identified in the *change process capability* element. Accordingly, using data we collected from key informant interviews, we were able to identify a few possible strategies for advancing the implementation of the CLAS Standard to support the health of South Asian Americans.

In this Chapter, we will focus on one strategy, outline a plan for change using that strategy, and how that change plan can be evaluated so that it can be of most value to all stakeholders. The strategy will focus on the resources, players, and contextual parameters affecting the change.

The Change Strategy

Effective January 1st, 2023, the Joint Commission (formerly known as JCAHO) established new and revised requirements to reduce health care disparities to organizations in the Joint Commission's ambulatory health care, behavioral health care, and human services, critical access hospital, and hospital accreditation programs. These six (6) new elements of performance (EP) have been implemented as part of a new standard in their Leadership (LD) Chapter, specifically Standard LD.04.03.08 which

states ‘Reducing health care disparities for the organization’s patients is a quality and safety priority’ (Joint Commission, 2022). This Standard has been placed in the LD Chapter because according to the Joint Commission, success demands leadership, and achieving healthcare equity will require commitment, vision, creativity, and sustained effort at all levels, including the C-suite and the Board (Joint Commission, 2022).

The six new EPs implemented as part of the new standard are:

1. EP1: The [organization] designates an individual(s) to lead activities to reduce health care disparities for the [organization’s] [patients].
2. EP2: The [organization] assesses the [patient’s] health-related social needs and provides information about community resources and support services.
3. EP3: The [organization] identifies health care disparities in its [patient] population by stratifying quality and safety data using the sociodemographic characteristics of the [organization’s] [patients].
4. EP4: The [organization] develops a written action plan that describes how it will address at least one of the health care disparities identified in its [patient] population.
5. EP5: The [organization] acts when it does not achieve or sustain the goal(s) in its action plan to reduce health care disparities.
6. EP6: At least annually, the [organization] informs key stakeholders, including leaders, licensed practitioners, and staff, about its progress to reduce identified health care disparities.

In line with the Joint Commission’s new requirement and because health equity, and some of the EP’s are prominently based on CLAS Standards, we propose a change

plan to designate an individual(s), a “CLAS champion”, to lead activities related to CLAS Standards implementation in healthcare organizations in California. This strategy is supported by data from our study showing leadership support and workplace culture as a facilitator to the enforcement and compliance of the CLAS Standard. Further, Miech et.al (2018) published “Integrative review of champions in healthcare-related implementation”, a study which sought to establish the current state of literature on champions in healthcare settings to bring greater clarity to this important construct. They report that 80% of champion articles identified champions as one of several key factors associated with implementation success (Miech et.al, 2018). This strategy will decrease the confusion and lack of understanding associated with the intended utility of CLAS Standards as evidenced by our study while increasing organizations’ accountability resulting in better enforcement, compliance, and adherence to the CLAS Standards. More importantly, it ensures that organizational staff have a point of contact for all things related to CLAS Standards. While our main goal is to advance the implementation of the CLAS Standards to support the health of South Asian Americans, this strategy aligns with EP1 by way of designating an individual to lead activities to reduce health care disparities for patients and therefore helping organizations fulfill the Joint Commission’s EP1 requirement.

The term ‘champion’, according to Hall et.al (2020), can be adopted to characterize either select groups of people, or an individual, who are typically influential and charismatic people with high social and institutional status whose goal is to affect positive change. Miech et.al (2022), in an integrative review guided by the Consolidated Framework for Implementation Research (CFIR), defined the construct of a champion to

be occupied by people who are 1) internal to an organization; 2) have an intrinsic interest and commitment to implementing a change; 3) work diligently to advance the change even without recognition or compensation; 4) enthusiastic, dynamic, energetic, personable and persistent; and 5) have strength of conviction. Subsequently, we suggest a CLAS champion that fulfills all five (5) constructs for our plan for change.

Studies suggest having at least one on-site staff member who has undertaken some form of supplementary training in a specific topic area will help improve the practice in that area, the quality of care, and the health outcomes for the service users (Hall et.al, 2020). For our change plan, we propose the designated champion obtain required training in CLAS Standards through a structured curriculum program such as one offered by the University of California Davis titled "Providing Quality Health and Health Care with CLAS", or by utilizing continuing education opportunities and resources on implementing CLAS by the United States Office of Minority Health's "Think Cultural Health" initiative. Our change plan will be oriented with a goal and objectives that are specific, measurable, achievable, relevant, and time-bound (CDC, n.d.)

There are many models of change management, but to do this succinctly, we propose a change strategy guided by Kotter's Change Management Model. According to Chappell et. al (2016), Kotter's has been one that is significant and enduring in both academic and practitioner settings. The assumption in Kotter's model is that successful change of any magnitude goes through eight sequential steps, each of which will be discussed in detail in subsequent sections of this Chapter.

Kotter's Change Management Model

Kotter's Change Management Model is a dynamic 8-step model, organized into three (3) distinct stages as shown in Figure 6 below. The first stage is called "creating climate (or conditions) for change". This stage includes steps 1, 2, and 3. The second stage is called "engaging and enabling the whole organization". This stage includes steps 4, 5, and 6. The third and final stage is "implementing and sustaining the change" which includes steps 7 and 8. Kotter's change management model is conducive to our proposal of a CLAS champion because it is based on the "see-feel-change" approach (Campbell, 2020). This approach, when instilled in each stage, ultimately creates opportunities within the organizational staff to overcome negative feelings towards change and adopt feelings that promote change (Campbell, 2020).

Figure 3: Kotter's Change Management Plan in Stages

Stage 1 **Creating climate for change**	**Stage 2** **Engaging and enabling the whole organization**	**Stage 3** **Implementing and sustaining the change**
Step 1: Establish a sense of urgency for change		
Step 2: Create a guiding coalition		
Step 3: Develop a vision and strategy		
	Step 4: Communicate the change vision	
	Step 5: Empower broad-based action	
	Step 6: Generate short-term wins	
		Step 7: Consolidate gains and produce more change
		Step 8: Anchor new approaches in the culture

Step 1: Establish a Sense of Urgency for Change

Twenty years ago, the National Academy of Medicine, then known as the Institute of Medicine, published "Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care." The report reviewed voluminous literature on differences in quality of care and use of services by racial and ethnic minorities and concluded that a large body of published research reveals that racial and ethnic minorities experience a lower quality of health services and are less likely to receive even routine medical procedures than are white Americans (Smedley et.al, 2003).

Twenty years later, emerging data suggests that the COVID-19 pandemic has disproportionately affected many minority populations in the United States. Lack of data disaggregated by national origin or language group has contributed to the under-appreciation of disease burden and the lack of resources tailored to each group (Yan et.al, 2021). This discovery underscores the tenet of this study and change plan. The COVID-19 pandemic has highlighted the significance of data disaggregation. According to Yan et.al (2021), analyzing testing positivity rates by primary language demonstrated a wide range of positivity, as did disaggregation by national origin for rates of positivity, hospitalization, and mortality. Interestingly, when disaggregated data from the NYC public hospital system was analyzed, Chinese patients had the highest mortality rate of any racial or ethnic group, while South Asians had the highest rates of positivity and hospitalization among Asian subgroups (Yan et.al, 2021). Notwithstanding the lack of disaggregation finding, the quality of health services in racial and ethnic minority groups in the United Sates is clearly problematic. This, coupled with the disease burden and health care experiences of the South Asian American population discussed in previous

chapters, organizations and providers must be made aware of the utility of CLAS Standards to help bridge the gap in health care of racial and ethnic minority groups.

Time is of the essence. Identifying and designating an informed CLAS Standards champion, with the support of the organization and its leadership, will help facilitate the implementation of the CLAS Standard and advance health equity. The selected individual must have completed a form of advanced supplementary training in CLAS Standards to be qualified to lead efforts within their organization.

Step 2: Create a Guiding Coalition

An organization should designate an individual's primary role as CLAS champion. The individual could have other responsibilities, however, the CLAS champion duties should occupy at least 75% of their role. At a minimum, we recommend the following criteria when selecting a suitable CLAS champion.

1. Leadership experience – the CLAS champion must be an individual(s) who is in a current leadership position so that they have in-depth knowledge of the inner workings of the organization. Individual(s) in Directorship positions such as Clinical Director, Human Resources Director, Nursing Director, and Laboratory Director are ideal. Alternatively, a physician may also be suited for this role, particularly in a hospital setting which allows the individual to conduct formal presentations at medical staff meetings and informal presentations during breaks and other settings. Experience and prior success in their position are important to building a successful coalition because it ensures accountability and creditability.

2. Internal to organization – the CLAS champion must be an individual(s) internal to an organization because awareness of workplace culture is an important aspect of this position. Further, being internal to an organization will help minimize extra time, effort, and resources needed to orient a new individual to the role. Ideally, the individual would have at least three (3) years of experience in the organization before taking on this new role.
3. Training – the CLAS champion must obtain in-depth training such as the University of California Davis' "Providing Quality Health and Health Care with CLAS". This is a JCAHO-accredited cultural competency training program designed in collaboration with California's Office of Multicultural Health, DHHS, and OMH (UC Davis, 2023).

These criteria are chosen because they can be adapted to organizations of any size, whether it be a large hospital, a community health center, or a private practice.

Once selected, the CLAS champion must form a powerful coalition (or team) to help establish and steer the change management process. Creating and selecting the right members of the team is imperative because the newly composed team will help guide the change management process throughout the remaining steps (Campbell, 2020). The CLAS champion must engage involvement and buy-in from all layers of the organization including the executive team, the administrative team, the physician and provider team, and peers, for the creation of the coalition even if it means people are stepping out of their comfort zones and outside of the normal hierarchy. Creating a team environment helps build trust, seeks commitment, and provides maximum support to make a sustainable change within the organization. In creating the coalition, the CLAS

champion will aid organizations fulfill Joint Commission's EP6 requirement to annually inform key stakeholders, including leaders, licensed practitioners, and staff, about the organization's progress to reduce identified healthcare disparities.

Step 3: Develop a Vision and Strategy

Guided by the coalition, with support and involvement from the leadership, the CLAS champion will collaboratively develop a vision and strategy that is adaptable to the mission of the organization. The vision will consist of two major components: core ideology and envisioned future (Collins and Porras, 1996). Core ideology will define what the organization stands for, and why it exists; and the envisioned future will address what it aspires to become (Collins and Porras, 1996). The core ideology must include the organization's strategy to take culture, language, living conditions, education, income, social norms, social status, migration, and acculturation as considerations in addressing health disparities in racial and ethnic minority groups. The vision of envisioned future must include some component of the change plan to support the health of racial and ethnic minority groups. The vision must be sensible, practical, and clear. This step will aid with the Joint Commission's EP4 which requires organizations to develop a written action plan that describes how it will address at least one of the healthcare disparities identified in its population.

Step 4: Communicate the Change Vision

Two questions all participants could not answer during our interview process were first, who within their organization is leading the CLAS Standards enforcement process, and second, how trainings are being monitored and tracked. The CLAS champion position will provide clarity and transparency to both questions. Leadership

must communicate through departmental heads and en masse through organizational communication channels regarding the creation of the CLAS champion position, and the specific duties and tasks of the individual. More importantly, the organizational strategy for creating the CLAS champion position, and the renewed vision of the organization will be widely communicated. This comprehensive communication will take place early in the process, and with clarity. The CLAS champion will spearhead the CLAS educational training component and therefore, clear communication to staff regarding training requirements is pivotal to adherence. Enforcement, monitoring, and tracking strategies will also be communicated. The CLAS champion will promote CLAS Standards education material exhaustively via presentations at staff meetings, and through print and digital media at repeated intervals. A single staff meeting or email announcement will not suffice.

Step 5: Empower Broad-based Action

Influencing change requires collective interaction with others. Collective interaction with others requires identifying obstacles that hinder the progress of the change plan. Such obstacles could include powerful decision-making individuals within the organization who undermine the renewed vision of the organization. Other obstacles could be a lack of manpower, funding, or adequate infrastructure. The CLAS champion will work collaboratively with the leadership coalition to identify obstacles both internally within the organization and externally if they exist, and encourage individuals to take calculated risks, adopt creativity and non-traditional ideas to implement change. Obstacles can be identified by having several open discussions in the form of Townhall

meetings or forums to elicit opinions. Staff surveys can also be used to collect honest responses. The intent is to empower and cultivate involvement broadly.

Step 6: Generate Short-term Wins

Change takes time, effort, and significant resources. Subsequently, waiting for the change plan to reach fruition can be both challenging and disappointing if short-term wins are not recognized. Setting short-term goals and recognizing short-term wins will be paramount to the successful implementation of the CLAS champion change plan. This requires defining and engineering transparent performance improvement data points. To satisfy this step, there must be two important planning steps: 1) what constitutes the performance improvement plan; and 2) how to achieve the improvements outlined in the plan. These planning steps must be taken in consideration of all five (5) previous Kotter's steps. Short-term achievements must be recognized, and staff contributing to these achievements must be rewarded.

Step 7: Consolidate Gains and Produce More Change

As short-term wins are achieved, visibility for what is working in the change plan will become evident. Short-term wins will provide credibility and allow the CLAS champion to keep moving forward using and enhancing, if applicable, strategies that have brought short-term wins. Additionally, short-term wins allow the CLAS champion and coalition to pause and identify strategies that are not producing wins. Because time is of the essence, realizing both successes and errors early is critical. The CLAS champion can regroup to see if additional resources are needed to produce more change using strategies that are working. For example, additional staff can be hired, or existing staff can be further trained/developed to take on more responsibilities. In collaboration with

the coalition team, errors can be corrected by implementing corrective action and/or new strategies. Obstacles can also be more clearly identified here and removed if they are a deterrent to the change plan. This step aligns with the Joint Commission's EP5 which states that an organization must act when it does not achieve or sustain the goal(s) in its action plan to reduce health care disparities.

Step 8: Anchor New Approaches in the Culture

Culture in the workplace is an important concept in today's work environment. According to Marenus et.al (2021), the primary constructs of workplace culture include leadership, policies, programs, supervisor support, peer support, and morale. These are all important constructs but are especially paramount to the change plan to implement a CLAS champion. The CLAS champion is intended to advance the implementation of CLAS Standards to support the health of South Asian Americans. In doing so, the positive by-product of this implementation is that the CLAS champion will help address health equity and reduce disparities in other racial and ethnic minority groups too. However, promoting this change requires people in leadership positions to embrace the new behaviors and show leadership traits that will articulate their support and cooperation toward the change plan. This will be the culture change that is needed within an organization which addresses the "morale" construct discussed by Marenus et.al (2021). Of equal importance, leadership should take corrective steps to diversify hires. Otherwise, the change plan that we are trying to implement will not be personified.

Change Evaluation Plan

The United States Office of Minority Health recognizes that the lack of CLAS Standards in healthcare settings is one of the more modifiable factors in closing the gap

to health inequities in the United States (OMH, 2018). With organizational commitment, successful CLAS Standards implementation is possible, however, to be certain, the implementation plan, or change plan, must be evaluated for success so that it can be determined whether the desired outcome is achieved or not.

We will use summative evaluation to look at the outcome, or effectiveness, of the CLAS Standards champion initiative plan for change. We propose to evaluate at least five (5) healthcare organization sites at the end of a period of two (2) years after the implementation of the CLAS champion initiative. The evaluation will help answer two main questions:

1) Was the CLAS champion initiative an effective program for increasing the practice of Culturally and Linguistically Appropriate Services Standards by primary care providers in health care settings? This question is designed to help determine if the program was successful in increasing the use of CLAS Standards to serve the needs of patients from racial and ethnic minority groups including South Asian Americans.
2) Did the CLAS champion initiative meet a previously unmet need for access to Culturally and Linguistically Appropriate Services for patients from racial and ethnic minority groups in healthcare settings? This question is designed to help determine if the program fulfilled the needs of patients from racial and ethnic minority groups including South Asian Americans.

Cultural Competence Implementation Measure

The National Quality Forum (NQF) is a not-for-profit, nonpartisan, membership-based organization that works to catalyze improvements in healthcare. In 2008, NQF

outlined a comprehensive framework for measuring and reporting cultural competency. According to the NQF, cultural competency should occur across the full spectrum of healthcare delivery and should involve multiple providers, organizational staff – including leadership – and all settings of care (NQF, 2009). Because measures do not exist to address comprehensive cultural competency, the NQF endorsed a set of 45 preferred practices that serve as the basis for performance measures (NQF, 2009).

The Cultural Competence Implementation Measure is an organizational survey designed to assist healthcare organizations in identifying the degree to which they are providing culturally competent care and addressing the needs of diverse populations (NQF, 2009). Scores are calculated based on healthcare organization's adherence to 12 of the 45 NQF-endorsed cultural competency practices prioritized for the survey (NQF, 2009). The CLAS champion initiative will be evaluated using the Cultural Competence Implementation Measure. The organizational survey will provide answers to the two evaluation questions:

1) Was the CLAS champion initiative an effective program for increasing the practice of CLAS Standards by primary care providers in health care settings?
2) Did the CLAS champion initiative meet a previously unmet need for access to CLAS Standards for patients from racial and ethnic minority groups in healthcare settings?

Evaluation Criteria

The CLAS champion initiative evaluation study will be guided by the CDC Framework for Program Evaluation in Public Health (CDC, 2011) based on the following 4 (four) standards:

1) Utility:
    i. Determine who will be using the CLAS champion initiative evaluation results and fully consider the "makeup" of the stakeholders.
    ii. Stress the credibility of the selected evaluators.
    iii. The evaluation report will be provided with clarity, and timeliness, and disseminated equitably to all stakeholders.
2) Feasibility:
    i. Determine if the planned activities are realistic and practical given the time, resources, and expertise at hand.
    ii. Ensure cost-effectiveness in accordance with the established budget.
    iii. Ensure political feasibility.
3) Propriety:
    i. Ensure that the evaluation protects the rights of individuals and the welfare of those involved in the program.
    ii. Ensure that the participants are engaged fairly and equitably.
    iii. Ensure that there is no conflict of interest.
    iv. Ensure that fiscal responsibility exists.
4) Accuracy:
    i. Determine that the findings are valid and reliable, given the needs of those who will use the results.
    ii. Describe clear and concise purposes and procedures.
    iii. Provide analysis of methods used.
    iv. Report the evaluation findings fairly without any impartiality.

The CLAS champion program evaluation must have “met”, or be grounded, in each of the four standards. Throughout the course of the evaluation, evaluators will cross-check the process to make sure these standards are upheld and maintained as benchmarks. If standards are maintained, and participating organizations respond favorably by a measure that is acceptable to the evaluation team (>= 70%), the evaluation questions would be considered as answered.

CHAPTER SIX: DISCUSSION

The literature review conducted for this study brought to light ethical and practical reasons why providing healthcare with a focus on CLAS Standards is important to the South Asian American population. We were able to gain an understanding of CLAS Standards in general, how CLAS Standards have been implemented in the state of California, and the health environment of the South Asian American population, however, the literature review showed a lack of clarity on compliance, enforcement, and adherence of CLAS Standards. The purpose of this qualitative study was to understand from the perspective of participants, how providers in California are implementing the CLAS Standard. California is one of ten states that enacted legislation requiring mandatory cultural competency training in accordance with the CLAS standards. Semi-structured interviewers were conducted with a range of providers (n=12) in California to identify facilitators and barriers to successful implementation

Data from semi-structured interviews were aligned to three elements of the Solberg (2007) framework for quality improvement. The *priority* element was aligned to understanding compliance and enforcement of the CLAS Standard. Study data showed that regardless of profession, years of experience, or places of employment, most participants had not heard of CLAS Standards, or the state requirement in California for physicians and surgeons to complete cultural and linguistic competency training as part of their CME. This is consistent with our review of the literature where we had previously reported results from a quantitative study by Mainous et. al (2020) who utilized data from the 2016 National Ambulatory Medical Care Survey and discovered that fewer than half of practicing physicians reported receiving cultural and linguistic

competency training in medical school or residency, and only 35% of the respondents had heard of the CLAS Standards. Data from our study further showed that while providers had some form of enforcement to cultural competency training in the workplace, there is a lack of clear understanding and/or delineation between CLAS and other trainings promoting health equity such as DEI.

The *change process capability* element of Solberg (2007) framework was mapped to gain an understanding of the cultural competency training and adherence to the CLAS Standard at providers' places of employment. Interestingly, all 12 participants indicated they undergo some form of training pertaining to cultural competency either in person or online via an interactive module as an annual requirement imposed by their employer. While our study data showed this is considered a favorable practice, the training put in place was thought to be insufficient to the actual practice of the CLAS Standard, akin to "going through the motions". We were able to ascertain that the cultural competency training offered at their places of employment is not specific to CLAS Standards training. We observed this to be across variations of roles held by participants and irrelevant to the size or type of organizations they were employed at. Our study data showed that CLAS-base care requires more than a mandatory training class, rather a structured in-depth training on how to best serve the needs of minority populations, South Asians included.

The third element of the Solberg framework, the *care process content* element was mapped to address and understand participant's knowledge of the South Asian population's health given their increased disease risk factors. Our study data showed that building a trusting provider-patient/client relationship with this population is extremely important due to a variety of reasons stemming from a lack of consistent preventative

care to fear of deportation due to immigration status. Providers reported that they are aware that non-English speaking populations, such as South Asian Americans, are not responsible for their own interpreters if language is a barrier, rather it is the responsibility of the provider to retain one through the patient's insurance carrier. Further, providers value supporting South Asian Americans by advocating for proper inclusion and health data that is representative and disaggregated for this population.

Using data from the study, we were able to propose a plan for change that will help address all three elements, *priority, change process capability* and *care process content* discussed here. A CLAS champion, if appointed according to the recommended criteria, is a feasible strategy to address barriers, and further strengthen facilitators that are currently in place to help address and bring attention to the healthcare needs in South Asian Americans. The CLAS champion will act as a harbinger for the organization's commitment to reducing health care disparities amongst minority groups, including South Asian Americans. The CLAS champion can help elevate and advocate for inclusivity in an organization's overall culture and day-to-day practices. Staff will be able to ignore muddled information and rely on one voice to receive updates and initiatives to uphold and promote the CLAS Standard as intended by the Office of Minority Health.

Limitations

This study faces some limitations. The goal of the study was to seek answers from the perspective of our participants, of how best providers in California can advance the implementation of the CLAS *Principal Standard* to support the health of South Asian Americans. The literature review was unable to identify studies that specifically addressed the 'CLAS Principal Standard'. Rather, studies addressed CLAS Standards in

a general context to include all 15 enhanced National CLAS Standards. We chose to focus on the Principal Standard because according to OMH and HHS, the Principal Standard will be achieved if the 14 remaining standards encompassing governance, leadership, workforce, communication and language assistance, engagement, continuous improvement, and accountability are met. While we referred to the Principal Standard in our protocol, participants responded to the broader CLAS Standards during the interview process.

As previously reported, literature indicates that individual champion studies consistently found that champions were important to implementation, however, these studies have collectively indicated that champions represented "necessary but not sufficient" conditions for implementation success (Miech et.al, 2018). Champions alone were inadequate to bring about change but were found to be essential to implementation success in combination with other factors (Miech et.al, 2018).

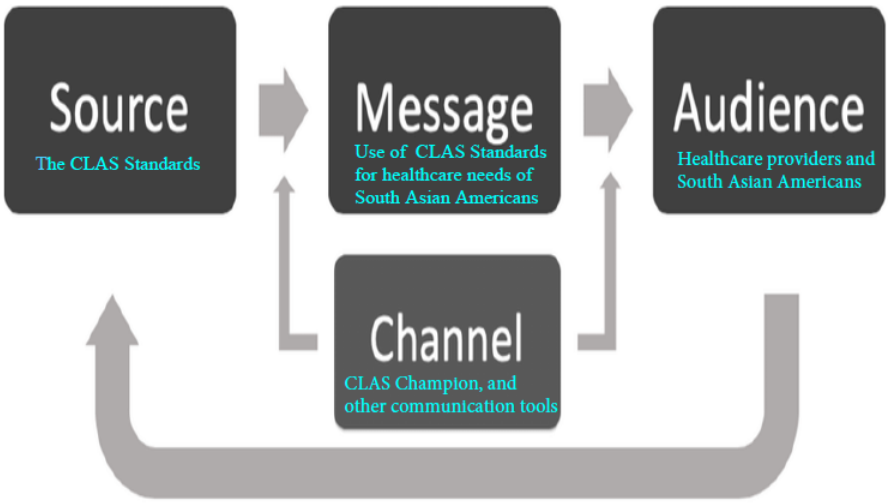
The success of the CLAS champion plan for change is reliant on how effectively the plan is implemented. Operationalizing a champion is dependent upon the leadership of an organization within which the strategy is to be employed. Therefore, the CLAS champion plan for change can only be as effective as the leadership allows it to be. Leadership is ultimately responsible for adopting the change vision, allocating adequate resources, rallying staff, and influencing the workplace culture to support the CLAS Standard in order to promote overall health equity amongst racial and ethnic minority groups, including South Asian Americans. Subsequently, resources for training the CLAS champion, operationalizing, and evaluating the CLAS champion's plan for change will defer from one organization to another. Additionally, the CLAS champion plan for

change may be difficult to evaluate because measuring effectiveness is not easy or intuitive. Larger healthcare organizations or integrated health delivery networks may need multiple champions which will demand the need for deeper commitment and resources from all levels of an organization, in particular, the leadership level.

Dissemination Plan

The plan for change can be disseminated using a framework such as the Model for Dissemination Research (Ashchraft, Quinn, and Brownson, 2020). This model uses four (4) key components or strategies: source (the evidence), message (relevant information sent by the source), audience (those receiving the message via the channel), and channel (how the message gets from source to audience). For our study, a simplified model of the four constructs is shown in Figure 4. The constructs can be classified as source (the CLAS Standard), message (use of CLAS Standard to address the healthcare needs of South Asian Americans), audience (healthcare providers and South Asian Americans) and channel (CLAS champion, websites, social media, and other communication channels). The constructs within the model can be modified as needed based on the results of the evaluation plan.

Figure 4. Model for Dissemination Research



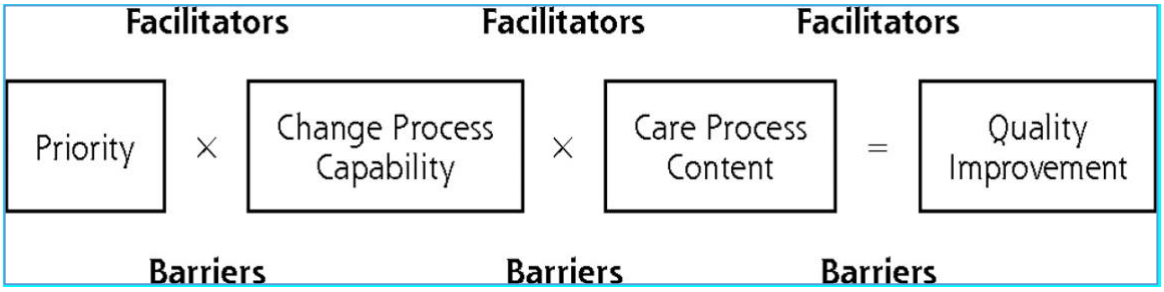
Future Plan

The objective of this study was to seek answers, from the perspective of providers, on how has California implemented the CLAS Standard, the facilitators, and barriers to successful implementation and to understand the best strategy to advance the CLAS standard to support the health of South Asian Americans. A significant finding from the study was that training specific to the CLAS Standards is lacking. Additionally, when questioned about the South Asian population's health concerns, participants' responses on their care seemed to be based on their personal experiences and engagement with this community, and not from training per se. Some participants' awareness seemed to stem from "other" health equity-related training, and/or from their own social justice convictions. We believe this to be a disconnect within the third element of the Solberg framework, *care process content.* Therefore, future plans could include a policy for an education program and/or training specifically for the CLAS Standard in healthcare organizations. In order to be aware of serious health concerns in a subgroup like South

Asian Americans, this policy is necessary for providers to be able to practice healthcare based on culturally and linguistically appropriate services.

Appendix 1

Conceptual Framework



Conceptual framework for practice improvement (Solberg, 2007).

Appendix 2

SAMPLE RECRUITMENT EMAIL

Subject: Interview about CLAS Standards?

Hello [participant],

My name is Beatrice Barnabas, and I am a Doctoral candidate at the Indiana University Fairbanks School of Public Health. I am reaching out to contact information provided by [?].

While we realize that you may not be currently involved in this area of interest, you have been identified as someone who may be able to provide valuable information. We see a lot of utility and value in learning through your knowledge and experience.

Would you be interested in participating in a 30-min Zoom interview with me about your experience as a provider focusing on the topic above?

We are planning to speak with multiple participants from Southern California. When we are done, you'll receive a $10 gift card as a thank you for your time. Please see the attached information sheet for more details about participating.

Best,

Beatrice

Beatrice Barnabas
DrPH Program in Global Health Leadership
Indiana University
Richard M. Fairbanks School of Public Health
Indianapolis, IN 46202
bbbarnab@iu.edu
301-996-2670

Appendix 3

Qualitative Interview Protocol for Key Informant Interviews to identify and gain understanding of CLAS based healthcare in California

Introduction script

You are invited to participate in a research study entitled '*Advancing the implementation of Culturally and Linguistically Appropriate Services (CLAS) Standards to support health of South Asian Americans - Qualitative Interviews*.' This interview is being used for research purposes and is intended to provide more information on how best providers in California can advance the implementation of the United States Office of Minority Health's CLAS Principal Standard to support the health of South Asian Americans. You are being asked to participate because of your professional role and expertise in primary healthcare and community services delivery.

We encourage you to ask questions now and at any time during or after the interview. If you decide to participate in an interview, the interview itself will be a record of your agreement to participate.

Our study seeks to address the following aims:

- Assess the extent to which the state of California has implemented CLAS Standards
- Assess the current health environment of South Asian Americans in California
- Identify health expert recommendations to advance CLAS Standards
- The results of this interview may help guide the best strategy to advance the CLAS Principal Standard by providers in the state of California

The interview should last approximately 30 to 60 minutes. A total of 20 people will be participating in a similar interview from locations across the state of California. Should you participate, you will not be contacted in the future.

The investigator(s) in this study are healthcare researchers. They are interested in the knowledge to be gained from this study. You are under no obligation to participate in any research study offered to you.

If you agree to take part in this study, you will then be asked to participate in one in-person, telephone, or online interview (via Zoom), depending upon your preference, lasting approximately 30 to 60 minutes. With your permission, the interview will be audio recorded for research purposes only. We will ask questions regarding your experience with implementation and practice of the CLAS standards in primarily the healthcare setting, and your knowledge of the South Asian population health experience.

You may not directly benefit from this research; however, we hope that your participation in the study will provide insight about how best providers in California can advance the CLAS Principal Standard to support the health of South Asian Americans.

There are no costs to you to participate in this study. A $10 Amazon gift card will be provided to you upon completion of the online Zoom interview.

The following procedures will be used to protect the confidentiality of your data. The researchers will keep all study records (including any codes to your data) locked in a secure location. Research records will be labeled with a unique code. A master key that links names and codes will be maintained in a separate and secure location. All electronic files (e.g., database, spreadsheet, etc.) containing identifiable information will be password protected. Any computer hosting such files will also have password protection to prevent access by unauthorized users. Only the members of the research staff will have access to the passwords. Data that will be shared with others will be coded as described above to help protect your identity. At the conclusion of this study, the researchers may publish their findings. Information will be presented in summary format, and you will not be identified in any publications or presentations. Any master key, audio recording, and other data described in this paragraph will be maintained in accordance with the security provisions of this paragraph until destroyed by the researchers. Audio recordings will be transcribed by a member of the staff.

You should also know that the Indiana University Human Research Protection Office and the Biomedical Institutional Review Board (IRB) may inspect study records as part of its auditing program, but these reviews will only focus on the researchers and not on your responses or involvement. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

You do not have to be in this study if you do not want to. You may discontinue your participation in this interview at any time. There are no penalties or consequences of any kind if you decide that you do not want to participate.

You do not have to answer any question that you do not want to answer.

Take as much time as you like before you decide to participate in this study. If you have further questions about this study, want to voice concerns or complaints about the research or if you have a research-related problem, you may contact the principal investigator, Dr. Cynthia Stone at (317) 278-0761 and the co-principal investigator, Beatrice Barnabas at 301-996-2670. If you would like to discuss your rights as a research participant, discuss problems, concerns, and questions; obtain information; or offer input with an informed individual who is unaffiliated with the specific research, you may contact the Indiana University Human Research Protection Office at (317) 274-8289.

QUESTIONS

1. INTRODUCTION SECTION

1.1 What is your current position?
1.2 What is your current place of work?
1.3 How long have you been employed in this role at your current place of work?

2. COMPLIANCE AND ENFORCEMENT OF CLAS STANDARDS

2.1 Tell us about your role(s) in your organization
2.2 How is your role(s) involved in compliance of CLAS Standards within your organization?
2.3 The state of California passed Assembly Bill No. 1195 in 2005 (effective 7/1/2006) where physicians and surgeons are required to complete cultural and linguistic competency training as part of their continuing medical education requirements. Please share what you know about this requirement.
2.4 Please share your understanding of how your organization enforces Bill No. 1195, if at all.
2.5 If answered yes (to enforcement) in 2.4, tell us a little bit about how your organization enforces this requirement
    a. Who leads the process?
    b. How long has this process been in place?
    c. What is your opinion of the process that is in place? If it is successful, why? And if not, why?
2.6 If answered no to 2.4
    a. In your opinion, what are some reasons why this enforcement is not in place? What are the barriers or challenges to enforcing this requirement?
    b. Who should be the key players to lead the enforcement?
    c. Are the resources available within your organization sufficient to begin the enforcement process?

3. CULTURAL COMPETENCY TRAINING AND ADHERENCE TO CLAS STANDARDS

3.1 Does your organization provide cultural competence training to primary healthcare providers (defined as primary care physicians, nurse practitioners and physician's assistants)?
3.2 If answered yes to 3.1, tell us a little bit about the cultural competency training within your organization
    a. How is your role(s) involved in this process?
    b. Who are the key players leading this process within your organization?
    c. How long has this process been in place?
    d. How is the process being monitored and tracked?
    e. What is your opinion of the process that is in place? If it is successful, why? And if not, why?

3.3 If answered no to 3.1

a. In your opinion, what are some reasons why cultural training programs are not in place? Are there specific barriers or challenges to providing this training?
b. Who should be the key players to lead this process?
c. What are some resources you see your organization needing to begin a cultural competency training program?

3.4 Please tell us how your organization is adhering to the practice of CLAS Standards

4. SOUTH ASIAN POPULATION HEALTH EXPERIENCE

4.1 In a few words, tell us about how your organization supports the larger Asian American population.

4.2 In a few words, please provide a general sense of your knowledge of the subset South Asian (SA) population. What do you know about their cultural and linguistic background?

4.3 Tell us if you are aware of the following health concerns in the SA population. If yes, briefly expand in a few words.

a. Unique phenotype with a high prevalence of early onset cardiovascular disease (CVD) where conventional risk factors (age, sex, smoking, obesity, diabetes, cholesterol, and hypertension) do not fully explain this heightened disease risk.
b. High prevalence of Type 2 Diabetes Mellitus (T2DM) in SAs adults (more than two-fold higher compared to other ethnic groups)
c. Less total lean abdominal muscle mass compared with all other racial/ethnic minority groups resulting in inactivity and diet

4.4 Acculturation is defined as the adoption of the customs, beliefs, principles, and actions of one cultural group by members of a different cultural group. Briefly tell us how you perceive acculturation to affect dietary choices and health behaviors in ethnic minority populations.

4.5 In conclusion, tell us how your role within your organization can help support the health of SA population given the conditions described in 4.3 and 4.4.

5. CONCLUSION

5.1 Is there anything else you would like to share with us regarding what we just discussed?

Thank you!

Appendix 4

Qualitative Interview Protocol mapped to Solberg (2007) framework

The interview procedure was guided by Solberg's conceptual framework.

It is not enough for leaders to state that a particular change is a priority but instead, that priority must be shared by other personnel at all levels.

2. COMPLIANCE AND ENFORCEMENT OF CLAS STANDARDS

2.1 Tell us about your role(s) in your organization
2.2 How is your role(s) involved in compliance of CLAS Standards within your organization?
2.3 The state of California passed Assembly Bill No. 1195 in 2005 (effective 7/1/2006) where physicians and surgeons are required to complete cultural and linguistic competency training as part of their continuing medical education requirements. Please share what you know about this requirement.
2.4 Please share your understanding of how your organization enforces Bill No. 1195, if at all.
2.5 If answered yes (to enforcement) in 2.4, tell us a little bit about how your organization enforces this requirement
   a. Who leads the process?
   b. How long has this process been in place?
   c. What is your opinion of the process that is in place? If it is successful, why? And if not, why?
2.6 If answered no to 2.4
   a. In your opinion, what are some reasons why this enforcement is not in place? What are the barriers or challenges to enforcing this requirement?
   b. Who should be the key players to lead the enforcement?
   c. Are the resources available within your organization sufficient to begin the enforcement process?

Change process capability was addressed by questions chosen to understand if providers are mindful of the services provided based on a patient's racial/ethnic background.

3. CULTURAL COMPETENCY TRAINING AND ADHERENCE TO CLAS STANDARDS

3.1 Does your organization provide cultural competence training to primary healthcare providers (defined as primary care physicians, nurse practitioners and physician's assistants)?
3.2 If answered yes to 3.1, tell us a little bit about the cultural competency training within your organization
   a. How is your role(s) involved in this process?
   b. Who are the key players leading this process within your organization?
   c. How long has this process been in place?
   d. How is the process being monitored and tracked?
   e. What is your opinion of the process that is in place? If it is successful, why? And if not, why?
3.3 If answered no to 3.1
   a. In your opinion, what are some reasons why cultural training programs are not in place? Are there specific barriers or challenges to providing this training?
   b. Who should be the key players to lead this process?
   c. What are some resources you see your organization needing to begin a cultural competency training program?
3.4 Please tell us how your organization is adhering to the practice of CLAS Standards

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Care process content element pertains to system-level changes in the practice environment.

4. SOUTH ASIAN POPULATION HEALTH EXPERIENCE

4.1 In a few words, tell us about how your organization supports the larger Asian American population
4.2 In a few words, please provide a general sense of your knowledge of the subset South Asian (SA) population. What do you know about their cultural and linguistic background?
4.3 Tell us if you are aware of the following health concerns in the SA population. If yes, briefly expand in a few words.
   a. Unique phenotype with a high prevalence of early onset cardiovascular disease (CVD) where conventional risk factors (age, sex, smoking, obesity, diabetes, cholesterol, and hypertension) do not fully explain this heightened disease risk.
   b. High prevalence of Type 2 Diabetes Mellitus (T2DM) in SAs adults (more than two-fold higher compared to other ethnic groups)
   c. Less total lean abdominal muscle mass compared with all other racial/ethnic minority groups resulting in inactivity and diet
4.4 Acculturation is defined as the adoption of the customs, beliefs, principles, and actions of one cultural group by members of a different cultural group. Briefly tell us how you perceive acculturation to affect dietary choices and health behaviors in ethnic minority populations.
4.5 In conclusion, tell us how your role within your organization can help support the health of SA population given the conditions described in 4.3 and 4.4.

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CURRICULUM VITAE

BEATRICE BENJAMIN BARNABAS

Education

- Doctor of Public Health (DrPH), Indiana University (2023)
- Master of Public Health (MPH), George Washington University (2016)
- Master of Science, Biotechnology (M.Sc.), Johns Hopkins University (2002)
- Bachelor of Science, Medical Technology (B.Sc.), Andrews University (1994)

Professional Experience

NATIONAL INSTITUTES OF HEALTH, **National Human Genome Research Institute**, **NIH Intramural Sequencing Center (NISC),** Bethesda, Maryland.

Operations Manager, NISC
July 2012 – Present

- Coordinate the diverse research operations of a state-of-the-art high-throughput sequencing center providing professional understanding of genomic science with extensive theoretical and practical experience as a biologist.
- Maintain continuous interaction with scientists and research personnel ensuring the effective and immediate resolution of highly complex problems without disruption to ongoing research and data gathering.
- Provide leadership for the development and execution of NISC operating budget, utilizing knowledge of molecular biology and related science disciplines in order to ensure the effective linkage to NISC operating and strategic plans with funding requests, justifications, and funds utilization.
- Participate directly with senior management in the development of options, scenarios, and approaches that profoundly impact NISC fiscal programs.
- Participate directly with senior management in planning, managing, and tracking the operational projects and activities at NISC.
- Serve as a key team member in the planning and execution of scientific project plans; including setting time frames, milestones, and agreed-upon endpoints for various projects at NISC.
- Identify project activities or situations that may adversely impact project plans and recommend solutions to problems.
- Prepare analyses of scientific accomplishments of NISC in quarterly and annual reports as required by senior management.
- Manage billing, generating quotes, and collecting reimbursement for all sequencing work performed at NISC.
- Develop models and practices for how NISC bills for services.

- Plan and coordinate the procurement of NISC supplies and reagents by evaluating cost-effective mechanisms for purchases.
- Develop and prescribe technical specifications and standards for specialized laboratory equipment, and other products and services.
- Manage responsibilities associated with the life cycle of contracting and procurement activities whilst utilizing professional knowledge of biology and related research fields.
- Serve as the Contracting Officer's Representative (COR) for the Government's contract programs.
- Develop highly technical statements of work that impact research programs.
- Solicit competitive quotes from vendors; review and evaluate responses for adequacy in meeting requirements and for their technical and business merits.
- Monitor contract services, delivery and customer service provided by vendors.
- Maintain adequate reagents, laboratory supplies and equipment inventories for efficient and continuous operation.
- Coordinate and interact with various service engineers for proper maintenance and timely calibration of laboratory equipment.
- Manage equipment installation and relocation to continuously adjust to new sequencing technology and platforms.

Project Analyst, NISC
April 2010 – July 2012

- Price quotes generation for new incoming Next Generation sequencing projects.
- Assist in quarterly billing for all sequencing projects for the center.
- Assist with the monthly projection of Next Generation Illumina technology sequencing capacity.
- Track projects for Next Generation Illumina technology sequencing.
- Assist with planning and implementing goals for Next Generation Illumina sequencing capacity.
- Place orders with various vendors and managing laboratory supplies for the entire facility.

Senior Finishing Biologist, NISC Sequence Finishing Group
February 2001 – April 2012

- Review and identify Single-Nucleotide Polymorphic (SNP) as well as insertions and deletions (INDELs) in regions of sequenced data as requested by principal investigators of the project.
- Evaluation of sequence data to establish quality control primer pairs for the MedSeq project.

- *ENCODE Project: Comparative Sequencing.* Extensively involved in generating multi-species sequences and analyzing the resulting data in an initiative that aims to identify all the functional elements in the human genome.
- *Multi-Species Comparative Mapping and Sequencing Effort.* Extensively involved in this ongoing project involving the generation of genomic sequence from multiple vertebrates for comparative analyses.
- Assess the quality of projects completed by other members of the sequence-finishing group. Thoroughly examine projects for low- and high-quality discrepancies, misassemblies, error rates, and overall project quality before submission to central genomic database. By various methods of analysis, provide feedback to finishing biologists to ensure that quality standards are being achieved.
- Ensure that all projects meet the quality criteria equal to that established by The Human Genome Project. Design project specific experiments in order to achieve a high quality contiguous genomic subclone sequence. All projects are analyzed on a molecular and computational level.

Research Biologist, NISC Sequence Production Group
October 1999 - January 2001

- As a member of a high-throughput DNA sequencing group, duties included the purification of genomic DNA, fluorescent based-sequencing of subclones, assimilation and analysis of sequence data by both gel and capillary-based instrumentation. Assisted in the acquisition and implementation of new DNA sequencing methodologies and platforms. Active participant in the training of new employees.

THE JOHNS HOPKINS HOSPITAL, Baltimore, Maryland**.**

Medical Technologist, Clinical Laboratory
September 1997 - October 1999

- As an integral member of the core laboratory team, duties included monitoring and evaluating data to help establish new assays and quality control. Thorough understanding of the different methodologies used in patient sample testing, including methods such as ELISA. Assisted in the preparation of reagents used in patient testing and quality control. Responsible for the calibration and maintenance of various diagnostic equipment. Active participant in the training of new employees and college student interns. Responsible for the review and update of the Standard Operating Procedure for the Department of Coagulation.

SHADY GROVE ADVENTIST HOSPITAL, Rockville, Maryland.

Medical Technologist, Clinical Laboratory
September 1994 - August 1997

- Involved in the operation and clinical patient sample testing using laboratory diagnostic equipment in all areas of the laboratory: Hematology, Chemistry, Blood Bank and Microbiology. Assisted in the calibration and the maintenance of diagnostic equipment. As a member of the clinical team, performed venipunctures competently. Supervision of staff when needed. Active participant in the training of new employees.

SKILLS

- Excellent organizational skills and demonstrated ability to complete detailed work accurately.
- Strong analytical skills and excellent judgment.
- Excellent oral and communication skills.
- The ability to produce good technical documents.
- Ability to relate professionally with employees and clients, motivate others, and demonstrate leadership and courage.
- Excellent general computer skills, experience with databases and scientific applications, and ability to quickly learn and master computer programs as

LANGUAGES

- English: native
- Bahasa Malaysia: native
- Tamil: fluent (speaking); basic (reading)
- Telugu: fluent (speaking)
- Chinese (Cantonese): basic (speaking)

HONORS

- Recognition, Twenty Years of Service in the Government of the United States of America, 2019
- Recognition, Fifteen Years of Service in the Government of the United States of America, 2015
- Recognition, Ten Years of Service in the Government of the United States of America, 2010

- Recipient, Performance Awards from the NIH, 2007, 2008, 2010, 2011, 2013, 2014, 2015, 2016, 2017, 2018, 2019
- Member, American Society of Clinical Pathologists (ASCP)
- Member, Phi Theta Kappa
- National Dean's List, 1991 – 1993
- Recipient, Academic Achievement Award, 1991 & 1992

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- Thomas JW… **Benjamin B** … Green ED (71 authors total) (2003) "Comparative Analyses of Multi-species Sequences from Targeted Genomic Regions." *Nature 424*, 788-793.
- Blakesley RW, Hansen NF, Mullikin JC, Thomas PJ, McDowell JC, Maskeri B, Young AC, **Benjamin B,** Brooks SY, Coleman BI, Gupta J, Ho S-L, Karlins EM, Maduro QL, Stantripop S, Tsurgeon C, Vogt JL, Walker MA, Masiello CA, Guan X, Bouffard GG, Green ED, and NISC Comparative Sequencing Program (2004) "An Intermediate Grade of Finished Genomic Sequence Suitable for Comparative Analyses." *Genome Res. 14*, 2235-2244.

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