Beyond the Limits of Traditional Health Care

A State-Level Systematic Review of Community Health Programs in the United States

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HEALTH

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EXECUTIVE SUMMARY

While community-based health care is not a new phenomenon and has been around for decades, the topic has received increased attention from policymakers, academic researchers, and the American public in recent years. In particular, community health workers have been hailed for their ability to "bridge the gap" between the formal health care system and populations that are typically hard to reach and thus underserved by traditional modes of health care delivery.[1] More broadly, a key asset of these community health workers and community health programs is their high degree of cultural sensitivity[2] and the ensuing ability to provide care that is appropriate to the specific context and circumstance of its target population.

However, despite the increased attention, there appears to be a lack of systematic information about community health programs. There is a need to rigorously evaluate programs and fully understand how successful programs adjust their offerings to the specific context in which they operate, especially for policymakers and nonprofit managers seeking to implement community health programs.

In order to fill this gap in knowledge, we conducted a thorough, systematic search and review of community health programs all across the U.S. and highlighted various best practices. All in all, we identified 211 programs across the country, spanning from 18 programs in California and nine programs in both Washington and Rhode Island; to single programs in Kentucky, Nevada, Wyoming, and West Virginia; to no programs in New Hampshire. We then used occupational data from the Bureau of Labor Statistics (BLS) to show that there is a strong correlation between the number of community health programs identified in our search and the number of workers employed in community social services (as represented by BLS

[1] Rosenthal et al., "Community Health Workers."

[2] Behforouz, "Bridging The Gap."

Occupational Code 21-1090). In addition to compiling this first exhaustive, if not complete, registry of community health programs in the United States, we further classified programs into four distinct categories based on their primary focus areas. Following our classification, we found that care coordination programs are aimed at facilitating access to formal health care and adherence to treatments, health education and healthy food programs are mostly targeted at prevention and healthier styles of living, and green building and environmental programs are aimed at improving general physical living conditions across communities.

Ultimately, we found that states that are highly diverse in terms of demographic and socioeconomic characteristics are most likely to rely heavily on community health programs to overcome the vast gaps in coverage and reach of their formal health care systems.

Aside from the readily apparent demand factors that motivate states to explore alternative models of health care delivery, we point to several surprising states such as Rhode Island, Washington, Oregon, and Colorado that have been very successful at implementing community health initiatives and establishing financing and regulatory structures that allow these programs to thrive and persist in the long run.

INTRODUCTION

The United States health care system has been referred to as wasteful and inefficient by academic scholars, policy experts, and media representatives.[3] To illustrate this point, *The Economist*[4] showed that while Americans spend far more per capita on health and health care than the citizens of any other Organisation for Economic Co-operation and Development (OECD)country, their surplus spending does not appear to translate into better health care outcomes. In some sense, the United States can be considered an outlier, falling victim to overspending, administrative waste, and fraud, as well as inefficient health care delivery channels and practices. When thinking about the root causes of these inefficiencies, the most commonly mentioned drivers are the U.S.' fee-for-service health care model that allows providers to dictate pricing of medical services; its aging society with a pronounced need for expensive, long-term, end-of-life care; and lastly, its high share of underinsured and uninsured people that rely heavily on the emergency care system, rather than regular, preventative care. In addition to these factors, the U.S. health care system is subject to several complex demographic and economic trends that have adversely affected its capacity to deliver health services in the cheapest possible fashion. Increasing racial, ethnic, and cultural diversity, along with growing income inequality, has created many pockets in the U.S. population that have little to no access to the formal health care system, and that are categorically missed by traditional service delivery channels. In order to address these shortcomings in coverage, state and local policymakers have been relying heavily on community representatives to bridge the gap between the formal system and culturally diverse, often underserved, groups of the population.[5]

Effectively, community-based health care represents a continuum of

[3] McGinnis et al., "Best Care at Lower Cost."

[4] "America's Big Spending on Health Care Doesn't Pay off."

[5] U.S. Department of Health and Human Services, "Community Health Worker National Workforce Study."

care that extends beyond the traditional medical setting of a hospital or clinic. Community-based programs integrate community leaders, nonprofit organization networks, social marketing or franchising campaigns, and public education outreach to provide comprehensive health care services. As health care reform in the United States continues to center on federal spending and financing mechanisms, there is an increased need and opportunity for holistic care approaches that would encompass all members of the population. From a public health perspective, community-based health programs can be beneficial in addressing social determinants of health[6] with the rationale that they are better attuned to the unique socioeconomic, cultural, and linguistic conditions of their target population. Community-based health programs can be valuable from a cost-effectiveness perspective as well. Through effective care coordination and health education measures, community-based programs have encouraged preventive health care and curbed unnecessary (or inappropriate) utilization of health care services, driving total costs down.[7]

Health care delivery in the United States continues to suffer from deep fragmentation—at the federal, state, and local levels—thus increasing the need for an expanded health care menu. Where traditional health care services cannot reach or effectively deliver services, there is demand for alternative modes of care that will be individualized and context-specific. This paper studies the current landscape of community-based health models in the United States and identifies national leaders and notable initiatives.

[6] Plough and Chandra, "From Vision to Action. A Framework and Measures to Mobilize a Culture of Health."

[7] Sanders and Lehmann, "Community Health Workers."

METHODOLOGY

RESEARCH OBJECTIVES

The primary objective of this paper is to help policymakers understand how to best incorporate context, cultural practices, and habits into state and local health care systems. This study selects community health as a topic of investigation because it exists outside of traditional health care settings and therefore, has received less academic inquiry and analysis. This study is unique as it highlights community-based programs on an individual state level and assesses all community-based health care work rather than exclusively centering on community health workers.

A secondary objective of this study is to develop a cohesive and logical framework of comparison for community-based health care in the United States. Due to the nature of health care in the U.S.—which is shaped by a multitude of actors and intervening public policy—no organized directory of community-based health programs exists. While we cannot claim to have compiled a complete list of programs, we believe it is a comprehensive list that illustrates states' overall propensities toward relying on community health programs as an innovative health care delivery tool. To the best of our knowledge, this effort may be the first to present a systematic framework for state-level examination by policymakers and academics.

SEARCH STRATEGY

Using an expanded keyword search list, we conducted a systematic search, relying primarily on electronic databases and websites to identify relevant published and gray literature. We searched the following key terms generally and later, specifically, for each state: *community health, healthy communities, minority health, community health workers, healthy cities, health equity,* and *food*

insecurity. We queried electronic databases such as Google Scholar, Health Affairs, and PLOS ONE for relevant academic literature, while gray literature sources included federal and state agency documents, state program evaluation reports, nonpartisan issue briefs and policy reports, publications from nonprofit health institutes, and other reports from foundations and funders.

Given that the concept of "community health" and the programs reviewed as part of this study are relatively new, we found that there is a lack of rigorous evaluations or systematic literature reviews. To supplement our search, especially for states where research findings were limited, we initiated contact with state-level departments of public health, eight of which responded and provided further information. The information obtained from this correspondence, along with the scholarly and gray literature, form the basis of this review.

DEFINITIONS OF CLASSIFICATIONS

Through a series of academic and gray literature searches, we identified core health issues and distinct population groups that community-based health programs today are designed to serve. The purpose of such definitions and conceptualization is to produce a framework which can most effectively and succinctly classify a state's public policy or institutional response toward specific population groups and unique health needs.

[8] Eapen and Jain, "Redesigning Care for High-Cost, High-Risk Patients."

[9] Mechanic and Tanner, "Vulnerable People, Groups, and Populations."

POPULATION GROUP

Three separate population groups are identified for the purpose of our framework: general population, high-risk and chronic high-needs individuals, and marginalized and vulnerable groups. Programs designed for the "general population" focus on all residents of a state, making no specific group a priority. "High-risk and chronic high-needs" patients are defined as individuals with disabilities or multiple/complex behavioral or mental health conditions. Patients with complex needs account for a disproportionate share of health care spending or are at risk of incurring high medical costs in the future.[8] Within the category of "marginalized and vulnerable groups," individuals may be "vulnerable" due to a disadvantaged socioeconomic status, inadequate interpersonal networks, degraded environments and neighborhoods, personal incapacities, and development problems.[9] These marginalized and vulnerable groups may include those who are low-income, racial and ethnic minorities, refugees, the uninsured, the elderly, the homeless, harder-to-reach groups, and those with mental illness.

PROGRAM AREA

Green Building and Environmental

Programs and initiatives that fall under this classification focus on creating livable communities that are safe, inclusive, and accessible;

reduce toxic exposure; and promote environmentally friendly, low-impact, and sustainable structures. As adapted from the "Framework for Community Health Work" by the Alliance for Community Health Plans, such programs may also focus on supporting cities and towns in adopting policies that promote healthy lifestyles.[10]

The Healthy Eating Active Living (HEAL) Cities Campaign, founded in 2008, is one notable initiative within this program area. HEAL provides training and technical assistance to city officials so that they can adopt healthier and more livable communities by pushing for healthy land use, walkability, sustainability, and healthy food retail policies.[11] HEAL, founded and funded by Kaiser Permanente, operates in five states today: California, Oregon, Colorado, Maryland, and Virginia. As of March 2017, California had 190 committed HEAL cities.[12] As each state's policy objectives and health statuses are unique, California's cities have focused on obesity prevention, healthy zoning regulations, and healthy infrastructure investment. The state capital, Sacramento, has established design standards to create pedestrian-friendly streets, while cities like La Jolla and Escondido have advocated for specific zoning laws to increase access to farmers' markets and community gardens.[13] In Colorado, the campaign has reached more than half of the state's population throughout urban, suburban, and rural communities.[14] The HEAL Cities Campaign works in partnership with local nonprofits, schools, and public health institutes to achieve its vision.

Healthy Food and Food Security

This classification includes programs and initiatives that focus on reducing the alarming problem of food insecurity (especially in food deserts across the U.S), addressing the issues of obesity, and promoting healthy foods and diets that are fresh and rich in nutrients (which can help achieve optimal health and reduce the risk of chronic diseases).

Hunger Free Colorado (HFC) is an exemplary organization, as

[10] "ACHP Framework for Community Health Work."

[11] "HEAL Nation | Supporting Civic Leaders Across the Nation to Build Healthy Communities."

[12] "Cities | Healthy Eating Active Living Cities Campaign | Physical Activity and Nutrition Policy Adoption in CA Cities."

[13] "Healthy Zoning Regulations | Healthy Eating Active Living Cities Campaign | Physical Activity and Nutrition Policy Adoption in CA Cities."

[14] "LiveWell Colorado's HEAL Cities & Towns Campaign Reaches 50 Municipalities."

identified in our research, working to reduce food insecurity in Colorado through community-based initiatives and partnerships. Where one in eight Coloradans struggle with hunger, HFC has fostered its core values of "community, innovation, partnership, and nutrition" to ensure access to healthy and affordable food.[15] Since its inception in 2009, HFC has provided mobile outreach services, a bilingual "Hunger Free Hotline," year-round food and nutrition provisions for children, and food stamp application assistance. HFC recognizes the growing problem of hunger among Colorado senior citizens and works toward eliminating barriers to access for the older adult population. HFC's sustainability is advanced by its commitment to develop and mobilize state legislation on the issue of food access and security. Since 2011, HFC has served more than 36,000 households. In the 2015-16 academic year, HFC served more than 30 million breakfasts to children in 1,440 participating schools.[16]

Care Coordination

Care coordination can be defined as "the deliberate organization of patient care activities between two or more participants (including the patient) involved in a patient's care to facilitate the appropriate delivery of health care services."[17] This can take the form of a team of health care professionals or the employment of community health workers (CHWs). Care coordination activities include assisting individuals in accessing health care services, developing an individualized care and treatment plan, counseling, disease management, encouraging preventative services, making at-home visits, or addressing patients' language and cultural barriers. Given the fragmented nature of the U.S. health care system, health and social service providers have increasingly developed programs aimed at coordinating the care patients receive. Care coordination models vary widely in structure and scope, but their primary goals have remained consistent: to improve disease outcomes while containing health care costs. Historically, care coordination models have targeted patients with chronic conditions because they represent the majority of total health care spending and are more

[15] "Hunger Free Colorado Fact Sheet."

[16] "Our Key Impacts | Hunger Free Colorado."

[17] McDonald et al., *Closing the Quality Gap.*

likely to experience poorly coordinated care.[18] Today, many care coordination mechanisms have expanded beyond cost control and focus on quality care, patient satisfaction, cultural competency, and improving access for vulnerable groups. likely to experience poorly coordinated care. Today, many care coordination mechanisms have expanded beyond cost control and focus on quality care, patient satisfaction, cultural competency, and improving access for vulnerable groups.

Care coordination initiatives are therefore attractive in their potential to improve both quality and efficiency of care. They may be designed to serve specific community groups or diseases. For example, Molina Healthcare in California utilizes community connectors to act as liaisons between clinicians and high-risk, high-needs patients to help them manage their conditions, understand treatment plans, and connect with community resources.[19] Other care coordination models like the Transitions Clinic Program in California serve recently released prisoners through health and social service navigation, mentorship, and with an individualized care team. Transitions Clinic began as a response to the large population of recently released prisoners in the state of California. It is estimated that up to 70 percent of this group faces chronic diseases, substance abuse, and severe mental health problems.[20] Upon release, very few of them have access to medication, health care coverage, or a primary care physician. Transitions Clinic employs community health workers with a history of incarceration to act as liaisons between the community clinics and former inmates. At first just a small innovative community project of San Francisco, it has expanded to 14 clinics across the country.[21] The Transitions Clinic Network operates in seven states and Puerto Rico, in communities affected with high incarceration rates, and operating on the belief that those closest to the problem can best engage with the community and deliver a sustainable solution.

[18] Ibid.

[19] "Taking Innovation to Scale: Community Health Workers, Promotores, and the Triple Aim."

[20] Wang et al., "Transitions Clinic."

[21] "Transitions Clinic Network | Transitions Clinic."

Health Education

Health education is "any combination of learning initiatives or experiences designed to help individuals and communities improve their health by increasing their knowledge or influencing their attitudes/behaviors."[22]

A notable health education program we identified in our research originated in Mississippi. The Barbers Reaching Out To Help Educate on Routine Screening (BROTHERS) program, founded by the Mississippi Department of Health, recruits and trains barbershop workers to administer blood pressure screenings to clientele and discuss heart disease risks. During appointments, barbers may even refer their clients to a physician if they require further counseling. The BROTHERS program runs 14 locations in the Mississippi Delta, and targets African-American men who are disproportionately affected by heart disease and stroke.[23] An evaluation conducted by the Centers for Disease Control found that of the 686 men who received blood pressure screenings, 48.5 percent had prehypertension and 36.4 percent had high blood pressure.[24] Of those screened, 34.3 percent of them were referred to a health care provider for a further follow-up. In the Mississippi Delta, where heart disease mortality is high among African-American men, BROTHERS represents the value of health education and screenings in a community setting, and beyond the traditional clinic.

[22] "WHO | Health Education."

[23] Sifferlin, "How Mississippi Barbers Are Teaching Men About Heart Disease."

[24] Mendy, "Planning for the Strategic Recruitment of Barbershops for Blood Pressure Screening and Referral in the Mississippi Delta Region."

DISCUSSION: TABLES AND MAPS

Analyzing community-based health models on an individual state level is difficult due to the fragmented and heterogeneous nature of health care that characterizes the United States. Appendix B illustrates the number of community-based health programs that exist in the U.S., as identified in our research. Spanning 211 programs, Appendix B is by no means an exhaustive directory, but it presents an insightful preliminary look into this topic and likely reflects an accurate depiction of overall community health trends and state proclivity toward alternative models of care. Thus, while we cannot be entirely confident in the actual number of programs found for each state, the fact that our standardized, systematic search unveiled numerous programs in several states and few to none in other states allows us to identify with reasonable certainty which states place an emphasis on community-based health care models and which states likely do not. Barring any systematic omission from our search terms, we are therefore reasonably confident in the general trends of our findings. Additionally, we consider data obtained from the Bureau of Labor Statistics (BLS)[25] to assess the state of the community health workforce across the nation. The BLS occupational classification "community social service workers" groups together all formally registered employees that provide community health services. This classification covers, among others, community health workers and most regular, full-time employees of community health programs. Because many community health initiatives run for a limited time, rely heavily on volunteer workers, and are often funded through grants, we believe that the workforce estimate from BLS presents a lower-bound estimate and likely understates the number of community social service workers.

When relating the number of programs discovered for each state to community social service worker employment as shown in Figure 1

and Figure 2, we find a very strong, positive correlation between formal community workers and programs identified in our systematic search across U.S. states, meaning that states with greater employment also have more community health programs. Thus, while we might be undercounting the number of community health programs across states, we have no reason to believe that we are systematically missing information regarding one state over another. In effect, we are just as likely to have missed a program in our highest-rated state (California), as we are to have missed a program in our lowest-rated state (New Hampshire). We, therefore, believe that our methodology is free of structural bias and appropriately delineates general trends in community health programs across the U.S.

Figure 1. Community Social Service Workers (CSW) per 1,000 people vs. Number of Community Health Programs in 2015
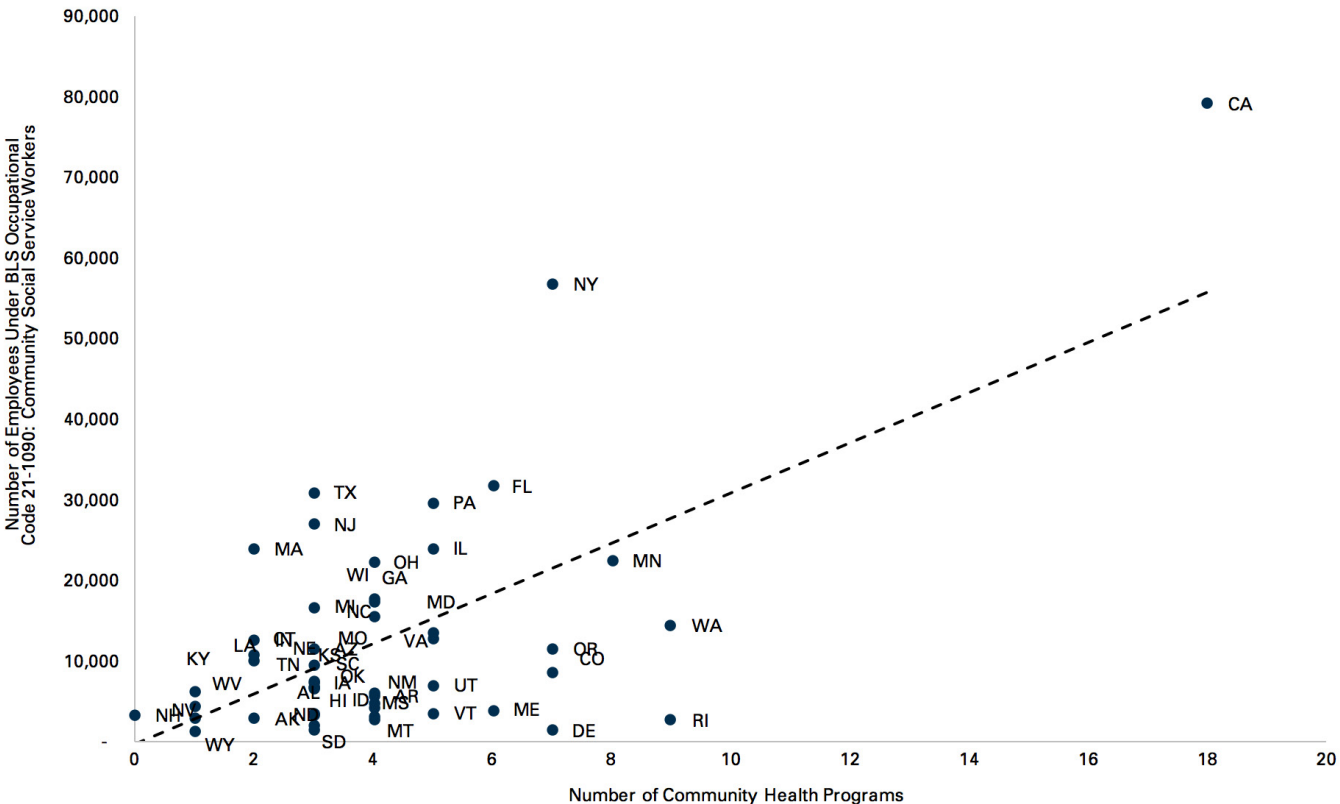
Figure 2. Community Social Service Workers (CSW)* per 1,000 People vs. Number of Community Health Programs in 2015
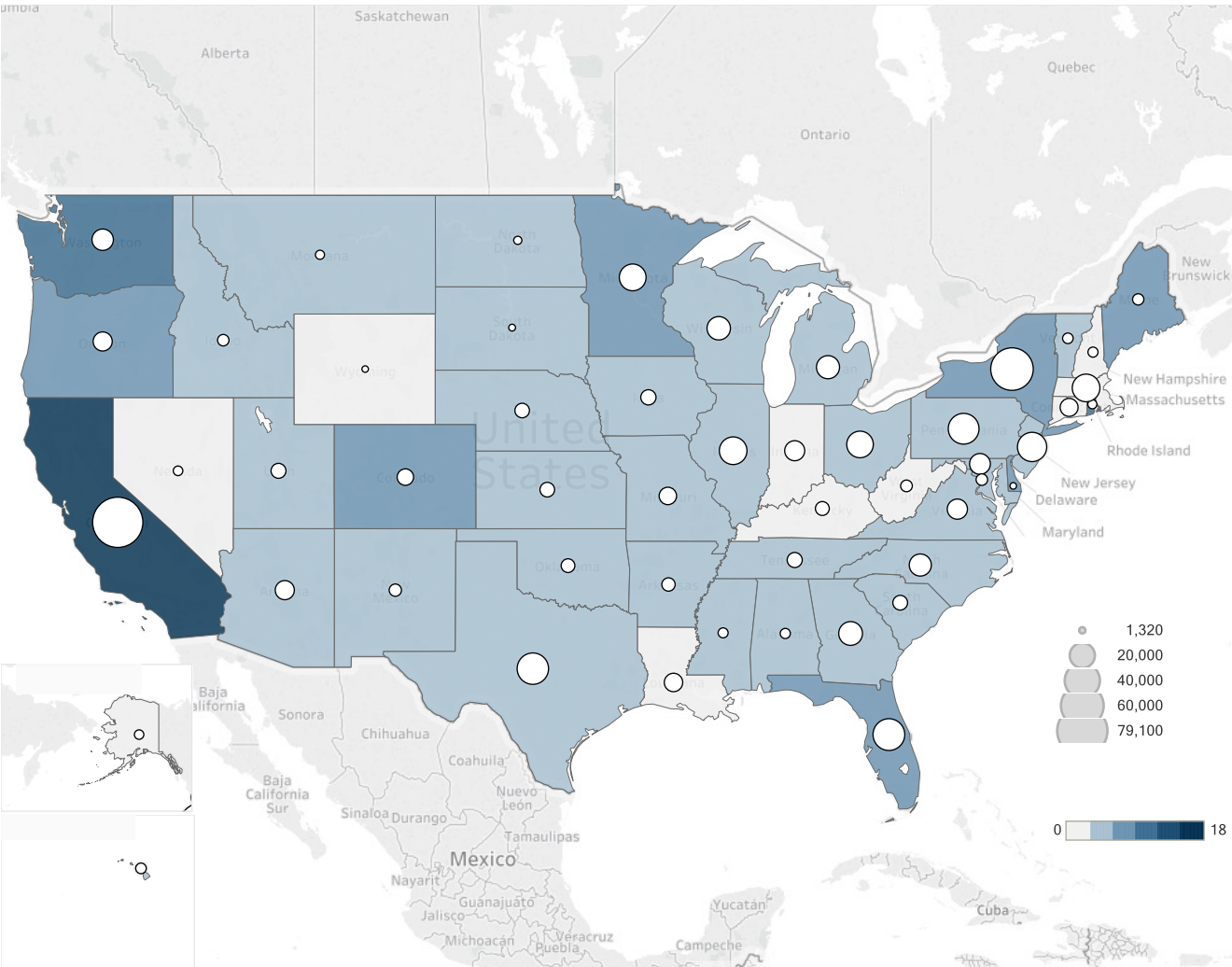

Table 1 illustrates the progress of each state in the various program classification areas and the populations that the state seeks to serve. A mark in each column indicates the existence of a relevant program. Where the column is empty, no program exists or could not be found in our comprehensive research. Table 1 reveals interesting patterns in the United States, most specifically in the care coordination and health education categories. Forty-eight of 50 states had care coordination programs; 49 of 50 states had health education programs. Such initiatives are nearly universal in the United States and implemented by a range of actors: nonprofit

organizations, foundations, and public and private hospitals.

Table 1. Systematic Framework of Community-Based Health Care Programs in the United States

State		Green Building and Environment	Healthy Food and Food Security	Care Coordination	Health Education	High-Risk and Chronic High-Needs	Marginalized and Vulnerable Groups
Alabama	AL			X	X	X	X
Alaska	AK			X	X		X
Arizona	AZ			X	X		X
Arkansas	AR			X	X	X	X
California	CA	X	X	X	X	X	X
Colorado	CO	X	X	X	X	X	X
Connecticut	CT			X	X		X
Delaware	DE		X	X	X	X	X
Florida	FL	X		X	X	X	X
Georgia	GA			X	X		X
Hawaii	HI		X	X	X		
Idaho	ID		X		X	X	X
Illinois	IL			X	X		X
Indiana	IN			X	X		X
Iowa	IA			X	X		X
Kansas	KS			X	X		X
Kentucky	KY			X	X		
Louisiana	LA			X	X		X
Maine	ME		X	X	X	X	X
Maryland	MD	X	X	X	X		X
Massachusetts	MA			X	X	X	
Michigan	MI			X	X		X
Minnesota	MN		X	X	X	X	X
Mississippi	MS			X	X	X	X
Missouri	MO			X	X		X
Montana	MT			X	X		X
Nebraska	NE			X	X	X	
Nevada	NV			X	X		X
New Hampshire	NH						
New Jersey	NJ			X	X		X
New Mexico	NM		X	X	X		X
New York	NY			X	X	X	X
North Carolina	NC			X	X	X	X
North Dakota	ND			X	X		X
Ohio	OH		X	X	X		X
Oklahoma	OK			X	X		X
Oregon	OR	X	X	X	X		X

Table 1 Cont. Systematic Framework of Community-Based Health Care Programs in the United States

State		Green Building and Environment	Healthy Food and Food Security	Care Coordination	Health Education	High-Risk and Chronic High-Needs	Marginalized and Vulnerable Groups
Pennsylvania	PA			X	X	X	X
Rhode Island	RI		X	X	X	X	X
South Carolina	SC			X	X		X
South Dakota	SD			X	X		X
Tennessee	TN			X	X		X
Texas	TX			X	X		X
Utah	UT			X	X		X
Vermont	VT			X	X		X
Virginia	VA	X	X	X	X	X	X
Washington	WA	X	X	X	X	X	X
West Virginia	WV			X	X		
Wisconsin	WI		X	X	X		X
Wyoming	WY			X	X		X

Following these results, it becomes pertinent to investigate further the trends in the remaining two categories more closely. Doing so reveals interesting patterns in the green building and environmental category in which only seven states are represented. This includes California, Colorado, Florida, Maryland, Oregon, Virginia, and Washington. All of these states are home to some of America's largest cities. Aside from Colorado, they are also all coastal. In comparing these trends, our research suggests that urban density and high diversity may be key drivers to the implementation of green building and environmental programs. Where urban density is high, there is an increased need for structures and spaces that are environmentally friendly and promote healthy behavior. Progressive public policy is another critical factor in propagating such programs. Taking into account Colorado and Oregon (whose most populous cities are not overly dense and diversity is rather low), progressive policy may be most fundamental to the creation of community-based programs.

Fifteen states were identified as having community health initiatives focused on healthy food and food security. Hunger is a critical issue

in the United States—every county and congressional district in the nation contends with a level of food insecurity. According to Feeding America, the national food insecurity rate as of 2015 was 13.4 percent, amounting to over 42 million people.[26] Federal and state policies, as well as food banks, exist nationwide but increasingly, community-based initiatives have been leading fervent efforts. Food insecurity is especially concentrated in Southern states, in both the Southwest and Southeast. Our research, as systematic in design as it was, indicated a surprising lack of programs in these states. Take Mississippi for example, where the food insecurity rate is an alarming 21.5 percent[27] and the highest in the nation. There were no results for community-based food support programs. Feeding America's directory tells a consistent narrative: Mississippi's hunger problem is the worst nationwide. The Mississippi Food Network[28] and member agencies are leading efforts, but these are generally all traditional food pantry systems rather than initiatives that are sustainable and context-specific. While this topic warrants further academic inquiry, the trends illustrate a severe need for more community-focused and holistic food support programs throughout the nation's most afflicted states.

This study's primary objective was to investigate the progress and innovation individual states have made in the implementation of community-based health programs. Our research elicited interesting results and revelations about the landscape of community-based health care delivery in the United States. California, with 18 programs, ranked first in the number of programs. With the largest population in the United States (nearly 40 million people), the results we found for California could be anticipated with prior knowledge of the state's demographic factors, high health needs, and health care delivery landscape.[29] Boasting one of the nation's most diverse state populations also means that California has a large concentration of marginalized and vulnerable groups and harder-to-reach populations. Due to such diversity, California's suspected leadership in community health, as found in our research, may not be

[26] "Map the Meal Gap."

[27] Ibid.

[28] "The Hunger Problem."

[29] "Demographic Research Unit."

exclusively due to innovation and entrepreneurship, but driven by demand and demographics as well. Due to the high volume of programs for California, we present further discussion on the state in Appendix A.

It is important to discuss other top performers in our state-level analysis. Washington (nine programs), Rhode Island (nine programs), and Colorado (seven programs) rank the highest after California. The state of Washington has taken considerable, if not unprecedented, efforts to integrate health equity into public policy. In 2013, Secretary of Health John Wiesman named health equity a priority for the Washington State Department of Public Health.[30] The Department has taken a systematic approach to designing and implementing public policies to improve health equity and reduce disparities. Through increased partnerships with community-based and tribal organizations, the development of a health disparity tool, and the utilization of mass communication, Washington's efforts in health planning and community-led approaches are notable.[31] The Washington Association of Community & Migrant Health Centers and the University of Washington School of Public Health are two of many institutions implementing community-based programs and innovative research. In the field of community health, Washington is a clear leader.

Rhode Island, though small in stature, has recorded a multitude of interesting community initiatives. Our research revealed nine programs across three program areas. Alongside health education efforts and initiatives to prevent food insecurity, Rhode Island has taken targeted approaches to reduce the burdens of HIV/AIDS and Hepatitis C. In response to a statewide Hepatitis C epidemic, the Rhode Island Hepatitis C Action Coalition (RIHAC) was formed in 2014. Comprised of over 75 stakeholders, RIHAC advances virus screenings, confirmatory testing, and treatment solutions, and works to inform the public of the disease burden.[32] Similar community-based projects exist to prevent the spread of HIV and provide services to Rhode Island residents living with HIV/AIDS.

[30] "Current Efforts to Promote Health Equity: Washington State Department of Health."

[31] "Information by Location | Washington Tracking Network (WTN)."

[32] "Epidemiological Profile: The Hepatitis C Epidemic in Rhode Island."

DISCUSSION: TABLES AND MAPS

Colorado is a case study of a state eager to embrace grassroots movements and innovative public policies. While much of the state is still conservative and rural, Colorado has become increasingly more progressive in the past few decades as evidenced by its serious gun control laws, marijuana legalization, anti-fracking movements, and historic drug policy reform.[33] Our research suggests that Colorado has successfully and efficiently developed community-based health models in every program area. The HEAL Cities Campaign and Hunger Free Colorado are two prominent community health programs in the state today, while other programs focus on high-needs patients and vulnerable groups.

[33] Sirota, "How to Turn a State Liberal."

In order to frame community health in the context of social determinants, we also assessed each state's social service worker employment data (as obtained from the BLS) against race and poverty. This information is presented in Figures 3 and 4. Data for race and poverty was acquired from the 2015 U.S. Census Bureau's American Community Survey. Social service worker employment for each state is represented by the dark circles inside each state and the magnitude of each circle denotes employment under BLS occupational code 21-1090. The results illustrate that states with the highest rates of poverty tend to have a more limited social service workforce. This is most noticeable for states in the South such as Mississippi, Arkansas, and Kentucky, who have elevated levels of poverty but only a handful of programs. While these states would stand to benefit the most from community-based health programs, they were the ones found to be most lacking due to their socioeconomic conditions.

Figure 4 illustrates the CSW workforce in relation to racial demographics across the United States. In states with majority-white populations, such as New England, Montana, and Wyoming, the CSW workforce is extremely limited. On the contrary, states with high racial heterogeneity and diversity such as California and New York, have expansive CSW workforces. This disparity may be due to

majority-white states believing in the efficiency of traditional health care delivery and subsequently, having little demand for alternative forms of care. Where high diversity can create pockets of inequity and inaccessibility to health care, racial homogeneity in these states could be reason why they have not had the need for context-specific care or community health workers. While further research is needed to explore the intersection of race and poverty with community health delivery, our research provides an interesting and novel insight into the topic.

Figure 3. Community Social Service Workers (CSW)* per 1,000 People vs. Percentage of People in a State Living Below 200x Federal Poverty Line
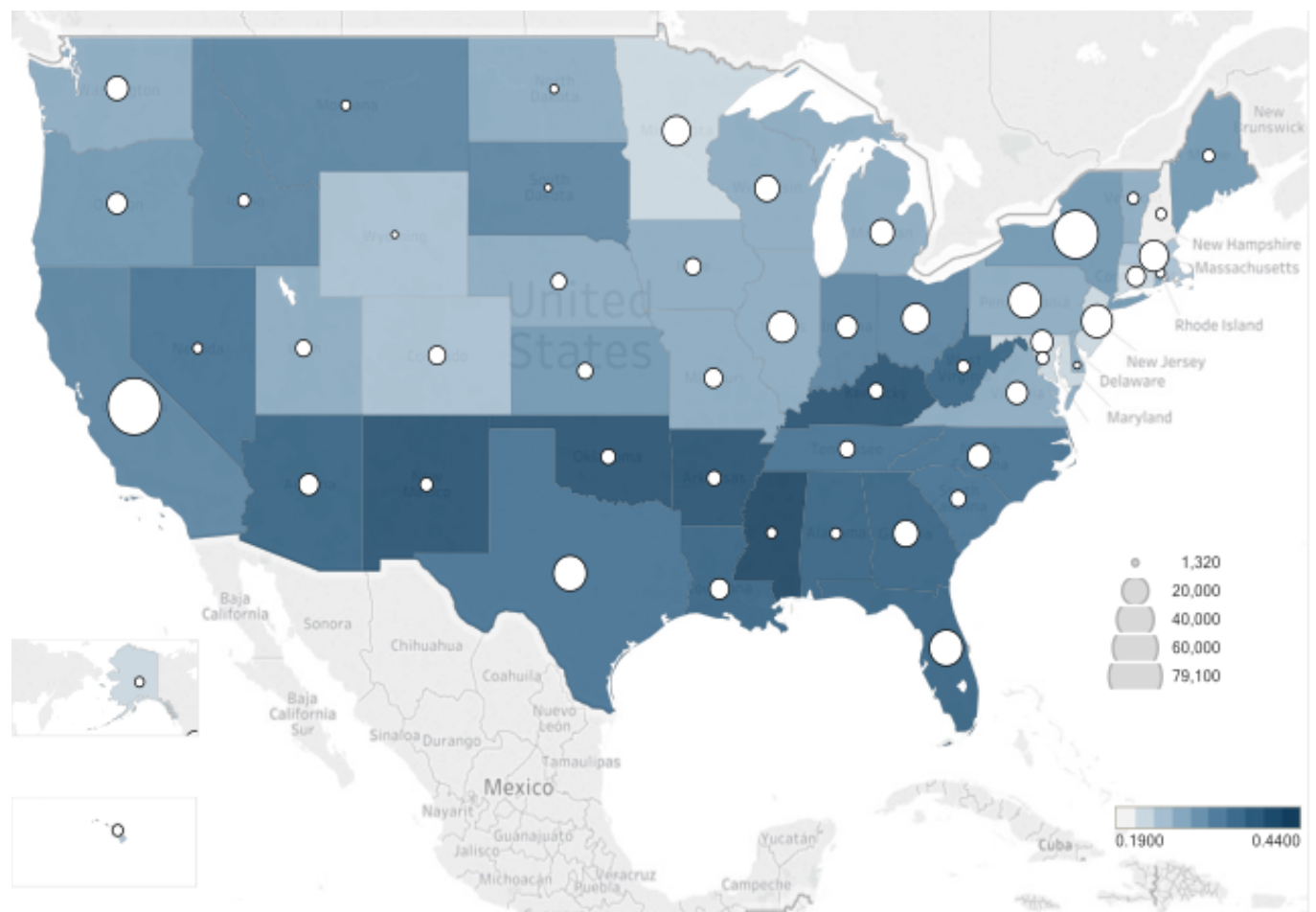
**Figure 4. Community Social Service Workers (CSW)* per 1,000 People vs.
Percentage of Whites Living in a State**
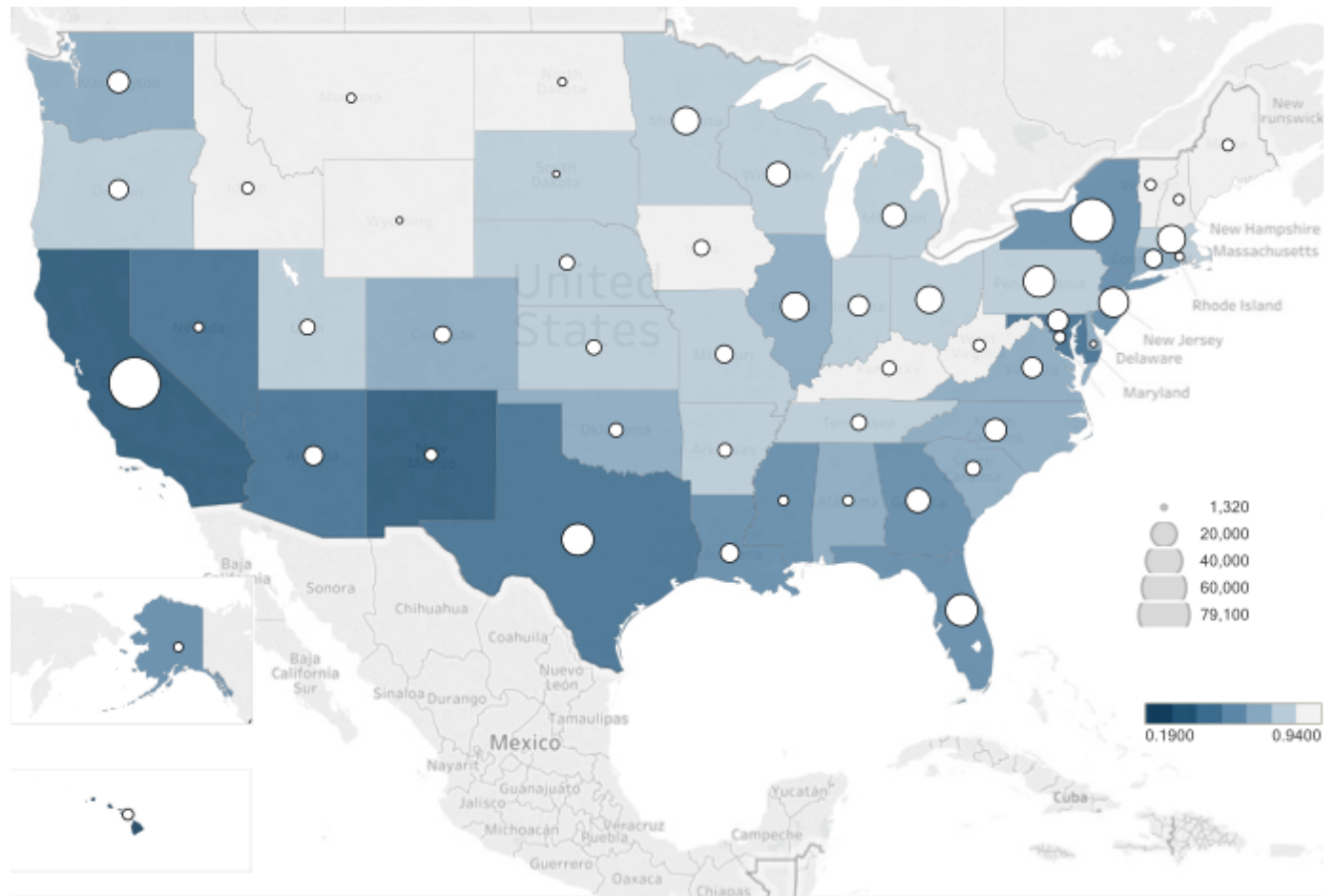
FUTURE OUTLOOK

The United States faces great challenges today in providing care to high-needs and chronic patients, and those from vulnerable and marginalized backgrounds. The health care delivery system strives to lower health care costs worldwide, to expand health insurance coverage, and to promote a population health framework. These challenges cannot be met by traditional health care models alone. Community-based health care programs represent an alternative mode of health care delivery that is not only context-specific and holistic, but also holds great potential for innovation and scope. Recently, there has been increased recognition of the importance of preventive and community health services. The Affordable Care Act of 2010 created for the first time a Prevention and Public Health Fund and the first National Prevention Strategy, which aim to increase the number of Americans who are "healthy at every stage of life," especially vulnerable and disproportionately affected groups.[34] Community-based care models can maximize the potential of such policies by serving as intermediaries that link clinical services to practical and sustainable actions on the local scale to address the social determinants of health.

In our systematic research of community health programs across the U.S., we identified a total of 211 programs ranging widely in scope and setting. Following our research, we classified programs into four distinct categories according to the health care needs and population groups they prioritized. While not exhaustive, our research provides perhaps the first systematic framework for comparison, as well as interesting insights into state-level community health progress. Policymakers and nonprofit organizations seeking to advance community health efforts could benefit from a systematic directory of existing programs for design and evaluation purposes. As the health care system in the U.S. is undergoing a crucial period of transformation, the need for more rigorous evaluations and comprehensive research into community-based health care is only growing.

[34] "National Prevention Strategy | SurgeonGeneral.gov."

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APPENDIX

CALIFORNIA CASE STUDY

In our research, California emerged as a clear leader in community-based health care, by both the number of programs it implemented (18) and the diversity and scope of its initiatives. While traditional health care delivery in California may be expansive and generally well-organized, there are long-evidenced barriers to health care access and quality care for many of the state's residents.[35] In order to cope with these barriers, it appears that California has decided to emphasize alternative community-based models of health care delivery. Where traditional systems have failed or have been unable to reach specific populations, the state has mobilized to provide localized and accessible care for the general population, homeless populations, recently released prisoners, young Native American women, and immigrant populations. California's policies and health care service system have also been welcoming to the design of more effective and nontraditional delivery models, most recently, through the California State Innovation Model and "Let's Get Healthy California" (LGHC) Task Force,[36] both of which emphasize the importance of social determinants and health equity.

While demand may be one explanation for California's progress in community health, innovation, and entrepreneurship are other critical factors. The University of California system, Stanford University, and the University of Southern California are all leading institutions recognized for their academic rigor, advanced medical and public health schools, and the innovative programs they produce. California is also home to major hospital systems and managed care companies like Molina Healthcare and Kaiser Permanente, the latter of which is the leading founder and funder of the Thriving Schools and HEAL Cities Campaign programs. The existence of these influential institutions has undoubtedly been advantageous to the progress of community health in California.

[35] Aug 26 and 2015, "The California Health Care Landscape."

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ABOUT US

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