

NEBRASKA

Good Life. Great Mission.

DEPT. OF HEALTH AND HUMAN SERVICES

An Assessment of the Community Health Worker Workforce in Nebraska during COVID-19

Prepared by:

Center for Reducing Health Disparities
College of Public Health
University of Nebraska Medical Center

October 2022

UNIVERSITY OF
Nebraska
Medical Center

 **UNMC** COLLEGE
OF PUBLIC HEALTH
Center for Reducing Health Disparities

TABLE OF CONTENTS

Authors	1
List of Figures and Tables	2
Executive Summary	3
Acknowledgements	5
Introduction	6
Background	6
Approach and Methods	10
Ethical Considerations	11
Analysis and Results	12
Participant Characteristics	12
Community Health Worker Workforce	15
Community Health Worker Team Integration	19
Community Health Workers in the COVID-19 Pandemic	22
COVID-19 Vaccine Hesitancy	25
Recommendations	27
References	28
Appendix A – Community Health Worker Statewide Survey	32

AUTHORS

Jessica Ern, MPH
Gaurav Kumar, MBBS, MPH
Brooke Lawson, RDH, BSDH
Dejun Su, PhD

LIST OF FIGURES AND TABLES

TABLE 1: Community Health Worker (CHW) Participant Demographics	12
FIGURE 1: Urban/Rural Designation of CHW Home and Work Locations	14
FIGURE 2: CHW Participant Country of Birth	14
FIGURE 3: Languages Spoken at Home other than English among CHWs	15
Figure 4: Comparison of Time Spent as a CHW - Nationwide, 2022, and 2019	16
Figure 5: Organizational Setting of CHW Employment	16
Figure 6: Self-Reported CHW Key Tasks Performed in Employment	17
Figure 7: Self-Reported CHW Focus Topics at Employment	17
Figure 8: Self-Reported Services Provided by CHWs	18
Figure 9: Self-Reported CHW Supervision at Employment Location	19
Table 2: CHW Opinions Regarding Communication with Team Members	20
Table 3: CHW Opinions Regarding Influence of Race, Ethnicity, or Culture on the Workplace	21
Table 4: CHW Comfort Level and Access to Workplace Resources	21
Figure 10: CHW Change in Employment due to the COVID-19 Pandemic	22
Figure 11: CHW Location of Employment during the COVID-19 Pandemic	22
Figure 12: COVID-19 Threat to CHW Professional and Personal Life	23
Figure 13: CHW Concerns Regarding the COVID-19 Pandemic	23
Table 5: CHW Opinion Regarding the Support of Employers during the COVID-19 Pandemic	24

EXECUTIVE SUMMARY

Despite the abundance of research regarding the effectiveness of Community Health Workers (CHWs) in the healthcare delivery system and addressing health disparities in vulnerable populations, there is a crucial nationwide discussion regarding the incorporation and sustainability of CHWs in the healthcare system, especially in light of the COVID-19 pandemic. In 2019, in a combined effort from UNMC's Center for Reducing Health Disparities at the College of Public Health and Nebraska's Department of Health and Human Services Title V Project, the first ever statewide assessment of Community Health Workers in Nebraska was conducted to empower and engage Community Health Workers and stakeholders in Nebraska to share their perspectives on the steps our state can take in developing, supporting, and sustaining a professional CHW workforce. In response to the increased need of CHWs in the healthcare system, a second statewide assessment was initiated in 2022 to reevaluate the CHW workforce in Nebraska and examine the perspectives of CHWs in healthcare delivery teams and the effects of COVID-19 on their work. This second assessment aims to gather crucial CHW perspectives to guide discussion in Nebraska regarding the discussion on the next stages of the CHW workforce in Nebraska.

Between July and September 2022, 106 CHWs from Nebraska were surveyed regarding their demographics, current work, opinions regarding communication, influence of race, ethnicity, or culture in the workplace, their comfort and access to workplace resources, and the effects of the COVID-19 pandemic on their work.

Highlights of Key Findings

1. While the COVID-19 pandemic has allowed some CHWs to get hired, about 20% of the CHWs either lost their jobs or decided to quit their jobs during the pandemic.
2. The proportion of CHWs providing maternal and child health services declined from over 40% right before the pandemic to 35% during the pandemic.
3. Within healthcare delivery teams, CHWs overall reported good communication with other professionals. However, about 17% of CHWs reported that their work was not respected by others and they were not able to share goals with other team members.
4. Approximately 20% CHWs reported that their racial, ethnic, or cultural background somewhat influenced their role in the team and how others thought of them.
5. The majority of CHWs reported that when they work with other healthcare professionals in a team, their teammates did not have a solid understanding of the role of CHW. Over 90% of CHWs reported that their employers did not provide dedicated, adequate workspace for them.

6. Nearly 80% of CHWs reported COVID-19 vaccine hesitancy as a serious issue in their communities. CHWs took specific steps in addressing the hesitancy including community education, sharing personal anecdotes, connecting residents to community resources, and promoting community awareness.

Recommendations

Based on the major findings from this study, we would propose the following recommendations to enhance and better support the CHW workforce in Nebraska:

- 1. Establishing statewide definitions, standards, and/or policy for CHW workforce.** While most states have moved to establish a statewide CHW organization and engage stakeholders in coalitions to provide a statewide definition of CHWs and recognize statewide core competencies, Nebraska does not currently have these two common outputs to help unify and guide CHW statewide development. Establishment of a CHW definition and core competencies will allow stakeholders to create a collaborative and clear policy for developing the CHW workforce infrastructure.
- 2. Enhancing the current CHW workforce for addressing vaccine hesitancy.** Participating CHWs expressed deep concerns over hesitancy in taking COVID-19 vaccines in their communities and reported a range of activities they had done to address the hesitancy. This workforce can benefit from having more investment and support to further increase their capacity to address vaccine hesitancy and better prepare Nebraska for future pandemics.
- 3. Identifying and motivating employers statewide who are interested in hiring CHWs.** The COVID-19 pandemic has uneven disruptions to the CHW workforce. While some CHWs lost their positions or decided to quit, others were newly employed or promoted. It is important to identify and survey state employers that are interested in employing CHWs currently or in the future and incentivize their offer of employment opportunities for CHWs through proper policy support.
- 4. Developing better communication with and respect for CHWs within healthcare delivery teams.** There are many issues regarding the incorporation of CHWs into healthcare delivery teams, including lack of respect, communication, and support, as reflected by feedback from CHWs in this assessment. Model programs can be established to illustrate effective integration of CHWs and their services into healthcare delivery based on shared vision, mutual respect, trust, clarity of roles, and culturally appropriate communications.
- 5. Increasing the number of CHWs who are trained to provide maternal and child health services.** The proportion of CHWs who provide maternal and child health services in Nebraska experienced a decline during COVID-19. There is a need for increasing the number of CHWs who are trained to provide these services, especially in consideration of the negative influence of the pandemic on maternal and child health in Nebraska.

ACKNOWLEDGEMENTS

This publication/project was made possible by Grant Number B04MC31500 from the Maternal Child Health Bureau, U.S. Department of Health and Human Services (HHS), Health Resources and Services Administration. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of HHS.

We would like to thank several individuals and organizations involved in the development and distribution of the survey into the community. First, we would like to show appreciation to Kathy Karsting, RN, MPH, former Program Manager at Maternal Child Adolescent Health, Division of Public Health, Nebraska Department of Health and Human Services, for her initial guidance and assistance in the development of the project. We would also like to thank the Nebraska Department of Health and Human Services Title V Maternal and Child Health Block Grant program CHW Consultant-Trainer Cadre for their input and assistance in the dissemination of the survey to fellow CHWs. Finally, we would like to thank all contacted organizations for their assistance in reaching their CHW employees.

INTRODUCTION

Community Health Workers (CHWs) are valued members of the healthcare delivery system and uniquely positioned for improving access to healthcare, health outcomes, and health equity in vulnerable and underserved communities. In Nebraska, there has been longstanding interest in developing the CHW workforce since the 1990s, with several coalitions and initiatives seeking to incorporate CHWs into the healthcare delivery system, create sustainable funding for employment, and work with other stakeholders to reduce health disparities in underserved communities.

In 2019, with the support from the Nebraska Department of Health and Human Services, the Center for Reducing Health Disparities at the University of Nebraska Medical Center conducted the first statewide assessment of Community Health Workers, titled *Strengthening the Community Health Worker Workforce to Improve Maternal and Child Health in Nebraska: A State-Wide Assessment of Needs, Barriers, and Assets* (Su et al., 2019). The primary goal was to empower and engage CHWs in Nebraska to share their perspectives on the steps our state can take in developing, supporting, and sustaining a professional CHW workforce, with a focus on maternal and child health.

As the COVID-19 pandemic has been straining the delivery of healthcare services across the world and aggravating health disparities experienced by vulnerable populations, there is a need to update the assessment of the CHW workforce in Nebraska to examine changes in the CHW workforce, their integration into health care delivery teams, and to assess the effects of COVID-19 on CHWs (personally and within the workforce). Findings from this study are expected to help the Nebraska Title V Project and other stakeholders to better assess the status quo of the CHW workforce and inform future decision making about workforce development to improve maternal and child health and reducing related disparities. For this purpose, altogether 106 CHWs were recruited to participate in an online survey, with 30 CHWs being reassessed from the 2019 statewide assessment, to share their perspectives on the steps our state can take in developing, supporting, and sustaining a professional CHW workforce, with a focus on maternal and child health. The results from this study will help develop strategies that can further enhance the readiness, willingness, and capability of CHWs working in different regions in the state and serving diverse populations and provide insights into how to better incorporate CHWs into the health care delivery system.

BACKGROUND

The COVID-19 pandemic reinforces the need of growing and investing in the public health workforce, including the Community Health Worker workforce (Ballard et al., 2022; Peretz et al., 2020). The American Public Health Association (APHA) defines community health workers as frontline public health workers, recognizing that they have in depth understanding and a trusted relationship with the communities they serve (APHA, 2021). This allows CHWs to serve as facilitators to distribute information to communities, as well as to act as the link between patients and the practitioners who serve them. In many ways the CHWs are an integral player in the health of a community by being involved in several roles

such as educator, counselor, supervisor, and advocate (St. John et al., 2021). The profession of community health workers has existed for many years, and continued support will enhance their ability to bridge the gap between underserved communities and the healthcare system amid or in the aftermath of a historic pandemic when such capacity is badly needed.

Since the 1960s CHWs have been serving marginalized and often hard-to-reach communities. Their work focuses primarily on low-income and marginalized peoples such as racial and ethnic minorities, immigrants, and those of the LGBTQ+ community (Malcarney et al., 2017). They function to help reduce health disparities that disproportionately affect these, and other, aforementioned groups. Clarifying and supporting their roles in the healthcare system has been essential to success in reducing disparities. As of March 2022, the U.S. Bureau of Labor Statistics estimates that there are over 60,000 community healthcare workers many industries including local governments, school settings, outpatient care centers, hospitals, community organizations, and insurance carriers (BLS, 2022). CHWs serve a wide variety of roles that promote public health practices in different settings, but most often CHWs generally fill non-clinical roles outside of the scope of traditional healthcare workers, often referred to as the ‘health human resources’ workforce (Torres et al., 2017). The most common and practical areas of CHW intervention include chronic disease management (Hunt, Grant, and Appel, 2011; Brownstein et al., 2007; Chang et al., 2010), enhancing disease prevention and promoting screening (Wennerstrom et al., 2016; Wells et al., 2011), improving healthy lifestyle, reducing hospital readmittance, and enrolling in insurance (Kangovi et al., 2014; Landers and Levinson, 2016).

In the current time, CHWs have been taking on many other roles to help serve the community. Their jobs are ever evolving to be more related to the specified disparities they are working to reduce. Common focuses of CHW intervention are: chronic disease management (Brownstein et al., 2007), prevention efforts (Wennerstrom et al., 2016), and promoting healthy lifestyles (Kangovi et al., 2014). As these workers have navigated a worldwide pandemic, their responsibilities and focuses have changed. An article by Mayfield-Johnson et al. in 2020 identified eight themes when communicating with CHWs related to COVID including 1) CHW identity, 2) CHW resiliency, 3) consequences of COVID, 4) technology, 5) resources and support, 6) stressors, 7) self-care, and 8) unintended positives outcomes of COVID. The CHWs discussed difficulties such as distance/zoom communications, lack of resources, personal challenges and sacrifices, political environment, and financial stressors. Despite the obvious challenges that the workers faced, they also discussed positive outcomes such as development of new skills, and some access to novel resources (Mayfield-Johnson et al., 2020). It remains unclear how these issues might relate to the CHW workforce in Nebraska.

Community Health Worker Integration into Health Care Delivery Systems

While there is extensive research examining the success of CHWs in health promotion programs and health outcome improvements, especially in Maternal and Child Health (MCH) outcomes, there is a renewed interest in the development and sustainability of the CHW workforce in the U.S., especially in the healthcare delivery system (Allen et al.,

2019; Allen et al., 2015). Since the enactment of the Affordable Care Act (ACA) in 2010, which allowed preventative services to be provided by non-licensed providers under the recommendation of a licensed provider, there have been more opportunities for CHWs and their services to become more integrated into the traditional care model (Malcarney et al., 2017). Typically, CHWs are funded through grants and Medicaid depending on the setting and salaries can vary depending on the type of work they are conducting and their organization (Nebraska Department of Health and Human Services, 2018). Providing more stable employment and career advancement opportunities would be important for recruiting and retaining qualified CHWs. This is especially important given the observation that many CHWs in Nebraska work on a grant funded, temporary basis (Su et al. 2019).

As healthcare is centered around the collaboration of teams, there is an importance to integrating CHWs in the care team. Current literature examines how the current healthcare model allows for CHWs to support diverse patients in the prevention, management, control of chronic disease, and access to services (Allen et al., 2015). CHWs are primarily seen as effective communicators who can help disseminate health messages in a culturally relevant manner to the disparaged communities which can be easily missed by traditional healthcare providers. Variability in the support for the integration of CHWs is often influenced by economic factors such as supply and demand, and health care labor shortages (Arvey et al., 2012). Traditionally, CHWs are best integrated into the healthcare system when there are strong health promotion policies such as the Affordable Care Act in 2010. Additionally, when other health professionals, health care administrators and the policy makers/ stakeholders recognize the importance and potential of these workers, they will be able to be supported to reach their full potential (Gilkey et al., 2007). Standardization of the profession via training and certification could play a role in incorporating these professionals into the healthcare team (Kash et al., 2007). Full integration into the healthcare team allows CHWs to transcend their traditional communicative role and undertake additional responsibilities to affect the patient's health outcome positively. To be able to achieve this implementation into the healthcare workforce it is necessary that the representatives consult to help 1) create CHW workforce development and education, 2) occupational regulations and standardizations, 3) financial models to support CHW in healthcare opportunities, 4) guidelines to organize their work in different roles such as research and education (Balcazar et al., 2011). Working towards further implementation of CHWs into healthcare teams can reinforce the support to patients and increase positive outcomes.

There are several considerations to account for when integrating CHWs into health care delivery, such as respect from professional care providers, sustainability, and funding support for CHWs in care settings, and liability and malpractice concerns (Chapman et al., 2017; CDC, 2015). One major concern is how to integrate non-licensed individuals into a setting which is often protected by licensure. A second concern is that there is a lack of understanding, knowledge, and respect for CHWs, which may affect their successful integration into healthcare delivery systems (Chapman et al., 2017; Ingram et al., 2017).

Community Health Workers during the COVID-19 Pandemic

As the COVID-19 pandemic emerged in late 2019 in the United States, the healthcare delivery system was significantly burdened and stretched to its capacity. During this time, many aspects of healthcare delivery changed and adapted in order to accommodate the new needs of those affected with COVID-19, provide vaccinations and education regarding COVID-19, and address the existing health needs of the local populations. While there has been limited research regarding how CHWs in the U.S. can facilitate emergency preparedness at the community level, CHWs began to fill a gap in the healthcare delivery system in its response to the pandemic, especially in vulnerable populations (Wells et al., 2021; Waters, 2020; Boyce and Katz, 2019). CHWs have been utilized to provide culturally and linguistically appropriate health education, conduct contact tracing, cultural medication, some clinical services, care coordination, case management, and systems navigation for vulnerable populations due to their unique role within these communities (Vanden Bossche, 2022; Byrd-Williams et al., 2021; Peretz et al., 2020). In addition to adding tasks to their workload, there are professional and personal issues that have emerged in the CHW workforce, such as loss or change in employment, threats to personal health, burnout, and anxiety (Franklin and Gkiouleka, 2021). As the CHW role is changing through the COVID-19 pandemic, there is an urgent need to continue to research and update the perspectives of CHW and healthcare teams regarding the integration of CHWs into the health care delivery team.

To further understand and facilitate the integration of CHWs into the healthcare delivery system across the nation, and especially in Nebraska, it is important to continually assess and incorporate the viewpoints of CHWs in order to develop evidence-based policy recommendations. In this assessment, we aimed to evaluate the current state of the CHW workforce in Nebraska, gather insights into their roles in care delivery teams, and evaluate the effects of the COVID-19 pandemic on their professional and personal lives. We also aimed to determine if there were any major differences in the CHW workforce since the initial 2019 statewide assessment by comparing related findings to those in the current 2022 assessment. The results of this study will assist in the development of strategies that can further enhance the CHW workforce, prepare organizations to employ and sustain CHWs to better respond to future pandemics, and offer recommendations at the state level for promoting effective integration of CHWs into healthcare delivery to address health disparities and related social determinants of health.

APPROACH AND METHODS

Between July and September 2022, a statewide assessment was circulated among CHWs in Nebraska through an online survey to understand the perspectives of CHWs regarding their current work, integration into healthcare delivery teams, and their experiences during the COVID-19 pandemic in Nebraska.

Survey Instrument

The survey started with an informed consent letter, a brief definition of Community Health Worker, and three screening questions to ensure eligibility. If the individual was not at least 19 years of age, self-identified as a CHW, and worked as a CHW in Nebraska, the participant was prompted to exit the survey. If the eligibility requirements were met, the participant was then prompted to continue the survey and answer a total of 36 questions, with 2 open-ended responses (Appendix A). At the end of the survey, respondents were given the opportunity to provide their physical mailing address to receive the \$20 gift card as compensation. This information was not linked to the survey responses.

Survey Distribution

A network of local and state-level CHW associations and health organizations collaborated with the survey team to distribute the survey link to any CHWs they know of. Survey distribution occurred via email to identified organizations and individuals throughout Nebraska working with or familiar with CHWs with a recruitment flyer introducing the survey, eligibility requirements, information on the assessment, and a direct link to the survey. Ninety-three community organizations, eight health systems, and all health departments were contacted to distribute the survey, including the UNMC Behavioral Health Education Center of Nebraska (BHECN) Community Health Worker Program and the DHHS Community Health Worker Health Navigation Program alumni listservs. Participants from the 2019 statewide assessment of CHWs were invited to participate in the current assessment and share with other known CHWs.

Data Collection and Analysis

Data collection in the survey was primarily managed using REDCap (Research Electronic Data Capture) hosted at UNMC. REDCap is a secure, web-based application designed to support data capture for research studies. REDCap at UNMC is supported by the Research IT Office funded by Vice Chancellor for Research (VCR). The published contents in this report are the sole responsibility of the authors and do not necessarily represent the official views of the VCR and NIH. In addition to the use of REDCap, a paper version of the survey was developed to accommodate individuals without easy access to the online survey. The online and paper versions of the survey were offered in Spanish and English. Data was cleaned, managed, and analyzed in SPSS and content analysis was used to categorize the open-ended, de-identified survey responses from the free text entry questions.

ETHICAL CONSIDERATIONS

This study was approved by the Institutional Review Board of the University of Nebraska Medical Center (IRB # 900-18-EX). Data collection from eligible participants only started after we had provided and obtained informed consent. Participants could choose to withdraw from the study or refuse to answer specific questions based on their judgments at any time during the survey. Confidentiality has been maintained by using numbers instead of names (e.g., survey respondent 1, survey respondent 2, etc.) and removing identifying information before data analysis. All data and identifying information were saved on a password-protected computer.

Only de-identified data were used in the final project report and related dissemination of project findings.

ANALYSIS AND RESULTS

Descriptive analyses were conducted to identify characteristics of participating survey CHW respondents, looking specifically at participant demographics, the descriptions of their current employment, the integration of CHWs into the healthcare delivery system, and experiences during the ongoing COVID-19 Pandemic. The assessment of CHWs in 2022 were also briefly compared to the CHW assessment performed in 2019 (Su et al., 2019). Overall, there were 106 surveys completed from CHWs across the state of Nebraska between July and September 2022. While the survey was offered online, in a paper form, and in Spanish, all the participants responded to the survey via the English, online version.

According to the Bureau of Labor Statistics (BLS, 2020), an estimated 380 formal CHW are employed within Nebraska. In addition, individuals without a formal CHW title position may account for another 200 to 300 CHW within the state. With this estimated population of CHW in Nebraska, the statewide survey reached approximately 16% to 18% of current Nebraskan CHWs, in comparison to assessing 20% to 32% of CHWs in 2019 (n = 121) (Su et al., 2019). Also, one goal of this survey was to reassess previous respondents from the 2019 Statewide Assessment in order to evaluate potential changes in the CHW workforce; however, less than 25% (n = 30) previous respondents completed the 2022 Statewide Assessment. This may be due to variations in the CHW workforce in Nebraska during the COVID-19 pandemic, workforce shifts due to other unidentified factors, or difficulty accessing existing CHWs at the time of survey distribution.

Participant Characteristics

A total of 106 CHWs completed the survey (TABLE 1). Most of the CHWs were in the age group range of 25 to 39 years (45.3%) and the majority were female (91.5%). Most participants were of non-Hispanic ethnicity (71.4%) and Caucasian/white (63.8%) by race. Those who listed ‘Some other race’ included self-described Hispanic, Mayan, Mestizo, and multiracial. Most of this sample were married (63.2%) and had four or more years of college education (41.5%).

TABLE 1: Community Health Worker (CHW) Participant Demographics

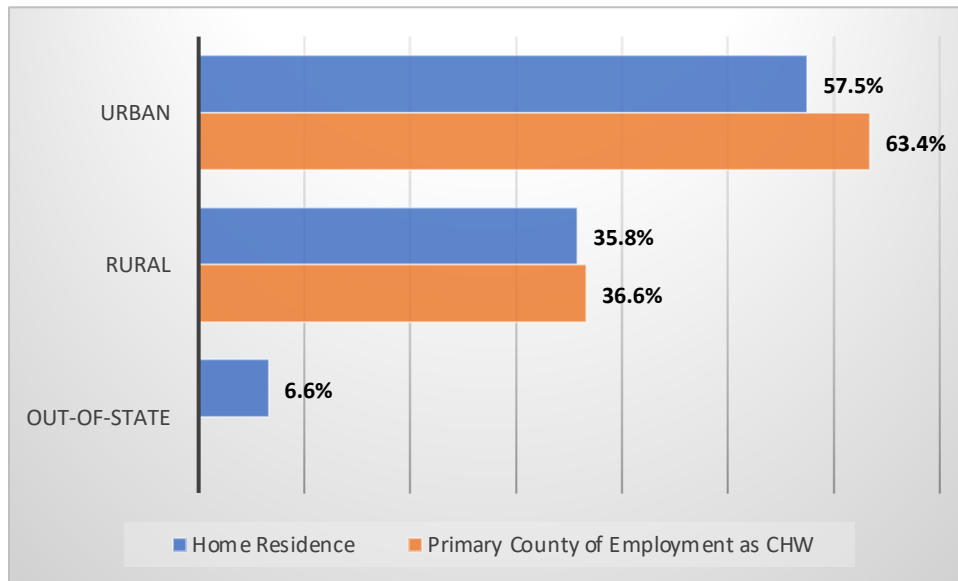
Age (n = 106)	n	%
19-24	4	3.8
25-39	48	45.3
40-59	45	42.5
60 and Older	9	8.5
Gender (n = 106)		
Male	8	7.5
Female	97	91.5
Non-binary	1	0.9

TABLE 1: Community Health Worker (CHW) Participant Demographics (cont.)

CHW Ethnicity (n = 105)		
Hispanic/Latino Origin	30	28.6
Not Hispanic/Latino Origin	75	71.4
CHW Race (n = 105)		
African American/Black	12	11.4
White	67	63.8
Asian	4	3.8
Native American/American Indian	6	5.7
Some Other Race	9	8.6
Prefer Not to Answer	7	6.7
Primary Language Spoken at Home (n = 105)		
English	65	61.9
Spanish	31	37.1
Other Language	8	1.0
Nativity (n = 106)		
Born in the United States	74	69.8
Born outside of the United States	31	29.3
Prefer not to answer	1	0.9
Educational Attainment (n = 106)		
Less than High School Graduate	2	1.9
High School Graduate	15	14.2
1-3 Years of College or Technical School	28	26.4
4 or more years of college (Graduate)	44	41.5
Master's degree	15	14.2
Professional Degree	1	0.9
Prefer Not to Answer	1	0.9
Marital Status (n = 106)		
Never Married/ Single	20	18.9
Married	67	63.2
Divorced	10	9.4
Legally Separated	1	0.9
Partnered	4	3.8
Widowed/ Widower	1	0.9
Prefer not to Answer	3	2.8
Employment Status (n = 106)		
Full-Time	89	84.0
Part-Time	11	10.4
Retired	1	0.9
Unemployed	0	0
Volunteer	5	4.7

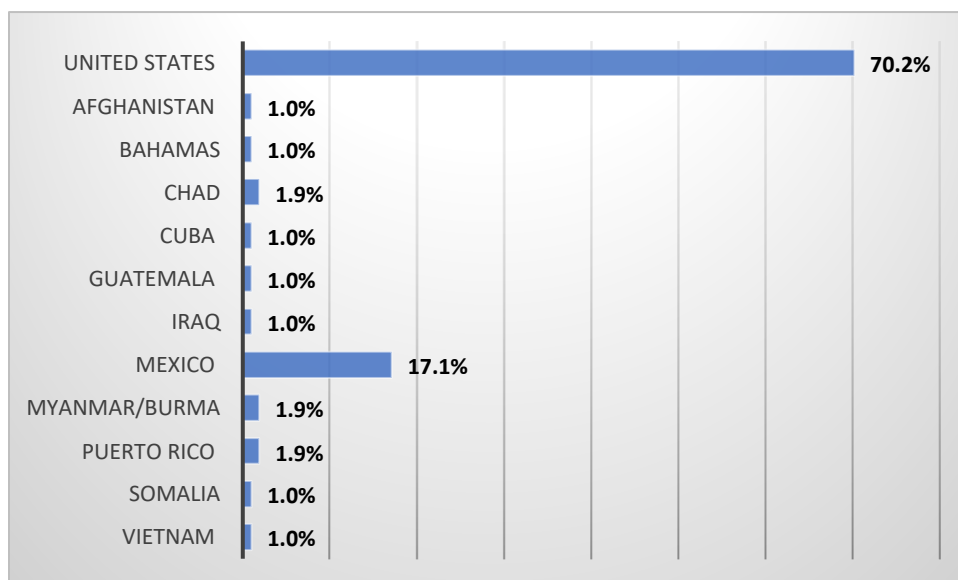
The majority of CHWs resided (57.5%) and served as a CHW (63.4%) in urban areas, as defined by the rural definition based on Economic Research Service Rural-Urban Commuting Areas (RUCA) (Office of Rural Health Policy, 2018). The difference in those residing and those serving as CHWs in rural or urban settings show that some CHWs are commuting from out-of-state or traveling into other areas to work and may not live in the community from which they serve (FIGURE1).

FIGURE 1: Urban/Rural Designation of CHW Home and Work Locations



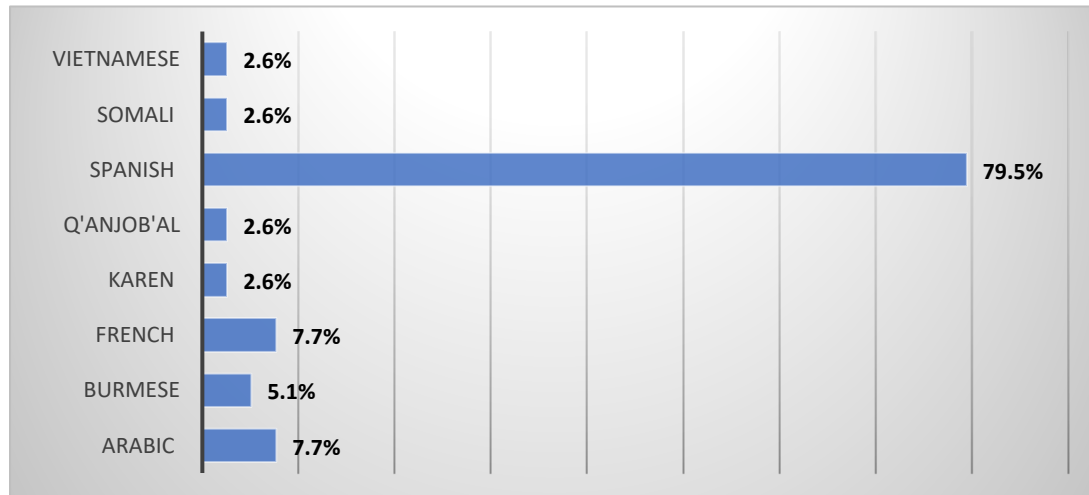
A little more than 30% of the respondents stated they were born in a country outside of the U.S., with the majority born in Mexico (17.0%) followed by Chad (1.9%), Myanmar/Burma (1.9%), and Puerto Rico (1.9%). Other countries that were reported are seen in Figure 2.

FIGURE 2: CHW Participant Country of Birth



Nearly 40% (n = 39) of the participants speak another language than English (63.2%), with the most common language other than English spoken at home being Spanish (29.2%). Among the nearly 8% of those that did not speak English or Spanish, those who stated they Burmese, French, Arabic, Karen, Kurdish, Somali, and Q’anjob’al were identified (Figure 3). Figure 3 shows the proportion of other identified languages spoken in the home by the 39 respondents who reported an additional languages spoken at home. Nearly 13% of those who spoke another language other than English spoke 2 or more languages.

FIGURE 3: Languages Spoken at Home other than English among CHWs



In comparison to the previous statewide assessment of CHWs in Nebraska in 2019 (Su et al., 2019), this sample was similar in terms of marital status, education, race and ethnicity, nativity, and the proportion speaking English as the primary language. This assessment surveyed a slightly younger cohort of CHWs (predominantly 40 to 59 years old in 2019 in comparison to 25 to 39 years old in 2022). More CHW respondents were surveyed from rural areas in 2022 than 2019 (36.6% vs. 22.3%, respectively) (Quinn et al., 2021).

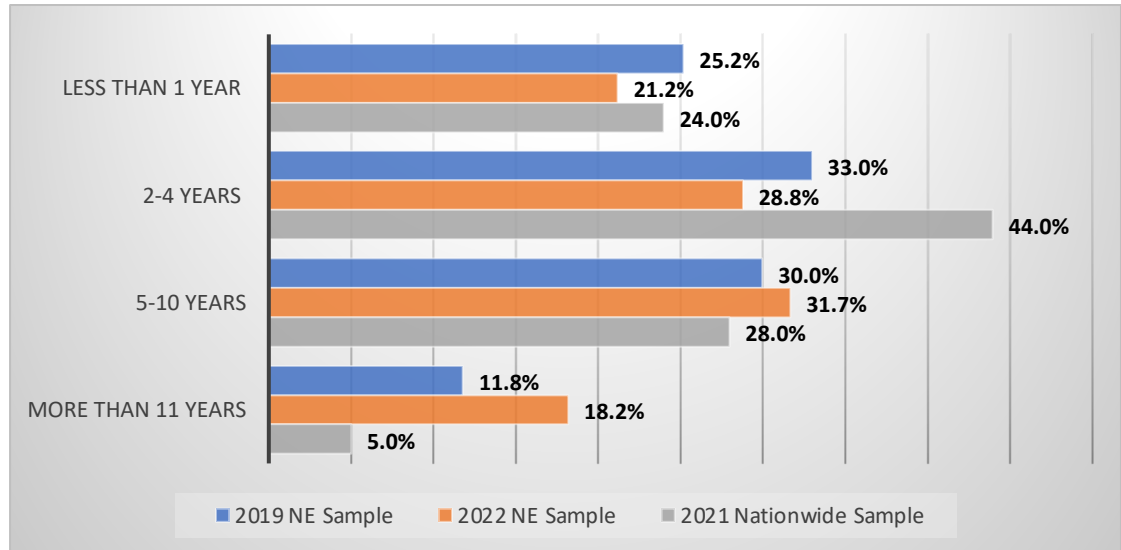
Community Health Worker Workforce

Most of the participants were employed full-time as a community health worker (84%), followed by part-time status (10.4%) (Table 1). Almost 5% of respondents stated they worked as volunteer CHWs in their communities. Approximately one-third of the survey respondents reported the most common job title was “Community Health Worker”, followed by “Community Health Advocate” (8.6%), “Outreach Worker” (4.8%), and “Peer Counselor” (4.8%). The following are some of the most common self-described job titles that self-identified CHWs are currently employed as:

- Case Manager
- Doula
- Home Visitor
- Behavioral Health Advocate
- Health Coach
- Parenting Coach
- Parent Resource Coordinator
- Community Support Provider

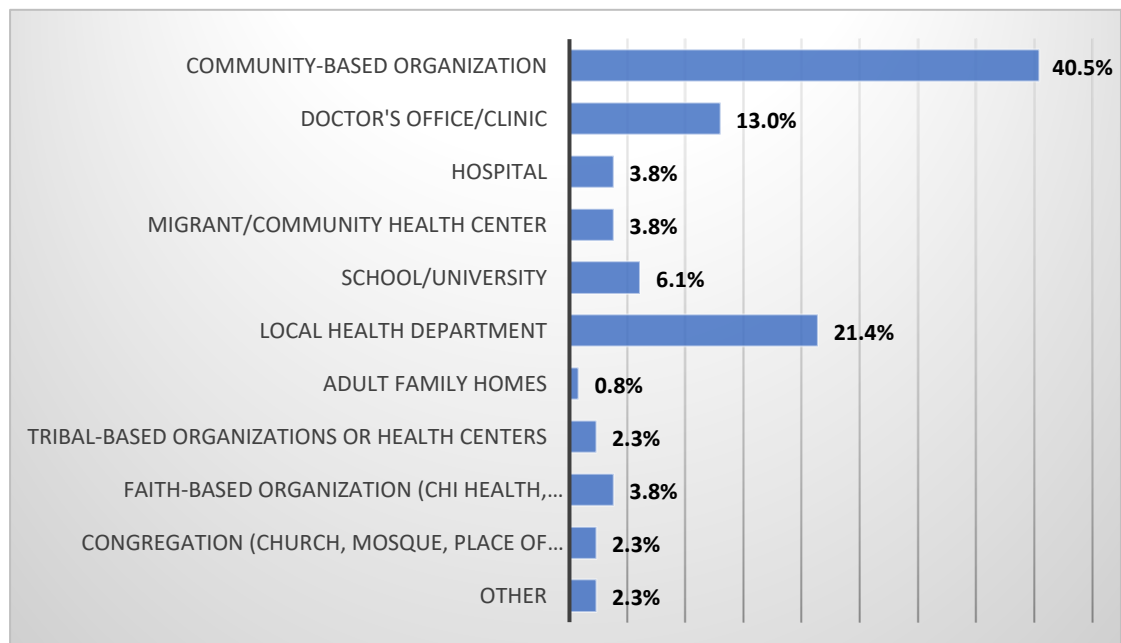
Most of the CHWs in this sample reported they have worked as a CHW between 5 and 10 years (31.7%), followed by 2 to 4 years (28.8%), and more than 11 years (28%) (Figure 4). This is slightly different from the nationwide trends and the 2019 assessment, in which the majority of CHWs worked on average 2 to 4 years (44% nationwide and 33% in 2019) followed by 5 to 10 years (28% nationwide and 30% in 2019).

Figure 4: Comparison of Time Spent as a CHW - Nationwide, 2022, and 2019



Over 40% of respondents worked within community-based organizations (40.5%), followed by local health departments (21.4%), and doctor’s offices/clinics (13%) (Figure 5). Nationwide employment statistics from the U.S. Bureau of Labor Statistics (2022) identified local government, individual and family services, and outpatient care organizations as the three most common CHW employers; this is also largely reflected in this assessment.

Figure 5: Organizational Setting of CHW Employment



CHWs indicated that they were prepared to perform key tasks such as linking to support (11.70%), social support (10.60%) community events (10.60%), Advocacy (10.60%), and were least prepared with medication compliance (2.50%) and translation or interpretation (4.90%) (Figure 6). Furthermore, participant’s focus on health issues at their work covers a broad range of health issues including behavioral/mental health (17.40%), child health (11.10%), chronic disease prevention (9.80%), and management (9.30%) (Figure7).

Figure 6: Self-Reported CHW Key Tasks Performed in Employment

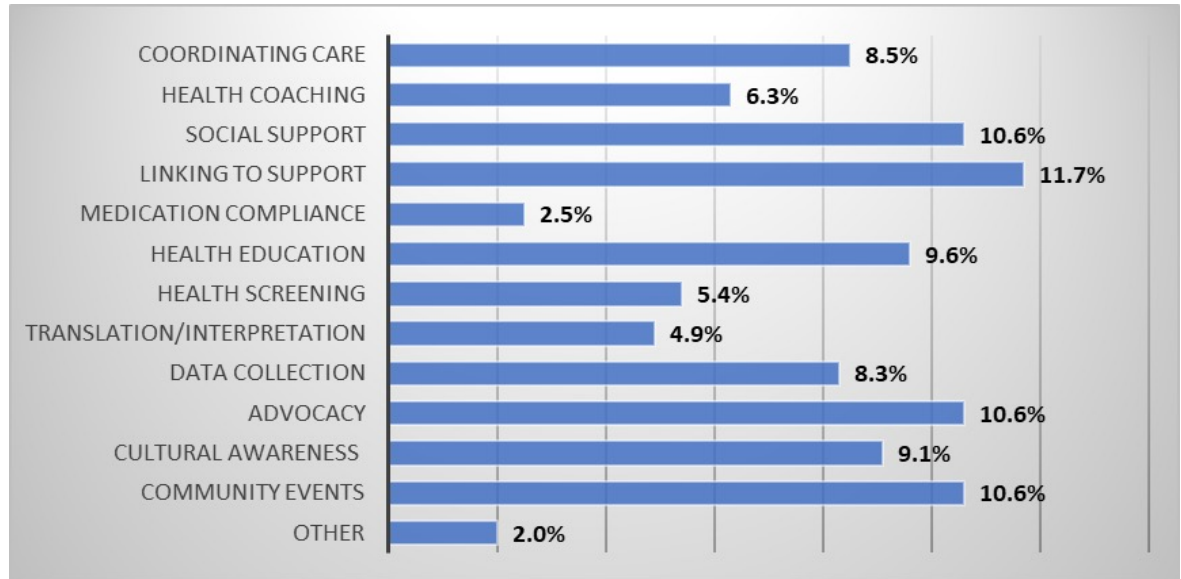
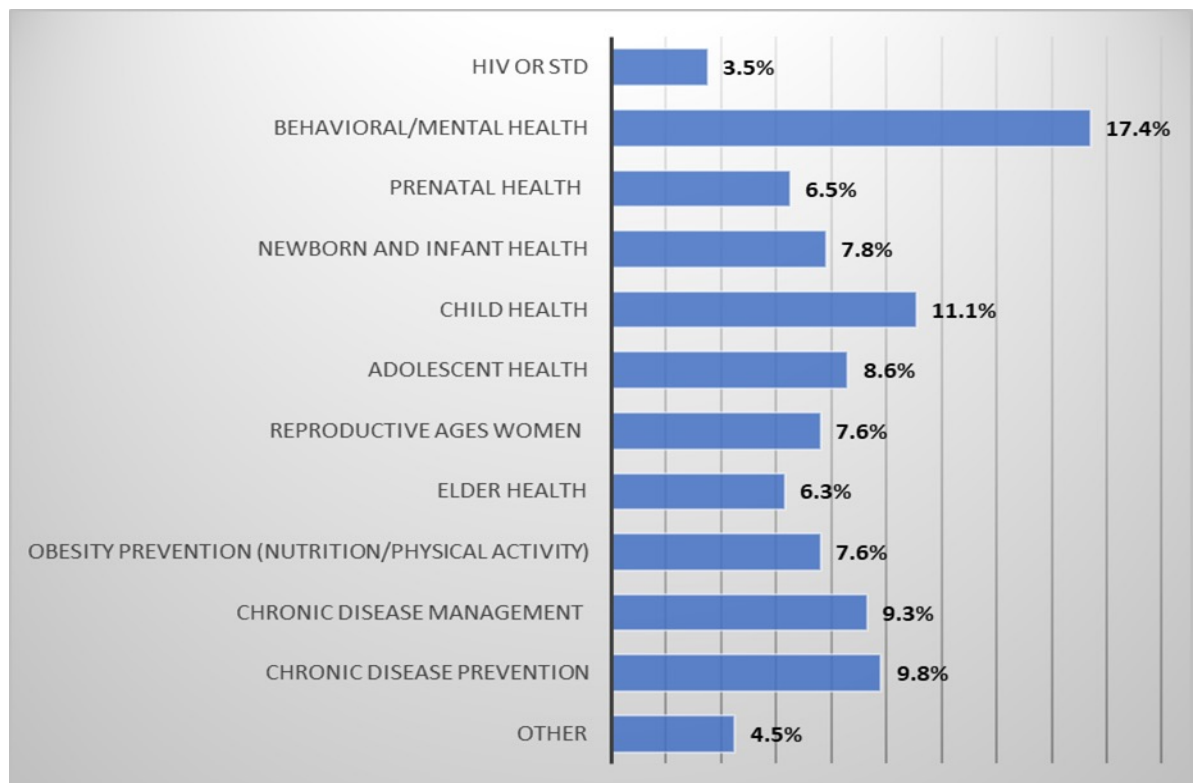
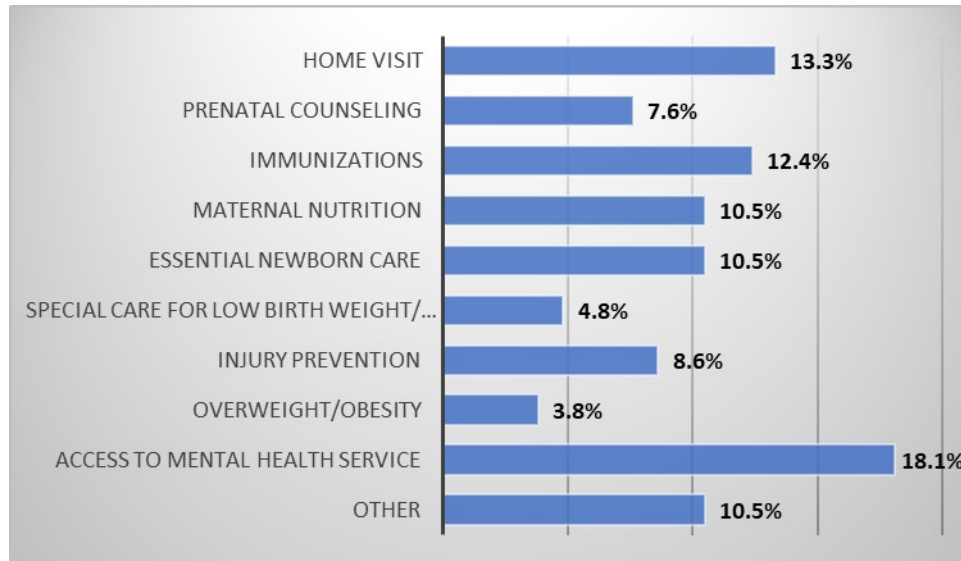


Figure 7: Self-Reported CHW Focus Topics at Employment



About 35 percent of participants indicated that they provide any services to improve maternal, newborn, and child health currently. The participants who provide the above services mostly focus on access to mental health services (18.10%), home visits (13.30%) immunization (12.40%) maternal nutrition (10.50%) (Figure 8).

Figure 8: Self-Reported Services Provided by CHWs



Among the ‘Other’ services provided by CHWs regarding MCH topics, the following were identified as key services:

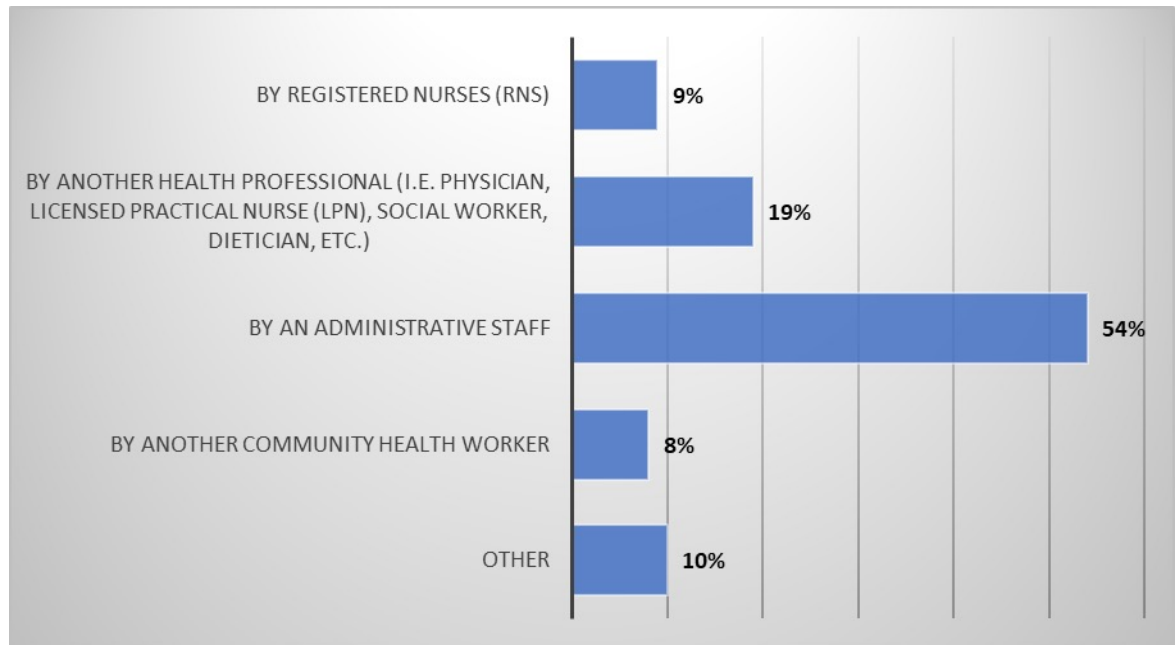
- Dental screenings
- Early intervention
- Financial assistance
- Substance abuse
- Care coordination
- Developmental milestone evaluations
- Lactation support
- Postpartum support
- Food insecurity services
- Disability services

There was a difference in key tasks, key focus areas of work, and MCH services provided to communities served between the 2019 and 2022 statewide assessments. For example, in 2019, the majority of CHWs focused on health education, community events, and linking to resources, while in 2022, there was equal focus on advocacy, community events, and social support. Similarly, there was a slight focus change between 2019 and 2022, in which CHWs became more focused on child health and less on obesity prevention in 2022, along with behavioral and mental health, and chronic disease prevention. Less CHWs also reported providing MCH services in 2022 (35% in 2022 vs. 40.5% in 2019), despite more CHWs reporting children’s health as a main focus of work. These changes may be due to multiple factors between the statewide assessments, including the COVID-19 pandemic and shutdowns, changes in program funding and focus, types of services provided, or other factors that are not readily apparent. More research is needed in Nebraska to evaluate the changing focus and key tasks among CHWs in Nebraska.

Community Health Workers Team Integration

Community Health Workers were asked to describe their role in healthcare delivery teams in their employment. Approximately more than half of the participants (54%) were supervised by administrative staff and by other health professionals such as physicians, licensed practical nurses, social workers, dieticians, etc. (19%) (Figure 9). Fifty-three percent of the participants' performance and evaluation were done annually and 16 % were done the monthly review.

Figure 9: Self-Reported CHW Supervision at Employment Location



CHWs were also asked to report their opinions on their position within the team in which they worked, focusing on their communication within teams, the influence of their race, ethnicity, or culture on their team interactions, and their comfort level and access to workplace resources (Appendix A).

CHWs were asked to describe their opinions on communication within teams, including the frequency, timeliness, and accuracy of communication in teams (Table 2). When asked about the frequency of communicating with the other healthcare, social service, and/or education providers with whom participants worked about the program, participants suggested that they often (46%) and constantly (27%) do that. Additionally, when asked about the frequency of communicating with the other healthcare, social service, and/or education providers with whom they work to communicate with them in a timely way about the program, participants suggested that they often (43.4%) and constantly (21.2%) do that. Furthermore, 47% of the participants reported that they often and 21% reported that they always accurately communicated with the program participants. CHWs suggested that when an error was made in their work, the other healthcare, social service, and/or education providers take the responsibility and never (27.3%) or rarely (54.5%) blame others.

CHWs suggested that other healthcare, social service, and/or education providers completely (20.2%), a lot (37.4%), and some (25.3%) shared goals for the care of program participants. Most of the CHW also suggested that other healthcare, social service, and/or education providers a lot (39%), and some (38%) had knowledge about the work they do with the program participants. When asked about the respect they get from other healthcare, social service, and/or education providers, most got a lot (43.4%), completely (24.2%), and some (20.2%).

Table 2: CHW Opinions Regarding Communication with Team Members

Opinion Topic	1	2	3	4	5
A. Communication Frequency	Never 1%	Rarely 7%	Occasionally 19%	Often 46%	Always 27%
B. Timely Communication	Never 3%	Rarely 10.1%	Occasionally 22.2%	Often 43.4%	Always 21.2%
C. Accurate Communication	Never 4%	Rarely 10%	Occasionally 18%	Often 47%	Always 21%
D. Blame due to errors	Never 27.3%	Rarely 54.5%	Occasionally 16.2%	Often 2%	Always 0%
E. Goal Sharing	Not at all 8.1%	A little 9.1%	Some 25.3%	A lot 37.4%	Completely 20.2%
F. Others have knowledge of your work	Nothing 5%	Little 12%	Some 38%	A lot 39%	Everything 6%
G. Others respect your work	Not at all 3%	A little 9.1%	Some 20.3%	A lot 43.2%	Completely 24.2%

In the second portion of the assessment of CHWs in teams, they were asked to report their feelings regarding the influence of their race, ethnicity, or cultural on the workplace environment (Table 3). About two thirds of CHWs perceived that they did not at all feel isolated (66%) at workplace because of their race/ethnicity, whereas the remaining one third reporting they felt various level of isolation at workplace. Similar pattern was also observed in the case of feeling dismissed or devalued. It is also noteworthy that only 47.5% of the CHWs believed that their teammates never made any assumption about them because of their race/ethnicity, whereas the majority believed that sometimes that was the case.

Table 3: CHW Opinions Regarding Influence of Race, Ethnicity, or Culture on the Workplace

Opinion Topic	1	2	3	4	5
A. Isolated from team due to race or ethnicity	Not at all 66%	A little 15%	Some 16%	A lot 2%	Completely 1%
B. Acting as voice of your race or ethnicity in your workplace	Not at all 59%	A little 11%	Some 20%	A lot 7%	Completely 3%
C. Feelings of dismissal or devaluation by other providers due to race or ethnicity	Not at all 69%	A little 15%	Some 13%	A lot 2%	Completely 1%
D. Feeling that other providers make assumptions due to your race or ethnicity	Never 47.5%	Rarely 32.3%	Occasionally 13.1%	Often 7.1%	Always 0%

Finally, CHWs were asked to report their comfort and level and access to workplace resources (Table 4). Only 40% CHWs indicated that their collaborators in the healthcare team either completely understand or understand a lot about their role as a CHW on the team, whereas the majority of CHWs reported a lower level of understanding of their roles by other healthcare providers in the team. About 77% of the CHWs reported that they did not have access to patients’ records in employers’ main tracking system, and the vast majority of the CHWs reported that they were not provided with adequate, dedicated space to work by their employer.

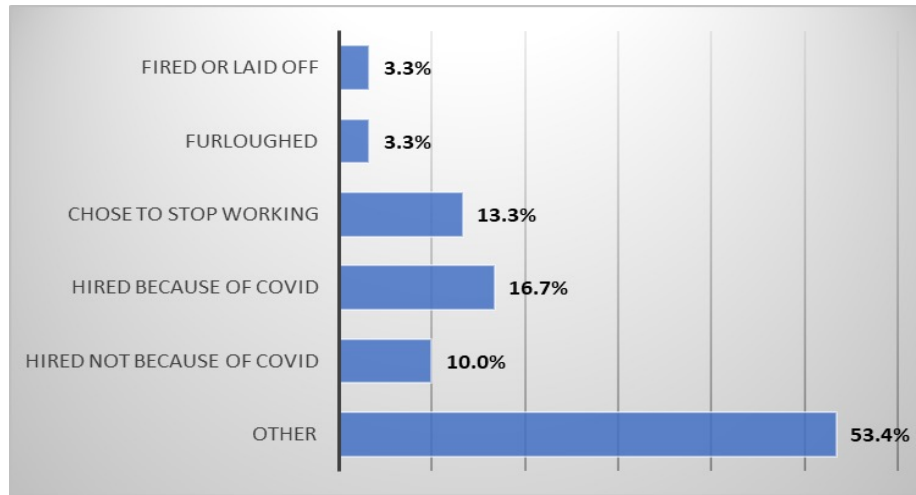
Table 4: CHW Comfort Level and Access to Workplace Resources

	1	2	3	4	5
A. Others understand your role as a CHW on the team	Not at all 6%	A little 14%	Some 40%	A lot 30%	Completely 10%
A. Comfortable talking to other providers about patients’ needs	Not at all 1%	A little 3%	Some 21%	A lot 40%	Completely 35%
A. Access to records in employers’ main tracking system	Yes 23.2%	No 76.8%	--	--	--
A. Provided with adequate, dedicated space to work by employer	Yes 8%	No 92%	--	--	--

Community Health Workers in the COVID-19 Pandemic

Nearly 70% of CHWs reported that there was no change in their employment during the COVID-19 pandemic. Among those that did report some change in employment, the majority were hired due to the COVID-19 pandemic (16.7%) or chose to stop working (13.3%) (Figure 10).

Figure 10: CHW Change in Employment due to the COVID-19 Pandemic

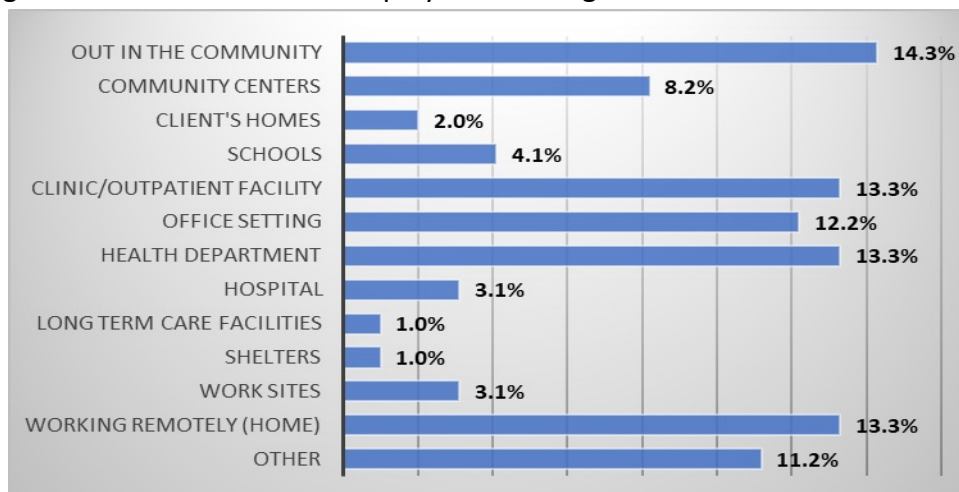


Over 50% of respondents that reported changes in employment replied that there was some other cause to their change in employment that was not listed. These include:

- Hired into new position
- Promoted
- Position was eliminated
- Hours reduced
- Roles and responsibilities changed
- Hours increased

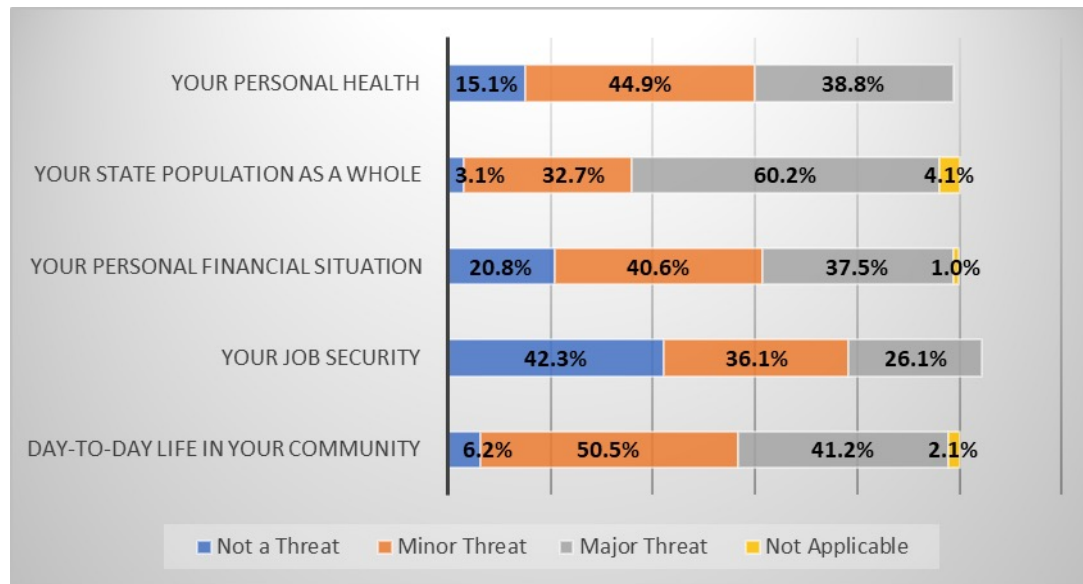
During COVID-19 pandemic, CHW worked in a wide range of settings such as out in the community (13.2%), working remotely (12.3%), health department (12.3%), clinic/outpatient facility (12.3%), and office setting (11.3%) (Figure 11).

Figure 11: CHW Location of Employment during the COVID-19 Pandemic



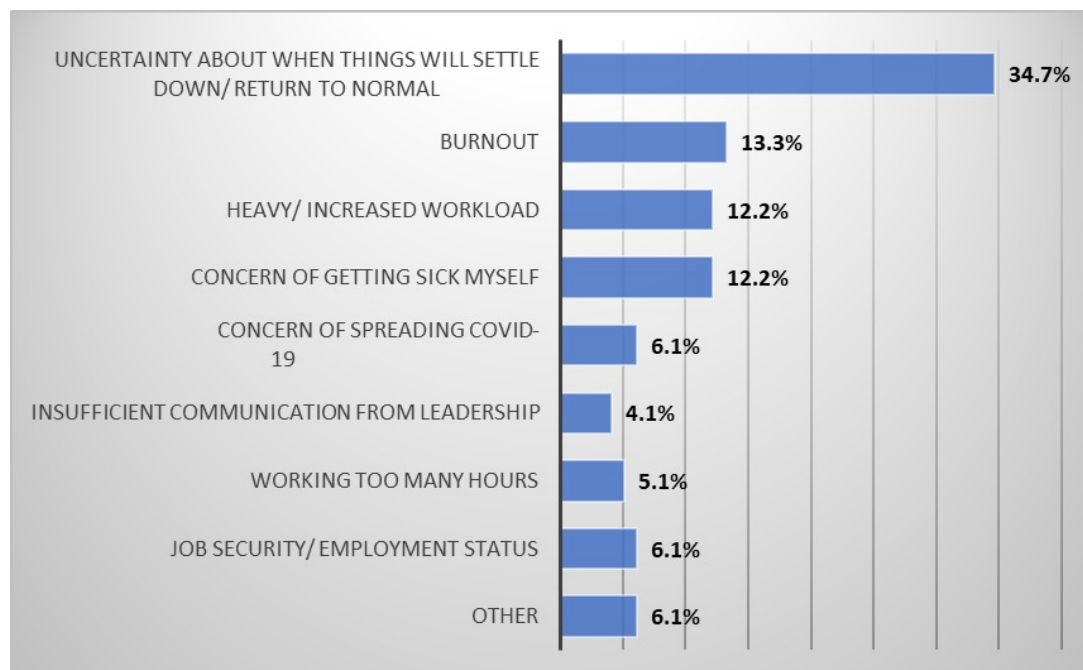
When asked about the threat due to COVID-19, CHW indicated that it had impacted their personal health [major (38.8%) or minor (44.9%) threat], financial situation [major (38.8%) or minor (44.9%) threat], job security y[major (21.6%) or minor (36.1%) threat], day-to-day life in community [major (41.2%) or minor (50.5%) threat] and state population as a whole [major (60.2%) or minor (32.7%) threat].

Figure 12: COVID-19 Threat to CHW Professional and Personal Life



CHW experienced some work-related stressor since the COVID-19 pandemic which includes uncertainty about when things will settle down/ return to normal (34.7%), burnout (13.3%), heavy/increased workload (12.2%), the concern of getting sick (12.2%) (Figure 13).

Figure 13: CHW Concerns Regarding the COVID-19 Pandemic



Most CHWs (84.5%) in the survey perceived that they don't need training to better prepare them to respond to COVID-19. Furthermore, approximately, two-thirds of the CHW didn't receive any additional compensation for working during the COVID-19 pandemic. Among those who reported receiving any additional compensation, mostly (82.1%) was non-monetary compensation.

CHWs were asked to provide their opinion regarding the support they received from their employers during the COVID-19 pandemic (Table 5). Overall, the majority of the CHWs reported their employer provided the needed support for them. Despite this, over 10% of the CHWs strong disagreed or disagreed with the following three statements:

My employer has helped me to feel well prepared to do my job.

My employer has communicated a clear plan of action related to COVID-19.

My employer keeps me updated and informed on a regular basis.

Table 5: CHW Opinion Regarding the Support of Employers during the COVID-19 Pandemic

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not Applicable
My employer has helped me to feel well prepared to do my job.	25.5%	41.8%	16.3%	8.2%	3.1%	5.1%
My employer has communicated a clear plan of action related to COVID-19.	36.7%	41.8%	6.1%	9.2%	1%	5.1%
My employer keeps me updated and informed on a regular basis.	31.6%	40.8%	10.2%	10.2%	2%	5.1%
My employer has provided sufficient personal protective equipment to do my job.	37.1%	37.1%	12.4%	6.2%	2.1%	5.2%
My employer cares about my overall wellbeing.	40.8%	26.5%	19.4%	4.1%	4.1%	5.1%
My employer has supported me since the COVID-19 pandemic response began in my community.	37.9%	31.6%	16.8%	4.2%	4.2%	5.3%

COVID-19 Vaccine Hesitancy

CHWs reported that more than three quarters (76%) of the communities they serve had hesitancy to take COVID-19 vaccines and 48.1% of the CHWs said that they helped to address the hesitancy.

When asked about the specific steps taken to address vaccine hesitancy in the community, CHWs suggested various options, including:

- Community education
- Sharing personal anecdotes
- Connecting to community resources
- Creating community awareness

Several CHWs noted the importance of providing the communities with appropriate information and believed it was the key to overcoming community vaccine hesitancy. For example, some CHWs noted that there was success for communities through appropriate community marketing.

Awareness education, information/resources, flyers, videotapes, all in the community language.

I provided information about vaccine in a manner that was culturally and linguistically appropriate. Also, I tried to provide information in a manner that was understood the first time the community members heard about it. Health literacy and use interpreters as needed.

Participants also indicated that they shared personal experiences related to COVID-19 and vaccines. One of the participants said:

[By talking] openly about my own decision to get vaccine and booster and described the lack of adverse effects for me and my family. Also shared details about my own kids' health issues and how I feel safer knowing they're vaccinated.

Related to connecting to community resources, the participants provided information about COVID-19 and vaccines, finding health fairs, providing appointments, transportation, and translation. One participants noted that:

I help to make call to our patient 65 and older at the beginning of the pandemic if they were interested in the vaccine and help them schedule for an appointment then all the different ages, based how was approved the vaccine. I let all my participants know about the vaccine and I connected them with our outreach Covid-19 vaccine... We got 10 people vaccinated in that event.

Participants also indicated that they made their clinic user-friendly so it would be less time-consuming and provided incentives, such as gift cards, lunch, snacks for kids, and welcoming and fun environments.

Furthermore, when asked about what could be done to increase the COVID-19 vaccination rate, some identified themes were based on building trust in healthcare systems, outreach, reduced political polarization, and training related to cultural competency surrounding vaccines.

The participants suggested that there was a need to build trust in the community in the healthcare systems and related to the vaccine. CHW participants quoted:

I am not sure what to do...the community I work with does not trust the healthcare system.

[We need to] build trust in the vaccination.

Outreach related to the COVID-19 vaccine was another identified theme, where participants suggested that there is a need to continue providing vaccination information and booster doses in the community through the different campaigns and overcoming the misinformation/myths. For example:

Continue to do outreach, distribute covid vaccination information about boosters, create a messaging campaign, keeping the community members informed about the constant changes around COVID-19. So much is changing every day that we are responsible for sharing the most updated information about Covid, and vaccination boosters.

Another key theme identified was reduced political polarization and suggested that bureaucracy and political stances related to the vaccination need to be neutral to promote the vaccination rate in the community. One participant said:

I don't think anything can be done until the vaccinations are no longer part of a political stance or party's platform.

Participants also identified a need for more cultural competency training surrounding the vaccine.

I have received training in cultural competency, but it would be interesting to learn more cultural competency surrounding vaccines. I listened to one webinar, which was very helpful. I could better address folks of other races if I knew more about how they feel about vaccines (COVID and in general)

Financial incentives were also identified as important ways to promote COVID-19 vaccination.

RECOMMENDATIONS

Based on the major findings from this study, we would propose the following recommendations to enhance and better support the CHW workforce in Nebraska:

- 1. Establishing statewide definitions, standards, and/or policy for CHW workforce.** While most states have moved to establish a statewide CHW organization and engage stakeholders in coalitions to provide a statewide definition of CHWs and recognize statewide core competencies, Nebraska does not currently have these two common outputs to help unify and guide CHW statewide development. Establishment of a CHW definition and core competencies will allow stakeholders to create a collaborative and clear policy for developing the CHW workforce infrastructure.
- 2. Enhancing the current CHW workforce for addressing vaccine hesitancy.** Participating CHWs expressed deep concerns over hesitancy in taking COVID-19 vaccines in their communities and reported a range of activities they had done to address the hesitancy. This workforce can benefit from having more investment and support to further increase their capacity to address vaccine hesitancy and better prepare Nebraska for future pandemics.
- 3. Identifying and motivating employers statewide who are interested in hiring CHWs.** The COVID-19 pandemic has uneven disruptions to the CHW workforce. While some CHWs lost their positions or decided to quit, others were newly employed or promoted. It is important to identify and survey state employers that are interested in employing CHWs currently or in the future and incentivize their offer of employment opportunities for CHWs through proper policy support.
- 4. Developing better communication with and respect for CHWs within healthcare delivery teams.** There are many issues regarding the incorporation of CHWs into healthcare delivery teams, including lack of respect, communication, and support, as reflected by feedback from CHWs in this assessment. Model programs can be established to illustrate effective integration of CHWs and their services into healthcare delivery based on shared vision, mutual respect, trust, clarity of roles, and culturally appropriate communications.
- 5. Increasing the number of CHWs who are trained to provide maternal and child health services.** The proportion of CHWs who provide maternal and child health services in Nebraska experienced a decline during COVID-19. There is a need for increasing the number of CHWs who are trained to provide these services, especially in consideration of the negative influence of the pandemic on maternal and child health in Nebraska.

REFERENCES

Allen, C., Brownstein, J. N., Jayapaul-Philip, B., Matos, S., & Mirambeau, A. (2015). Strengthening the Effectiveness of State-Level Community Health Worker Initiatives Through Ambulatory Care Partnerships. *The Journal of ambulatory care management*, 38(3), 254–262. <https://doi.org/10.1097/JAC.0000000000000085>

Allen, C. G., Barbero, C., Shantharam, S., & Moeti, R. (2019). Is Theory Guiding Our Work? A Scoping Review on the Use of Implementation Theories, Frameworks, and Models to Bring Community Health Workers into Health Care Settings. *Journal of public health management and practice : JPHMP*, 25(6), 571–580. <https://doi.org/10.1097/PHH.0000000000000846>

American Public Health Association (APHA). (2014). Support for community health workers to increase health access and to reduce health inequities. <http://www.apha.org/policiesand-advocacy/public-health-policy-statements/policydatabase/2014/07/09/14/19/support-for-community-health-workers-to-increase-healthaccess-and-to-reduce-health-inequities> (Accessed September 1, 2022).

Arvey, S. R., & Fernandez, M. E. (2012). Identifying the core elements of effective community health worker programs: a research agenda. *American journal of public health*, 102(9), 1633-1637.

Balcazar, H., Lee Rosenthal, E., Nell Brownstein, J., Rush, C. H., Matos, S., & Hernandez, L. (2011). Community health workers can be a public health force for change in the United States: three actions for a new paradigm. *American journal of public health*, 101(12), 2199-2203.

Ballard, M., Johnson, A., Mwanza, I., Ngwira, H., Schechter, J., Odera, M., ... & Nepomnyashchiy, L. (2022). Community Health Workers in Pandemics: Evidence and Investment Implications. *Global Health: Science and Practice*, 10(2).

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Health Education Specialists and Community Health Workers, at <https://www.bls.gov/ooh/community-and-social-service/health-educators.htm> (visited October 04, 2022).

Boyce, M. R., & Katz, R. (2019). Community health workers and pandemic preparedness: current and prospective roles. *Frontiers in public health*, 62.

Brownstein, J. N., Chowdhury, F. M., Norris, S. L., Horsley, T., Jack, L., Jr, Zhang, X., & Satterfield, D. (2007). Effectiveness of community health workers in the care of people with hypertension. *American Journal of Preventive Medicine*, 32(5), 435-447. doi:S0749-3797(07)00040-2 [pii]

Byrd-Williams, C., Ewing, M., Rosenthal, E. L., St. John, J. A., Menking, P., Redondo, F., & Sieswerda, S. (2021). Training needs of community health workers facing the COVID-19 pandemic in Texas: a cross-sectional study. *Frontiers in public health*, 9, 689946.

Cacal, S. L., Spock, N., Quensell, M. L., Sentell, T. L., & Stuppelbeen, D. A. (2019). Legislative Definitions of Community Health Workers: Examples from Other States to Inform Hawai'i. *Hawai'i journal of medicine & public health : a journal of Asia Pacific Medicine & Public Health*, 78(6 Suppl 1), 23–29.

Centers for Disease Control and Prevention. Coronavirus Disease 2019 (COVID-19): Resources for Community Health Workers, Community Health Representatives, and Promotores de la Salud. (2020). Available online at: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/community-health-workers/index.html> (accessed December 7, 2020).

Centers for Medicare and Medicaid Services. State Innovation Models Initiative. (2020). Available online at: <https://innovation.cms.gov/initiatives/state-innovations/> (accessed March 17, 2020).

Chang, A. B., Taylor, B., Masters, I. B., Laifoo, Y., & Brown, A. D. (2010). Indigenous healthcare worker involvement for indigenous adults and children with asthma. *The Cochrane Database of Systematic Reviews*, (5):CD006344. doi(5), CD006344. doi:10.1002/14651858.CD006344.pub3 [doi]

Chapman, S., Schindel, J., Miller, J., & Healthforce Center at UCSF. (2017). Supporting the Integration of Community Health Workers Into Health Care Teams in California. Healthforce Cent UCSF.

Franklin, P., & Gkiouleka, A. (2021). A scoping review of psychosocial risks to health workers during the Covid-19 pandemic. *International Journal of Environmental Research and Public Health*, 18(5), 2453.

Gilkey, M., Garcia, C. C., & Rush, C. (2011). Professionalization and the experience-based expert: Strengthening partnerships between health educators and community health workers. *Health promotion practice*, 12(2), 178-182.

Hunt, C. W., Grant, J. S., & Appel, S. J. (2011). An integrative review of community health advisors in type 2 diabetes. *Journal of Community Health*, 36(5), 883-893. doi:10.1007/s10900-011-9381-7 [doi]

Ingram, M., Doubleday, K., Bell, M. L., Lohr, A., Murrieta, L., Velasco, M., ... & Carvajal, S. C. (2017). Community health worker impact on chronic disease outcomes within primary care examined using electronic health records. *American journal of public health*, 107(10), 1668-1674.

Kangovi, S., Mitra, N., Grande, D., White, M. L., McCollum, S., Sellman, J., . . . Long, J. A. (2014). Patient-centered community health worker intervention to improve posthospital outcomes: A randomized clinical trial. *JAMA Internal Medicine*, 174(4), 535-543. doi:10.1001/jamainternmed.2013.14327 [doi]

Kash, B. A., May, M. L., & Tai-Seale, M. (2007). Community health worker training and certification programs in the United States: findings from a national survey. *Health Policy*, 80(1), 32-42.

Landers, S., & Levinson, M. (2016). Mounting evidence of the effectiveness and versatility of community health workers. *American Journal of Public Health*, 106(4), 591-592.

Malcarney, M. B., Pittman, P., Quigley, L., Horton, K., & Seiler, N. (2017). The changing roles of community health workers. *Health services research*, 52, 360-382.

Mayfield-Johnson, S., Smith, D. O., Crosby, S. A., Haywood, C. G., Castillo, J., Bryant-Williams, D., ... & Wennerstrom, A. (2020). Insights on COVID-19 from community health worker state leaders. *The Journal of ambulatory care management*, 43(4), 268.

National Academy for State Health Policy. *State Community Health Worker Models*. (2017). Available online at: <https://nashp.org/state-community-health-worker-models/> (accessed March 1, 2020).

Nebraska CHW Education Work Group. (2014). *Nebraska Community Health Worker Training Curricula Inventory*. http://www.publichealthne.org/chw_section.htm

Office of Rural Health Policy. (2018). *List of Rural Counties and Designated Eligible Census Tracts in Metropolitan Counties: Updated Census 2010*.

Peretz, P. J., Islam, N., & Matiz, L. A. (2020). Community health workers and Covid-19—addressing social determinants of health in times of crisis and beyond. *New England Journal of Medicine*, 383(19), e108.

Quinn, A., Ern, J., Silva, F., Toure, D., Su, D., and Karsting, K. (2021). (rep.). *Urban and Rural Differences in Community Health Worker Workforce in Nebraska*. Omaha, NE: Center for Reducing Health Disparities College of Public Health University of Nebraska Medical Center.

St. John, J., Byrd-Williams C., Rosenthal E. L., Menking, P., Redondo, F., Ewing, M., Herrington, E., Sieswerda, S., Kwentua, V., Dixon, M., & Simpson, J. (2021). *The Final Report of the Community Health Worker COVID-19 Impact Survey: Texas Results & Methodology*. The University of Texas at Houston Health School of Public Health; Texas Tech Health Science Center El Paso Paul L. Foster School of Medicine; & Texas Tech Health Science Center School of Biomedical Sciences.

Su, D., Toure, D. M., Ern, J., Vinton, V., Ouattara, B., & Crum, A. (202AD). (rep.). *Strengthening the Community Health Worker Workforce to Improve Maternal and Child Health in Nebraska: A State-Wide Assessment of Needs, Barriers, and Assets* (pp. 1–62). Omaha, NE: Center for Reducing Health Disparities College of Public Health University of Nebraska Medical Center.

Torres, S., Balcázar, H., Rosenthal, L. E., Labonté, R., Fox, D., & Chiu, Y. (2017). Community health workers in Canada and the US: working from the margins to address health equity. *Critical Public Health*, 27(5), 533-540.

United States Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions. (2007). (rep.). *Community Health Worker National Workforce Study* (pp. 4–12). District of Columbia, D.C.: U.S. Department of Health and Human Services.

Vanden Bossche, D., Willems, S., & Decat, P. (2022). Understanding Trustful Relationships between Community Health Workers and Vulnerable Citizens during the COVID-19 Pandemic: A Realist Evaluation. *International journal of environmental research and public health*, 19(5), 2496.

Willems, S., & Decat, P. (2022). Understanding Trustful Relationships between Community Health Workers and Vulnerable Citizens during the COVID-19 Pandemic: A Realist Evaluation. *International journal of environmental research and public health*, 19(5), 2496.

Waters, R. (2020). *Community Workers Lend Human Connection To COVID-19 Response: Article examines the role of community health workers in responding to the COVID-19 pandemic.*

Wells, K. J., Luque, J. S., Miladinovic, B., Vargas, N., Asvat, Y., Roetzheim, R. G., & Kumar, A. (2011). Do community health worker interventions improve rates of screening mammography in the united states? A systematic review. *Cancer Epidemiol Biomarkers Prev*, 20(8), 1580.

Wells, K. J., Dwyer, A. J., Calhoun, E., & Valverde, P. A. (2021). Community health workers and non-clinical patient navigators: A critical COVID-19 pandemic workforce. *Preventive Medicine*, 146, 106464.

Wennerstrom, A., Hargrove, L., Minor, S., Kirkland, A. L., & Shelton, S. R. (2015). Integrating Community Health Workers Into Primary Care to Support Behavioral Health Service Delivery. *Journal of Ambulatory Care Management*, 38(3), 263-272.

APPENDIX A – COMMUNITY HEALTH WORKER STATEWIDE SURVEY

Introduction

A Community Health Worker (CHW) is an individual who:

- Serves as a bridge between public health, health care, behavioral health services, social services, and the community to assist individuals and communities in adopting healthy behaviors.
- Conducts outreach that promotes and improves individual and community health.
- Facilitates access to services, decreases health disparities, and improves the quality and cultural competence of service delivery in Nebraska.

For this survey, Community Health Worker (CHW) is an umbrella term used to describe many different health positions. The following is a list of some titles used to describe CHWs:

- Community Health Worker
- Patient Navigator
- Community Health Advisor
- Navigator Promotoras
- Outreach Worker
- Peer Health Advisor
- Community Health Representative
- Peer Counselor
- Promotora/Promotores de Salud
- Peer Leader
- Lay Health Ambassador
- Community Health Advocate

Our purpose here is to conduct a statewide assessment of community health workers. Please do NOT take the survey if you are not a community health worker.

Screening Questions:

1. Do you consider yourself a Community Health Worker based on the definition provided above?

1 Yes (Please continue on to question 2)

2 No (You can exit the survey now)

2. Are you 19 years or older?

1 Yes (Please continue on to question 3)

2 No (You can exit the survey now)

3. Do you currently work in Nebraska?

1 Yes (Please continue on to the next section)

2 No (You can exit the survey now)

Section A: Please tell us a little about yourself:

1. What is your age group?
1 19-24 years 2 25-39 years 3 40-59 years
4 60 years or older 5 Prefer not to answer

2. What is your gender?
1 Male 2 Female 3 Prefer to self-describe
4 Prefer not to answer

3. Are you of Hispanic or Latino origin?
1 Yes 2 No 3 Prefer not to answer

4. What is your race?
1 African American/Black 2 Caucasian/White
3 Asian 4 Native American/American Indian
5 Native Hawaiian or some other Pacific Islander
6 Some Other Race (please specify):
7 Prefer not to answer

5. What is your home zip code? (5 digits)

6. What is your country of birth?
1 Please specify:.....
2 Prefer not to answer

6.a. If you were born in a foreign country, what year did you come to the U.S.?

7. Do you speak another language other than English at home?
1 Yes, please specify:.....
2 No
3 Prefer not to answer

8. What is your current marital status?
1 Never Married/Single 2 Married 3 Divorced
4 Legally Separated 5 Partnered 6 Widowed/Widower
7 Prefer not to answer

Section B: Now we would like to know about your training and work

1. What is your job title?

- | | |
|--|---|
| 1 <input type="checkbox"/> Community Health Worker | 2 <input type="checkbox"/> Patient Navigator |
| 3 <input type="checkbox"/> Community Health Advisor | 4 <input type="checkbox"/> Navigator Promotoras |
| 5 <input type="checkbox"/> Outreach Worker | 6 <input type="checkbox"/> Peer Health Advisor |
| 7 <input type="checkbox"/> Community Health Representative | 8 <input type="checkbox"/> Peer Counselor |
| 9 <input type="checkbox"/> Promotora/Promotores de Salud | 10 <input type="checkbox"/> Lay Health Ambassador |
| 11 <input type="checkbox"/> Peer Leader | 12 <input type="checkbox"/> Community Health Advocate |
| 13 <input type="checkbox"/> Other (please specify): | |

2. How long have you worked as a CHW?

- | | | |
|--|--|---------------------------------------|
| 1 <input type="checkbox"/> 0-1-year | 2 <input type="checkbox"/> 2-4 years | 3 <input type="checkbox"/> 5-10 years |
| 4 <input type="checkbox"/> 11-20 years | 5 <input type="checkbox"/> Over 20 years | |

3. Please describe the key tasks you are prepared to perform as a community health worker (Check all that apply).

- | | |
|---|--|
| 1 <input type="checkbox"/> Coordinating care | 2 <input type="checkbox"/> Health coaching |
| 3 <input type="checkbox"/> Social support | 4 <input type="checkbox"/> Linking to resources |
| 5 <input type="checkbox"/> Medication compliance | 6 <input type="checkbox"/> Health education |
| 7 <input type="checkbox"/> Health screenings | 8 <input type="checkbox"/> Translation/Interpretation |
| 9 <input type="checkbox"/> Data collection | 10 <input type="checkbox"/> Advocacy |
| 11 <input type="checkbox"/> Cultural awareness | 12 <input type="checkbox"/> Community events (e.g. health fairs) |
| 13 <input type="checkbox"/> Other (please specify): | |

4. Please list the health issues that are the focus of your work (Check all that apply).

- | | |
|--|---|
| 1 <input type="checkbox"/> HIV or STDs | 2 <input type="checkbox"/> Behavioral / Mental Health |
| 3 <input type="checkbox"/> Prenatal health | 4 <input type="checkbox"/> Newborn and Infant health |
| 5 <input type="checkbox"/> Child health | 6 <input type="checkbox"/> Adolescent health |
| 7 <input type="checkbox"/> Reproductive aged women (15-49 years) | 8 <input type="checkbox"/> Elder health |
| 9 <input type="checkbox"/> Obesity Prevention (Nutrition/Physical Activity) | |
| 10 <input type="checkbox"/> Chronic Diseases (e.g. diabetes, high blood pressure, cancer) management | |
| 11 <input type="checkbox"/> Chronic Diseases (e.g. diabetes, high blood pressure, cancer) prevention | |
| 12 <input type="checkbox"/> Other (please specify): | |

5. Do you provide any services to improve Maternal, Newborn, and Child Health currently?

- 1 Yes 2 No

5a. If yes, select all that apply:

- | | |
|---|---|
| 1 <input type="checkbox"/> Home Visit | 2 <input type="checkbox"/> Prenatal Counseling |
| 3 <input type="checkbox"/> Immunizations | 4 <input type="checkbox"/> Maternal Nutrition (e.g. gestational diabetes) |
| 5 <input type="checkbox"/> Essential Newborn Care | 6 <input type="checkbox"/> Special Care for Low Birth Weight/Premature |
| 7 <input type="checkbox"/> Infant Injury prevention | 8 <input type="checkbox"/> Overweight/Obesity |
| 9 <input type="checkbox"/> Access to mental health services | |

1. Did you receive any training before becoming a community health worker?
 1 Yes 2 No

6a. What was the year you took the training? _____

6b. What was the length of your training?

1 Less than 1 day 2 Between 1 and 7 days
 3 Between 1- and 4-weeks 4 More than 1 month

6c. What agency provided the training?

1 Nebraska Department of Health and Human Services
 2 University of Nebraska Medical Center
 3 OneWorld Community Health Center
 4 Other (please specify):

6d. Topics covered during your training (select all that apply):

1 Women, Newborn, and Child Health 2 Heart disease and stroke
 3 Diabetes and Pre-diabetes 4 Nutrition
 5 Oral health 6 Behavioral Health
 7 Cancer 8 Communication skills
 9 Cultural competencies 10 Navigating health insurance
 11 DHHS health navigator training
 12 Other

2. Are you aware of any current training opportunities for CHWs to reinforce initial training, learn new skills, or update their knowledge base?

1 Yes 2 No

7a. If yes, please describe:

3. While you are working as a CHW, how would you like to be trained?

1 Do not see the need for receiving any continuous training
 2 Continuous training at least every 6 months for CHWs
 3 Continuous training at least every 12 months for CHWs
 4 Continuous training at least every 2 years for CHWs
 5 Other (please specify):

4. Please describe the community where you primarily work as a CHW.

9a. What is the predominant ethnic background of the community you work in?

1 Hispanic/Latino/Spanish 2 Non-Hispanic

9b. What is the predominant racial background of the community you work in?

1 African American/Black 2 Caucasian/White

1. What is the organizational setting where you work as a community health worker?
 - 1 Community-Based Organization
 - 2 Doctor's Office/Clinic
 - 3 Hospital Migrant/Community Health Center
 - 4 School/University
 - 5 Local Health Department
 - 6 Housing Authority
 - 7 Adult Family Homes
 - 8 Private Insurance Companies
 - 9 Tribal-Based Organizations or Health Centers
 - 10 Faith-Based Organization (CHI Health, Lutheran Family Services, etc.)
 - 11 Congregation (church, mosque, place of worship, etc.)
 - 12 Other (please specify):

2. Do you have opportunities for promotion or professional advancement through the CHW program?
 - 1 No
 - 2 If yes, please specify: _____

3. What is your biggest personal challenge when working as a CHW? (Please select only one.)
 - 1 Financial support
 - 2 Language barriers
 - 3 Safety
 - 4 Support from community
 - 5 Support from supervisors
 - 6 Support from other healthcare professionals
 - 7 Transportation
 - 8 Lack of training
 - 9 Unsure of work responsibilities
 - 10 Stress/ Burn out
 - 11 Other (please specify):

Part C: We would now like to know the extent you as a CHW are integrated into teams.

1. How is your work supervised?
 - 1 By Registered Nurses (RNs)
 - 2 By another health professional (i.e. Physician, Licensed practical nurse (LPN), Social Worker, dietician, etc.)
 - 3 By an Administrative Staff
 - 4 By another Community Health Worker
 - 5 Other (please specify): _____

2. How is your performance monitored and evaluated?
 - 1 Monthly reviews

The following questions aim to identify your opinions on your position in teams. Please select the option that best reflects your opinion.

- A. How frequently do you communicate with the other healthcare, social service, and/or education providers with whom you work about program participants?
- 1 Never 2 Rarely 3 Occasionally 4 Often 5 Constantly
- B. Do the other healthcare, social service, and/or education providers with whom you work communicate with you in a timely way about program participants?
- 1 Never 2 Rarely 3 Occasionally 4 Often 5 Always
- C. Do the other healthcare, social service, and/or education providers with whom you work communicate with you accurately about program participants?
- 1 Never 2 Rarely 3 Occasionally 4 Often 5 Always
- D. When an error has been made about program participants, do the other healthcare, social service, and/or education providers with whom you work blame others rather than sharing responsibility?
- 1 Never 2 Rarely 3 Occasionally 4 Often 5 Always
- E. To what extent do the other healthcare, social service, and/or education providers with whom you work share your goals for the care of program participants?
- 1 Not at all 2 A little 3 Some 4 A lot 5 Completely
- F. How much do the other healthcare, social service, and/or education providers with whom you work know about the work you do with program participants?
- 1 Nothing 2 Little 3 Some 4 A lot 5 Everything
- G. How much do the other healthcare, social service, and/or education providers with whom you work respect you and the work you do with program participants?
- 1 Not at all 2 A little 3 Some 4 A lot 5 Completely

The following questions focus on the extent to which you feel that your race, ethnicity, or culture negatively influences the way you are viewed or treated by the other healthcare, social service, and/or education providers with whom you work. Please select the option that best reflects your opinion.

- A. Do you feel isolated from the other healthcare, social service, and/or education providers with whom you work because of your culture or race/ethnicity?

1 Not at all 2 A little 3 Some 4 A lot 5 Completely

- B. Do you feel like you have to be the only voice for your race/ethnicity or culture amongst the other healthcare, social service, and/or education providers with whom you work?

1 Not at all 2 A little 3 Some 4 A lot 5 Completely

- C. Do you feel dismissed or devalued by the other healthcare, social service, and/or education providers with whom you work because of your ethnic/racial background?

1 Not at all 2 A little 3 Some 4 A lot 5 Completely

- D. Do you feel that the other healthcare, social service, and/or education providers with whom you work make assumptions about you because of your race/ethnicity?

1 Never 2 Rarely 3 Occasionally 4 Often 5 Always

The following questions aim to identify your comfort level and access to workplace resources. Please select the option that best reflects your opinion.

- A. To what extent do the other healthcare, social service, and/or education providers with whom you work understand your roles and what you do as a CHW?

1 Not at all 2 A little 3 Some 4 A lot 5 Completely

- B. To what extent do you feel comfortable going to the other healthcare, social service, and/or education providers with whom you work to talk about participants' needs?

1 Not at all 2 A little 3 Some 4 A lot 5 Completely

- C. Do you have access to record information about your participants in your employers' main participant tracking form/system?

1 Yes 2 No

- D. Does your employer provide you with adequate, dedicated space where you can work (e.g., meet with participants, complete paperwork, make phone calls, access a computer, etc.)?

Part D: We would now like to know about your work since the beginning of the COVID-19 pandemic.

1. How is your work supervised?

- 1 No change
- 2 Fired or laid off
- 3 Furloughed
- 4 Chose to stop working
- 5 Hired because of COVID
- 6 Hired not because of COVID
- 7 Other (please specify):

2. Where did you work during the COVID-19 pandemic?

- 1 Out in the community
- 2 Community centers
- 3 Client's homes
- 4 Clinic/Outpatient facility
- 5 Office setting
- 6 Religious centers
- 7 Health department
- 8 Early childhood education
- 9 Hospital
- 10 Long-term care facilities
- 11 Shelters
- 12 Work sites
- 13 Working remotely (home)
- 14 Other (please specify):

3. What is the threat of COVID-19 pandemic for each of the following areas?

	Not a Threat	Minor Threat	Major Threat	Not Applicable
A. Your Personal Health	1	2	3	4
A. Your State Population as a Whole	1	2	3	4
A. Your Personal Financial Situation	1	2	3	4
A. Your Job Security	1	2	3	4
A. Day-to-day life in your Community	1	2	3	4

4. What is your top work-related stressor since the COVID-19 pandemic began?

- 1 Uncertainty about when things will settle down/ return to normal
- 2 Burnout
- 3 Heavy/increased workload
- 4 Concern of getting sick myself
- 5 Concern of spreading COVID-19
- 6 Insufficient communication from leadership
- 7 Insufficient PPE
- 8 Working too many hours
- 9 Job security/ employment status
- 10 Insufficient training
- 11 Other (please specify):

1. Do you see the need for receiving any training to better prepare you to respond to COVID-19?

1 Yes 2 No

2. Do you receive any additional compensation working during COVID-19 pandemic?

1 Yes 2 No

3. How did your employer support you during the COVID-19 pandemic?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not Applicable
My employer has helped me to feel well prepared to do my job.	1	2	3	4	5	6
My employer has communicated a clear plan of action related to COVID-19.	1	2	3	4	5	6
My employer keeps me updated and informed on a regular basis.	1	2	3	4	5	6
My employer has provided sufficient personal protective equipment to do my job.	1	2	3	4	5	6
My employer cares about my overall wellbeing.	1	2	3	4	5	6
My employer has supported me since the COVID-19 pandemic response began in my community.	1	2	3	4	5	6

1. What are the common populations you have served since COVID-19? Select all that apply.

- | | |
|---|---|
| 1 <input type="checkbox"/> Infants/children | 2 <input type="checkbox"/> Adolescent |
| 3 <input type="checkbox"/> Refugees | 4 <input type="checkbox"/> Recent Immigrants |
| 5 <input type="checkbox"/> Women | 6 <input type="checkbox"/> Individuals with disabilities |
| 7 <input type="checkbox"/> Families | 8 <input type="checkbox"/> Pregnant women/ new parents |
| 9 <input type="checkbox"/> LGBTQ+ | 10 <input type="checkbox"/> Older Adults |
| 11 <input type="checkbox"/> Veterans | 12 <input type="checkbox"/> Individuals that experienced homelessness |
| 13 <input type="checkbox"/> Men | 14 <input type="checkbox"/> Other (please specify): |

1. What is the race/ ethnicity selected since COVID-19 pandemic? Select all that apply.
 - 1 Latino or Hispanic origin 2 African American/Black
 - 3 Caucasian/White 4 Asian
 - 5 Native American/American Indian
 - 6 Native Hawaiian or some other Pacific Islander
 - 7 Some Other Race (please specify):

2. Based on your personal observation, is hesitancy to take COVID-19 vaccines common in the communities you serve?
 - 1 Yes 2 No

 - A. Did you do anything to help address hesitancy to take COVID-19 vaccines in the communities you serve?
 - 1 Yes 2 No

 - B. Please describe any activities you have done to help address vaccine hesitancy in your community:.....

 - C. From what you can tell, what else needs to be done to increase COVID-19 vaccination rate in the communities you serve?.....

