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Developing the Community Health Worker Workforce to Promote Maternal and Child Health in Nebraska

Prepared by:

Center for Reducing Health Disparities
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BREAKTHROUGHS FOR LIFE.

TABLE OF CONTENTS

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EXECUTIVE SUMMARY

Community Health Workers (CHW) are valued members of the public health workforce, promoting healthy behavior changes through manageable interventions and health promotion activities. According to the definition by the American Public Health Association (APHA), CHW are individuals who work in the public health sector and establish a relationship based on trust with their community, allowing them to be the first point of contact connecting the community, healthcare, and social services (APHA, 2014). Furthermore, in 2014, the Nebraska CHW Coalition Steering Committee defined a CHW as a person who connects the community to different sectors of health and healthcare in order to assist individuals with positive health behavior changes (Nebraska CHW Education Work Group, 2014). While previous research has shown that there is a substantial CHW workforce in Nebraska (Su et al., 2020), additional research is needed to understand how CHW can further promote the health of underserved mothers and children in the State of Nebraska.

In January 2020, the Nebraska Department of Health and Human Services (NE DHHS), in partnership with the Center for Reducing Health Disparities (CRHD) at the College of Public Health, University of Nebraska Medical Center, released a comprehensive assessment of the Community Health Workers workforce throughout the state of Nebraska (Su et al., 2020). This assessment included focus group discussions with CHW, in-depth interviews with organizations that employed CHW, and an online survey to collect data from CHW in Nebraska. This assessment provided qualitative and quantitative information regarding CHW roles, both within their communities and the greater healthcare system, and presented a cross-section of CHW demographics, training, services provided, and perspectives on the training and certification of CHW in Nebraska.

This report further examines the previous assessment of CHW workforce in Nebraska to specifically focus on the role and capacity of CHW in promoting maternal and child health (MCH). Through secondary analysis of the data used in the original assessment, the study team seeks to illustrate the main maternal and child health issues identified by participating CHW, the barriers CHW reported when they work with the community and other stakeholders to address the issues, as well as recommendations for future steps.

Highlights of Findings

The qualitative feedback from CHW participating in the focus group discussions and the quantitative data based on the online survey of CHW in Nebraska have revealed several important findings as listed below.

- CHW identified several health issues threatening the wellbeing of women and children including the high prevalence of certain chronic conditions (e.g., diabetes and obesity), mental health, domestic violence and abuse, and lack of nutritional knowledge.

- The CHW also reported several barriers to promoting maternal and child health, including some clients being without health insurance or assistance due to lack of legal immigration status, culture, transportation, poverty, limited healthcare access, and language issues.

- In response to these challenges, participating CHW provided important services, including interpretation, health education, patient navigation, and other health services to women and children in Nebraska.

The findings from the online CHW survey confirms some of the reported concerns by CHW in the focus group discussions and further point to additional service gaps.

- Out of the 121 CHW surveyed, only about one-fifth received training in MCH prior becoming a CHW.

- The majority of CHW in the survey do not provide services directly related to MCH. Among CHW who provide MCH services, less than 5% are African Americans and about one third do not have full time employment, which points to the need for diversifying the CHW workforce and providing more full-time CHW positions to stabilize and grow the workforce.

- Furthermore, less than one quarter of CHW who provide MCH services work in rural areas.

Recommendations

The CHW also proposed recommendations for future steps including:

- More training on different health issues (e.g., mental health);
- Education on and provision of culturally and linguistically relevant health education;
- Provision of more healthy options in food security programs;
- Limiting screening time for children; and
- Usage of information technology to better connect with and serve clients.

Future program efforts in developing the CHW workforce need to consider urban-rural differences by making sure that CHW work is a viable workforce option in rural areas, and that CHW from rural areas are recruited and trained to improve maternal and child health in the increasingly diverse rural populations in Nebraska.

ACKNOWLEDGEMENTS

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INTRODUCTION

Community Health Workers (CHW) are individuals from the community who have been trained to help their fellow community members improve their health status and access to health services. CHW constitute an integral segment of the public health workforce, aiding in the support of under-resourced or underserved areas of their local community (Lewin et al., 2010; Stacciarini et al., 2012). In response to their communities' unique health needs, CHW contribute to improved health outcomes through identification of local health gaps (Perry, Zulliger, & Rogers, 2014). CHW play a vital role on the frontlines of public health, often in low-income areas through serving individuals who may not have access to a medical home, primary care physician (PCP), or other healthcare provider. Often acting as a liaison between healthcare providers and the broader community, CHW educate and communicate important health issues in a culturally relevant manner, serving as an advocate for community members.

Among the many demographics that CHW serve, mothers and children have benefitted from the knowledge and skills of CHW. Maternal and child health services are often expensive and may be inaccessible for some mothers and children, particularly if their family does not have affordable health insurance coverage. The cost of prenatal care and delivery in the United States ranges greatly, both for insured and uninsured families. Moniz and colleagues (2020) found that women paid, on average, $4,569 in 2015 for pregnancy-related expenses. This may be an area of opportunity for CHW to help pregnant women find free or low-cost community resources to keep pregnancy-related expenses down.

CHW have assisted mothers in several key areas of raising healthy children. Breastfeeding is recommended by the American Academy of Pediatrics due to its high nutrient density for healthy infant development (2012). CHW have received training in breastfeeding education through public health agencies and utilize these skills in their communities (Furman & Dickinson, 2013; Lewin et al., 2010). Immunization is another aspect of healthy childhood development. CHW have aided in educating mothers about infant and childhood immunization, increasing rates of vaccination in communities they serve (Findley et al., 2009). Recently, CHW have aided school nurses in managing COVID-19 precautions in school-based health centers (Boldt et al., 2021), suggesting an increased need for CHW in school settings.

In addition to serving as agents of change in physical health outcomes, CHW also assist in ameliorating mental health burdens in mothers. Racial and ethnic minority community members often struggle to locate culturally salient mental health resources and may be at increased risk for health disparities. Smith & Kruse-Austin (2015) developed CHW training which can assist in alleviating mental health burdens in mothers. Furthermore, Stacciarini and colleagues (2012) found that promotoras could be trained to help community members overcome or cope with mental illness when faced with limited access to resources.

CHW are valued members of the public health workforce, promoting access to care and community resources, and helping make care more culturally responsive to clients' needs. Additional research is needed to understand how CHW can further benefit mothers and

children in the State of Nebraska. CHW are more frequently utilized in low- and middle-income countries due to the overwhelming health disparities (Gilmore & McAuliffe, 2013).

In January 2020, the Nebraska Department of Health and Human Services (NE DHHS), in partnership with the University of Nebraska Medical Center, College of Public Health, Center for Reducing Health Disparities (COPH CRHD), released a comprehensive assessment of the Community Health Worker (CHW) workforce throughout the state of Nebraska. The assessment included focus group discussions with CHW, in-depth interviews with organizations that employed CHW, and an online survey to collect data from CHW in Nebraska (Su et al., 2020). The assessment provided qualitative and quantitative information regarding CHW roles, both within their communities and the greater healthcare system, as well as data outlining CHW demographics, training, services provided by CHW, and opinions on the training and certification of CHW.

This report builds upon the previous assessment of CHW workforce in Nebraska to specifically focus on examining the role, as well as the capacity, of CHW in promoting maternal and child health. Through secondary analysis of all the data used in the original assessment, the study team seeks to illustrate the main maternal and child health issues identified by participating CHW, the resources and barriers CHW reported when they work to address the issues, as well as recommendations for future steps.

APPROACH AND METHODS

The methods and approach in this report are the same as outlined in the Strengthening the Community Health Worker Workforce to Improve Maternal and Child Health in Nebraska: A Statewide Assessment of Needs, Barriers, and Assets (Su, et al., 2020), in which a 3-phase Exploratory Sequential Mixed Methods Analysis was utilized (Berman, 2017).

Community Health Workers Focus Group Discussions

We conducted nine focus group discussions involving a total of 65 unduplicated CHW across the state of Nebraska to collect in-depth qualitative data regarding the role of CHW in their communities and within the healthcare system. These focus group discussions were conducted at five local public health departments including South Heartland District in Hastings, Elkhorn Logan Valley Public Health Department in Norfolk, Two Rivers in Kearney, Public Health Solutions in Crete, and Douglas County Health Department in Omaha. With the exception of Douglas County Health Department, the host public health departments' jurisdictions each encompass multiple rural counties. The focus groups were held between April and July 2020. Table 1 shows the dates and number of participants in these focus group discussions across those five locations.

Table 1: Locations, dates, and participants of focus group discussions

Health Department	Location	Date		Number of participants	
		First Session	Second Session	First Session	Second Session
South Heartland District Health Department	Hastings	April 9th, 2020	July 22nd, 2020	15	13
Elkhorn Logan Valley Public Health Department	Norfolk	April 23rd, 2020	July 27th, 2020	11	10
Two Rivers Public Health Department	Kearney	April 25th, 2020	July 30th, 2020	7	12
Public Health Solutions	Crete	April 30th, 2020	July 12th, 2020	6	0
Douglas County Health Department	Omaha	May 10th, 2020	July 26th, 2020	10	7

We held two separate sessions in each of the health departments, with each session covering different discussion topics. The first session was focused on Community Health Workers' perspectives on their role in the community and the second session was focused on the role of CHW in the healthcare system. All the focus group sessions were led by a trained facilitator. The facilitator read the consent form before the start of the focus group and provided a copy of the informed consent to participants. Participants were informed of audiotaping and photo-taking. Basic demographic data were collected. For the focus group, the moderator asked participants a series of questions using a semi-structured interview guide with open-ended questions and additional probes when needed.

The focus group sessions were recorded with a digital recorder, and the sound quality was tested and deemed sufficient quality for recording. The focus group facilitator made sure to create an atmosphere of respect and openness so that responses would be spontaneous and appropriate without creating any unnecessary conflict or argument. The recordings were transcribed verbatim by the research personnel involved in the study. Individuals were offered a stipend for attendance if otherwise unpaid by an employer and, in cases where significant travel was involved, participants were compensated for mileage expenses.

Two members from the study team independently coded the transcripts using thematic content analysis (Vaismoradi et al., 2013). The two members analyzed the transcripts in two stages. First, each member independently analyzed the transcripts and applied initial codes. Then two members met and discussed their results and recoded the transcripts based on their discussion over the emerging themes. During the second stage, the two members compared their updated codes and established the themes together based on their joint review of the codes. Cohen's kappa of at least 90% was used to quantify the degree of agreement between the two research members in their coding (Davey et al., 2010).

All participants were older than 19 years of age and able to communicate in English. Among these sixty-five participants, the majority of CHW were females while only three of these participants were males. Participants in the focus groups were predominantly part-time, paid employees who work in clinical or health care settings. The majority of the participants received training prior to becoming a CHW or held some form of licensure (Table 2).

Table 2: Descriptive summary of Focus Group CHW employment information

	Frequency (n)	Percentage (%)
Work Setting (n = 50)		
Clinical or Healthcare Organization	17	34
Community Organization	11	22
Not currently working as CHW	10	20
Other	12	24
Work Status (n = 48)		
Paid	35	73
Volunteer	13	27
Work Hours (n = 49)		
Full-time hours	23	47
Part-time hours or less	26	53
CHW Training (n = 50)		
Yes	41	82
No	9	18
Licensure (n = 49)		
Holds a license	27	55
Does not hold a license	22	45

Community Health Workers Statewide Survey

Based on qualitative feedback from CHW who participated in the focus group discussions and a review of related literature, the research team drafted a survey questionnaire and updated the questionnaire with input from the Nebraska Community Health Worker Committee. The questionnaire was further pilot tested at a 2019 statewide minority health conference before it was finalized and used in the Community Health Workers Statewide Survey. 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 REDCap, we developed and circulated a paper version of the survey to accommodate individuals without easy access to the online survey.

The survey opened with an informed consent letter, a brief definition of Community Health Worker, and two screening questions to ensure eligibility. If the individual was not at least 19 years of age or self-identified as a CHW, 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 21 multiple-choice questions and one open-ended question (Appendix C). Participants were asked to provide an address at the end of the survey to receive a $20 gift card as compensation. This information was not linked to the survey responses.

ETHICAL CONSIDERATIONS

The Institutional Review Board at the University of Nebraska Medical Center approved this study (IRB# 900-18-EX). The study objectives and voluntary participation were explained to participants, and informed consent was obtained before the beginning of the focus group. Participants could choose to withdraw from the study or refuse to answer certain questions based on their personal judgments at any time during the data collection process. Confidentiality was assured by using numbers instead of names (e.g., focus group session 1 and focus group session 2) and removing identifying information such as name and center references from the transcripts before data analysis. All audio recordings and transcripts were saved on a password-protected computer. The Standards for Reporting Qualitative Research guidelines were followed throughout this study (O'Brien et al., 2014).

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

ANALYSIS AND RESULTS

Section A: Findings based on CHW Focus Group Discussions

Theme 1: Perceived Maternal and Child Health Issues

When asked about the most important health needs of women and children in their community, participants described several maternal and child health concerns that include chronic disease, mental health, domestic violence/abuse, and nutritional attitudes (Table 3). Chronic disease was identified as one of the most important health needs of women and children, especially diabetes. An important component of addressing chronic disease in women and children is access to healthcare and resources to address these chronic conditions.

Another common health issue participants described that affects women and children's health is mental health. This health concern was identified and mentioned by the as anxiety, stress, and other emotional impacts. Oftentimes, the effects of mental-health related issues extend beyond the immediate effects of the mother or female caregiver and affect the entire household unit, including other caregiving partners and children. These issues could also be exacerbated by factors such as employment, isolation, technology, and financial issues.

Domestic violence/abuse was described as a common health concern that could either has a direct impact on the women's and children's health or may lead to other health issues, which ultimately affects their health outcomes.

The fourth subtheme that was identified regarding the perceived maternal and child health concerns was food culture and lack of nutritional knowledge. CHW participants identified the need to educate specific populations with nutritional education through a cultural lens. This would help address chronic diseases associated with nutrition, such as diabetes, in specific populations.

Table 3: Selected Sample Quotes of Theme 1 - Perceived Maternal and Child Health Issues

Subthemes	Sample Quotes
Chronic Disease	"Still chronic diseases……. Well, I'm just thinking about how there's (a lot of) of diabetes in the area. And if you're diabetic, that means you have to reach out to at least three other professionals for your vision, to check for neuropathy, and you just need more than take your insulin and watch your carbs and sugar."
Mental Health	"Anxiety, stress, mental health." "I think technology. Yeah. I mean, technology, I think, is a big cause of a lot of things nowadays. But even with parents, they're not paying attention to their kids because they're always on their phone. And so, I think that's just, yeah, harming the emotional health as well."
Domestic Violence/Abuse	I've been seeing a lot of cases of domestic violence….. all I can do is try to listen to them, and give them information of where they can go, and offering them to call an officer and file a report. But they're not willing to do that because they think it's okay. And once again, it's back to their cultural background. I mean, to them, that's normal. "One thing that I think that uses stronger correlation in regard to health, and specifically to women and children, is understanding that there might be background levels of abuse and sexual abuse going on in our communities. So that's one thing that I would add to as a health need. I think there needs to be a correlation between abuse and health outcomes."
Nutritional Knowledge and Food Culture	"Within the Hispanic culture, cooking, I mean, oil, and—Tortillas… all greasy food….. And I think, once again, coming from a country where food is very, very difficult to get, and then you come here and I mean, you're working, and I mean, it's a lot easier to purchase food, and you have your kids that are going, "Okay, I want this, I want this," and parents thinking, "Well, I have the money. Okay, let's get whatever they want." Because when I was growing up, I couldn't buy that or my parents couldn't buy that for me, but at the same time, they're harming their children. And so, I mean, it's very difficult, I mean, to change the way of thinking that you're purchasing this, yeah, because you can maybe afford it now, but let's look at healthier options. And I mean, it's just I don't know, it's hard."

Theme 2: Barriers Related to Maternal and Child Health

When asked about the barriers related to maternal and child health, the participants suggested a wide range of factors that hinder access to care, such as limited training, immigration status, cultural factors, transportation issues, poverty, and language barriers (Table 4).

Participating CHW identified a lack of, or inadequate, training related to domestic violence as an important barrier for promoting maternal and child health. Some participants felt unprepared to address the issue or how to help women who experience domestic violence. This includes addressing cultural factors that affect whether the abuse will be reported, and community reaction to the abuse.

Poverty was identified as an additional barrier to promoting women's health. Many women from low-income households need to work at multiple jobs, to sustain living conditions and afford appropriate childcare. Healthcare appointments cannot be made to meet their schedules. Also, lack of transportation constitutes an important barrier for some women when they seek needed health services.

Other key barriers to maternal and child health identified by CHW include:

- Language
- Translation services
- Health literacy
- Care accessibility
- Immigration status
- Cultural understanding
- Nutritional knowledge
- Transportation
- Financial limitations
- Limited resources

While most of these barriers are in individual terms, CHW also identified barriers to maternal and child health at the systems level. Maternal and child health is not viewed as a priority area by many CHW employers. Funding is limited for MCH projects involving CHW. Funding limitations may result in MCH services or resources not being provided at all.

Table 4: Selected Sample Quotes of Theme 2 - Barriers to Promoting Maternal and Child Health

Subthemes	Sample Quotes
Undocumented Immigration	"Some people, they're here illegally, and how can they get health insurance? And how can their babies get health insurance? That's just scary. I feel for them. They don't have any healthcare benefits. They can't get it."
Culture	"And they're just thinking, "Oh, no. I need to be with him forever." And try to change that way of thinking is hard. I mean, you really can't do anything about what somebody thinks. I mean, you can offer help."
Limited training	"No training [domestic violence]….. We need training."
Transportation	"With my position as a home visitor, I'm thinking of a specific family that doesn't always have a reliable vehicle. So, they're sometimes unable to get to their medical appointments when they should. And they have four young children, and the mother is expecting now, and she's high-risk pregnancy, and the father has some medical issues too. So that's a barrier for them, is transportation and gas money too. At some points, it's difficult for them to come up with."
Poverty	"I had a client. And so, she was telling me about a pain she was having on one of her breasts, and so I was really encouraging her to make an appointment and get seen before anything got worse, and she just kept saying, "I can't. I can't take days off because I'm barely making enough to pay rent, and if I miss a day or if I take hours out of work, I'm not going to make enough to pay rent, and then I'm going to fall behind." So, I mean, just living day-to-day to pay what is needed, I mean, a lot of times getting into an appointment is really hard for people." "So, they only have one car, so they have to wait for Dad to get home for them to go anywhere. Dad can't take off work because Dad pays for everything." "And people say it's not affordable with the fruits and vegetables, and I get that. Because sometimes on my reservation it's bad. If you want to buy an avocado there, it's $5 for an avocado. One avocado on my reservation. It's ridiculous. And so, what are my people going to buy? They're going to buy junk food. They're going to buy cheap ramen noodles. Buying stuff that will get their family through. And that's all they know."
Language issues	"I've gone with a few families with their appointments. So, I know they have to have a child that's school-age interpret for them or translate for them. Or sometimes, some clinics do have somebody, but they have to schedule certain times or certain days.

Theme 3: Services provided by CHW to improve maternal and child health

When asked about the service provided by CHW related to maternal and child health, we identified two subthemes which include interpretation and healthcare navigation (Table 5).

Table 5: Selected Sample Quotes of Theme 3 - Services provided by CHW to improve maternal and child health

Subthemes	Sample Quotes
Interpreter	"Someone who doesn't have English as their first language, or they speak very broken English, they're not going to come to an all-English-speaking facility to get help. They're going to try and find someone else who speaks their language to find help. So, we have to go through different avenues of finding that local champion and communicating with them to communicate to the public, "Hey, the health department can help you with this. They can set up an interpreter." "For instance, yesterday I went to interpret for a child that he have Down syndrome, and the mother said, "I don't know what I can do if you didn't come."
Healthcare Navigation	"I navigated with the ladies that have no insurance. And so those ladies were screened through Every Woman Matters program."

Theme 4: CHW Recommendations for Improving Maternal and Child Health

The CHW participants provided several recommendations related to maternal and child health. Subthemes included CHW training, awareness/ education in communities, and improved access to healthy food and technology (Table 6). Recommendations include:

- Community Health Worker training on maternal and child health issues and population health priorities.
- Improved information resources for underserved communities on how to obtain health insurance and navigate complex health care systems and services.
- Educate women regarding domestic violence and reinforce the notion that it is their right and, in their interest, to report it.
- Involve women in the decision-making process to get some services for them and their children.
- CHW identified children's increased time spent on computers, phones, and games as a serious health concern.
- Participants also suggest that having parent health education classes and breastfeeding education for new mothers would help further improve maternal and child health.

Table 6: Selected Sample Quotes of Theme 4 - CHW Recommendations for Improving Maternal and Child Health

Subthemes	Sample Quotes
Training	"Well, like the circle of security class, I don't know if any of you have done that, it's in, oh my gosh, how many weeks is it? I think it's like a month-long training. But it's more focused towards the mental health aspect of parents, and the relationship with their children, and understanding that parents are always going to be making mistakes because no one's perfect……So that's a good training."
Awareness of existing programs or services	"Yeah. And that was something that I didn't know. I wasn't aware the Medicaid will pay for that. No idea."

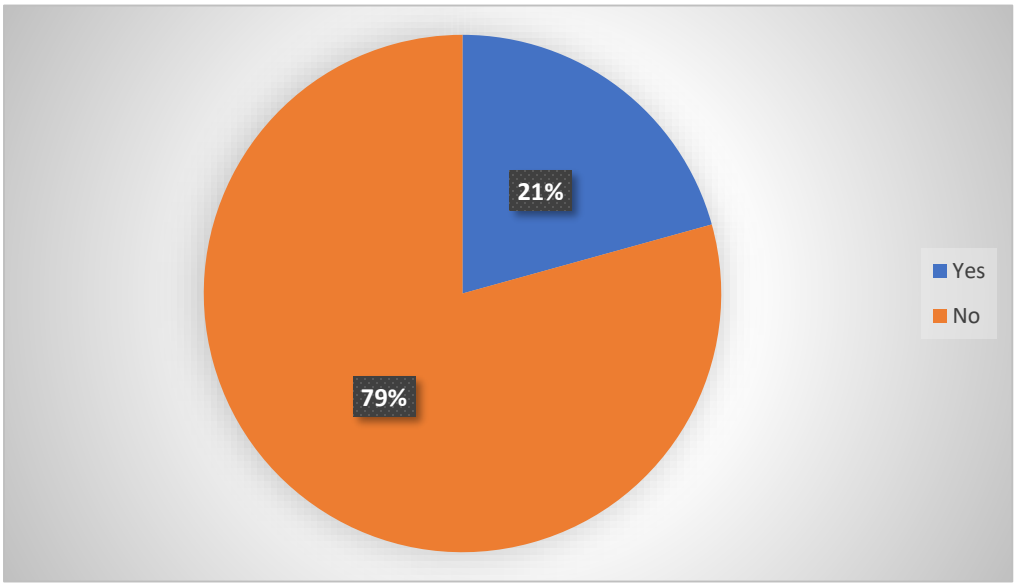
Table 6: Selected Sample Quotes of Theme 4 - CHW Recommendations for Improving Maternal and Child Health (cont.)

Subthemes	Sample Quotes
Healthy Food Options	"….But food stamps, SNAP benefits, I almost feel like there should be stipulations on buying soda or something they need to make it more regulated on a healthier budget. You know how you have WIC, you can't go and buy the fancy, you have to get Life cereal, or you have to get Grape Nuts, or Chex, or something that's a healthier option for women and children. But what about the SNAP benefits?"…….. So, if they could regulate that a little bit. It's kind of nice to have a treat now and then."
Health Education	"And I also think there has to be some education on domestic abuse because I'll hear a lot of people say, "But they haven't hit me." "One of the things that I've been trying to do is if I have a mom with young children coming into the office, making sure that I can provide the mom with as much information as I can in offering to be of assistance whenever they need something. But then, also trying to connect them with other organizations that can go into the home. So, home visitation programs to make sure that somebody can at least go in the home and kind of be aware of the situation so that this mom isn't isolated completely and forgotten about. So that somebody is kind of keeping an eye to make sure that the children are okay. Or if the mom isn't willing to report it, but if something happens with the child, then somebody can go in and report it."
Children's Lifestyle	"Just getting children out to play. It's really more physical." "So, limiting technology."
Resource Accessibility	"And so, SNAP is there to help, but it's not going to cover all of it. That's the problem. So I do think they need to regulate it, but I do think it needs to have more money put into it so families can feed all of them." "I wish it was distributed weekly instead of monthly because I think when you are living in poverty, you have money now. I don't know if I'm going to have money by the 30th of the month, so I'm going to spend it now on things that are going to last the whole month. My cart's going to be full, but I'm not going to be able to go shopping again until I get SNAP benefits again. So, you're not going to have any fresh produce. You're not going to have anything that's not shelf-stable."
Make good use of Information Technology	"One of my biggest problems with my oral health prevention program is I am relying on children to take parent permission slips home and relying on children to bring them back, signed. So, I had actually-- it was so funny. I called a bunch of health departments to ask if anyone has an app system where the schools-- either they have an email or a text alert system where they could send out reminders for things. And I'm like, it would be great if you could link in an app or parents could pull that up and be like, "Oh, I want to do that. Okay, yes, I want this, this, this. E-sign, done." It's in their face, readily available. Because I think, like you said, you're a one-stop shop. You can give somebody all the information they need, but for them to take those steps to do it, they either don't want to do it or they don't have time to do it, and it's just-- And I do feel sometimes feel like, "Well, you should do that for me. That's your job, right? You should do that for me." So, I struggle with that sometimes. So, I feel like having some readily available tools that we could give people-- because I don't know anybody who doesn't have a smartphone anymore. It's something that they could use that way. And it can't get lost. Paper gets lost. You're not going to lose your phone."

Section B. Findings based on Community Health Workers Statewide Survey

As indicated by Figure 1, out of the 121 CHW participating in the online survey, only 25 (20.7%) indicated they received training in Women/Newborn/Child Health prior to becoming a CHW.

Figure 1: CHW Who Received Training in Women/Newborn/Child Health (n=121)



Based on Figure 2, about 40% (n=49) of the participating CHW indicate they provide maternal and child health services.

Figure 2: CHW who provide Maternal and Child Healthcare Services (n=121)

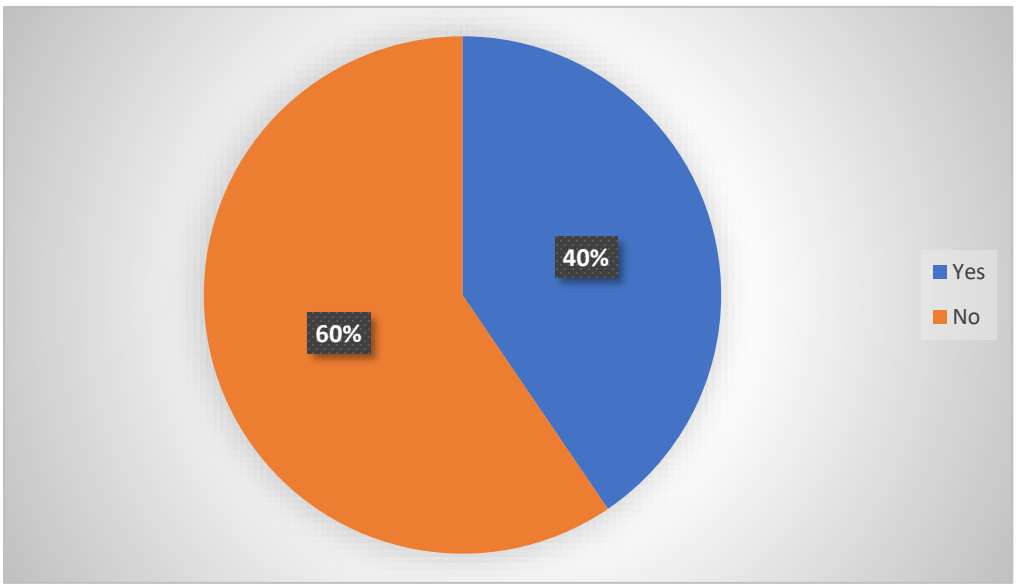


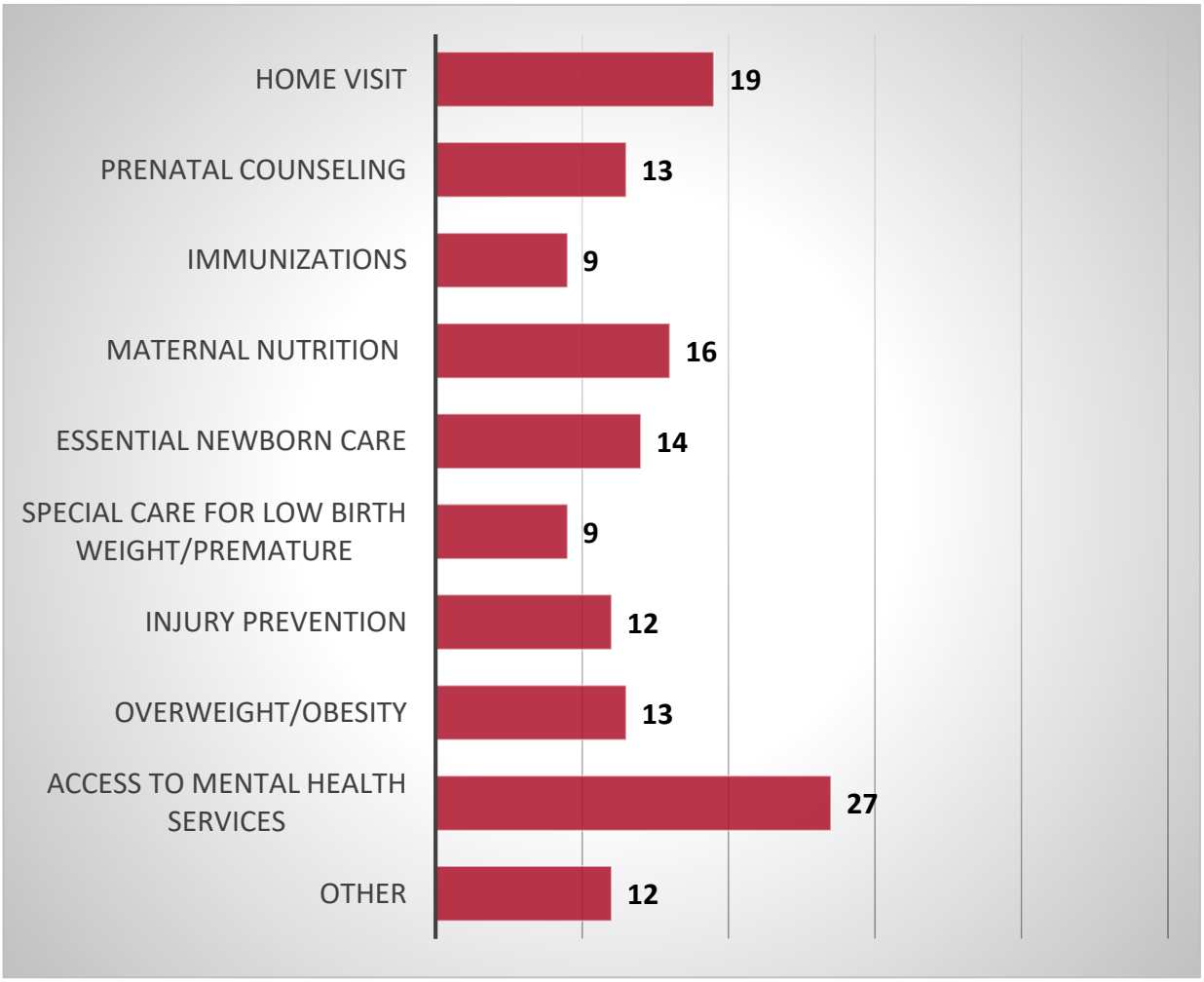
Table 7: Demographics of CHW who provide MCH Services

	Frequency (n)	Percentage (%)
Age (n = 46)		
25-39	22	44.9
40-59	22	44.9
60 and Older	2	10.2
Gender (n = 49)		
Male	1	2.0
Female	48	98.0
CHW Ethnicity (n = 49)		
Hispanic/Latino Origin	13	26.5
Not Hispanic/Latino Origin	35	71.4
Prefer Not to Answer	1	2.0
Predominant Community Ethnicity (n = 49)		
Hispanic/Latino	14	28.6
Not Hispanic/Latino	35	71.4
CHW Race (n = 49)		
African American/Black	2	4.1
White	35	71.4
Asian	1	2.0
Native American/American Indian	2	4.1
Some Other Race	6	12.2
Prefer Not to Answer	3	6.1
Predominant Community Race (n = 49)		
African American/Black	2	4.1
White	36	73.5
Asian/Pacific Islander	1	2.0
Native American/American Indian	2	4.1
Other	8	16.3
Language (n = 49)		
English	35	71.4
Other than English	14	28.6
Education (n = 49)		
High School Graduate	6	12.2
1-3 Years of College or Technical School	7	14.3
4 or more years of college (Graduate)	26	53.1
Master's degree	8	16.3
Prefer Not to Answer	2	4.1
Employment Status (n = 49)		
Full-Time	33	67.3
Part-Time	8	16.3
Retired	1	2.0
Unemployed	1	2.0
Volunteer	6	12.2

As indicated in Table 7, among the 49 CHW who provide maternal and child health (MCH) services, 98% of them are female. Less than 5% of them are African American. About two thirds of these CHW are employed full time.

Figure 3 presents the specific MCH services provided by CHW. Out of the 49 CHW who reported provision of MCH services, 27 facilitated access to mental health services, followed by 19 conducting home visits, 16 providing services related to maternal nutrition, and 14 providing services on essential newborn care.

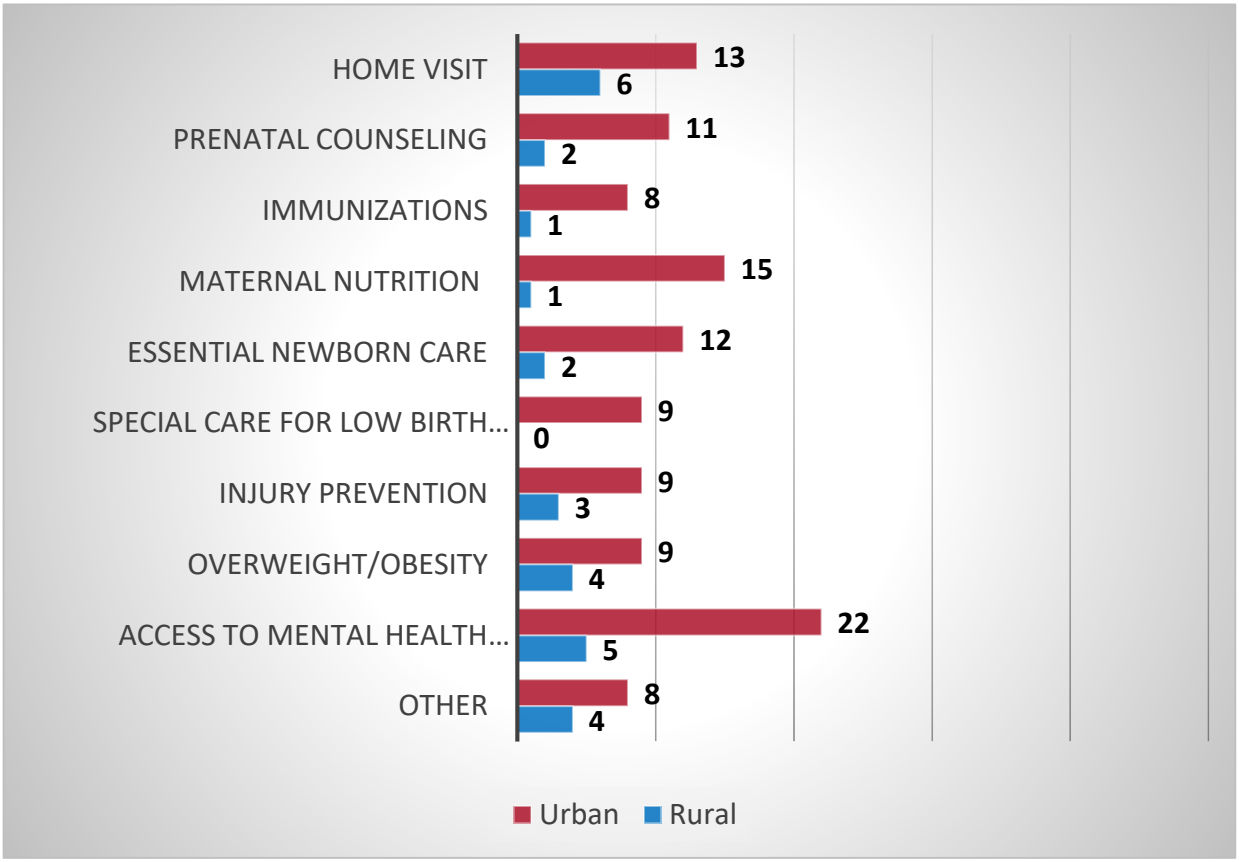
Figure 3: MCH Services Provided by CHW (n=49)



*Other: Assistance with services for disabled individuals, breastfeeding, car seat education, early interventions, systems navigation, nutrition assistance, Early Development Network, STI education/screening.

Figure 4 illustrates significant differences between services reported as provided in urban and rural locations. Among the 49 CHW who provide MCH services, eleven (22%) work in rural areas. Numerous MCH services are underrepresented in rural areas. For example, no CHW provide special care for low birth weight/premature infants, only one CHW provides immunization and maternal nutrition outreach, and 2 CHW provide prenatal and newborn support services.

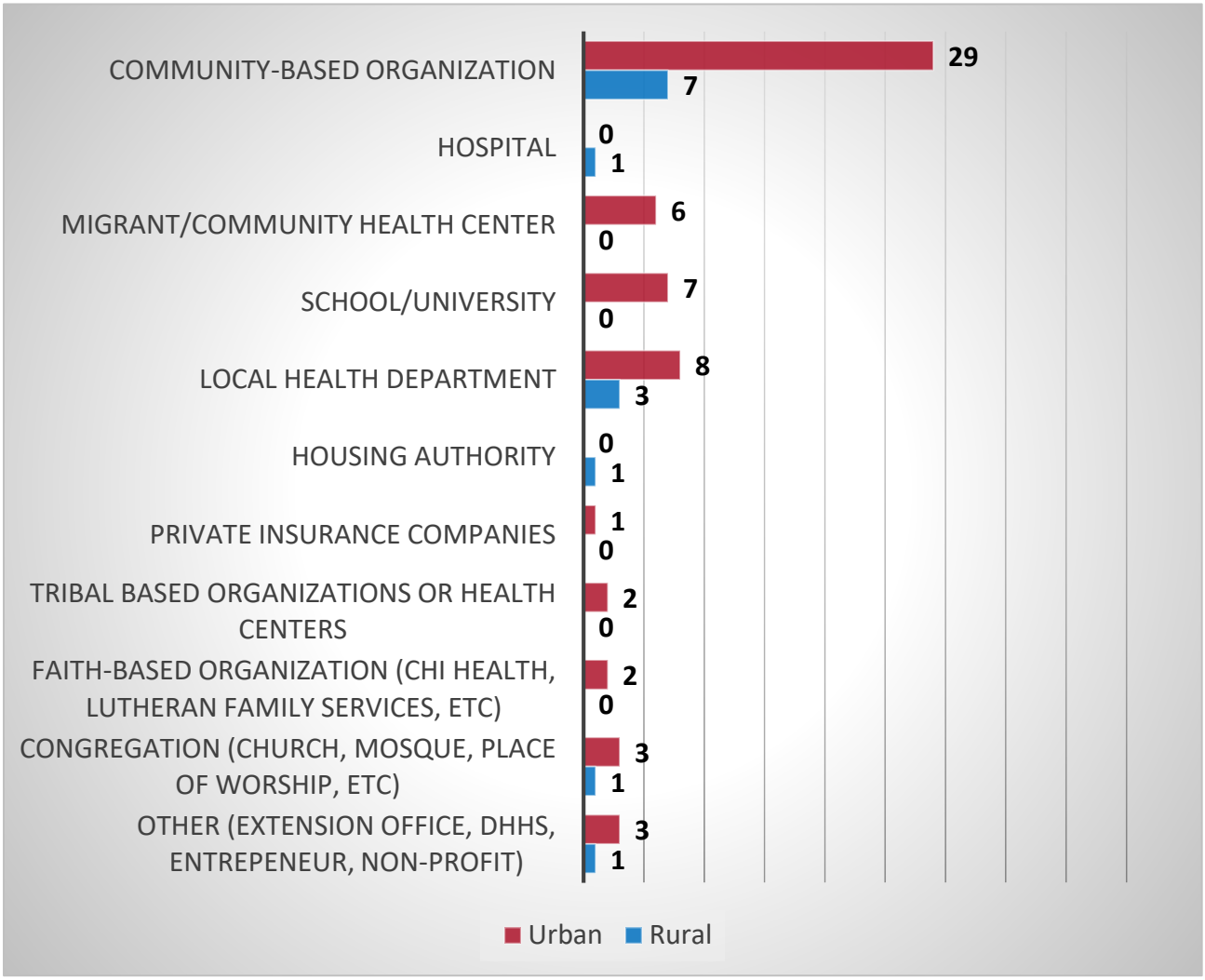
Figure 4: Urban/Rural Breakdown of MCH Services Provided by CHW (n=49)



*Other: Assistance with services for disabled individuals, breastfeeding, car seat education, early interventions, systems navigation, nutrition assistance, Early Development Network, STI education/screening.

The majority of MCH services reported by CHW were provided through Community-Based Organizations (Figure 5). From CHW responses, it appears rural schools, health centers, tribal organizations, and faith organizations might be underutilizing CHW. Efforts are needed to further examine the use of CHW in these various types of organizations.

Figure 5: Organizational Setting of CHW offering MCH Services (n=49)



CONCLUSIONS

The qualitative feedback from CHW participating in the focus group discussions and the quantitative data based on the online survey of CHW in Nebraska have revealed several important findings regarding the role of CHW in Maternal and Child Health. CHW identified several health issues threatening the wellbeing of women and children including the high prevalence of certain chronic diseases (e.g., diabetes and obesity), mental health needs, domestic violence, unhealthy dietary behavior, and lack of nutritional knowledge. The CHW also reported several barriers to promoting maternal and child health including some clients being denied or otherwise without health insurance or assistance due to immigration status, culture, transportation, poverty, limited training, and language issues.

In response to these challenges, participating CHW provide important services on interpretation, health education, patient navigation, and other health services to women and children in Nebraska. The CHW also recommended future steps including having more training on different health issues (e.g., mental health), providing culturally relevant health education, offering more healthy options in food security programs, limiting screening time for children, and making use of information technology to better connect with and serve clients.

The findings from the online CHW survey confirm some of the reported concerns by CHW in the focus group discussions and further point to additional service gaps. Out of the 121 CHW surveyed, over 40% currently provide MCH services and 20% received training in MCH services prior becoming a CHW. Among CHW who provide MCH services, less than 5% are African American and about one third do not have full-time employment. Future program efforts in developing the CHW workforce need to focus on recruiting and diversifying the CHW workforce, including recruiting CHW from racial and ethnic minority groups, as well as refugee populations. Future research on the types of organizations and settings where CHW are effective may be indicated.

REFERENCES

American Academy of Pediatrics. (2012). Breastfeeding and the Use of Human Milk. *Pediatrics, 129*(3): e827-e841. https://doi.org/10.1542/peds.2011-3552

American Public Health Association (APHA). (2014). Support for community health workers to increase health access and to reduce health inequities.http://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/09/14/19/support-for-community-health-workers-to-increase-health-access-and-to-reduce-health-inequities. (Accessed August 28, 2021).

Berman, E. A. (2017). An exploratory sequential mixed methods approach to understanding researchers' data management practices at UVM: Integrated findings to develop research data services.

Boldt, A., Nguyen, M., King, S., & Breitenstein, S.M. (2021). Community Health Workers: Connecting Communities and Supporting School Nurses. *NASN Sch Nurse, 36*(2):99-103. doi: 10.1177/1942602X20976545

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101.

Davey, J. W., Gugiu, P. C., & Coryn, C. L. (2010). Quantitative methods for estimating the reliability of qualitative data. Journal of MultiDisciplinary Evaluation, 6(13), 140-162.

Findley, S.E., Sanchez, M., Mejia, M., Ferreira, R., Pena, O., Matos, S., Stockwell, M.S., & Irigoyen, M. (2009). Effective strategies for integrating immunization promotion into community programs. *Health Promotion Practice, 10,* (2 Suppl):128S-137S. doi: 10.1177/1524839909331544

Furman, L.M., & Dickinson, C. (2013). Community Health Workers: collaborating to support breastfeeding among high-risk inner-city mothers. *Breastfeeding Medicine, 8*(1):73-8. doi: 10.1089/bfm.2012.0027

Gilmore, B., & McAuliffe, E. (2013). Effectiveness of Community Health Workers delivering preventive interventions for maternal and child health in low- and middle-income countries: a systematic review. *BMC Public Health, 13,* 847. https://doi.org/10.1186/1471-2458-13-847

Lewin, S., Munabi-Babigumira, S., Glenton, C., Daniels, K., Bosch-Capblanch, X., van Wyk, B.E., Odgaard-Jensen, J., Johansen, M., Aja, G.N., Zwarenstein, M., & Scheel, B.I. (2010). Lay health workers in primary and community health care for maternal and child health and the management of infectious diseases. *Cochrane Database of Systematic Reviews*. https://doi.org/10.1002/14651858.CD004015.pub3

Moniz, M.H., Fendrick, A.M., Kolenic, G.E., Tilea, A., Admon, L.K., & Dalton, V.K. (2020). Out-Of-Pocket Spending For Maternity Care Among Women With Employer-Based Insurance, 2008–15. *Health Affairs, 39*(1). https://doi.org/10.1377/hlthaff.2019.00296

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

O'Brien, B. C., Harris, I. B., Beckman, T. J., Reed, D. A., & Cook, D. A. (2014). Standards for reporting qualitative research: a synthesis of recommendations. *Academic Medicine*, *89*(9), 1245-1251.

Perry, H.B., Zulliger, R., & Rogers, M.M. (2014). Community health workers in low-, middle-, and high-income countries: an overview of their history, recent evolution, and current effectiveness. *Annual Review of Public Health, 35*:399-421. doi: 10.1146/annurev-publhealth-032013-182354

Smith, M.V., & Kruse-Austin, A. (2015). A gender-informed model to train Community Health Workers in maternal mental health. *Evaluation and Program Planning, 51*: 59-62, https://doi.org/10.1016/j.evalprogplan.2014.12.008

Stacciarini, J.R., Rosa, A., Ortiz, M., Munari, D.B., Uicab, G., & Balam, M. (2012). *Promotoras* in Mental Health: A Review of English, Spanish, and Portuguese Literature. *Family & Community Health, 35*(2): 92-102. doi: 10.1097/FCH.0b013e3182464f65

Su, D., Toure D., Ern, J., Vinton, V., Ouattara, B., and Crum, A. (2020) "Strengthening the Community Health Worker Workforce to Improve Maternal and Child Health in Nebraska: A State-Wide Assessment of Needs, Barriers, and Assets." Nebraska Department of Health and Human Services, Division of Public Health. https://dhhs.ne.gov/MCAH/CHW-Workforce-Assessment-Report.pdf

Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & health sciences*, *15*(3), 398-405.

APPENDIX A – COMMUNITY HEALTH WORKERS FOCUS GROUP QUESTIONS (Session 1)

1. Please take two minutes to think about your experience working as a community health worker in your community. Is anyone happy to share what she/he is the proudest about her/his work?
2. What do you like about your job as a Community health Worker? What do you dislike about your job as a Community health Worker?
3. What are the key tasks you are prepared to perform as a Community Health Worker?
    a) What is the setting you work in as a Community Health Worker?
    b) What is a common term you use to describe your role as a Community Health Worker?
4. What resources do you wish you had available when you try to promote health in your community?
    a) Do you think poverty and language barriers are common obstacles that prevent people from getting and staying healthy?
    b) What are the biggest challenges as a Community Health Worker?
5. What do you need to do your best work?
    a) What resources (money, people, other) do you need to do your work very well?
    b) What are some changes that would help you do your job as community health worker better?
6. Based on your experience and observation, what are the priority health issues of the populations you serve?
    a) What are some important health problems in your community?
    b) What are the health issues that are the focus of your work?
7. Based on your observation, what are some of the most important health needs of women and children in your community?
    a) What issues to you find with infant mortality? Access to health insurance? Health of women? STIs and sexual health?
    b) What social, cultural, environmental factors influence women and their kids' health?
    c) What is the predominant racial/ethnic background of the community you work in?/Are you prepared to work in that community?
    d) What Maternal, Newborn, and Child health services do you personally provide?
8. What can we do to better address the health needs of women and children?
9. How difficult is it to address unmet health needs in your community?
    a) What are some of the challenges to meet your community health needs?

APPENDIX B – COMMUNITY HEALTH WORKERS FOCUS GROUP QUESTIONS (Session 2)

1. In what way are you part of a team?
2. What are the advantages of having CHW on teams?
3. What is your experience with electronic documentation tools or the use of the system?
4. To what extent do you help people navigate health insurance?
5. What are your relationships with other health professionals?
6. What would you like your relationships with other health professionals to be?
7. Do you have a supervisor? What makes a good supervisor for a Community Health Worker?
8. How is your work supervised?
9. How were you trained? What did you learn later that you wish was part of your training?
    a) How long was your training?
    b) What topics were covered in your training? Were you trained in the core competencies?
10. How should Community Health Workers be trained?
11. What would you like the future to be like for Community Health Workers in health care settings?
12. What are the key advantages of having CHW on teams?

Appendix C. Online CHW Survey Questions

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 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, how many total years have you been living in the U.S.? |___|___| Years |___|___| months

7. Do you speak another language other than English at home?
   1☐ Yes, please specify:……
   2☐ No (skip to 8)
   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

9. What is the highest grade or year of school you have completed?

1☐ Never attended school
2☐ Grade 1-8 (Elementary)
3☐ Grade 9-12 (Some High School)
4☐ High School Graduate
5☐ 1-3 years of college or technical school
6☐ 4 or more years of college (Graduate)
7☐ Master's degree
8☐ Professional degree (MD, JD, PhD, etc.)
9☐ Prefer not to answer

10. What is your current employment status as a community health worker?

1☐ Full-time
2☐ Part-time
3☐ Retired
4☐ Unemployed
5☐ Volunteer
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☐ Community Health Worker
2☐ Patient Navigator
3☐ Community Health Advisor
4☐ Navigator Promotoras
5☐ Outreach Worker
6☐ Peer Health Advisor
7☐ Community Health Representative
8☐ Peer Counselor
9☐ Promotora/Promotores de Salud
10☐ Lay Health Ambassador
11☐ Peer Leader
12☐ Community Health Advocate
13☐ Other (please specify): ……

2. How long have you been working as a community health worker?

|__|__| years |__|__| months

3. How many hours do you work or volunteer per week as a community health worker?

1☐ Less than 10 hours
2☐ 10-30 hours
3☐ 30 – 40 hours
4☐ More than 40 hours

4. How long have you worked at your current organization?

|__|__| years |__|__| months

5. What was your work experience before becoming a community health worker?

1☐ Doctor
2☐ Nurse
3☐ Midwife
4☐ Other health professional (e.g. social worker, CNA, medical assistant)
5☐ Other (please specify): ……

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

1☐ Coordinating care
2☐ Health coaching
3☐ Social support
4☐ Linking to resources
5☐ Medication compliance
6☐ Health education
7☐ Health screenings
8☐ Translation/Interpretation
9☐ Data collection
10☐ Advocacy
11☐ Cultural awareness
12☐ Community events (e.g. health fairs or health classes)
13☐ Other (please specify):……

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

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

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

1☐ Yes, please specify (Check all that apply):

1☐ Home Visit
2☐ Prenatal Counseling
3☐ Immunizations
3☐ Maternal Nutrition (e.g. gestational diabetes)
5☐ Essential Newborn Care
6☐ Special Care for Low Birth Weight/Premature Infant
7☐ Injury prevention
8 ☐ Overweight/Obesity
9☐ Access to mental health services
10☐ Other (please specify):……..

2☐ No

9. Did you receive any training before becoming a community health worker?

1☐ Yes (Please continue on to question 10a & 10b)

2☐ No (skip to 10)

9a. If yes, what was the year you were trained and how long was your training? Please provide the agency and training title if you can remember.

Year _____

Duration (how many hours or days?) |___|___| days |___|___| hours

Agency _____

Name of training_____

9b. 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 (please specify): ……

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

1☐ Yes, please describe:……

2☐ No

11. 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)……

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

12a. What is the predominant ethnic background of the community you work in?

1☐ Hispanic/Latino/Spanish
2☐ Non-Hispanic

12b. What is the predominant racial background of the community you work in?

1☐ African-American/Black
2☐ Caucasian/White
3☐ Asian/Pacific Islander
4☐ Native American/American Indian
5☐ Other (please specify): ……

12c. Please list the Nebraska counties that you practice as a CHW, and the hours per week you generally work in each county.

Primary County:…….. Hours per week:……
*Primary County is the county you spend the majority of your time.

Secondary County:…….Hours per week:……

In the space below, list any other county that you work as a CHW and time distribution you spend in each of the counties.

……

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

14. Do you have opportunities for promotion or professional advancement through the CHW program?
1☐ Yes, please describe them: ……
2☐ No

15. 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: ……

16. 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): ……

17. How is your performance monitored and evaluated?
1☐ Monthly reviews
2☐ Annual reviews
3☐ Random skill evaluation
4☐ Continuing education sessions
5☐ No evaluation or monitoring
6☐ Other (please specify): ……

18. Do you expect to retire from your CHW position?
1☐ In the next 5 years
2☐ In the next 6-10 years
3☐ Not planning to retire in the near future

19. How did you hear about this survey?
1☐ Health Department
2☐ News Media (e.g. news, radio, newspaper)
3☐ Social Media (e.g. Facebook, Twitter)
4☐ Hospital/Clinics
5☐ Another Community Health Worker
6☐ Employer (please specify): ……
7☐ Other (please specify): ……

20. Did you attend one of the Community Health Worker Gatherings recently hosted by selected health departments in Nebraska?

1☐ Yes. Please specify (check all that apply):
1☐ South Heartland District Public Health Department, Hastings, April 9th
2☐ Elkhorn Logan Valley Public Health Department, Norfolk, April 23rd
3☐ Two Rivers Public Health Department, Kearney, April 25th
4☐ Public Health Solutions, Crete, April 30th
5☐ Douglas County Health Department, Omaha, May 10th
6☐ Public Health Solutions, Crete, July 12th
7☐ Elkhorn Logan Valley Public Health Department, Norfolk, July 17th
8☐ South Heartland District Public Health Department, Hastings, July 22nd
9☐ Douglas County Health Department, Omaha, July 26th
10☐ Two Rivers Public Health Department, Kearney, July 30th
2☐ No

21. Do you think Nebraska should have a statewide certification program for community health workers as some other states do (e.g. Arizona, Florida, Indiana, Massachusetts, New Mexico, Ohio, Oregon, Rhode Island, and Texas)?

1☐ Yes

2☐ No

21a. Why do you believe Nebraska should or should not have a certification program?