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ORIGINAL PAPER

Community Health Worker Employer Survey: Perspectives on CHW Workforce Development in the Midwest

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Abstract

A statewide Community Health Worker Employer Survey was administered to various clinical, community, and faith-based organizations (n = 240) across a range of rural and urban settings in the Midwest. At least 80% of participants agreed or strongly agreed that items characterized as supervisory support were present in their work environment. Thirty-six percent of respondents currently employed CHWs, over half (51%) of survey respondents reported seeing the need to hire/work with more CHWs, and 44% saw the need for CHWs increasing in the future. Regarding CHW support, a majority of respondents indicated networking opportunities (63%), paid time for networking (80%), adequate time for supervision (75%), orientation training (78%), mandatory training (78%), ongoing training (79%), and paid time for training (82%). Open-ended responses to the question "In your organization, what needs could CHWs meet?" resulted in the largest number of respondents reporting mental health issues as a priority, followed by connecting people with services or resources, educating the public on preventive health, family support, and home care/visitations. Our findings suggest that respondents, who largely have supervisory or managerial roles, view workplace environments in Nebraska favorably, despite the fact that nearly two-thirds of respondents typically work well over 40 h per week. In addition, CHWs could help address mental and physical health needs in a variety of community and clinical settings through primary and secondary prevention activities, such as provision of health screenings, health and nutrition education, connecting people to resources and empowering community members through these activities and more.

Keywords Community health worker (CHW) · Workforce development · Integration · Employer perspectives · Prevention

Introduction

Although use of community health workers (CHW) in the U.S. has gained momentum as a means to addressing chronic disease, little is known about the specifics around training, integration and organizational support of a growing CHW workforce. A CHW is a frontline public health worker involved in community-level activities and interventions to promote health, and bridges the gap between populations and professionals in the field of health and human services. A growing consensus has called for greater roles for CHWs in improving access to care, controlling costs, and helping to eliminate persistent health inequities among vulnerable population [3]. However, Arvey and Fernandez [2] argue that the current general recommendations for CHW policy and practice are based on insufficient evidence and require more research to identify core elements of effective CHW programs. For example, U.S. states vary in geographic density (i.e., rural, suburban, urban), ethnic diversity, state funding for health care services, and economic needs, and scholars have called for research to move beyond a one-size-fits-all approach [3]. In essence, the process of growing and legitimizing (and thus standardizing) the CHW workforce within their local environments can be a threat to the very nature of what makes a CHW effective. Specifically, there is a need for research to elucidate the diverse factors that can influence the effectiveness of CHWs, including the various settings (i.e. organizations, communities, states) where they

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are increasingly expected to work in, which in turn may dictate a variety of employer types responsible for overseeing their training needs and support.

Increased focus on employer perceptions and awareness of CHW contributions both nationally and regionally is necessary for a variety of reasons: (1) by 2020, the U.S. public health workforce is estimated to shrink by 38% [23]; (2) with the U.S. Hispanic/Latino population expected to represent 1 in 5 Nebraskans by 2040, a more diverse workforce is needed to serve the health needs of our country (especially Hispanic/Latino staff given their underrepresentation in the existing workforce) (7%) [23]; and (3) more than one-third of the CHW workforce is estimated to be Hispanic [6]. As a result of these calls for more research about employer perceptions of CHW needs in their unique work environments, the current study surveyed employers in Nebraska and asked: what is the current status of employers regarding awareness, perceived need, and recruitment factors for supporting a sustainable CHW workforce?

There is limited research that has examined conditions that facilitate or impede CHW effectiveness. Extant literature focuses on CHW workforce development at a systems-level, such as collaborating with partners to implement comprehensive CHW policies in workforce development, occupational regulation, and financing for sustainable employment or partner with nonprofit agencies and academic institutions to develop training and certification standards [4, 21]. A recent qualitative study examined the qualities and contexts in which CHW programs are most likely to be effective in providing insight on conditions that help drive CHW integration into existing healthcare systems [18]. Specifically, four themes were identified to improve CHW effectiveness, including organizational capacity, support for CHWs, clarity about healthcare roles for all team members, and clinical workflow. Although results suggest practical steps that healthcare organizations can take to help CHWs integrate better in clinical environments, little examination was given to other community settings into which CHWs are increasingly being incorporated (e.g., schools, churches, daycare).

States vary in policy priorities, funding for health care services, and the health needs of their population; however, Massachusetts and Minnesota provide several guiding principles to follow in development of policy initiatives for CHWs. These principles include: (1) promote and support participation and leadership of CHWs in the development of policies that affect them; (2) minimize barriers to training and employment of the workers related to language, education level, citizenship status, and life experience; (3) allow and encourage providers to contract with community-based organizations for CHWs' services; and (4) incorporate the full range of CHW roles and competencies in the positions for these workers [21]. The latter would allow CHWs the flexibility to perform all the roles they are known for, including outreach and education, advocacy, and health system navigation. In addition, state-level policies regarding CHWs should be developed through evidence-based approaches to fully leverage the knowledge generated by research and evaluation efforts.

Though these examples offer guidance to the other states that do not have a comprehensive CHW program, including Nebraska, the challenge is determining *how* exactly these policy recommendations should be implemented, and this is where specific context and nuance need to be considered and studied, such as place of employment, geographic location (i.e., rural, suburban,urban), and amount of organizational and community resources. For example, the California Health Workforce Alliance conducted a statewide assessment that identified several obstacles to bringing CHWs into the mainstream of U.S. healthcare, including limited professional recognition; lack of data to make the business case; sustainability; and lack of knowledge of best practices [19]. Adding to this complexity is the number of national trends in public health such as implementation of the Patient Protection and Affordable Care Act (ACA), Health in All Policies, evidence-based public health practice, and primary care and public health integration. Interestingly, many of these trends coincide with some of the difficulties of defining and developing the CHW workforce. For example, regarding the former trend, the Affordable Care Act includes provisions allowing CHWs to work in preventive care capacities, but few states have explored these options; and regarding the latter trend, the roles and competencies required of CHWs may differ in public health capacities compared to those in primary care adding to the confusion of whether or not to require a certification process to be formally recognized as a CHW.

One way to better inform CHW workforce development is to have a better understanding of perspectives from the people who would employ or supervise them, the existing health workforce (e.g., supervisors in a community-based organization, nurses in a health clinic or hospital, program managers in a local health department, etc.) across healthcare and public health systems. To date little empirical data exists on such perspectives of health workforce issues in the U.S. For decades, public health practitioners, policy makers, and researchers have called for more data on individual worker's perceptions about workplace environment, job satisfaction, and training needs [23]. Findings from the first U.S. Public Health Workforce Interests and Needs Survey, representing over 10,000 state health agency employees across the U.S., indicate that although, overall job satisfaction is high, an anticipated turnover of at least 38% is expected by 2020. In addition, a nationwide survey sought the perspectives of rural hospital CEOs documenting similar patterns of physician and health profession shortages as well as recruitment challenges [13]. Thus, there is a dire need to recruit and

invest in a diverse workforce through: (1) systems thinking and social determinants of health, (2) evidence-based public health practice, and (3) collaboration and engagement with diverse communities.

In Nebraska, the process of collaborating with partners is underway and in the early stages of identifying key CHW stakeholders to help prioritize and inform steps to legitimizing a sustainable CHW workforce. The Nebraska legislature has been approached and is open to the idea of supporting a CHW workforce (personal communication, Nebraska CHW Stakeholder meeting, July 2017); however, to be effective, there needs to be a consensus about roles, competencies, and whether or not certification will be required of CHWs. One concern that has been openly recognized is: As a systems-level approach moves forward, input is lacking from a grassroots level, including CHWs and those who supervise or work closely with CHWs.

Overall, there is scant research on employer perspectives and understanding related to CHW integration and support for success. Adding to that dearth of knowledge is the variety of settings, contexts and populations to be considered for successful CHW integration. The objective of this study is to better depict existing employer perspectives and landscape for CHWs and inform future CHW workforce development in Nebraska in hopes that these results will be helpful to: (1) other states trying to implement a comprehensive CHW state policy; and (2) federal public health policy makers trying to understand and incorporate the totality and diversity of health needs and solutions across various states.

Methods

Questionnaire Design

The Community Health Worker Employer Survey was largely a compiled adaptation of two existing surveys. The survey questions related to workplace environment and priorities were adapted from the Public Health Workforce Interests and Needs Survey (PH WINS), the first of its kind to assess the public health workforce in the United States [12]. Survey questions related to employers' perceived need and support for CHW were adapted from Douglas County Health Department (DCHD) CHW Survey in Nebraska. The Bureau of Sociological Research (BOSR) at the University of Nebraska-Lincoln (UNL) provided survey expertise including refinement and reordering of questions as well as formatting the survey.

Sampling Design

The research team compiled a sample list of contacts from 500 potential CHW employers. The list of CHW employers was designed to represent existing CHW employers as well as potential future employers in rural and urban settings. In Nebraska (NE) a noteworthy portion of the CHW workforce development has been connected with the state Department of Health and Human Services (DHHS), specifically the Division of Public Health. Hence, a starting point in compiling a list of employers was to begin with a list of local health departments on the DHHS Division of Public Health website. In Nebraska there are five divisions in DHHS. These divisions include Public Health, Medicaid & Long-term Care, Developmental Disabilities, Children & Family Health, and Behavioral Health. Based on lessons learned from DCHD, a concerted effort was made to identify the most appropriate individual to fill out the survey for each employer type. The research team spent several months combing through websites linked between NE DHHS Divisions' websites and actual service providers at the local level to identify an appropriate person who either managed or supervised CHWs or would be in a position to supervise a CHW. With the exception of Children & Family Services, all divisions are represented in the CHW Employer Survey. The PI (V.C.) also reached out to community partners via email and phone calls to help identify appropriate CHW employers and contact persons. This included identification of Minority Health Initiative grantees for the 2015–2017 cycle, which consisted largely of local health department or healthcare awardees. There was some overlap in employers identified via network connections and those identified through the Internet.

In addition, other potential employers cited in the literature as strategic placement opportunities for CHWs were considered in this study, including churches, schools and UNL's Cooperative Extension. For churches, a list of 70 statewide congregations was provided by CHI Health, which is part of Catholic Health Initiatives (CHI), a national nonprofit health system focused on a value-based care model. An additional 30 congregations from across the state were added to the list by the research team for a total of 100 congregations. A list of over 900 schools and principals was accessed online through Nebraska's Department of Education website. From this list, a sample of 155 principals were randomly selected and purposely oversampled in anticipation of a lower response rate. Finally, UNL's Cooperative Extension was included as an exploratory setting for CHW work. Supervisors or Unit leaders overseeing Food, Nutrition & Health-related or 4-H Youth Development Programs were targeted for survey mailings.

Data Collection and Analysis

The Bureau of Sociological Research (BOSR) at UNL handled survey mailings as well as data collection, entry, cleaning and preliminary analysis. Data were collected by BOSR

between March 14, 2017 and May 18, 2017. The initial survey packet was mailed out March 14, 2017, followed up with a reminder postcard one week later, and replacement packets were mailed out three weeks later to non-responders only. The initial survey packet contained a cover letter, the survey, a $2 cash incentive and a postage-paid business reply envelope. Professional data-entry staff completed data entry in a two-step process. Supervisory staff provided support to help resolve discrepancies or handle illegible responses. The data were recorded and stored on a secure server. Descriptive statistics were analyzed using IBM Statistical Package for Social Sciences (SPSS) software, version 22.0. Open-ended data were edited to remove identifying information and summarized for the question "In your organization, what need could CHWs help meet?".

Results

A total of 240 employers returned the survey with an overall response rate of 48.4%. From the original sample of 500 mailings, four were deemed ineligible, 29 were returned as undeliverable, and three were refusals. Although 240 surveys were returned, some respondents did not answer every question. Therefore, the number of respondents (denoted by 'n') will vary based on how many participants answered each question. As a reminder, the current study's findings explore the organizational climate for current and potential CHW employment as a way to assess how best to integrate CHWs into communities to help meet the population's current health needs. Thus, not all employers surveyed currently employ CHWs.

Employer Characteristics

Table 1 provides an overview of employer characteristics represented in the survey findings. Well over half of respondents had supervisory or managerial roles (58%). Of the nine organization types, schools (27%), community-based organizations (20.3%), and local health departments (16%) represented the largest groups, followed by congregations (13.5%) and UNL Extension (13.1%). Developmental disabilities service (4.4%), healthcare settings (2.6%), faith-based organizations (1.7%), and other organizations (2.5%) were represented to lesser degree. 'Other' category consisted of providers related to behavioral health or senior services. Nearly two-thirds of survey respondents (63.4%) work above the typical 40-h workweek (45–54 h, 36.6%; 55 or more hours, 26.8%). A majority of respondents were female (60.7%), white (91.1%), and highly educated (graduate or professional degree, 67.7%). Among all participants, 36% currently employed CHWs.

Table 1 Employer characteristics

	n	%
Organization type	237	
Local health department (LHD)	38	16.0
Developmental/intellectual disabilities services	10	4.4
Healthcare settings	6	2.6
Community-based organizations	48	20.3
School	64	27.0
Congregation	32	13.5
Faith-based organization	4	1.7
UNL extension	31	13.1
Other	6	2.5
Supervisory status	219	
Non-supervisor	20	9.1
Team leader	19	8.7
Supervisor	91	41.6
Manager	36	16.4
Executive	53	24.2
Average hours worked per week	224	
Less than 35 h	10	4.5
35–44 h	72	32.1
45–54 h	82	36.6
55 or more hours	60	26.8
Gender	234	
Female	142	60.7
Male	92	39.3
Ethnicity	234	
Hispanic/Latino	5	2.1
Race	237	
White	216	91.1
Black	13	5.5
Asian	1	0.4
American Indian or Alaska native	5	2.1
Native Hawaiian or Pacific Islander	0	0.0
Other	2	0.8
Educational level	235	
High school diploma	6	2.6
Some college	12	5.1
Technical/associate/2 year degree	9	3.8
Bachelor's degree	49	20.9
Graduate or professional degree	159	67.7

Organization and Workplace Environment

At least 80% of participants *agreed* or *strongly agreed* that items characterized as supervisory support were present in their work environment. These items are shown in Table 2 and include: "my supervisor/team leader treats me with respect" (85%), "my supervisor/team leader provides me with opportunities to demonstrate leadership skills" (82%), "my supervisor supports my need to balance work

Table 2 Organization and workplace environment

Survey Item	n	Strongly agree (%)	Agree (%)	Neither agree nor disagree (%)	Disagree (%)	Strongly disagree (%)
I recommend my organization as a good place to work	231	96 (42%)	103 (45%)	21 (9%)	3 (1%)	8 (3%)
My co-workers & I have a good working relationship	232	88 (38%)	126 (54%)	6 (3%)	1 (0.4%)	11 (5%)
My supervisor/team leader treats me with respect	231	100 (43%)	96 (42%)	19 (8%)	6 (3%)	10 (4%)
My supervisor/team leader provides me with opportunities to demonstrate my leadership skills	231	76 (33%)	114 (49%)	22 (10%)	9 (4%)	10 (4%)
My workload is reasonable	229	25 (11%)	120 (52%)	36 (16%)	31 (14%)	17 (7%)
My supervisor supports my need to balance work and family issues	230	89 (39%)	95 (41%)	25 (11%)	10 (4%)	11 (5%)
Employees learn from one another as they do their work	228	60 (26%)	144 (63%)	12 (5%)	4 (2%)	8 (4%)
Supervisors/team leaders in my work unit support employee development	232	65 (28%)	132 (57%)	22 (9%)	5 (2%)	8 (3%)
Supervisors/team leaders work well with employees of different backgrounds	231	43 (19%)	149 (65%)	23 (10%)	8 (3%)	8 (3%)
Communication between senior leadership and employees is good in my organization	231	33 (14%)	117 (51%)	40 (17%)	28 (12%)	13 (6%)
Creativity and innovation are rewarded	231	34 (15%)	125 (54%)	46 (20%)	17 (7%)	9 (4%)
	n	Very satisfied (%)	Somewhat satisfied (%)	Neutral (%)	Somewhat dissatisfied (%)	Very dissatisfied (%)
Considering everything, how satisfied or dissatisfied are you with						
Your job?	240	150 (63%)	79 (33%)	8 (3%)	2 (1%)	1 (0.4%)
Your organization?	239	121 (51%)	92 (38%)	12 (5%)	13 (5%)	1 (0.4%)
Your pay?	236	92 (39%)	92 (39%)	25 (11%)	22 (9%)	5 (2%)
Your health benefits?	238	116 (49%)	72 (30%)	23 (10%)	21 (9%)	6 (3%)
Your leave benefits?	238	159 (67%)	58 (24%)	10 (4%)	8 (3%)	3 (1%)
Your job security?	238	123 (52%)	76 (32%)	30 (13%)	7 (3%)	2 (1%)

& family issues" (80%), "supervisors/team leaders in their work unit support employee development" (85%), and "supervisors/team leaders work well with employees of different backgrounds" (84%). There was less agreement with items related to organizational support than supervisory support, with the exception of one item: "I recommend my organization as a good place to work" (87%). Namely, less agreement was reported for "my workload is reasonable" (63%); "communication between senior leadership and employees is good in my organization" (65%); and "creativity and innovation are rewarded" (69%).

Other workplace items with high levels of agreement (at least 80% agreed or strongly agreed) include: "employees learn from one another as they do their work" (89%); "my co-workers and I have a good working relationship" (92%).

More than three-quarters of respondents reported being somewhat satisfied or very satisfied with their jobs (96%); their organization (89%); their pay (78%); their health benefits (79%); their leave benefits (91%); and their job security (84%).

Importance of Items in Daily Work

Out of ten items related to daily work, an overwhelming majority (90% or more) of respondents rated eight out of the ten items very important or somewhat important to their job effectiveness (Table 3). "Communicating ideas and information in a way that different audiences can understand" (98%); "communicating in a way that persuades others to act" (99%); and "gathering reliable information to answer

Table 3 Importance of items in daily work

Survey Item	n	Very important (%)	Somewhat important (%)	Somewhat unimportant (%)	Not Important (%)
Communicating ideas and information in a way that different audiences can understand	230	196 (85%)	30 (13%)	3 (1%)	1 (0.4%)
Communicating in a way that persuades others to act	231	171 (74%)	57 (25%)	1 (0.4%)	2 (1%)
Collaborating with diverse communities to identify and solve health problems	225	93 (41%)	79 (35%)	32 (14%)	21 (9%)
Addressing the needs of diverse populations in a culturally sensitive way	229	138 (60%)	70 (31%)	17 (7%)	4 (2%)
Assessing the broad array of factors that influence specific public health problems	225	70 (31%)	85 (38%)	45 (20%)	25 (11%)
Engaging staff within your organization to collaborate on projects	229	163 (71%)	59 (26%)	6 (3%)	1 (0.4%)
Engaging partners outside your organization to collaborate on projects	227	121 (53%)	83 (37%)	20 (9%)	3 (1%)
Managing change in response to dynamic, evolving circumstances	229	150 (66%)	73 (32%)	6 (3%)	0 (0%)
Anticipating the changes in your environment that may influence your work	229	148 (65%)	72 (31%)	8 (3%)	1 (0.4%)
Gathering reliable information to answer questions	230	183 (80%)	43 (19%)	4 (2%)	0 (0%)

questions" (99%) were ranked the most important, followed closely by "managing change in response to dynamic, evolving circumstances" (98%); "engaging staff within your organization to collaborate on projects" (97%); and "anticipating the changes in your environment that may influence your work" (96%). The lowest ranked items included "collaborating with diverse communities to identify and solve health problems" and "assessing the broad array of factors that influence specific public health problems" where 76 and 69%, respectively, of respondents ranked this item very important or somewhat important.

Perceived Need and Support for CHW

Perceived need and support for CHW is illustrated in Table 4. Thirty-six percent of respondents reported that their organization currently employed CHWs, but 9% were unsure. Just over half (51%) of survey respondents reported

Table 4 Perceived need and support for CHW

Question	n	Yes (%)	No (%)	Not sure (%)
In your organization, do you see a need to hire/work with more CHWs?	238	121 (51%)	63 (26%)	54 (23%)
In your organization, do you see the need for CHWs increasing in the future?	237	104 (44%)	48 (20%)	85 (36%)
Does your organization currently employ CHWS?	235	85 (36%)	128 (54%)	22 (9%)
Please indicate funding sources available to CHWs in your organization				
Government funds	95	76 (80%)	19 (20%)	–
Private funds	81	32 (40%)	49 (60%)	–
Fee for service	83	28 (34%)	55 (66%)	–
General funds (agency operating budget)	89	67 (75%)	22 (25%)	–
Other	25	4 (16%)	21 (84%)	–
Do CHWs in your organization have opportunities to network with other CHWs?	100	63 (63%)	14 (14%)	23 (23%)
Are CHWs paid during networking time?	65	52 (80%)	13 (20%)	–
Do you believe the time you spend providing one-on-one supervision to CHWs is adequate?	60	45 (75%)	15 (25%)	–
Do CHWs in your organization receive training when they begin their job at your organization?	102	80 (78%)	12 (12%)	10 (10%)
Is CHW training mandatory?	85	66 (78%)	11 (13%)	8 (9%)
Is there ongoing training?	84	66 (79%)	10 (12%)	8 (10%)
Are CHWs at your organization paid during training?	83	68 (82%)	7 (8%)	8 (10%)

seeing the need to hire/work with more CHWs, while 23% indicated they were unsure. Similarly, 44% saw the need for CHWs increasing in the future, while 36% were unsure. For those who currently employed CHWs, a majority reported use of government funds (80%) and/or general operating funds (75%) to support CHW employment. A smaller group reported use of private funds (40%) and/or using fee for service (34%). Regarding CHW support, a majority of respondents indicated networking opportunities (63%), paid time for networking (80%), adequate time for supervision (75%), orientation training (78%), mandatory training (78%), ongoing training (79%), and paid time for training (82%). Open-ended responses to the question "In your organization, what needs could CHWs meet?" were provided by 165 respondents. The largest number of respondents reported mental health issues as a priority, followed by connecting communities/families/seniors with outside services or resources, educating the public on health lifestyle/health screening prevention, family support, and home care/visitations. Others mentioned themes related to addressing rural areas and needs associated with rural poverty, or meeting the needs of vulnerable groups including those with developmental disabilities, seniors, students, and minority populations.

Discussion

Our findings suggest that respondents, who largely have supervisory or managerial roles, view workplace environments in Nebraska favorably, despite the fact that nearly two-thirds of respondents typically work well over 40 h per week. Interestingly, though, our findings indicate only 21% of respondents *disagreed* or *strongly disagreed* that their workloads were reasonable. One explanation for such a discrepancy in reported overtime and workload expectation could be that respondents are generally satisfied with their jobs, despite the time demand. The percentage of respondents who indicated "very" or "somewhat" levels of satisfaction with job, organization and pay, was considerably higher in our sample compared to a nationally representative public health workforce sample, (96 vs. 79%; 89 vs. 65%; and 78 vs. 48%, respectively) [23].

Job satisfaction is a critical, understudied facet of workforce development, particularly in public health [9]. Supervisory support and organizational support were most strongly related to increased job satisfaction in a nationally representative public health workforce study [9]. In our study, there was more agreement on supervisory support items than items related to organizational support, suggesting perhaps supervisory support may weigh more heavily than organizational support for overall job satisfaction within this sample of diverse organizations and workplace settings. Alternatively, there may also be other aspects of organizational support (e.g. fairness, policies that promote favorable job conditions, regular and bidirectional communication, etc.) that were not measured and might explain why "I recommend my organization as a good place to work" had higher levels of agreement than other items related to organizational support.

Perhaps other aspects of job satisfaction are related to how individuals rank the importance of certain skills in daily work. For example, the top ranking items of importance in our employer sample involve an often-overlooked element of the human experience and quality of life, that is, the art and science of communication. Specifically, the three highest ranked items of importance for job effectiveness are arguably indicative of effective communication in the workplace. "Gathering reliable information to answer questions", "Communicating ideas and information in a way that different audiences can understand", and "Communicating in a way that persuades others to act", collectively suggest that this sample recognizes the importance of being well-informed and equipped to educate and guide others in a way that is inclusive and empowering. Without these fundamental communication skills, it would be a challenge to follow through on the remaining items of importance in daily work. In addition, other high ranking items such as "engaging staff within your organization to collaborate on projects", "managing change in response to dynamic, evolving circumstances", and "anticipating changes in your environment that may influence your work" suggest a spirit of collegiality and teamwork is highly valued, particularly considering this survey was disseminated during a time of great uncertainty and unpredictability with a newly elected president and administration in place.

Although only 36% of our respondents reported currently employing CHWs, larger proportions of respondents (51%) reported seeing the need to hire/work with more CHWs or seeing the need for CHWs increasing in the future (44%). With a growing awareness of who CHWs are and what they do, there also appears to be a growing need for CHWs to be integrated into a variety of workplace organizations. Although we did not assess how respondents learned about CHWs, it is worth noting that Nebraska has engaged considerable effort in helping raise awareness. For example, the state DHHS Public Health Division developed a three-part video series [15–17] aimed at CHWs, employers of CHWs, and the general public, for this very purpose. These tools have been disseminated among health care providers and healthcare extenders, and are even being used in higher education classrooms (by the authors, for example) to inform the next generation of health professionals about the role of CHWs. In addition, there is considerable interest and engagement of public health nurses serving as champions and policy leaders in support of a growing CHW workforce [10]. Still, a notable proportion of participants (23%) also

expressed uncertainty about the need to hire CHWs or the need for CHWs increasing in the future (36%). It is unclear whether this uncertainty is related to lack of awareness about what CHWs do, how CHW roles differ from other positions, or other factors, such as the political climate and legislation related to healthcare or immigration reform. The latter should be addressed in future studies because they can have considerable consequences on the availability of funding, support and innovation in utilization of CHWs.

One of the challenges of growing a CHW workforce relates to sustainable funding mechanisms where CHW positions are primarily supported through grants, which are time-limited and often not sustained [19]. Our sample of employer respondents reported a combination of funding sources, with a notable three-quarters of CHW employers utilizing agency operating budgets, presumably with some combination of either government funds, private funds, fee-for-service or other funding mechanisms. This is a promising trend suggesting Nebraska employers recognize the value of CHWs and are making an effort to secure and justify use of general funds for sustainable CHW employment in their organizations. Such findings are consistent with extant research, which confirms the variety of ways that CHWs are funded through organizations that employ them [14]. Interestingly, of the 21 interviewees in the Malcarney study, 16 acknowledged the importance of the Patient Protection and Affordable Care Act (ACA) for funding innovation in this area, while 18 cited the continued importance of public health dollars and philanthropic funding. This demonstrates the increasing need for CHW employers to keep a pulse on the political climate and engage in advocacy as the threat of chipping away or repealing the ACA continues to linger. The ACA was the first time that comprehensive health reform had been enacted into law, and considerable effort was involved to ensure that expanding prevention and wellness services and the need for health equity provisions, such as data collection, workforce diversity and CHW, stayed in the ACA when it finally passed in 2010 [5, p. 142].

Although research on CHW integration is limited, our findings suggest Nebraska workplace environments are favorable for CHW integration. In a mixed methods study examining CHW perspectives, communication was identified as beneficial to the well-being of the CHW and to the care team and patient [1]. In particular, CHWs cited important facilitators to CHW integration include having consistent team meetings, training inside and outside of the organization, and ability to stay connected with the community and with other CHWs. Similarly, among our subset of respondents who currently employ CHWs, roughly three-quarters reported a variety of training, networking and supervisory support including: adequate time for one-on-one supervision of CHWs; orientation training and ongoing training for CHWs; paid time for training and paid time to network with other CHWs. Although the importance of high-quality, continuous training and supervision have been identified by CHWs in previous research, to our knowledge, paid time for these activities has not been examined or documented in the literature. Considering CHWs spend a considerable amount of time building relationships, learning and connecting with new resources, and growing professionally to keep up with the needs of their communities, ensuring paid time for activities that enhance their effectiveness only seems fair and likely an area worthy of further exploration.

We intentionally oversampled a range of employers independent of the healthcare system to gain insight on the workplace landscape for more "upstream" primary and secondary prevention efforts where CHWs might be strategically placed. Chronic diseases, such as heart disease, cancer, and diabetes, are responsible for seven of every ten deaths among Americans each year and account for 75% of the nation's health spending [20]. Moreover, according to former U.S. Surgeon General Dr. David Satcher, only 1% of total dollars spent on national health care went to population-based prevention in 1999. Some estimates suggest that the U.S. government spends $1,390 per person to treat disease while spending only $1.21 per person on prevention [7, p. 9]. Clearly, more focus needs to be shifted on preventive efforts in the U.S. One such policy includes the ACA, which makes preventive care affordable and accessible by requiring certain private health plans to cover certain recommended preventive services without charging a deductible, copayment, co-insurance, or other cost sharing method [20]. In addition, the ACA has opened doors for CHWs including increased access to preventive services under Medicaid, where states may designate non-licensed providers such as CHWs to provide preventive services, but no state has taken advantage of the new regulation [11].

In the case of Nebraska, there is a palpable consensus that a CHW workforce is needed, but much still remains to be explored in terms of *how-to* best integrate CHWs into existing systems. Considering the majority of Nebraska includes state-designated shortage areas for mental and behavioral health, there could be many suggested roles that CHWs could take given the well-documented behavioral and mental health shortages across all levels of providers/professionals [25, 26]. Our findings suggest CHWs could help address mental and physical health needs in a variety of community and clinical settings, in large part by conducting primary and secondary prevention activities, such as provision of health screenings, health and nutrition education, connecting people to resources and empowering community members through these activities and more. Emerging evidence suggest that CHWs engage in various forms of advocacy which, in turn, contributes to civic engagement among historically marginalized populations, and strengthens the ability of broader community agencies to work together to

create positive change in communities [22]. We describe elsewhere an ecological framework of how CHWs might influence health at multiple levels [8, pp. 148–157].

Nebraska is in a favorable position to grow an innovative and sustainable CHW workforce. Based on our findings and the existing infrastructure in Nebraska, we recommend development of CHW competencies that focus on the three levels of prevention. For primary and secondary prevention, areas of focus include training of CHWs in the areas of mental health, nutrition and advocacy with an eye on cultural, linguistic and health literacy considerations in development of training, delivery and education materials. Moreover, partners in academia with expertise in these areas can facilitate development and training of CHWs to help fill these gaps. In addition, academic collaboration is associated with higher awareness of public health trends, which have important implications for addressing population health [24]. Tertiary level CHWs should be expected to function at higher levels to include competencies at the primary and secondary levels as well as those described by [14]. Training CHWs to understand the three levels of prevention may help facilitate a better understanding of their roles if a set of core competencies can be identified across all three levels, and competencies unique to primary, secondary and tertiary are differentiated.

Several limitations are noted in this study. First, self-selection bias might be an issue where conceivably those who are motivated or interested in the subject matter filled out surveys. Second, more women were represented in the findings, so it is unclear if there is gender factor in responding to surveys or if this reflects the proportion of women in the workplace. Third, our survey sample largely targeted community-based organizations and workplace settings, and there may be employers of CHWs not captured in this study. However, we intentionally oversampled in community settings where we anticipated low response rates to access the voices of those trusted community organizations not typically included in public health surveys. Given the knowledge generated by this study, future research should quantify the perceptions and current roles of CHWs by the CHWs themselves. In addition, studies should examine the motivation, perceptions, and retention of CHWs among diverse organizations. There is a need to develop ongoing surveillance efforts to track and quantify the CHWs workforce in Nebraska and other states. Future research could evaluate the differences in roles assumed by tertiary, primary, and secondary levels.

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Compliance with Ethical Standards

Conflict of interest The authors claim that they have no conflict of interest.

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