BMC Health Services Research

RESEARCH Open Access

A cross-sectional survey of community health workers and their roles in Indiana

Michael Scanlon[1,2*], Melissa R. Thomas[3], Qing Tang[4], Jasmine D. Gonzalvo[5], Yumary Ruiz[6], Margarita Hart[7], Jasmine Jackson[3] and Debra K. Litzelman[1,3]

Abstract

Background In the US, there is a lack of information about the community health worker (CHW) workforce, which is critical to inform workforce policy, development, and training initiatives. In this manuscript, we report the results of a cross-sectional workforce survey of CHWs in Indiana.

Methods We conducted a statewide electronic survey of CHWs in Indiana. Eligible participants were self-reported CHWs and over the age of 18. The survey was adapted from an existing tool and included questions about CHWs' demographics, employer, compensation, and roles and responsibilities. The survey was pilot-tested and distributed in partnership with the state's CHW professional association. Data were collected anonymously using REDCap. Bivariate correlations were examined between salary and demographics, employer type, training, and length of employment. Analyses were conducted using SAS version 9.4.

Results Among 282 participants that met eligibility, a majority were female (92%) with 39% identifying as Black/African American, 38% as White, and 13% as Hispanic/Latino. Over 40% held at least a Bachelor's degree, and 20% were multilingual. CHWs worked under various job titles – only half reported that their official job title was as a CHW – and for a variety of organizations with about half working for either a health system or academic employer. Respondents had a median of 2 years of experience as a CHW. The majority of CHWs were employed full-time (85%) and had completed a training program (83%). Their scopes of practice varied but CHWs were most engaged in activities related to culturally relevant communication, care coordination, coaching, and social support. Lower salary was significantly associated with less education and working as a CHW for less than one year, but not with other demographic characteristics, employer type, or having completed a training program.

Conclusion This study offers a snapshot of Indiana's CHW workforce, highlighting that it is predominantly female but diverse demographically, in employment setting, job title, and roles played. The findings provide insights to guide workforce development and planning efforts by employers, professional associations, health departments, and policymakers to strengthen and expand this essential workforce in Indiana and beyond.

Keywords Community health workers, United States, Indiana, Health workforce survey

*Correspondence:
Michael Scanlon
mscanlon@iu.edu
[1]Center for Global Health, Indiana University, Indianapolis, IN 46202, USA
[2]Fairbanks School of Public Health, Indiana University, Indianapolis, IN, USA
[3]Center for Health Services Research, Regenstrief Institute, Indianapolis, IN, USA
[4]Department of Biostatistics, Indiana University, Indianapolis, IN, USA
[5]Center for Health Excellence, Quality, and Innovation, Purdue University, Indianapolis, IN, USA
[6]Department of Public Health, College of Health and Human Sciences, Purdue University, West Lafayette, IN, USA
[7]Indiana Community Health Worker Association, Indianapolis, IN, USA

Background

Community health workers (CHWs) are an important and internationally recognized cadre of the health workforce. The American Public Health Association (APHA) defines a CHW as "a frontline public health worker who is a trusted member and/or has an unusually close understanding of the community served […], and as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery," [1]. CHWs provide health education, social support, care linkage and coordination, and advocacy, among other services [2, 3]. There is robust evidence for the effectiveness of CHWs in improving health outcomes, reducing cost of care, and addressing social determinants of health [3], and CHWs have a unique role in addressing stark health inequities in the United States (US) and around the world [4, 5].

CHWs have been part of the health workforce in the US for at least 70 years, including in federal antipoverty programs, public health departments, and the Community Health Representative program of the Indian Health Service established in 1968 [3]. The 2010 Affordable Care Act specifically identified CHWs in new value-based care models and interdisciplinary teams, which represented an important policy shift toward expanding the CHW workforce [6]. More recently, the CDC's COVID Response and Resilient Communities Initiative and the Health Resources and Services Agency's CHW Training Program created new funding opportunities to train and deploy CHWs across the country [7, 8]. Changes in the 2024 Medicare Physician Fee Schedule included reimbursement for CHWs addressing social determinants of health for the first time [9], and over half of states allow CHW reimbursement under state Medicaid plans facilitated by a 2014 rule change [10]. Despite the growing evidence for CHWs and increased federal and state funding, there are important challenges to integrating CHWs into health and social care systems and informing workforce initiatives and policies [11].

In 2023, the Bureau of Labor Statistics (BLS) estimated that there were 58,000 people employed as CHWs in the US and that the workforce would grow by 14% by 2032, much faster than average occupations [12]. In many settings, however, the CHW workforce is poorly described, including where CHWs work, their compensation and training, and scopes of practice [13, 14]. CHWs work under a variety of job titles and for many types of organizations from health departments, clinics, managed care organizations, academic and research institutions, and community-based organizations, among many others, which can make surveying the workforce challenging [13]. Training, certification, and reimbursement pathways vary by state and have implications for equitable workforce growth, integration, and wages [15–17]. Efforts like the CHW Core Consensus Project (C3) that defined core CHW roles and competencies from cultural mediation to care coordination to participating in evaluation and research represent important steps forward that can help standardize data collection on scopes of practices [18].

Information about the CHW workforce is critical for policymakers, CHW professional associations, state and local health departments and other employers to inform workforce development and training initiatives and ensure that workforce expansion is equitable [19]. A national CHW survey was conducted in 2021 by the National Association of Community Health Workers (NACHW), but it included only 867 CHWs and representation from many states was lacking [20]. Several states conduct regular surveys of their CHW workforce. The Michigan Community Health Worker Alliance (MiCHWA), for example, conducts statewide workforce surveys every two years alongside CHW employer surveys to inform workforce development [21]. In this paper, we describe a statewide survey of CHWs in Indiana conducted in 2024. The objective of the survey was to build on a previous 2020 assessment [22], and provide an updated snapshot of the CHW workforce in Indiana with a focus on employment setting, training and certification, scope of practice, and wages and benefits.

Methods

Setting

The BLS reported that there were 980 CHWs working in the state of Indiana as of May 2023 [12]. Various efforts have been undertaken to grow the CHW workforce in Indiana. The Indiana Community Health Worker Association (INCHWA) was established in 2013 as a statewide professional association with a mission to support the CHW workforce through evidence-based strategies, education, and advocacy. In 2017, the Indiana Governor's office established an Indiana Health Workforce Council that included a CHW Taskforce to generate policy recommendations for advancing the profession in Indiana. These recommendations included establishing a CHW registry, adopting the APHA definition and C3 core competencies, and state-standardized CHW certification and assessments. Progress towards these recommendations have been hampered by limited funding and infrastructure, and most have not been implemented or only partially realized [23]. In 2018, Indiana became only the second state to be approved under a state plan amendment to the Centers for Medicare and Medicaid Services to reimburse CHW services through state Medicaid plans; however, utilization of this mechanism to fund CHW services has been limited due to complex billing procedures and low reimbursement rates [22]. From 2018

to 2023, reimbursement rates for a 1–1 visit with a CHW were $9.70 for a 30-minute visit. In 2024, the rate was increased significantly to $26.56, which still falls below a minimum (i.e., sustainable) reimbursement rate of $47.35 calculated in one study [17] and the average reimbursement under Medicare of $50.26 [24].

Study design

We conducted a statewide electronic survey of CHWs in Indiana. The study was led by members of a CHW Reimbursement Taskforce, a multidisciplinary group established in 2023 to generate evidence and advance policy for a sustainable CHW workforce in Indiana. The Taskforce includes leadership from INCHWA, researchers and clinicians, and social service organizations. Our study's approach was guided by recommendations for surveying the CHW workforce, including recommendations for survey planning and design, recruitment and retention, data collection and analysis, reporting and dissemination, and advocacy and policy [13] (see Additional file 1). With permission we adapted the survey tool created by MiCHWA for their 2023 Michigan CHW survey [21]. The survey adopted best practices published by the CHW Common Indicators Project and included C3 roles and competencies [25, 26].

The survey was pilot tested by members of INCHWA and CHWs and led to reorganizing survey sections, clarifying and rephrasing questions, and shortening the survey. The final survey included 56 questions that were organized into eight domains: (1) position description (employer, title, years of experience); (2) demographics; (3) training and continuing education; (4) communities and clients served; (5) compensation, career development, and job satisfaction; (6) roles and responsibilities; (7) team integration; and (8) challenges and accomplishments. The survey was designed to be completed in about 20 minutes. Survey responses included fixed response, Likert-scale, and free-text. Data on career development and job satisfaction are reported elsewhere [27].

Data collection

Survey eligibility included being 18 years of age or older, self-identifying as a CHW (as defined by APHA), and currently working and/or volunteering as a CHW in Indiana. All data were collected and stored in REDCap [28, 29]. To recruit participants, we developed a public webpage on the All IN For Health platform, an initiative of the NIH-funded Indiana University Clinical and Translational Sciences Institute. We also distributed information and the survey link through an INCHWA listserv that at the time of the study included 1,700 certified CHW (not all of whom were currently working as CHWs) and to 11 organizations that collectively employed 137 CHWs in Indiana. Organizations were identified using publicly available information and interviews conducted as part of a different study [30], and included health systems, departments of health, community-based organizations, and a community health coalition.

All data were collected anonymously using REDCap. Upon survey completion, participants were asked if they would like to opt-in to a raffle for a chance to win one of twenty $100 gift certificates. If they opted-in, participants were given a link to a separate REDCap page to provide their name and email for entry into the raffle. The study survey and raffle databases were kept separate and unlinked to maintain participant anonymity. This study was approved by the Indiana University Institutional Review Board (IRB protocol#: 21790).

Data analysis

Descriptive analyses included frequency counts and percentages, and a heatmap was created to show the Indiana counties where CHWs provided services. Bivariate correlations were examined between self-reported annual salary and demographics (gender, education, race/ethnicity, and language), employer type, participation in a training program, and length of CHW employment. The following data were collapsed into dichotomous variables for bivariate analysis: education (high school/some college/trade school versus associate's degree and higher), language (English versus English plus another language), CHW training program completed (yes versus no), and years worked as a CHW (more than one year versus less than one year). Employer type was categorized into health system, clinic or academic organization; government (state or local health department); community, faith-based, or social service organization; and other. Annual salary was categorized into three bands: less than $40,000 per year; between $40,000 and $50,000; and more than $50,000. This was based on distribution of the data and was consistent with the average CHW salary in Indiana reported by BLS [12]. Statistical analyses were performed using SAS version 9.4 (SAS Institute, Inc., Cary, NC) with significance determined as $P < 0.05$.

Results

From a total of 308 surveys completed, 282 met study eligibility and were included for analysis. Twenty-six surveys were excluded due to respondents not self-identifying as a CHW, not being at least 18 years of age, and being incomplete. A majority of participants identified as female (92%), and 39% identified as Black/African American, 38% as White, and 13% as Hispanic/Latino (Table 1). Respondents had a mean age of 41 years (standard deviation 12 years). Over 40% of participants held at least a Bachelor's degree and a fifth of respondents spoke more than one language, with 16% speaking Spanish.

Table 1 Respondents' demographic characteristics

Characteristics	Frequency (*n*)	Frequency (%)
Age (*n* = 281)		
18–24	23	8.2
25–34	65	23.1
34–44	76	27.0
45–54	63	22.4
55–64	45	16.0
65+	9	3.2
Gender (*n* = 274)		
Female	254	92.7
Male	18	6.6
Non-binary	2	0.7
Race and Ethnicity (*n* = 277)		
Black/African American	107	38.6
White	105	37.9
Hispanic/Latino	37	13.4
More than one race	19	6.9
Asian	4	1.4
Prefer not to say/not listed	4	1.4
Arab American	1	0.4
Born in the U.S. (*n* = 272)		
Yes	248	91.2
Languages Spoken (*n* = 277)*		
English	267	96.4
Spanish	44	15.9
Burmese	4	1.4
Korean	2	0.7
Haitian-Creole	2	0.7
French	2	0.7
Yoruba	2	0.7
Education Level (*n* = 279)		
High school or GED	20	7.2
Some college	78	28.0
Trade school	11	3.9
Associates	50	17.9
Bachelors	87	31.2
Masters	31	11.1
Doctorate	2	0.7

*Respondents could select more than one option, so total percentages do not equal 100%

CHWs worked for a variety of employers with health or academic organizations being most common (49%), followed by community/social service organizations (31%) and health departments (11%) (Table 2). Only half of participants worked under the official title of a "community health worker," illustrating the diversity in position titles within the profession. Participants had a median of 2 years of experience as a CHW. Over half of participants (57%) reported serving in urban settings, and over 70% reported being from or residing in the community that they served. The average caseload of respondents varied significantly, with 19% reporting a caseload of 10 or fewer, 34% reporting a caseload of 31 to 100 clients, and 9% reporting a caseload of over 100 clients. A high percentage of CHWs indicated working with clients who were Black/African American (86%) and/or Hispanic/Latino (75%), low-income (80%), immigrants (73%), and Spanish (70%) or Burmese-speaking (20%) communities.

The majority of respondents (82%) were full-time paid employees defined as working over 30 hours a week. Among those who provided salary information, most participants reported a salary of $25,000-40,000 (32%) or $40,000-50,000 (36%). A notable percentage of participants (25%) reported that they did not want to answer questions about pay. Among respondents who reported that they had benefits, most participants received health insurance, followed by vacation time, mileage reimbursement, employer retirement/pension fund, and sick pay. The majority of CHWs (82%) reported being certified as CHW, with over half receiving their certification after they were employed at their organization.

Participants responded that they served clients in all of Indiana's 92 counties (respondents could select working in more than one county), with a significant proportion (46%) providing services in Marion County, home the state's capital and largest city, Indianapolis, and the surrounding counties (Fig. 1). There were also higher numbers of respondents who worked in Lake County in northwest Indiana bordering the Chicago metropolitan area (9%) and Vanderburgh County in southwest Indiana and home to the state's third-largest city, Evansville (7%).

Table 3 shows information about the different roles played by CHWs in their work. Bolded numbers in the table indicate that over half of respondents reported either that they often/very often played a certain role (i.e., at least weekly) or never/rarely played that role (i.e., at most 1–2 times per year). The roles reported by at least 70% of participants being done on a weekly or daily basis included documenting and tracking individual data (77%); empowering individuals (77%); motivating and encouraging people to obtain care and other services (76%); and connecting people to resources and advocating for basic needs (75%). The roles reported by at least 60% of participating being done on a weekly or daily basis included providing individual support and coaching (67%); providing direct services related to basic needs (66%); following up on health and social service encounters with individuals, families, and community (62%); advocating for community needs and perspectives (61%); and educating individuals and communities about how to use health and social service systems (60%).

Roles and responsibilities that were reported as never or rarely being done by more than half of respondents included engaging stakeholders to take action on findings (65%); participating in the design, implementation or interpretation of community-level assessments (63%) or

Table 2 Employer and position characteristics

Characteristic (*n*)	Frequency (*n*)	Frequency (%)
Employer Type (*n* = 279)		
Health or academic	139	49.8
Community or social service	87	31.2
State or local government	30	10.8
More than one	12	4.3
I am not affiliated with an organization	7	2.5
Other	4	1.4
Position Title (*n* = 282)		
Community health worker	140	49.6
Community health outreach worker	24	8.5
Patient navigator	17	6.0
Community health advocate	11	3.9
Health educator	11	3.9
Other	79	28.0
Communities Served (*n* = 255)		
Urban (high population density, large amount of infrastructure)	145	56.9
Rural (low population density, large amount of undeveloped land)	56	22.0
Suburban (less populated than cities, made up of homes and stores)	54	21.2
Relationship/Experience with Communities Served (*n* = 254)*		
Reside in community	181	71.3
Professional experience working with community	123	48.4
Previously resided in community	53	20.9
Long-term volunteer work with community	42	16.5
Other	11	4.3
Average Caseload of Active Clients (*n* = 220)		
< 10	41	18.6
11–20	38	17.3
21–30	32	14.5
31–100	74	33.6
> 100	20	9.1
Other	5	2.3
Varies day to day	3	1.4
I do not have a caseload	7	3.2
Position Type (*n* = 230)		
Paid – full time	196	85.2
Paid – part time	10	4.3
Volunteer - full time	5	2.2
Volunteer - part time	13	5.7
As needed/on call only	6	2.6
Salary (Annual) (*n* = 211)		
Below $25k	18	8.5
$25k-<$40k	67	31.8
$40k-<$50k	76	36.0
$50k-<$60k	31	14.7
Above $60k	19	9.0
Benefits Provided by Employer (*n* = 230)**		
Health insurance provided	205	89.1
Vacation time	181	78.7
Transportation/mileage reimbursement	161	70.0
Retirement/pension fund	158	68.7
Sick pay	135	58.7
Completed Training Program (*n* = 258)		
Yes, after being hired as a CHW	152	58.9

Table 2 (continued)

Characteristic (*n*)	Frequency (*n*)	Frequency (%)
Yes, before being hired as a CHW	63	24.4
Not completed	43	16.7
Employer Requires Continuing Education Credits (*n* = 259)		
No	149	57.5
Yes	110	42.5

*Respondents could select more than one option, so total percentages do not equal 100%

** Respondents could select more than one option, so total percentages do not equal 100%. Results show respondents who reported at least one benefit

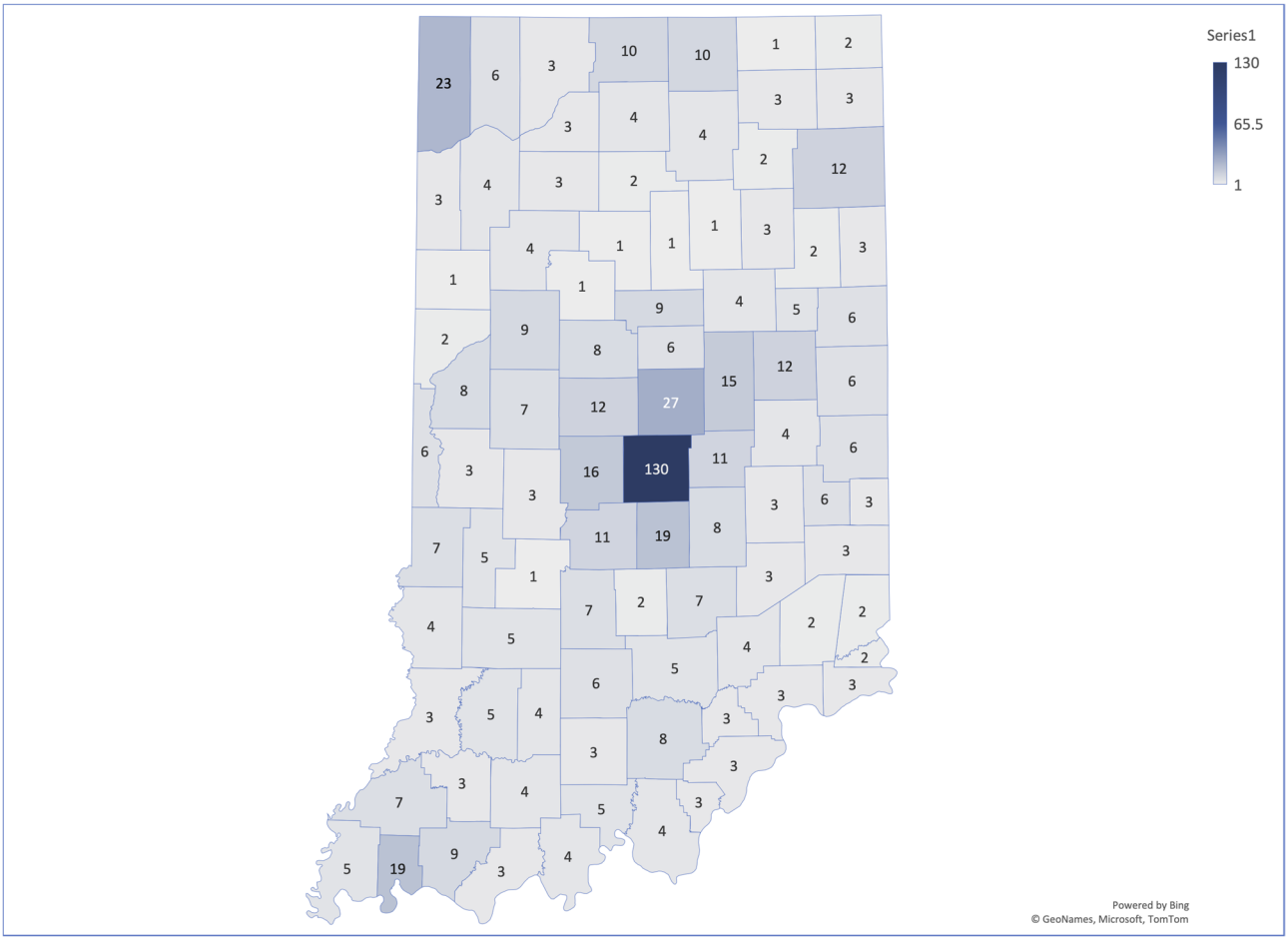

Fig. 1 Number of CHWs who reported providing services in Indiana counties (*Respondents could select providing services in more than one county)

individual-level assessments (59%); participating in or leading support groups (60%); developing evaluation or research designs (58%); presenting at conferences, local agencies or community events (57%); providing screening tests (57%) or basic health services (51%); and participating in policy advocacy (55%).

In bivariate analyses, only lower education level (defined as high school, some college, or trade school) and working as a CHW less than one year were significantly associated with lower salary (Table 4).

Discussion

Workforce surveys are critical to advancing evidence-informed workforce policies and initiatives, including helping policymakers understand the scope and impact of CHWs and enabling evidence-based decisions regarding funding, resource allocation, and program development [13]. Workforce surveys help identify who CHWs are, including demographics, educational and training background, and geographic distribution. As the demand for CHWs grows with the expansion of healthcare access

Table 3 CHW roles and responsibilities

CHW Role or Responsibility	*N*	Never/ rarely*, n (%)	Some-times, *n* (%)	Often/ very often, n (%)
Culturally Relevant Communication				
Educating individuals and communities about how to use health and social service systems	203	30 (14.8)	51 (25.1)	**122 (60.1)****
Culturally Appropriate Health Education				
Conducting health promotion and disease prevention education that matches cultural needs of community	201	51 (25.4)	61 (30.3)	89 (44.3)
Providing necessary information for individuals to understand and manage health conditions	198	42 (21.2)	61 (30.8)	95 (48.0)
Care Coordination				
Participating in care coordination and/or case management	198	42 (21.2)	39 (19.7)	**117 (59.1)**
Helping make patient referrals for follow-up health care services	196	48 (24.5)	42 (21.4)	**106 (54.1)**
Facilitating transportation to services and/or helping to address other barriers to services	196	52 (26.5)	44 (22.4)	**100 (51.0)**
Documenting and tracking individual data	195	26 (13.3)	18 (9.2)	**151 (77.4)**
Coaching & Social Support				
Providing individual support and coaching to clients	197	27 (13.7)	38 (19.3)	**132 (67.0)**
Motivating and encouraging people to obtain care and other services	196	11 (5.6)	35 (17.9)	**150 (76.5)**
Supporting self-management of disease prevention and management of health conditions	199	41 (20.6)	54 (27.1)	**104 (52.3)**
Planning and/or leading support groups	198	**119 (60.1)**	35 (17.7)	44 (22.2)
Advocating				
Advocating for the needs and perspectives of the communities you serve	197	28 (14.2)	48 (24.4)	**121 (61.4)**
Connecting people to resources and advocating for basic needs	198	15 (7.6)	34 (17.2)	**149 (75.3)**
Participating in policy advocacy	197	**108 (54.8)**	47 (23.9)	42 (21.3)
Building Capacity				
Empowering individuals	196	14 (7.1)	30 (15.3)	**152 (77.6)**
Engaging communities	190	46 (24.2)	45 (23.7)	**99 (52.1)**
Training and building individual capacity with CHW peers	196	67 (34.2)	63 (32.1)	66 (33.7)
Direct Services				
Meeting basic needs	193	24 (12.4)	42 (21.8)	**127 (65.8)**
Providing basic health services	194	**98 (50.5)**	24 (12.4)	72 (37.1)
Providing basic screening tests	193	**109 (56.5)**	23 (11.9)	61 (31.6)
Outreach				
Case-finding/recruitment of individuals, families, and community groups to services and systems	190	53 (27.9)	39 (20.5)	**98 (51.6)**
Follow-up on health and social service encounters with individuals, families, and community	192	35 (18.2)	39 (20.3)	**118 (61.5)**
Home visits to provide education, assessment, and social support	191	84 (44.0)	29 (15.2)	78 (40.8)
Presenting at conferences, local agencies, or community events (in-person or virtual)	191	**108 (56.5)**	41 (21.5)	42 (22.0)
Evaluation & Research				
Engaging in evaluating CHW services and programs	193	94 (48.7)	58 (30.1)	41 (21.2)
Identifying and engaging community members as research partners	193	94 (48.7)	59 (30.6)	40 (20.7)
Identification of priority issues and evaluation/research questions	193	95 (49.2)	48 (24.9)	50 (25.9)
Development of evaluation/research design and methods	192	**111 (57.8)**	44 (22.9)	37 (19.3)
Data collection	194	60 (30.9)	44 (22.7)	90 (46.4)
Sharing results and findings	191	73 (38.2)	55 (28.8)	63 (33.0)
Engaging stakeholders to take action on findings	190	**123 (64.7)**	42 (22.1)	25 (13.2)
Assessments				
Participating in design, implementation, and interpretation of individual-level assessments	193	**114 (59.1)**	33 (17.1)	46 (23.8)
Participating in design, implementation, and interpretation of community-level assessments	192	**120 (62.5)**	36 (18.8)	36 (18.8)

*Respondents were instructed to use the following definitions when considering the frequency of roles: "Never" indicated never engaging in the role, "Rarely" indicated one to two times per year, "Sometimes" indicated monthly, "Often" indicated weekly, and "Very often" indicated daily

**Bolded numbers are used to indicate where over half of respondents indicated either that they often/very often filled a role (i.e., at least weekly) or never/rarely filled a role (i.e., at most 1-2 times per year)

Table 4 Bivariate analyses of characteristics associated with salary

Variable	Annual salary, *n* (%)				
	Overall *n* = 211	<$40k *n* = 85	$40-$50k *n* = 76	>$50k *n* = 50	*P*-value*
Gender					0.497
Female	192 (93.2)	77 (91.7)	71 (95.9)	44 (91.7)	
Male	14 (6.8)	7 (8.3)	3 (4.1)	4 (8.3)	
Education					**0.010**
Less education	74 (35.1)	37 (43.5)	28 (36.8)	9 (18.0)	
More education	137 (64.9)	48 (56.5)	48 (63.2)	41 (82.0)	
Race and Ethnicity					0.888
Black/African American	76 (37.6)	27 (32.9)	30 (42.9)	19 (38.0)	
Hispanic/Latino	27 (13.4)	13 (15.9)	8 (11.4)	6 (12.0)	
More than one	15 (7.4)	6 (7.3)	6 (8.6)	3 (6.0)	
White	84 (41.0)	36 (43.9)	26 (35.6)	22 (44.0)	
Language					0.685
English only	167 (82.3)	70 (84.3)	57 (79.2)	40 (83.3)	
English plus another language	36 (17.7)	13 (15.7)	15 (20.8)	8 (16.7)	
Type of organization					0.341
Community or social service	67 (31.8)	35 (41.2)	19 (25.0)	13 (26.0)	
Health or academic	104 (49.3)	35 (41.2)	42 (55.3)	27 (54.0)	
State or local government	24 (11.4)	7 (8.2)	10 (13.2)	7 (14.0)	
Completion of a CHW training program					0.293
Completed a CHW training program	176 (84.6)	71 (83.5)	67 (89.3)	38 (79.2)	
Not completed a CHW training program	32 (15.4)	14 (16.5)	8 (10.7)	10 (20.8)	
No. of years as a CHW					**< 0.001**
Less than 1 year	64 (30.5)	21 (24.7)	36 (48.0)	7 (14.0)	
More than 1 year	146 (69.5)	64 (75.3)	39 (52.0)	43 (86.0)	

*Bolded values indicate significance of $P < 0.05$

and focus on social determinants of health, workforce surveys can help predict future workforce needs and reveal barriers that CHWs face, such as low wages, job insecurity, and lack of career advancement opportunities that are vital for retaining CHWs and ensuring the sustainability of the workforce [31].

CHWs in our study spent the majority of their time providing direct services to clients, including helping them with basic social needs, care coordination and connecting them to resources, and empowering them ("coaching") to act on their own behalf to meet these needs. CHWs are highly effective and impactful in addressing participants' social determinants of health and health outcomes [3]. In Indiana, the policy for reimbursement under state Medicaid plans does not currently cover CHW services related to "navigator" assistance, case management and care coordination, or facilitating transportation for a client to and from services [32]. Our results show that Indiana CHWs provide many of these services, and to support expansion and sustainability of the CHW workforce, Indiana's Office of Medicaid Policy and Planning should consider revising its Medicaid policy to cover a broader range of services, with several states like New Mexico and South Dakota serving as potential models [24].

In addition to documenting many important roles CHWs in Indiana currently play in health and social care systems, our study provides evidence for opportunities to grow and expand CHWs roles in other important areas. As found in other surveys, CHWs in Indiana were less often involved in needs assessments, research, and policy advocacy [21]. Community-based needs assessments and research benefit from CHW involvement in planning, implementing, evaluating, and disseminating results [33], and our study shows a potential gap and missed opportunity for organizations in collaborating with CHWs in this way. CHWs can also serve as clear, strong, and effective communicators with local and state leaders to help advocate for policy change that improves the health and well-being of those they serve [34], and there is an important opportunity for CHWs to play more of these roles in Indiana.

Job security in terms of adequate pay and stable positions is a major workforce challenge for CHWs, as many CHWs are hired on short-term grants and programs [3]. In this study, pay reported by respondents was in line with BLS estimates in Indiana, but there was significant variation at both the lower and upper ends of the pay spectrum suggesting that many CHWs remain in very low paying positions. There have been few studies about

the factors associated with pay in the CHW workforce. One study found that CHW wages were higher in states with certification programs but that wage gaps persisted within the workforce, with wage gains being higher for White and male CHWs [16]. In Michigan, CHWs working for Medicaid managed care organizations (MCO) earned significantly more than those working for community-based organizations, health systems and clinics, and local health departments (about $27 dollars per hour for MCOs versus $21 dollars per hour under other employers) [21]. A notable gap in our survey is that we did not specifically survey CHWs working for MCOs. Michigan is one of a handful of states that requires MCOs to employ CHWs on a minimum CHW-to-enrollee ratio, and represents an important policy reform that Indiana should consider to expand the workforce [14].

A majority of respondents had completed a training program, but most did so after being hired as a CHW. We did not collect information about the type of training program that CHWs completed and future CHW workforce surveys will be strengthened by assessing certification type and its relationship with compensation. When Indiana's Office of Medicaid Policy and Planning approved reimbursement of CHW services under the state amendment plan in 2018, they listed three approved vendors for certification but allowed CHWs to also receive certification from employer-based training as long as core competencies were covered [32]. Training programs may be cost prohibitive for those wishing to pursue a career as a CHW. For example, one approved training vendor had a published cost of $1,200 per trainee as of this writing [35]. Whether core competencies are taught in a vendor-based or employer-based training program, CHW employers must provide ongoing in-service training and supervision to retain and grow competencies that are aligned with career advancement and higher wages [36].

This study had several limitations. The first relates to survey dissemination and reach. To encourage participation, we maintained survey anonymity and thus could not calculate the response rate for those who were sent a survey invitation. A CHW registry does not currently exist in Indiana and so we were unable to utilize a central registry for survey distribution or to determine an accurate denominator of the number of Indiana CHWs currently working in Indiana. While a CHW registry was recommended by the CHW Taskforce to the Indiana Governor's Health Workforce Council, funding was never allocated to establish it. To support data collection and strategic planning, enhance professional development, facilitate employment and workforce development, we urgently recommend that the state work to implement a statewide CHW registry as has been recommended elsewhere [22].

Several strategies were undertaken to enhance the survey's reach and sample representativeness, including contacting CHW employers directly and partnering with INCHWA, who disseminated study information through its listserv and at several CHW events. The heat map (Fig. 1) demonstrates the success of these efforts, showing good sampling of CHWs adjusting for city/region population, with Lake, Vanderburgh, and Marion and surrounding counties with the largest population densities. Survey participation and the demographics of CHWs in this study were consistent with other published workforce surveys including the 2021 national survey by NACHWA and Michigan survey conducted in 2023 [20, 21], but were different from a previous CHW survey in Indiana conducted in 2020. The previous CHW survey in Indiana also used an online survey and reported a sample of 648 CHW participants who were mostly male (56%) and White (68%) [22]. In this study, there was a smaller number of respondents employed in health departments and overrepresentation from one local health department in Indiana with a longstanding CHW program. As noted previously, we did not capture MCOs as a distinct employer type and so we could not assess the number of CHWs working in these settings. We found many CHWs reported working for both a hospital or clinical organization and an academic organization, which may be explained by many CHW programs in Indiana being based within academic medical centers. This is also why we collapsed these employers for bivariate analysis but there may be important employer-based distinctions that this approach loses.

Another potential limitation was related to potential selection bias. The survey was available only in English and electronically, which excluded non-English speakers and those without regular access to a computer and internet. A fifth of the study respondents reported speaking a language in addition to English and a significant percentage of participants reported serving immigrant communities suggesting that we did have participation from CHWs serving diverse communities. Finally, because respondents were able to skip survey questions, some data were missing, particularly towards the end of the survey. There may also have been sensitivity to answering specific questions. For instance, a quarter of participants indicated that they preferred not to answer questions related to pay, even though the survey was anonymous. Good overall survey completeness suggests that allowing respondents to skip questions resulted in more people completing the survey. The total number of responses aligns with previous sample sizes of statewide surveys targeting the CHW workforce. Future surveys may provide additional information about the anonymity of the survey and how data will be used to encourage

answering sensitive questions. Additional challenges to surveying the CHW workforce and the strategies we used to mitigate them are further explained in the supplementary material (see Additional File 1).

Conclusion

We provide a comprehensive snapshot of the CHW workforce in Indiana highlighting their major roles and responsibilities, and equally important, the roles in which they are currently underutilized. It is clear from these data that more needs to be done to sustain the CHW workforce in Indiana given their positive impact on chronic disease management, infant mortality, and use of primary care and inpatient services across diverse populations in the state. There remains significant challenges to growing a robust CHW workforce, including a lack of sustainable funding mechanisms and significant variations in the qualifications, roles, compensation, and training of CHWs across the state and programs. The CHW workforce remains poorly described, which leads to a complex, fragmented, and precarious labor markets for CHWs. Within the ever-changing workforce and policy landscapes in Indiana and across the US, regular workforce surveys are critical for policymakers, health departments, and other employers to support best practices and evidence-informed policy.

Abbreviations

APHA	American Public Health Association
BLS	Bureau of Labor Statistics
CHWs	Community health workers
INCHWA	Indiana Community Health Worker Association
MCO	Managed Care Organization
MiCHWA	Michigan Community Health Worker Alliance
NACHW	National Association of Community Health Workers

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12913-025-13182-x.

Additional file 1. Study team responses to CHW workforce survey challenges and recommendations: a practical guide.

Acknowledgements

The Indiana Statewide CHW Survey was reviewed by investigators that led the 2020 Indiana Statewide Community Health Worker Survey, members of the Purdue University Community Health Worker Development Institute, and leadership of the Indiana Community Health Worker Association. Survey set-up, distribution, and tracking in REDCap and data cleaning were facilitated by Laramie Mack, Kirby Kirk and Sarah Roth. We would like to acknowledge the Michigan Community Health Worker Alliance for sharing their survey tool, which was adapted with permission for this study.

Authors' contributions

MLS: Funding acquisition; conceptualization; investigation; methodology; project administration; writing—original draft, review & editing. MRT: Investigation; methodology; project administration; data curation; writing—original draft, review & editing. QT: Data curation; formal analysis; writing—review & editing. JDG and YR: Validation; methodology; visualization; writing—review & editing. MH: conceptualization; methodology; writing—reviewing & editing. JTJ: Investigation; methodology; project administration; data curation; writing—review & editing. DKL: Funding acquisition; conceptualization; investigation; methodology; project administration; writing—original draft, review & editing.

Funding

This research was funded by the Indiana Department of Health (grant number 4781014).

Data availability

Survey data is provided within the manuscript. Requests for de-identified survey data can be made to the corresponding author.

Declarations

Ethics approval and consent to participate

All methods were carried out in accordance with relevant guidelines and regulations and adhered to principles of the Declaration of Helsinki for human subjects research. The Indiana University Institutional Review Board determined this research was exempt (IRB protocol#: 21790). Written informed consent was not obtained to protect participant anonymity, and a waiver of documentation was approved by the IRB given the study's minimal risk. Verbal consent was obtained through survey completion. There was a paragraph at the beginning of the survey that stated the purpose of the research and the voluntary nature of participation, including that participation would not affect their relationship with their employer, professional association, or other affiliations. Personally identifiable information was not collected as part of the survey.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

Received: 24 January 2025 / Accepted: 8 July 2025
Published online: 07 August 2025

References

1. Community Health Workers. American Public Health Association, Washington DC. Available online: https://www.apha.org/apha-communities/member-sections/community-health-workers.
2. Perry HB, Zulliger R, Rogers MM. Community health workers in low-, middle-, and high-income countries: an overview of their history, recent evolution, and current effectiveness. Annu Rev Public Health. 2014;35:399–421.
3. Knowles M, Crowley AP, Vasan A, Kangovi S. Community health worker integration with and effectiveness in health care and public health in the united States. Annu Rev Public Health. 2023;44:363–81.
4. Perez LM, Martinez J. Community health workers: social justice and policy advocates for community health and well-being. Am J Public Health. 2008;98(1):11–4.
5. Sabo S, Ingram M, Reinschmidt KM, Schachter K, Jacobs L, Guernsey de Zapien J, et al. Predictors and a framework for fostering community advocacy as a community health worker core function to eliminate health disparities. Am J Public Health. 2013;103(7):e67–73.
6. Islam N, Nadkarni SK, Zahn D, Skillman M, Kwon SC, Trinh-Shevrin C. Integrating community health workers within patient protection and affordable care act implementation. J Public Health Manag Pract. 2015;21(1):42–50.
7. Community Health Workers for COVID Response and Resilient Communities (CCR). Atlanta: Centers for Disease Control and Prevention; 2024. Available online: https://www.cdc.gov/covid-community-health-workers/php/about/index.html#:~:text=Recipients,%24340%20million%20across%2067%20organizations.
8. Community Health Worker Training Program (CHWTP), Washington DC. Health Resources and Services Agency, Department of Health and Human Services. Available online: https://www.hrsa.gov/grants/find-funding/HRSA-22-124.
9. Changes to the 2024 Medicare Physician Fee Schedule for CHI services Association of State and Territorial Health Officials, Washington DC. 2024. Available

online: https://www.astho.org/topic/resource/changes-to-2024-medicare-physician-fee-schedule-for-chi-services/.
10. Gyurina C, Victoriano L. Environment scan on community health workers: A 50-state scan of Medicaid reimbursement approaches for the CHW workforce. Hartford: ForHealth Consulting, UMass Chan Medical School; Connective Health Foundation. 2024. Available online: https://www.cthealth.org/publication/50-state-scan-of-medicaid-payment-for-community-health-workers/.
11. Rodriguez NM. Community health workers in the united states: time to expand a critical workforce. Am J Public Health. 2022;112(5):697–9.
12. Community Health Workers (21-1094). Occupational Employment and, Statistics W. Washington, D.C: U.S. Bureau of Labor Statistics; 2023. Available online: https://www.bls.gov/oes/2023/may/oes211094.htm.
13. Sabo S, Allen CG, Sutkowi K, Wennerstrom A. Community health workers in the united states: challenges in identifying, surveying, and supporting the workforce. Am J Public Health. 2017;107(12):1964–9.
14. State Community Health Worker Policies. (State Tracker version 1/11/24). Washington, D.C.: National Academy for State Health Policy; 2024. Available online: https://nashp.org/state-tracker/state-community-health-worker-policies/.
15. Coffinbargar M, Damian AJ, Westfall JM. Risks and benefits to community health worker certification. Health Affairs Forefront. 2022. Available online: https://www.healthaffairs.org/content/forefront/risks-and-benefits-community-health-worker-certification.
16. Jones TM, Jeung C, Schulte A, Lewis CM, Maddox PJ. Hourly wages and turnover of community health workers according to US state certification policy and medicaid reimbursement, 2010–2021. Am J Public Health. 2022;112(10):1480–8.
17. Basu S, Patel SY, Robinson K, Baum A. Financing thresholds for sustainability of community health worker programs for patients receiving medicaid across the united States. J Community Health. 2024;49(4):606–34.
18. Rosenthal EL, Fox DJ, John J, Allen CG, Menking P, Brownstein J, et al. The community health worker core consensus (C3) project story: confirming the core roles and skills of community health workers. Promoting the health of the community: community health workers describing their roles. Competencies, and Practice: Springer International Publishing; 2021. pp. 11–25.
19. Covert HH. Are State-Level policies supporting community health worker employment?? The jury is still out. Am J Public Health. 2022;112(10):1368–9.
20. Advance CHWs Project. Community Health Worker Survey Report National Association of Community Health Workers. 2021. Available online: https://nachw.org/nationalchwsurvey/.
21. MiCHWA Survey Team. Community Health Worker Survey 2023: Final evaluation report. Ann Arbor: Michigan Community Health Worker Alliance; 2023. Avaiable online: https://michwa.org/wp-content/uploads/2023/12/MiCHWA-2023-CHW-Survey-Report.pdf.
22. Rodriguez NM, Ruiz Y, Meredith AH, Kimiecik C, Adeoye-Olatunde OA, Kimera LF, et al. Indiana community health workers: challenges and opportunities for workforce development. BMC Health Serv Res. 2022;22(1):117.
23. A 5-year review of the Governor's Health Workforce Council Activities and Outcomes for Indiana's Health Workforce, Indianapolis. InBowen Center for Health Workforce Research and Policy, Indiana University School of Medicine; 2021. Available online: https://scholarworks.indianapolis.iu.edu/server/api/core/bitstreams/d5446780-f51c-4159-9e19-237af01f4028/content.
24. Cloke A, Hart M, Tyus J, Alley D, Kangovi S. Medicaid reimbursement for community health worker services: model state plan amendment and other guidance. New York: Milbank Memorial Fund; 2024. Available online: https://www.milbank.org/wp-content/uploads/2024/11/Medicaid-CHW-SPA_12.17_Final.pdf.
25. Rodela K, Wiggins N, Maes K, Campos-Dominguez T, Adewumi V, Jewell P, et al. The community health worker (CHW) common indicators project: engaging CHWs in measurement to sustain the profession. Front Public Health. 2021;9:674858.
26. A guide to using the CHW Common Indicators. Porland, Oregon: CHW Center for Research and Evaluation; 2023. Available online: https://www.chwcre.org/post/a-guide-to-using-the-chw-common-indicators.
27. Scanlon ML, Thomas MR, Jackson JT, Tang Q, Gonzalvo JD, Ruiz Y et al. As we are caring for those in need, who is caring for the CHW? A mixed methods study on community health workers' perspectives on career advancement and job satisfaction in Indiana. Manuscript Under Review.
28. Harris PA, Taylor R, Minor BL, Elliott V, Fernandez M, O'Neal L, et al. The REDCap consortium: Building an international community of software platform partners. J Biomed Inf. 2019;95:103208.
29. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)--a metadata-driven methodology and workflow process for providing translational research informatics support. J Biomed Inf. 2009;42(2):377–81.
30. Scanlon M, Thomas MR, Jackson JT. Perspectives of employers on the CHW workforce and sustainability in Indiana, unpublished. 2025.
31. Kirkland C, Dill JS, Karnik H. Retention of community health workers in the public health workforce: public health workforce interests and needs survey, 2017 and 2021. Am J Public Health. 2024;114(1):44–7.
32. IHCP adds coverage of community health worker services. IHCP bulletin BT201826. Indianapolis: Indiana Health Coverage Programs; 2018. Available online: https://provider.indianamedicaid.com/ihcp/Bulletins/BT201826_PF.pdf.
33. Coulter K, Ingram M, McClelland DJ, Lohr A. Positionality of community health workers on health intervention research teams: A scoping review. Front Public Health. 2020;8:208.
34. Sabo S, Flores M, Wennerstrom A, Bell ML, Verdugo L, Carvajal S, et al. Community health workers promote civic engagement and organizational capacity to impact policy. J Community Health. 2017;42(6):1197–203.
35. Certified Community Health Worker (CCHW). Training. Hammond, IN: HealthVisions Midwest. Available online: https://hvusa.org/ccwh-training/.
36. Smithwick J, Nance J, Covington-Kolb S, Rodriguez A, Young M. Community health workers bring value and deserve to be valued too: key considerations in improving CHW career advancement opportunities. Front Public Health. 2023;11:1036481.

Publisher's Note