

# Framing the Integration of Community Health Workers Into Health Care Systems Along Health Care and Community Spectrums

***Erin E. McCarville, DrPH, MPH;***

***Molly A. Martin, MD, MAAP;***

***Preethi Lakshmi Pratap, PhD; Eve Pinkser, PhD;***

***Steven M. Seweryn, EdD, MPH; Karen E. Peters, DrPH***

**Abstract:** Research calls for community health worker (CHW) integration within health systems, yet there is no agreement regarding what CHW integration is or guidance for how it can be achieved. This study examines factors associated with CHW integration in community and health care settings using a qualitative descriptive multiple-embedded case study of CHW teams at the University of Illinois at Chicago. Data were collected via semistructured interviews/document review and analyzed using thematic coding and quantitative content analysis. Factors associated with higher clinical integration included culture, communication, protocols, and training while higher community integration was associated with accessibility, relationships, and empathy. **Key words:** *case study, community, community health workers, health system, integration*

---

**Author Affiliations:** *School of Public Health, University of Illinois at Chicago, Chicago (Drs McCarville, Pratap, Pinkser, and Seweryn); and Institute for Health Research and Policy, University of Illinois at Chicago, Chicago (Drs Martin and Peters).*

*The University of Illinois at Chicago Community Health Worker Taskforce and its leadership team provided input into the design and conduct of this research.*

*The University of Illinois at Chicago's Institutional Board provided approval for the conduct of this research (protocol #2020-0326). Participants provided verbal consent to participate in the research.*

*The authors have disclosed that they have no significant relationships with, or financial interest in, any commercial companies pertaining to this article.*

*Supplemental digital content is available for this article. Direct URL citation appears in the printed text and is provided in the HTML and PDF versions of this article on the journal's Web site ([www.ambulatorycaremanagement.com](http://www.ambulatorycaremanagement.com)).*

**Correspondence:** *Erin E. McCarville, DrPH, MPH, School of Public Health, University of Illinois at Chicago, 1603 W Taylor St, Chicago, IL 60612 (Emccar2@uic.edu).*

DOI: 10.1097/JAC.0000000000000396

**I**N THIS ERA of health system reform, health and hospital systems are increasingly employing community health worker (CHW) models as a strategy to improve health outcomes, reduce cost, and improve patient experience (Berwick et al., 2008). Recognizing this trend, experts have described CHWs as an “emerging health care workforce,” predicting that CHWs will have growing prominence within the US health care system in the future (Kangovi et al., 2015; Malcarney et al., 2017; Rogers et al., 2018).

Research suggests that integration of CHWs within the health care system is critical for program effectiveness (Allen et al., 2015; Collinsworth et al., 2013; Findley et al., 2014; Johnson & Gunn, 2015; Kangovi et al., 2015; Martinez et al., 2011; Wennerstrom et al., 2015), but there is no clear definition for CHW integration nor is there guidance for how integration can be achieved.

Notable is the question of how to balance a CHW's community and clinic-facing

priorities when integrating this workforce into a health system (Malcarney et al., 2017). CHWs are valued for their intimate knowledge of the populations and communities served. They are viewed as bridges between community and health care services (Allen et al., 2015). But the process of bridging 2 sectors—with different cultures, priorities, and procedures—has the potential to pose challenges for CHWs and for the health care context in which they are situated. For example, research suggests that systems of sharing CHW supervision and work responsibilities (cosupervision) can support bridging clinical and community systems, yet factors that support this unique structure are not well understood (Gunderson et al., 2018). The question of how to effectively integrate CHWs into the health care system while continuing to maintain their unique identity and position within the community remains unclear (Malcarney et al., 2017).

A qualitative case study allows for a deeper understanding of the complex and interrelated systems-level factors that may be associated with CHW integration, and thus offers the potential for unique insights into the field. This research aims to examine teams that currently employ CHWs to understand the critical factors for effective CHW integration. It also aims to understand how the dual priorities of clinical and community-level integration can be achieved, thus serving to support efforts to engage CHWs to improve health service delivery for the most vulnerable.

This study is an exploratory case study utilizing cross-case comparison among clinical teams as subunits of analysis, using primarily interviews as a qualitative data source. The case of study is the University of Illinois at Chicago's Hospital and Health Science System (UI Health). The embedded subunits of analysis are teams within the UI Health System that currently employ CHWs to assist with the provision of clinical care or services to patients.

Existing CHW research offers insight into the critical factors associated with CHW integration both in community and clinical contexts. During the study design phase,

an environmental scanning process was employed to develop a conceptual framework for CHW integration, which identified theorized relationships among factors that may be associated with effective integration (Bodenheimer, 2019; Fiscella et al., 2017; Gunderson et al., 2018; Kim et al., 2016; Kok et al., 2017a, 2017b; Mickan & Rodger, 2005; Payne et al., 2017; Peters, 2014; Wagner et al., 2017). This conceptual framework was used to inform study methods (see the diagram, Supplemental Digital Content 1, available at: <http://links.lww.com/JACM/A104> for conceptual framework).

## SETTING

UI Health is an academic hospital system based at the University of Illinois at Chicago (UIC).

## PARTICIPANTS

We employed a 3-pronged strategy to identify subunits for recruitment. First, researchers used a recently completed survey of UIC CHWs and CHW administrators, which produced a list of potential CHW programs. An Internet search was used to identify additional programs, not included in the survey, for recruitment. Finally, the generated list of programs was shared with a stakeholder group of UIC CHW experts for review to ensure completeness.

Subunit recruitment targeted program leadership including an administrator, director, or principal investigator with management authority over the subunit to determine eligibility and willingness to participate. Once leadership approval was obtained, researchers recruited up to 4 participants per subunit representing (1) CHWs ( $n = 1-3$ ), (2) administrators ( $n = 1$ ), and (3) clinicians ( $n = 1$ ) when applicable. Subunit documents associated with CHW programming or services were also collected for review.

## METHODS

A semistructured interview guide was designed and pilot tested to explore factors

associated with CHW integration identified in the conceptual framework (60 minutes in length). The interview included questions about CHW integration including how CHWs worked with other members of the team, how CHWs worked with patients and the community, how integration was perceived, and barriers and facilitators to effective integration. A document review matrix was also created to collect document data including program information and structure (number of CHWs, size of caseload, and program budget).

### **Data collection**

First, program administrators and research participants were invited to share documents including: (1) CHW training documents (manuals, agendas, or evaluation instruments); (2) CHW job descriptions; (3) clinical or CHW protocols; (4) program reports; (5) publications; and (6) other relevant documents describing the CHW program. We also conducted an online search to identify additional publicly available documents such as Web sites, program reports, or publications.

Next, individual one-on-one semistructured interviews were conducted with 1 to 4 representatives from each subunit over video call and audio recorded. Memos were written at the end of each interview capturing initial researcher thoughts regarding overarching themes or key impressions. All study procedures were approved by the University of Illinois at Chicago Institutional Review Board (protocol #2020-0326).

### **Data analysis**

Data were analyzed by the principal investigator (E.M.) first on the subunit level, beginning with document review and followed by interviews. Document data were summarized in Microsoft Excel and document-specific memos were written. Interview recordings were transcribed verbatim, edited to ensure accuracy, and de-identified. Interview data were analyzed using MaxQDA software (version # 2018.2, VERBI Software) and thematic coding. Researchers applied a hybrid coding approach beginning with a priori codes derived from the literature (Miles et al., 2014).

In a subsequent pass, emergent codes were also developed utilizing a more inductive, grounded approach to illuminate new or previously unrecognized patterns (Timonen et al., 2018). A subset of coded interviews was reviewed by an independent coder and coders met to review and discuss the coding scheme. This cycle was repeated until a minimum of 80% cross-coder agreement was achieved.

Documents and interviews from each subunit were triangulated and subunit-level codes were analyzed across data sources (interviews and documents) to identify points of convergence (agreement) and divergence (disagreement). Memos were written to generate a list of subunit-level themes. This was repeated until thematic saturation was achieved. A subunit report summarizing themes was shared with research participants from the respective subunit for feedback (member checking).

Themes from each subunit were then triangulated to identify convergent and divergent patterns across subunits through the charting method (Gale et al., 2013). Discussions, reflection, and the resulting memos helped identify cross-subunit themes, thus unifying concepts and interrelationships across subunit data.

Quantitizing was used to transform qualitative data into a quantitative score that allowed for comparison across sub-units and ranking of subunits along clinical and community-level integration spectrums (Sandelowski et al., 2009). A list of 9 clinic-level factors and 7 community-level factors theorized to be associated with CHW integration was created utilizing the thematic coding process described earlier. Interview and document data from each subunit were analyzed to determine the presence or absence of each integration factor using a 3-point scale of present (1 point), partially present (0.5 points), or absent (0 point) (Gale et al., 2013). Community and clinical integration scores were then totaled across factors for each subunit to generate an integration score. Each subunit received a score between 0 and 9 for clinical integration and 0 and 7 for community integration, with a higher score

associated with more representation across integration factors in that category.

**RESULTS**

In total, 11 distinct programs were identified for subunit recruitment, and 9 were confirmed to be eligible. Of the 9 eligible programs, 6 (66.7%) agreed to participate, and 3 declined due to insufficient time or inactive CHWs. Between 1 and 4 interviews were completed for each subunit for a total of 17 interviews (9 male, 8 female interviewees):

9 interviews with CHWs, 3 with administrators, 2 with health care providers/clinicians, and 3 with a dual administrator/health care provider role. Mean interview duration was 46 minutes (range = 23-62 minutes). We reviewed 34 distinct documents for the document review.

Each subunit was scored for the presence/absence of the 9 health system and 7 community-level factors. Table 1 summarizes the distribution of factors across subunits. The most common health system factors employed across subunits include: (1) creating

**Table 1.** Health System and Community-Level Factors Associated With Effective CHW Integration Within Clinical Care Teams

Subunit #	1	2	3	4	5	6
<b>Health system factors</b>						
Respondents reported working as part of care team	X <sup>a</sup>			X	X	X
Mechanisms for CHWs and care team members to communicate	X		P <sup>b</sup>	X	X	P
CHWs participated in regular meetings with care team	X	... <sup>c</sup>	P	X	X	X
CHWs had access to EMRs or other medical record systems	X			P	P	P
CHW working in close proximity to care team members (share physical workspace)	P	P	X	X	X	
A champion or leader within the team supports CHW integration	X	P		X	X	P
A flattened hierarchy enables CHWs to engage in aspects of care				X	P	
Health care providers received training or mentorship in working with CHWs			X	X	X	P
Protocols or procedures involve CHWs in health service delivery	X			P	P	
<b>Community factors</b>						
Respondents reported integration with the communities served	P	X	X	X	X	P
CHWs have shared experiences with patients or intimate knowledge of communities served	P	P	X	X	X	P
CHWs work with patients where they live in homes or community settings close to patients	P	X	X	P	P	X
CHWs have time to build relationships/rapport with patients	P	X	P	X	P	X
CHWs are perceived as trusted members of the community		X	X	X	X	
Health services are delivered in a way that is easily accessed by patients		P	X	X	X	P
Strong partnerships with other community organizations are maintained			X	X	X	

Abbreviations: CHW, community health worker; EMR, electronic medical record.

<sup>a</sup>X: This factor was confirmed to be present via multiple data points within the subunit.

<sup>b</sup>P: This factor was described as partially present or only confirmed to be present by 1 data point within the subunit.

<sup>c</sup>Blank: This factor was not described in data collected, or this factor was described as specifically not present within the subunit.

**Table 2.** Health System and Community-Level Integration Scores Calculated as a Sum of Present (1) and Partially Present (0.5) Integration Factors Observed for Each Subunit

Subunit #	1	2	3	4	5	6
Health system-level integration score	6.5 (0.72) <sup>a</sup>	1 (0.11)	3 (0.33)	8 (0.89)	7.5 (0.83)	4 (0.44)
Community-level integration score	2 (0.29)	5 (0.71)	6.5 (0.93)	6.5 (0.93)	6 (0.86)	3.5 (0.50)

<sup>a</sup>Health system score range (0-9) and community-level score range (0-7) followed by percentage of total score in parentheses.

mechanisms for CHWs and care team members to communicate, (2) regular team meetings, (3) CHWs working in close proximity with care team members, (4) a local leader or champion that supports CHWs, and (5) training or mentorship for health care providers in working with CHWs. The most common community-level factors employed across subunits include: (1) employing CHWs with a knowledge of the communities served, (2) employing CHWs to work directly with patients in the community setting, (3) allowing CHWs time to build relationships, and (4) delivering health services in a way that is easily accessible to patients.

Integration scores were calculated for both health system and community-level integration (Table 2). Health system integration scores ranged from 1 to 8 (mean = 5.0) on a scale of 0 to 9. Community-level integration scores ranged from 2 to 6.5 (mean = 4.9) on a scale of 0 to 7. Scores (as a percent of the total) were graphed to compare community and health system integration scores across subunits (Figure 1).

To examine the relationship between community and health system factors for in-

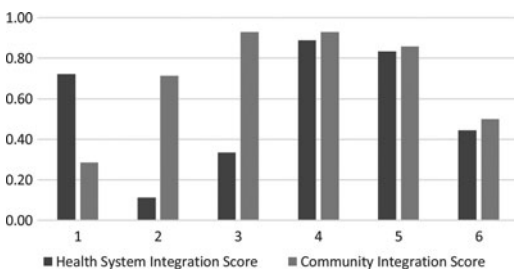
tegration, each subunit was mapped on a 2 × 2 table for presence/absence of community and health system integration factors (Figure 2). The resulting 2 × 2 table illustrates that some subunits were more heavily integrated within the community while others were more heavily integrated within the health system. Two subunits reported both high levels of community and health system integration.

**Facilitators of clinical or health system integration**

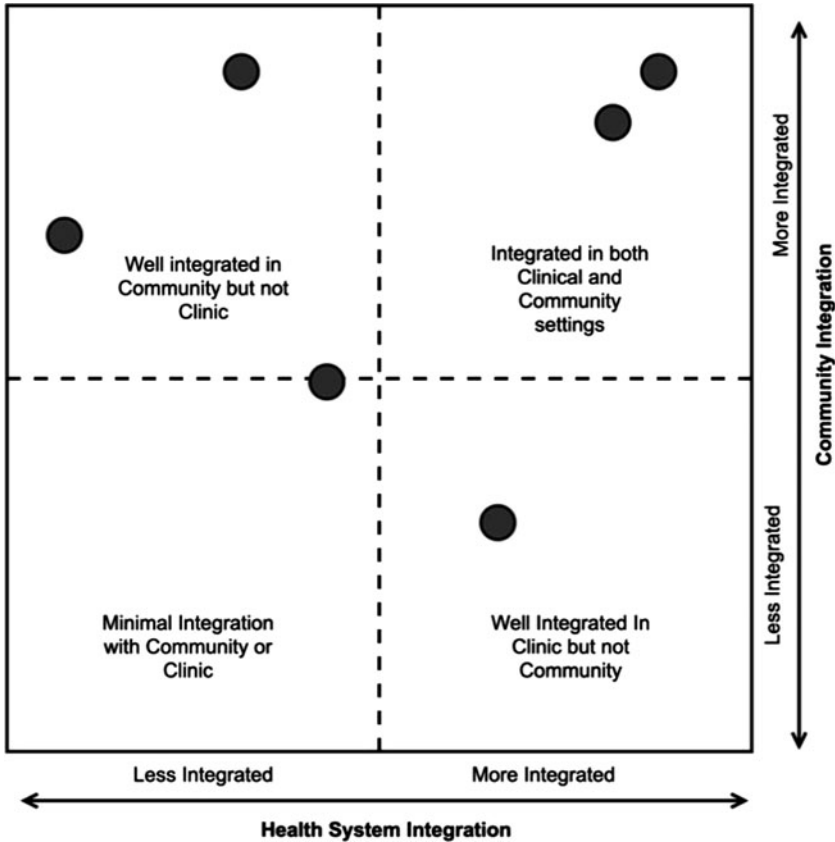
Those subunits that reported high levels of health care integration indicated that CHWs were perceived to be important members of the health care team. One respondent noted, “I really love learning from my coworkers because it’s so team-oriented... we depend on each other so much. And in order for our clients to get all the services that they need, we really, really, truly need to work together.” Teams with high levels of integration also reported having a culture with a “flattened” team hierarchy where a CHW’s knowledge and contribution were perceived to be valuable by supervisors and other members of the care team.

Research suggests that higher level of clinical integration may be associated with strong communication among members of the team. Common ways in which communication was facilitated included regular meetings or huddles and shared coworking space.

This research also suggests that the creation of procedures or protocols that facilitate CHW engagement in care or services to patients was important for CHW integration. Some subunits redesigned aspects of patient



**Figure 1.** Health system and community integration scores (percentage of total) by subunit.



**Figure 2.** Mapping representation of subunits along integration spectrums across health system and community-level factors.

scheduling, intake, or clinic flow to engage CHWs in the process. One respondent, discussing the challenges associated with modifying clinical procedures for CHW integration noted:

Doctor’s offices are set up to sort of process patients in a certain way. They come in, they check in when they’re ready, they go to a . . . patient room. They’re there long enough for the nurse to come in and do some basic checks, and the doctor to come in and do what they need to do. And then they’re out the door and that room gets set up again for the next patient to come in. So, trying to add another person to spend time anywhere in that clinic with a patient is challenging because they don’t tend to have extra rooms.

Thus, both systems and physical spaces needed to be redesigned to engage CHWs. But this redesign was also perceived by re-

spondents to be a challenge. The presence of a local champion on the team and leadership support for CHW models helped to facilitate these changes.

Finally, care providers reported challenges learning how to work with CHWs. Subunits that reported high levels of clinical integration provided trainings or orientations for health care providers to support their work with CHWs as well as training for CHWs to work within the health system. Some subunits also created mechanisms for health care providers to shadow or receive mentorship from other clinicians who had experience working with CHWs.

**Facilitators of community integration**

This research suggests that high levels of integration in the community may be associated

with services that were more accessible to patients. Among subunits with higher community integration scores, clinical facilities were more commonly located at community-based locations, and CHWs more commonly met patients in home or community settings.

Additionally, CHWs spent time building relationships with both patients and other community members through in-person community-based interaction. One respondent described the importance of accessibility stating, “You meet people where they are, it just can’t be a cliché that you throw around. You know, we actually literally did that, met people where they are, where they were physically, as well as what they were ready to do mentally and emotionally.”

CHWs also described the importance of connecting with patients. This was facilitated by the ability to empathize with the patient’s experience. In stressing the importance of this shared experience, one CHW noted, “We come from the streets, same as the people that we serviced. We were there. We’ve been there. We’ve done that . . . and we love what we do because, you know, we give a helping hand to the people in the community because someone in the past gave a helping hand to us.”

Subunits that allowed CHWs to invest in long-term relationship building also reported higher levels of community integration. CHWs reported performing tasks beyond a traditional clinical scope to build trust with patients and community members. Relationship-building responsibilities were perceived to be time intensive and were supported by schedule and workflow flexibility so that CHWs could prioritize relationship-building needs. In describing how they work with patients, one CHW said:

I provide them with coffee. I provide them with some sandwiches. I’ll try to get them motivated to stay there, you know, cause it’s in their best interest. So, I do all these other little things that I don’t necessarily put on the chart. So yes, I do spend two hours or three hours with a client or however long it takes with the client, because I need to make sure that the client is well taken care of and not just, you know, not just another number.

## **Limitations**

The sample size in the research is small; thus, findings should be interpreted with caution and should be validated with further research. As a case study, this research focused specifically on one health and hospital system, and thus generalizability may be limited. Efforts were made to identify a case of study that shares traits with other health and hospital systems to improve generalizability. Additionally, including only those programs interested in discussing CHW integration may have selected for programs with the most robust CHW integration models. The relatively high response rate among recruited subunits serves to minimize this bias. It is also possible that biases may exist among respondents. Those care teams engaging CHWs in health services may represent those individuals or teams who are more prone to organizational change or nontraditional care models. Or these individuals may be more likely to value a CHW. Consequently, additional barriers may exist for those programs seeking to initiate CHW integration for the first time in a health system unaccustomed to CHW models.

The scoring system utilized in this research was generated from themes that emerged in the qualitative interviews. It is not inclusive of all important or relevant factors. For example, the extent to which CHWs serve in leadership roles within the organization could be an important factor that supports health system integration. The scoring system also should not be viewed as an evaluation of individual programs; rather, it offers a methodology for comparing integration across programs to learn more about factors associated with integration. Finally, broader cross-cutting factors, such as CHW funding mechanisms and state and local policies and regulations, are also important for integration, but were not evaluated in this research.

## **CONCLUSION**

This research offers preliminary insight into those factors that may be associated with effective integration of CHWs within health

systems. Health system-level factors identified in this research align with other research that suggests that communication and champions are important factors (Rogers et al., 2018). Communication can be fostered through regular meetings and in-person interaction. Also important is a training process that includes all members of the care team, and clear protocols that delineate responsibility. It is important for training and protocols to focus on both how CHWs can work within health systems and how health care providers can work with CHWs. But this research also points to the critical role that the predominant team culture and hierarchical structure play in health system integration. Simply providing trainings and creating protocols are not enough.

This research also brings attention to the importance of framing integration in the community as well as the health system. CHWs, and the health systems that employ them, may face a delicate balance between clinical and community integration priorities. Community integration is fostered through shared experiences, relationship building, trust, and health services that are accessible to communities served.

Critical for effective community-level integration is the process of rethinking where health care is delivered—focusing care delivery on formats that are more accessible or comfortable for patients. Critical for high levels of health system integration is the need to redesign how health services are delivered to enable the engagement of a CHW workforce. Shortell argues that we must do a better job of integrating health care, public health, and community development. We must move from patient-centered care to population-centered care. This can only be done by rethinking the “place” that health care is delivered and the “person” providing care (Shortell, 2013). Thus, Shortell is arguing for models that move clinical care from the clinic into the community. He argues that we should think beyond the physician in the delivery of care. Integrated CHW models provide an example of how such rethinking of health care delivery can be achieved.

Such examples of health care redesign pose notable leadership challenges in facilitating systems-level change. This research points to the relationship between the hierarchical structure of the care team and CHW integration. The current health care structure—with its emphasis on certifications or educational credentialing—does not enable integration of lay health workers such as CHWs, or the promotion of CHWs into leadership positions within the organization. Yet, changing the predominant culture of a health care team cannot be achieved quickly. More research is needed to understand how this systems-level change can be achieved. For example, does promoting CHWs into leadership and supervisory positions within the health system foster an organizational culture that supports CHW integration? And what organizational changes are needed to promote this workforce? This remains an area for future research.

CHW programs have different goals and priorities—with some programs prioritizing clinical or community-based work. Thus, the positioning of a program on the  $2 \times 2$  matrix may reflect a purposeful choice to prioritize clinical or community integration. Notable in this research is that 2 programs achieved high levels of integration in both the community and clinical context. At times, the goals of community and clinical integration may be in conflict. For example, CHWs with strong community-based experience may be less familiar with health system-level work such as record keeping in electronic medical record (EMR) systems. Yet, this research demonstrates that dual community and clinical integration is achievable, and specific practices may support this goal. For example, programs employing CHWs with community-based experience may need to build in more training time focused on health system knowledge. More research is needed to understand what unique factors support the dual priorities of high health system and community integration.

Finally, this research offers preliminary insights into factors associated with CHW integration that can be validated through



additional research. The factors identified in this research could be used to develop scales for larger-scale quantitative study (Islam et al., 2017).

## REFERENCES

- Allen, C. G., Escoffery, C., Satsangi, A., & Brownstein, J. N. (2015). Strategies to improve the integration of community health workers into health care teams: "A little fish in a big pond." *Preventing Chronic Disease, 12*, E154.
- Berwick, D. M., Nolan, T. W., & Whittington, J. (2008). The triple aim: Care, health, and cost. *Health Affairs, 27*(3), 759-769.
- Bodenheimer, T. (2019). Building powerful primary care teams. *Mayo Clinic Proceedings, 94*(7), 1135-1137.
- Collinsworth, A. W., Vulimiri, M., Schmidt, K. L., & Snead, C. A. (2013). Effectiveness of a community health worker-led diabetes self-management education program and implications for CHW involvement in care coordination strategies. *The Diabetes Educator, 39*(6), 792-799.
- Findley, S., Matos, S., Hicks, A., Chang, J., & Reich, D. (2014). Community health worker integration into the health care team accomplishes the triple aim in a patient-centered medical home: A Bronx tale. *The Journal of Ambulatory Care Management, 37*(1), 82-91.
- Fiscella, K., Mauksch, L., Bodenheimer, T., & Salas, E. (2017). Improving care teams' functioning: Recommendations from team science. *Joint Commission Journal on Quality and Patient Safety, 43*(7), 361-368.
- Gale, N. K., Heath, G., Cameron, E., Rashid, S., & Redwood, S. (2013). Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Medical Research Methodology, 13*, 117.
- Gunderson, J. M., Wieland, M. L., Quirindongo-Cedeno, O., Asiedu, G. B., Ridgeway, J. L., O'Brien, M. W., ... Njeru, J.B. (2018). Community health workers as an extension of care coordination in primary care. *Journal of Ambulatory Care Management, 41*(4), 333-340.
- Islam, N., Shapiro, E., Wyatt, L., Riley, L., Zanowiak, J., Ursua, R., ... Trinh-Shevrin, C. (2017). Evaluating community health workers' attributes, roles, and pathways of action in immigrant communities. *Preventive Medicine, 103*, 1-7.
- Johnson, S. L., & Gunn, V. L. (2015). Community health workers as a component of the health care team. *Pediatric Clinics of North America, 62*(5), 1313-1328.
- Kangovi, S., Grande, D., & Trinh-Shevrin, C. (2015). From rhetoric to reality—community health workers in post-reform U.S. health care. *The New England Journal of Medicine, 372*(24), 2277-2279.
- Kim, K., Choi, J. S., Choi, E., Nieman, C. L., Joo, J. H., Lin, F. R., ... Han, H. R. (2016). Effects of community-based health worker interventions to improve chronic disease management and care among vulnerable populations: A systematic review. *American Journal of Public Health, 106*(4), e3-e28.
- Kok, M. C., Broerse, J. E. W., Theobald, S., Ormel, H., Dieleman, M., & Taetmeyer, M. (2017a). Performance of community health workers: Situating their intermediary position within complex adaptive health systems. *Human Resources for Health, 15*(1), 59.
- Kok, M. C., Ormel, H., Broerse, J. E. W., Kane, S., Namakhoma, I., Otiso, L., ... Dieleman, M. (2017b). Optimising the benefits of community health workers' unique position between communities and the health sector: A comparative analysis of factors shaping relationships in four countries. *Global Public Health, 12*(11), 1404-1432.
- Malcarney, M., Pittman, P., Quigley, L., Horton, K., & Seiler, N. (2017). The changing roles of community health workers. *Health Services Research, 52*(1), 360-382.
- Martinez, J., Ro, M., Villa, N. W., Powell, W., & Knickman, J. R. (2011). Transforming the delivery of care in the post-health reform era: What role will community health workers play? *American Journal of Public Health, 101*(12), 1.
- Mickan, S. M., & Rodger, S. A. (2005). Effective health care teams: A model of six characteristics developed from shared perceptions. *Journal of Interprofessional Care, 19*(4), 358-370.
- Miles, M., Huberman, A., & Saldana, J. (2014). *Qualitative data analysis* (3rd ed.). London, England: Sage Publications.
- Payne, J., Razi, S., Emery, K., Quattrone, W., & Tardif-Douglin, M. (2017). Integrating community health workers (CHWs) into health care organizations. *Journal of Community Health, 42*(5), 983-990.
- Peters, D. H. (2014). The application of systems thinking in health: Why use systems thinking? *Health Research Policy and Systems, 12*, 51.
- Rogers, E. A., Manser, S. T., Cleary, J., Joseph, A. M., Harwood, E. M., & Call, K. T. (2018). Integrating community health workers into medical homes. *Annals of Family Medicine, 16*(1), 14-20.
- Sandelowski, M., Voils, C. I., & Knafl, G. (2009). On quantizing. *Journal of Mixed Methods Research, 3*(3), 208-222.
- Shortell, S. M. (2013). Bridging the divide between health and health care. *JAMA, 309*(11), 1121-1122.
- Timonen, V., Foley, G., & Conlon, C. (2018). Challenges when using grounded theory: A pragmatic introduction to doing GT research. *The International Journal of Qualitative Methods, 17*(1), 67-80.

Wagner, E. H., Flinter, M., Hsu, C., Crompt, D., Austin, B. T., Etz, R., ... Ladden, M. D. (2017). Effective team-based primary care: Observations from innovative practices. *BMC Family Practice, 18*(1), 13-18.

Wennerstrom, A., Hargrove, L., Minor, S., Kirkland, A. L., & Shelton, S. R. (2015). Integrating community health workers into primary care to support behavioral health service delivery: A pilot study. *The Journal of Ambulatory Care Management, 38*(3), 263-272.