Role of Technical Assistance and Relationships in

Development of Initiatives to Address Precarious Work

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THESIS

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This thesis is dedicated to the many individual workers and organizations across systems levels who work tirelessly to improve the lives of all working people. Many of these dedicated individuals and groups made this dissertation possible, and I have been and will continue to be very inspired by all of the work that they do.

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LIST OF ABBREVIATIONS

AL	Action Learning
AR	Action Research
HWC	Healthy Work Collaborative
NIOSH	National Institute for Occupational Safety and Health
PSE	Policy, Systems, and Environmental
TA	Technical Assistance
TWH	Total Worker Health
SDOH	Social Determinants of Health
UIC	University of Illinois at Chicago

SUMMARY

An exploratory mixed-methods study was conducted to examine the role of technical assistance in and facilitators, challenges, and impacts of a university-facilitated Action Learning process designed to build the capacity of multi-level, multi-sector organizations to address the drivers and repercussions of precarious work. This capacity-building process, entitled the Healthy Work Collaborative (HWC), involved six in-person meetings at the University of Illinois at Chicago (UIC) hosted by the Center for Healthy Work Outreach Core in which representatives of primarily health-focused organizations came to learn about precarious work from representatives of labor-organizations and begin to identify opportunities and plan for upstream actions to address its drivers. Participants in the HWC continued to develop and began to implement these actions in the year following the in-person sessions.

Participants in the HWC were invited to participate in various data collection activities over the course of a one year study period. The 7 UIC personnel who facilitated and provided technical assistance (TA) during and after the HWC process were invited to participate in a focus group in the week following the six HWC in-person sessions; the 7 representatives of labor organizations who provided content-focused TA during the HWC in-person sessions were invited to participate in baseline and immediate-post HWC interviews; and the 20 representatives of primarily health-focused organizations who participated in the HWC in-person sessions were invited to participate in interviews at 3- and 9-months post-HWC. All non-UIC HWC participants were also invited to participate in surveys at 4 time points during the study period in which they were asked to classify their organization's level of engagement with the other HWC-participating organizations.

Results from this study highlight the utility of a university connecting organizations from different disciplines that do not traditionally work together and suggests that the HWC process helped previously disconnected organizations from the health and labor sectors identify opportunities and begin to work collaboratively to design interventions to address the drivers and repercussions of precarious work.

1. INTRODUCTION

1.1 Background

The conditions in which people work have a determining impact on their health (M. Marmot, 2005). Precarious work, characterized by non-standard, uncertain and unpredictable work arrangements with low wages and unhealthy working conditions, has been shown to adversely affect worker health (Benach, Muntaner, & Santana, 2007; Benavides & Delclos, 2005). Workers in precarious jobs are more likely to be exposed to recognized occupational hazards, including psychosocial stressors, and are more likely to experience decreased economic security and social stability than their counterparts in standard, stable jobs, even when both work in the same workplace (Benach et al., 2014).

Despite the recognized implications of precarious work on worker health, few interventions aimed at addressing the drivers of these health concerns are described in the literature (Baron et al., 2014). Historically, interventions aimed at protecting and promoting worker health have been targeted at workers inside of their workplace and typically fail to consider the impacts of upstream determinants, such as economic and social policies that affect workers' work arrangements and economic security (Krieger, 2010; Punnett et al., 2009). Workers in non-traditional, highly precarious employment arrangements, such as contingent or temporary workers, contract workers, or day laborers, are less likely to benefit from workplace-based programs, as these workers may not return to the same worksite or interact with the same employer throughout the duration of their employment (Caldbick, Labonte, Mohindra, & Ruckert, 2014). Interventions at the community level are necessary to address upstream drivers of the health equities attributed to precarious work and achieve supportive environments for change to better protect and promote the health of precariously employed workers (Baron et al., 2014; Golden, McLeroy, Green, Earp, & Lieberman, 2015). Public health can and should take an active role in developing and implementing interventions that change policies, systems, and environments to reduce health equities and improve the health of these workers.

In many cases, organizations that are well-poised to take on complex problems like precarious work lack the necessary knowledge and skills to translate goals into practice (Mitchell, Florin, &

Stevenson, 2002). There is a need to transfer knowledge, including research findings, community knowledge, and lived experiences, into practice to minimize the "knowledge-to-action" gap (Graham et al., 2006). The literature offers some insight into effective ways in which transfer or exchange of knowledge can occur, which is a necessary catalyst for PSE change. These mechanisms include systems approaches to intervention, technical assistance (TA), building networks and forming partnerships, and community-university engagement, all of which are further described in Chapter 2.

While public health practitioners have been involved in the development of occupational health protection and health promotion programs for years, these programs have traditionally operated in siloes within workplaces (Schill & Chosewood, 2013). In an attempt to integrate health protection and promotion programs, the National Institute for Occupational Safety and Health (NIOSH) established the *Total Worker Health*® (TWH) program. TWH seeks to approach worker health holistically by addressing the myriad factors that contribute to worker health, including traditionally recognized occupational hazards, such as chemical, biological, physical, and psychosocial hazards, and other factors that impact worker well-being, such as wage and hour factors and access to paid leave (National Institute for Occupational Safety and Health (NIOSH), 2015).

In 2011, NIOSH began funding several Total Worker Health® Centers for Excellence with the goal of building scientific evidence around innovative approaches to address complex problems faced by workers in the United States.(National Institute for Occupational Safety and Health (NIOSH), 2015). The University of Illinois at Chicago (UIC) Center for Healthy Work, one of the NIOSH TWH Centers for Excellence, has focused its efforts on understanding the barriers faced by workers in non-traditional, precarious jobs in Illinois and building evidence around the development of interventions to remove those barriers.

One of the groups within the UIC Center for Healthy Work recognized the opportunity for diverse groups of stakeholders to engage in collaborative efforts to create sustainable policy, systems, and environmental (PSE) change to address both occupational and non-occupational factors that affect the health of precariously employed workers. Given the absence of existing coalitions, interventions, or best

practices in this area, researchers in the Center for Healthy Work's Outreach Core engaged a group of multi-disciplinary stakeholders in a process to better understand and begin to develop upstream action to address drivers of precarious work. This process, known as the Healthy Work Collaborative Initiative, involved a six-session series of instructional and planning-based activities for primarily Illinois-based organizations that were interested in addressing precarious work.

1.2 Healthy Work Collaborative Initiative

Prior to the development of the Healthy Work Collaborative (HWC), researchers in the Outreach Core conducted key informant interviews with individual representatives from a variety of local-, state-, and national-level groups across these focal areas: policy, research, and advocacy organizations; workforce development; labor unions and worker centers; non-profit community-based organizations; funding organizations; healthcare providers and healthcare-related associations; public health organizations; educational institutions; and employers or employer associations. The purpose of these key informant interviews was to explore perceptions of the relationships between work and health, identify existing systems approaches to address root causes of precarious work and promote and protect worker health more generally, and elucidate existing partnerships and communication channels for information sharing across groups.

Findings from these interviews suggested that representatives from many of the health-focused organizations who were interviewed, including public health departments, advocacy groups, and healthcare providers, were doing little to engage with labor-focused organizations that are driving upstream PSE change initiatives aimed at addressing precarious work at local, state, and national levels. The interviews also suggested that even single-discipline public health initiatives that target the causes of precarious work were few and limited in scope, despite the fact that many of these interviewees were able to identify work as an important determinant of health. In response to these findings, and given the absence of existing coalitions, interventions, or best practices in this area, UIC researchers engaged a

group of multi-disciplinary stakeholders in a process to better understand and begin to develop upstream action to address drivers of precarious work in the summer of 2018.

1.2.1 Healthy Work Collaborative Recruitment

Outreach Core researchers recognized that many of the public health, healthcare, and other non-labor organizations that were interviewed were well-poised to take on complex issues, like precarious work, that have many intricate root causes. However, both the literature and the Outreach Core's key informant interviews suggest that many organizations that are well-positioned to take on complex problems lack the necessary knowledge and skills to translate their goals into action (Mitchell et al., 2002). In an attempt to close this "knowledge-to-action" gap, Outreach Core researchers invited representatives from a variety of health-focused groups, including public health departments, health care providers, and health advocacy groups, and their partners to attend the HWC to deepen their understanding of precarious work, its drivers, and its consequences.

To recruit these health-focused participants, Outreach Core researchers conducted individual follow-up calls with representatives from organizations that were part of the key informant interviews as well as representatives from other health-focused organizations that had not participated in interviews. All representatives from health-focused organizations that were invited to participate in the HWC had an existing connection with at least one member of the Outreach Core. It is important to note that the various representatives that were invited to participate in the HWC had existing relationships with researchers at the Center for Healthy Work, and these researchers invited groups from their own networks to participate in the HWC sessions. Health-focused organizations invited to participate in the HWC included public health departments, health care providers, and health advocacy groups, as well as any of their non-health partner organizations that were also interested in understanding and developing plans to address precarious work.

Outreach Core researchers recognized that many representatives from labor organizations who participated in key informant interviews or who had existing relationships with the researchers already

had a deep understanding of precarious work and were actively engaged in developing and implementing interventions at multiple levels to better protect and support precariously employed workers. Given this level of existing expertise, Outreach Core researchers invited representatives of several labor groups, including worker centers, labor advocacy organizations, and a labor-focused academic group, to serve as labor expert technical assistance (TA) providers in the HWC sessions. These labor expert TA providers were asked to share their expertise via presentations, discussions, and other activities in the HWC sessions. The conceptualization of this TA role aligned with the content-focused TA described in the existing TA literature. (Blase, 2009; Fixsen, Blase, Horner, & Sugai, 2009; Le, Anthony, Bronheim, Holland, & Perry, 2016)

1.2.2 Healthy Work Collaborative Participants

One goal of the HWC was to connect these two groups in order to foster the development of more transdisciplinary, multi-level interventions to address the drivers of precarious work. Outreach Core researchers recognized that many of representatives from labor organizations already had a deep understanding of precarious work and were already actively engaged in developing and implementing interventions at multiple levels to better protect and support precariously employed workers. Given this level of existing expertise, Outreach Core researchers invited representatives of these labor organizations to serve as labor expert TA providers who would share content knowledge in the HWC sessions.

Many of the primarily health-focused TA recipients entered the HWC with an idea of a focal area or specific intervention to explore, and some entered in "teams", with partners identified with an issue of shared interest or specific intervention in mind. Others entered the HWC as sole representative of their organizations with no formal outside partners. A brief description of the types of participants and their areas of focus for action planning, if applicable, are included in Table I.

Outreach Core researchers also envisioned their own collective role as that of a convener, with the researchers also providing some level of TA to TA-recipients in the HWC sessions. In the HWC, TA provided by UIC researchers was conceptualized as more intensive, relationship-based TA, focused on

facilitating behavior and systems change, while TA provided by labor experts was conceptualized as more content-driven, focused on the transfer of knowledge to participants. For the duration of the HWC, UIC TA providers divided themselves up between TA recipient groups, helping to guide TA recipients through the various HWC activities and exercises. The UIC TA providers also followed up with their TA recipient groups between HWC sessions, pointing them in the direction of resources, clarifying content from the sessions, and pushing them toward actionable next steps. There is some evidence in the literature that this type of higher intensity TA, involving frequent check-ins and tailored supports and feedback, increases sustained, higher level involvement in later implementation or action phases (Le et al., 2016; Noell et al., 2005). The roles of both labor expert TA and UIC TA are briefly described in Table II.

1.2.3 Healthy Work Collaborative Structure

The UIC researchers designed the HWC using an Action Learning (AL) approach, which is an approach that emphasizes learning with the intent to build and sustain systems-level change (Marquardt, Leonard, Freedman, & Hill, 2009). Action Learngin uses an iterative, participatory process, which combines scientific knowledge with evidence derived from learners' experiences to solve complex problems (Hawe, Noort, King, & Jordens, 1997; Marquardt et al., 2009). Action Learning approaches often rely on AL "coaches", or facilitators, who promote critical thinking through probing and prompting of learners throughout a process. In the HWC, UIC researchers served in this facilitator role.

Activities within each session were designed to build upon one another so that participants would leave the HWC process with foundational knowledge and skills to plan for and take action to address drivers of precarious work within their own organizational purview. The HWC sessions were grouped into three phases (Table III), all of which incorporated AL tools: 1) Understanding; 2) System, strategies, and approaches; and 3) Planning for action. A fourth phase, the Action phase, was not included in the HWC sessions. Each phase included two sessions. Table III details the purpose of each phase and the activities that were included in that phase's sessions. In addition to these structured activities, UIC researchers built in time for networking and small- and large-group discussion to allow for deeper

TABLE I. HEALTHY WORK COLLABORATIVE TA RECIPIENTS

Participant Types	**Individuals/Organizations Represented (N individual representatives)**	**Focus for Action Planning**
TA Recipient Groups	**(17)**	
Rural	LHD (2), workforce development org (1), government representative (1)	Develop interventions to support health and well-being of precarious workers in rural county.
Hospital-Legal-Labor	Hospital system (1), legal organization (1), worker center (1)	Identify precarious workers who enter hospital system and connect with appropriate legal and other support services.
Public Health Advocacy-Academic	Public health advocacy organization (1), academic institution (1)	Improve community health worker employment structures across the state of Illinois.
LHD-Labor 1	LHD (1), worker center (1)	Develop strategies to enforce minimum wage and sick-leave ordinances at county level.
LHD-Labor 2	LHD (1), worker center (1)	Develop strategies for LHD's enforcement of labor standards during routine restaurant inspections.
TA Recipient Individuals	**(3)**	
Health Advocacy 1	Health advocacy organization (1)	Develop paid internship model focused on equity and inclusion.
Health Advocacy 2	Health advocacy organization (1)	Explore strategies to include precarious workers in workplace wellness programs.
Labor Union	Labor union (1)	Develop strategies to organize low-wage healthcare workers.

TABLE II. HEALTHY WORK COLLABORATIVE TA PROVIDERS

TA Provider Group	**Individuals/Organizations Represented (N individual representatives)**	**Focus of TA Provision**
UIC TA Providers	**(7)** Faculty (2) Staff (3) Students (2)	Relationship-focused TA; organized HWC process and engaged TA recipients directly in in-depth discussions and action-planning activities. Clarified content and pushed TA recipients to move towards action.
Labor Expert TA Providers	**(7)** Worker Centers (4) Advocacy Orgs (2) Academic Orgs (1)	Content-focused TA; focused on the transfer of knowledge to TA recipients. Engaged TA recipients in presentations and discussions about precarious work and skills and strategies to address it.

TABLE III. HEALTHY WORK COLLABORATIVE PHASES

Phase	**Purpose of Phase in the HWC**	**Aligning HWC Activities**
Understanding	Gather information and begin to develop a shared understanding of precarious work.	Presentations and Q&A with panel of experts.* Root cause analysis and creation of a rich picture diagram (systems map).
System, strategies, and approaches	Analyze and interpret data from the "Understanding" phase and further develop a shared understanding of precarious work and approaches to address it.	Framing and stakeholder exercises. Power analysis and mapping exercise.
Planning for action	Begin to develop a plan for action to address drivers of precarious work based on the shared understanding of precarious work from the previous cycles.	Past, current, and future state exercise. Development of a Theory of Change.
Action	Implement the plan for action developed during the previous phase. The "Action" phase was not part of the HWC sessions.	The "Action" phase was not part of the HWC sessions, but data collection for this study occurred during this phase.

engagement among participants. All of the HWC sessions were held in person at the UIC School of Public Health and took place within a 10-week period in the spring and summer of 2018.

1.2.4 Action Phase of Healthy Work Collaborative

Following the in-person HWC sessions, the Center for Healthy Work offered small grants to organizations in an effort to support participants' efforts to transition from planning interventions to implementation. In order to receive these small funds, participating organizations committed to attending two additional in-person sessions, both hosted by UIC, in which they would share progress and lessons learned with other grant recipients. All grant recipients were organizations represented in the initial in-person HWC sessions, but several organizations involved additional personnel from their organizations in the implementation phase of their planned intervention. In addition to supporting organizations' efforts to implement their planned initiatives, UIC researchers hoped that grant funding and follow-up interactions would help to sustain new relationships and more formal partnerships between the various groups that were initially represented in the in HWC. The UIC researchers continued to provide TA to HWC participants as they prepared for and began implementation of projects that they had focused on during the summer sessions.

1.2.5 Innovation of the Healthy Work Collaborative Model

While the HWC model shares some of the features of community-university partnerships highlighted in the literature, such as an opportunity to co-create knowledge and develop shared research and action agendas (Shannon & Wang, 2010), the model developed by UIC researchers focused heavily on planning and preparing for action and focused less on traditional research methodology. Unlike most TA models described in the literature, TA providers in the HWC were not convened based on an individual organization's self-identified need; rather, UIC researchers brought representatives from primarily health organizations together with representatives from labor organizations and organized the HWC process to fulfill the collective needs of the health organizations. Further, unlike most traditional

TA provider and recipient engagements, the HWC involved multiple TA providers from various organizations sharing content and skill knowledge in a formal, instructional setting with pre-determined agendas and learning objectives.

The HWC presented an opportunity to better understand how a university might function as both a convener and TA provider in hopes of facilitating engagement between sectors and supporting movement towards action planning. Given the lack of multi-disciplinary coalitions and upstream intervention development around precarious work, the HWC also presented an opportunity to better understand how relationships develop and the impacts of those relationships between previously unconnected groups of stakeholders as they explore ways to address issues of mutual interest.

1.3 Study Aims

The six session Healthy Work Collaborative (HWC) was part of a larger project in the UIC Center for Healthy Work Outreach Core. The overarching aim of the Outreach Core's larger project is to use an action research framework to understand and address precarious work through cycles of inquiry and action planning (Stringer, 2013). The HWC was a component of this larger project, designed with an intent to increase stakeholders' individual and organizational capacities to apply PSE strategies to address drivers of precarious work. The primary goal of the HWC was to bring together health and labor organizations to explore initiatives that may address health in the context of precarious employment.

For my dissertation research, I had four areas of interest, which I explored during and after the Healthy Work Collaborative: 1) university facilitation and technical assistance, both provided by UIC; 2) technical assistance provided by labor experts; 3) changes in and features of relationships formed or deepened as a result of individuals' participation in the HWC; and 4) changes in and features of partnerships formed or deepened as a result of individuals' participation in the HWC and the impacts of those partnerships on organizations' activities following the HWC. Given that TA, networks and transdisciplinary partnerships, and university-community partnerships have all been identified as important mechanisms to close the "knowledge to action" gap, I wanted to see if each of these was

important in facilitating learning and development of PSE change interventions in the context of the Collaborative. I conducted an exploratory mixed-methods study using a combination of surveys, interviews, and a focus group to examine each of these features in the context of the HWC and in the year following the HWC.

This study followed representatives from organizations involved in the HWC to answer the following research questions:

1. How do members of a university group and members of several labor organizations perceive their roles as technical assistance (TA) providers in a six-meeting process designed to prepare primarily health-focused organizations and their partners to take action to address precarious work?
2. How do the primarily health-focused TA recipients perceive the role of TA, provided by university and labor representatives, in this process and what impacts do these TA recipients attribute to the provision of TA?
3. How does involvement in this six-meeting process impact relationships between the individuals and organizations represented in the process?
4. Do individuals who participated in this process attribute changes to their organization's priorities and activities to their participation in the process? If so, how did priorities and activities shift?
5. Do individuals who participated in this process attribute changes to their organization's priorities and activities to the relationships that formed or were strengthened as a result of their participation in the process? If so, how and why did priorities and activities shift as a result of these relationships?

Four study aims were established to answer these research questions. Each of these aims is described below.

1.3.1 Aim 1

Aim 1 of this study was to explore the role of TA provided by members of the UIC Center for Healthy Work Outreach Core in the six-meeting HWC process. Because the HWC was a pilot process, researchers in the Outreach Core had not previously served in a TA role in this capacity. It is important to capture both TA providers' own perceptions of their role in convening and facilitating the HWC and the perceptions of TA recipients as to the utility and impacts that this university-sponsored TA model confers.

1.3.2 Aim 2

Aim 2 of this study was to explore the role TA provided by members of labor organizations in the six-meeting HWC process. Similar to Aim 1, labor expert TA providers had not previously provided TA in the context of the HWC given its pilot nature. Additionally, although TA recipients were willing participants in the HWC, they did not seek TA from the labor expert TA providers directly; rather, Outreach Core researchers convened both groups and asked the TA providers to share information with a specific focus on precarious work based on the researchers' perceptions of TA recipients' collective needs. It is therefore important to capture labor expert TA providers' perceptions of their own roles in the HWC, their motivations for participating in the HWC, and perceptions of features of the HWC TA model that they found helpful in building TA recipients' capacities to understand and take action to address precarious work.

1.3.3 Aim 3

Aim 3 of this study was to examine relationships between individuals who were involved in the six-meeting HWC process at 6 time points before, immediately following, and in the year following the conclusion of the HWC process. The focus on transdisciplinary networks as a means to understand and address complex problems presented in the literature highlights the importance of understanding ways in which networks can form, and the HWC presents an opportunity to do that. It is important to understand

the impacts of participation in the in-person sessions on the nature of individuals' and organizations' relationships with one another, as these relationships may progress towards more formal partnerships and may result in new collaborative strategies to address the drivers of precarious work at multiple levels.

A related sub-aim of Aim 3 is to examine the organizational priorities and endeavors of HWC participants in the months following their participation in the in-person sessions. One of the goals of the HWC was to foster cross-sectoral collaboration between HWC participant organizations with the longer-term goal of facilitating the development and implementation of PSE change to address precarious work. Shifts or lack of shifts in organizational priorities and activities might indicate organizations' likelihood to engage or not engage in formal partnerships with organizations from other sectors.

1.3.4 Aim 4

Aim 4 of this study was to examine relationships between members of more formal partnerships, whose organizations were represented in the HWC, established with the purpose of planning and implementing collaborative action to address precarious work. Although some participants in the HWC entered the in-person meetings with partnerships focused on a specific goal already formed, some expanded teams formed after the in-person sessions. In some cases, existing partnerships between organizations have expanded to include additional partners based on a deeper understanding of the original issue of interest and an expanded understanding of what players are already involved or ought to be involved in to address that issue. This aim provided the opportunity to look in depth at the relationships between individuals engaged in formal partnerships and also allowed for an examination of key decisions, activities, facilitators, and barriers of the partnership that might contribute to movement or lack of movement toward action.

Similar to Aim 3, an examination of organizational priorities and activities is an important sub-aim of Aim 4. Shifts in priorities and activities might provide insight into features of individual organizational structures or partnership structures that help or hinder movement towards action.

2. LITERATURE REVIEW

2.1 Work as a Social Determinant of Health

The circumstances in which people live and work have long been established as important social determinants of health (SDOH) (Commission on Social Determinants of Health, 2008; Link & Phelan, 1995; M. Marmot, 2005). Both the circumstances of daily life, including the conditions in which people are born, grow, live, work, and age, and the structural drivers of these conditions, including the unfair distribution of power, money, and resources, are encompassed in the designation "social determinants of health." The social and economic policies in the United States have a determining impact on the equitable distribution of resources across the population, and the unequal distribution of these resources has recognized implications for the population's health (Commission on Social Determinants of Health, 2008).

The unequal distribution of wealth, power, and resources affects the employment and working conditions experienced by individuals in a system. Employment conditions refer to an individual's work arrangement, typically categorized as unemployed, employed in a standard work arrangement, or employed in a non-standard, "atypical" work arrangement (Benach et al., 2007). In the United States, standard full-time, permanent jobs with benefits are on the decline, while non-standard, atypical forms of employment, such as contingent or temporary work, part-time contract work, unregulated, underground work or home-based work, are on the rise (Benach & Muntaner, 2007). Working conditions, on the other hand, are the circumstances that workers experience in their work environments. The tasks that workers must perform, the organization of the workplace and job tasks, and hazardous conditions encountered on the job are examples of working conditions (Benach et al., 2007). As employment conditions shift from standard work arrangements to non-standard, atypical work arrangements, workers experience decreased economic security and social stability. Work becomes increasingly precarious as forms of employment shift away from standard work arrangements towards highly precarious non-standard work arrangements (Hadden, Muntaner, Benach, Gimeno, & Benavides, 2007).

2.1.1 Precarious Work

The term "precarious work" has been used to describe work that is "uncertain, unpredictable, and risky from the point of view of the worker" (Kalleberg, 2009). Precarious work is characterized by non-standard or atypical work arrangements, including temporary work, part-time contract work, or unregulated, informal work such as day labor or domestic work (Benach & Muntaner, 2007; National Employment Law Project (NELP), 2009). Features of precarious jobs include low wages, lack of protection from termination, variable work schedules, and working conditions that cause high psychosocial stress (Benach & Muntaner, 2007). Workers in precarious jobs are disproportionately exposed to a variety of workplace and social risks due to the shifting of societal risks from institutions in the private and public sectors to the individual worker (Weil, 2009). Studies increasingly show that highly precarious, flexible work arrangements have adverse effects on the health of workers (Azaroff, Levenstein, & Wegman, 2002; Benach & Muntaner, 2007; Benavides & Delclos, 2005; Kalleberg, 2009; Park & Butler, 2001).

The rise in precarious work in the United States can be linked to macroeconomic changes that resulted in increased global competition, which led to outsourcing of labor, weakened labor unions, and deregulation of the labor market (Kalleberg, 2009). In response to increased competition, employers have sought to minimize costs by shifting jobs away from standard, full-time work arrangements toward a more flexible labor market. From an economic perspective, flexible employment has become necessary for increased productivity given increased competition in both developed and developing countries (Benavides & Delclos, 2005). This has resulted in an increase in non-standard and informal work arrangements that have been linked to adverse mental and physical health outcomes (Benach et al., 2014; Ferrie, Westerlund, Virtanen, Vahtera, & Kivimäki, 2008; Landsbergis, Grzywacz, & LaMontagne, 2014).

The causes of precarious work are complex and multi-faceted. Jobs added to the economy post-recession are increasingly non-standard and insecure and without intervention, a growing share of workers in the United States will experience precarious employment conditions, regardless of occupation

(Caldbick et al., 2014; Weil, 2014). In recent decades, formerly standard, stable jobs have become increasingly precarious, and many of the fastest growing jobs at present are low-wage, often temporary contract jobs (Bureau of Labor Statistics, 2016; Weil, 2014). This shift towards more flexible working arrangements to meet fluctuating employment needs increases job insecurity among workers who hold these temporary or contract jobs, which is likely to result in an increase of adverse mental and physical health effects among these workers (Benach & Muntaner, 2007; M. G. Marmot, Ferrie, Newman, & Stansfeld, 2001). Precarious jobs now exist in virtually all employment sectors in the United States, resulting in a large and growing population of vulnerable workers (Kalleberg, 2014; Weil, 2009).

2.2 Approaches to Address the Health of Precariously Employed Workers

Improvements in the health outcomes of workers who experience increasingly precarious employment conditions requires an understanding of the determinants of health at multiple social ecological levels, including the individual, intrapersonal, interpersonal, organizational, and community or societal levels, coupled with a range of strategies to address these determinants at each level (Glanz & Ammerman, 2015). To achieve real, substantial change, interventions must be undertaken at multiple social ecological levels to improve the conditions that affect health (see Figure 1). However, despite calls for multi-level interventions to reduce health inequities, most interventions described in the literature tend to focus on modifying individual behaviors instead of tackling community- or societal-level factors through policy, systems, or environmental (PSE) changes (Bambra et al., 2010).

Because many of the features of precarious work are not unique to a single occupation or a single workplace, interventions that focus primarily on individual or interpersonal determinants of workers' health without consideration of more upstream determinants are limited in potential impact. Several studies specifically highlight the limitations or barriers of implementing interventions targeted at precariously employed workers inside the workplace, noting that these interventions address only "downstream" behavioral risks and do not change the more fundamental causes of workers' health concerns (Baron et al., 2014). It is therefore important that initiatives aimed at addressing the causes of

Figure 1. Social ecological model

precarious work occur at broadly impactful social ecological levels. Studies have shown that societal-level changes to achieve supportive environments for change are especially necessary to both address upstream drivers of health problems and maintain individual-level behavior (Brownson, Fielding, & Maylahn, 2009; Glanz & Bishop, 2010).

2.2.1 Policy, Systems, and Environmental (PSE) Change

There is a substantial body of literature that posits that public health interventions that create the social and environmental conditions that promote and facilitate health are likely to be most effective and impactful on a population level (Allegrante, 2015; Golden et al., 2015; National Employment Law Project (NELP), 2009; Phelan, Link, & Tehranifar, 2010; Tarlo, Arif, Delclos, Henneberger, & Patel, 2017). Unlike health promotion or health protection interventions that are often designed to target individual health behaviors, such as those of individual workers in a given workplace, PSE change approaches to

intervention focus on the structures in which individuals live and work (The Food Trust, 2012). Successful PSE approaches to intervention consider the needs of a particular population and aim to address those needs using public policies, organizational policies and activities, and changes to physical environments (The Food Trust, 2012). Although these approaches are focused at the community level, they typically incorporate strategies at aimed at addressing the community's needs at multiple social ecological levels (e.g. individual, interpersonal, organizational, community) (Cheadle et al., 2016). For example, a minimum wage ordinance at a county level is a change in public policy (community level) that has the potential to directly impact individuals' abilities to attend to their own and their families' needs (individual and interpersonal levels).

For maximum impact and effectiveness, PSE change approaches are needed to address the drivers and consequences of precarious work at multiple social ecological levels. Unfortunately, PSE changes are often difficult to articulate, potentially limiting perceived feasibility and effectiveness, and are also difficult to engineer, requiring buy-in and infusion of resources from a variety of stakeholders (Golden et al., 2015). These challenges likely contribute to the scarcity of societal-level interventions that address complex problems like precarious work.

Given these challenges, there has been much discussion in the literature about the process of developing PSE interventions to address complex issues. Examples of PSE change approaches to intervention in a variety of settings have highlighted important factors and practices that contribute to successful intervention development and implementation (Allegrante, 2015). These factors include deep understanding of the problem of interest and relevant power dynamics between stakeholders at multiple levels (Freudenberg, Franzosa, Chisholm, & Libman, 2015; Freudenberg, Silver, Hirsch, & Cohen, 2016), collaborative partnerships with and buy-in from an influential group of decision makers (Allegrante, 2015; Best, Stokols, et al., 2003), capacity of those decision makers to address the issue (Freudenberg, Pastor, & Israel, 2011), and broad social support for intervention (Allegrante, 2015).

There are several examples of successful public health PSE change interventions that incorporate these factors, including tobacco control initiatives and measures to reduce automotive crashes (Allegrante,

2015). However, there is little evidence in the literature of similar strategies to address the drivers or repercussions of precarious employment. Interventions to improve the health of workers in precarious jobs are difficult to design and implement, as workers in these jobs are hard to reach and many of the contributors to adverse health outcomes are upstream social and economic policies that drive increases in precarious employment (Baron et al., 2014; Commission on Social Determinants of Health, 2008). Many public health professionals may also lack sufficient knowledge of the causes, characteristics, and consequences of precarious work that are necessary to design and implement effective interventions in this arena. Ultimately, the adverse impacts that precarious employment has on worker health make it imperative that public health professionals utilize a PSE change approach to develop effective and expansive interventions that target the causes and consequences of precarious work.

2.3 Knowledge-to-Action

In many cases, organizations that are well-poised to take on complex problems lack the necessary knowledge and skills to translate goals into practice (Mitchell et al., 2002). Researchers and practitioners in many disciplines have highlighted the need to enhance and expedite the transfer of research findings and other forms of existing knowledge (i.e. community knowledge, lived experiences, etc.) into practice in order to minimize the "knowledge-to-action" gap (Graham et al., 2006). There are a variety of terms used to describe this transfer process, including "knowledge translation", "knowledge transfer", and "knowledge exchange", each of which vary in terms of elements involved in the knowledge-to-action process. Several definitions of each of these terms are described and interpreted in detail by Graham et al. (2006) and are summarized here:

- *Knowledge translation* typically refers to the transfer of primarily scientific research to practice with the specific intent to improve health outcomes. In at least one definition of knowledge translation reviewed by Graham et al, it is clear that the knowledge translation process is intended to be

collaborative between researchers and practitioners with two-way interactions between the two stakeholder groups.

- *Knowledge transfer* is used in fields outside of healthcare, with "knowledge" encompassing ways of knowing that are not limited to scientific research. Graham et al note that none of the definitions of knowledge transfer that they reviewed are explicit in whether the knowledge transfer process is uni- versus bi-directional, but do note that several definitions appear to refer to a one-way process of transferring knowledge from producers to stakeholders. Additionally, these definitions are not explicit about the intended use of knowledge beyond dissemination, so it is unclear whether the knowledge transfer process is meant to include an action phase.
- *Knowledge exchange* is more explicit in regards to the collaborative nature of the process involved in understanding and acting upon a given problem. The definition of knowledge exchange reviewed by Graham et al describes a process of bringing stakeholders together to understand a problem and generate knowledge that "is relevant and applicable to stakeholder decision making as well as useful to researchers" (Graham et al., 2006). This definition explicitly outlines the need for collaborative engagement throughout the entire knowledge-to-action process, from shared learning through implementation.

Several mechanisms to close the "knowledge-to-action" gap are described in the literature. These include systems approaches to intervention, technical assistance, building diverse networks and partnerships, and community-university engagement. These are further described in sections 2.5 – 2.8, below.

2.4 Approaches Used by Center for Healthy Work Outreach Core

The overarching aim of the UIC Center for Healthy Work Outreach Core project is to use an Action Research (AR) framework to generate knowledge about precarious work in various contexts and systematically develop and implement action plans to address the contributors to precarious work. The Healthy Work Collaborative (HWC) initiative, described in Chapter 1, was a component of the Outreach

Core's overall project that used an Action Learning (AL) approach to increase participants' understanding of the drivers and repercussions of precarious work and their organizations' capacity to develop interventions to address those drivers and repercussions. Action Research and AL are further described below.

2.4.1 Action Research

AR was originally conceived as an approach to intervention by Kurt Lewin. Lewin's AR approach involves cycles of knowledge generation, through processes of investigation and understanding of a system, and action planning and implementation to change aspects of that system (Lewin, 1946). Variations of Lewin's original AR approach have emerged since his original conceptualization of AR in the 1940s, and many AR approaches share similarities with systems approaches, including involvement of transdisciplinary stakeholders in AR processes (Stokols, 2006). Action Research approaches have been used to tackle a variety of complex societal issues (Stokols, 2006).

At UIC, Outreach Core researchers relied on one AR approach, conceptualized by Stringer, as the overarching framework for their project. Stringer's AR framework involves a cyclical and iterative approach to inquiry and action planning (Stringer, 2013). The AR framework begins with an information gathering or investigative process, a cycle Stringer refers to as the "Look" cycle, in which stakeholders together begin to build a deep understanding of the issue of interest. This is closely followed by the "Think" cycle, which involves analysis and interpretation of information gathered in the "Look" cycle. The third and fourth cycles in this Action Research framework are the "Plan" and "Act" cycles, during which stakeholders plan for and implement actions to address the issue of interest.

2.4.2 Action Learning

The UIC Outreach Core researchers used an AL approach in the design of the HWC. Action Learning is an approach to problem solving that emphasizes learning through action and reflection on the results of that action (Revans, 1982). Action Learning was originally conceptualized by Reg Revans in

the early 1980s but, like AR, has been adapted by others to better suit emerging learning and action needs in different contexts. One of these adaptations is that of Marquardt et al (2009), in which AL was used with the intent to build and sustain systems-level change, specifically. Like Revan's original AL approach, that described by Marquardt et al uses an iterative, participatory process, which combines scientific knowledge with evidence derived from learners' experiences to solve complex problems (Hawe et al., 1997; Marquardt et al., 2009). Unlike Revan's approach, however, Marquardt et al's AL approach relies on AL "coaches", or facilitators, who promote critical thinking through probing and prompting of learners throughout a process. In the HWC, UIC researchers served in this facilitator role.

2.5 Systems Approaches to Intervention

Given the absence of existing public health interventions and best practices to address precarious work, it is important that public health researchers and practitioners understand the various facets of the issue and learn from other non-public health PSE change approaches that have been used to address it. Systems approaches, which are gaining popularity in the public health field, emphasize the holistic consideration of interacting factors that contribute to a particular problem and the various strategies that have or can be used to address those factors (Best, Moor, et al., 2003; Best, Stokols, et al., 2003; Midgley, 2006). In an effort to solve a complex problem using a systems approach, parties must consider all of the factors that interact within a system to produce a particular problem and then manipulate those factors via intervention to solve the problem.

Engaging diverse groups of stakeholders or problem solves is especially important when using a systems approach, as they can support both the research and development of solutions to address complex issues (Golden et al., 2015; Stokols, Hall, & Vogel, 2013). Results from several studies suggest that team-based approaches to problem solving and intervention are more effective than single disciplinary approaches, especially when collaborators from a variety of fields come together to explore an issue of shared interest and are able to offer a range of perspectives, knowledge, and approaches in response to that issue (Jordan, 2006; Wuchty, Jones, & Uzzi, 2007).

Many of the features of systems approaches to intervention align with the factors and practices that contribute to successful development of PSE change interventions. It is therefore logical that public health professionals utilize a systems approach when beginning to develop PSE change interventions to address precarious work, given public health's limited familiarity and experience with the issue.

2.6 Technical Assistance to Support PSE Change

In order to move towards action to address complex problems like precarious work, decision makers must ensure that they have the knowledge, tools, and resources necessary to mobilize for and engineer PSE changes. Technical assistance (TA) providers can provide organizations with these supports as they aim to better understand and mobilize to tackle complex, unfamiliar problems. Several studies describe ways in which TA providers can support knowledge-to-action processes with varying intensity (Fixsen et al., 2009; Le et al., 2016; Rushovich, Bartley, Steward, & Bright, 2015).

Several studies have shown TA to be a necessary part of implementing PSE change, helping to increase the capacity of other organizations to tackle complex problems through the translation of knowledge into policies and programs (Le et al., 2016; Mitchell et al., 2002; Trohanis, 1980). Effective TA models described in the PSE change literature integrate several theoretical principles, including theories of change, adult learning, consultation, and facilitation (Blase, 2009; De Silva et al., 2014; Le et al., 2016; Trohanis TA Project, 2014). Using these principles, researchers and practitioners in various fields have conceptualized TA as a multi-tiered approach to build the capacity of individuals or organizations to achieve substantial PSE change (Chilenski et al., 2018; Fixsen et al., 2009).

The intensity of TA provided to a recipient depends on that recipient's needs and their desired project outcomes and can be classified along a continuum from less intensive, content-drive TA, to more intensive, relationship-based TA (Fixsen et al., 2009; Le et al., 2016). Less intensive TA typically involves sharing of content or skill knowledge with the TA recipient, which is most useful when the recipient already has structures and policies in place to support PSE change (Rushovich et al., 2015). This type of TA often involves fewer, less intensive TA-recipient encounters in which TA providers present

information to the recipients but do not engage in longer-term collaborative work. More intensive TA, on the other hand requires a more sophisticated relationship between the TA provider and the recipient. In this instance, the TA provider engaged in sustained, in-depth work in partnership with the TA recipient and takes on more responsibility for the outcomes of the program that they are supporting (Fixsen et al., 2009).

In all of the aforementioned studies, TA is conceptualized as a support to a particular recipient based on that recipient's self-identified need. In general, TA appears to be sought out by a recipient, either on their own accord or via a support system as part of a grant or other formalized structure with a specific purpose (e.g. supports for local health departments (LHDs) as they design community health improvement plans to address the social determinants of health) (Fixsen et al., 2009).

2.7 Networks and Transdisciplinary Partnerships

Although there have been calls to develop multi-level, multi-stakeholder interventions to address complex problems like precarious work, actual interventions that meet these criteria remain scarce (Schölmerich & Kawachi, 2016). A prerequisite to the development of multi-sectoral interventions is the establishment of multi-sectoral networks. Networks have been defined as groups of interconnected individuals or organizations that have some level of relationship with one another (Jay, 1964). Many studies have described the utility of establishing diverse networks, including an expanded ability for organizations to conceive of, design, implement, and sustain interventions in complex environments (Chisholm, 1996). Networks of organizations typically form when members identify shared interests or potentially duplicative efforts to address an issue of mutual interest, and members of a given network might work together in some capacity to create and implement interventions (Chisholm, 1996).

Achieving PSE change typically requires coalitions and partnerships between and among multiple diverse organizations or constituencies (Centers for Disease Control and Prevention, n.d.). In general, successful coalitions bring together various groups to pool resources and leverage respective areas of expertise to achieve meaningful and sustainable change, and funders have increasingly invested in

interagency collaboration and coalition development as part of health promotion interventions (Butterfoss, Goodman, & Wandersman, 1993; Cross, Dickmann, Newman-Gonchar, & Fagan, 2009).

Several researchers have posited that relationships between organizations within a network can vary in intensity, depending on the mutually agreed upon purpose and goals of the network. Organizations may form more formal coalitions in order to achieve a common goal, and relationships between coalition members often vary in intensity (Butterfoss et al., 1993). Existing organizational relationship literature suggests that relationships between organizations begin with low intensity exchanges, typically in the form of networking between members of two organizations (Himmelman, 2002; Riggs, Block, Warr, & Gibbs, 2013). Relationships can progress along a continuum from less intensive to more intensive engagements depending on each organization's available time and willingness to engage, their commitment to an issue of shared interest, and the level of trust between the two organizations (Himmelman, 2002).

Himmelman developed four separate relationship classifications based on this theory, progressing from least to most intense: networking relationships, coordinating relationships, cooperating relationships, and collaborating relationships. Relationships on the less intensive end of this intensity spectrum are primarily focused on mutually beneficial information exchange between organizations, while relationships of increasing intensity involve altering of organizational activities to achieve a specific shared goal (Himmelman, 2002). Himmelman posits that organizations that move beyond initial networking will reach a coordinating stage, in which they exchange mutually beneficial information and begin to alter organizational activities to serve a shared purpose. Increasingly intensive relationships, classified by Himmelman as cooperating relationships, require higher levels of trust and willingness to adapt organizational priorities from both organizations. Collaborating relationships are the most intensive, demanding significant organizational changes for both organizations to ensure that resources are appropriately leveraged and shared objectives are met.

2.8 Community-University Partnerships

Collaborations between university groups and outside partner organizations are certainly not new and have been described in various contexts in the literature. Much of the existing literature on community-university partnerships focuses on opportunities for knowledge translation, or application of research findings in the community, and service-learning and community-based research (Shannon & Wang, 2010; Suarez-Balcazar, Harper, & Lewis, 2005). Universities can play important roles in community networks, helping to connect various academic departments and community-based organizations (Shannon & Wang, 2010). More involved community-university partnerships present opportunities to co-create knowledge and develop shared research and action agendas (Drabble, Lemon, D'Andrade, Donoviel, & Le, 2013). When resources allow, universities are able to support community engagement with grant funding, which has been found to both support community involvement with research and action planning and demonstrate the value that the university places on community engagement (Leisey, Holton, & Davey, 2012).

While some studies have examined the value and impacts of community-university engagement in research and practice partnerships (Drabble et al., 2013; Leisey et al., 2012; Shannon & Wang, 2010), no studies were found that focus on universities as a convener for processes focused heavily on planning and preparing for action and focused less on traditional research methodology.

3. METHODS

3.1 Study Population

Thirty-seven individuals were invited to participate in one or more components of this longitudinal mixed-method case study. These individuals included all individuals who participated in the Healthy Work Collaborative (HWC) in-person sessions some capacity (32 individuals) and any individuals who joined partnerships with HWC participants in the months post-HWC (5 individuals). Study participants fell into the following categories:

1. The UIC researchers who organized and facilitated the overall HWC process (7 individuals);
2. Representatives from labor organizing, labor advocacy, and labor-focused academic organizations who attended select HWC sessions and led various HWC activities during those sessions (5 individuals);
3. Representatives from labor organizing organizations who both led select HWC activities and attended and participated in all other HWC sessions (2 individuals);
4. Representatives from a variety of organizations, primarily from public health- and healthcare-focused organizations, who attended and participated in all six HWC sessions (18 individuals); and
5. Representatives from several organizations, some of which were represented in the HWC sessions, who joined partnerships following the HWC but who did not attend the in-person sessions (5 individuals).

Both UIC researchers and the representatives from labor-focused organizations who led various HWC activities were considered technical assistance (TA) providers in the HWC process. These individuals are referred to as either UIC TA providers or labor expert TA providers in Chapters 4 and 5. All non-TA providers are referred to as TA recipients in Chapters 4 and 5. In Chapter 6 and 7, these distinctions are not used; instead, individuals are referred to more generally as HWC participants or new partnership

participants and are distinguished by the type of organization that they represent (e.g. public health department, hospital system, worker center, etc.).

3.2 Instruments

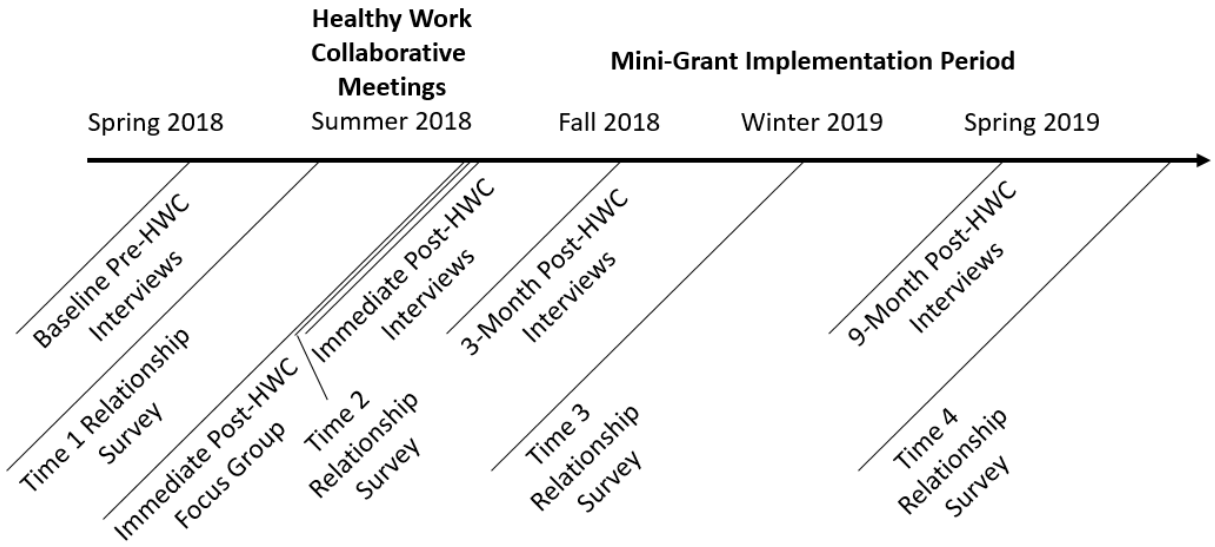
Several instruments were developed to obtain information from study participants. Each instrument, its purpose, and the intended audience for that instrument is further described, below. Data collection took place over the course of a year (see Figure 2).

3.2.1 Relationship Surveys

All non-UIC participants, including labor expert TA providers and TA recipients, were asked to report the nature of their relationships with other organizations represented in the HWC at four time points: at baseline (May 2018); immediately post-HWC in-person sessions (July 2018); 6 months post-HWC (January 2019); and approximately 12 months post-HWC (June 2019). New partnership participants were asked to complete the surveys at 6-month and 12-month follow-up. Participants were provided definitions for four relationship classifications and were asked to self-report the nature of their relationship with each of the other organizations that were represented in the HWC sessions. These relationship classifications aligned with Himmelman's organizational engagement strategies (described in Chapter 2) and included:

1. No existing relationship, defined as having no interaction with the organization;
2. Networking relationship, defined as exchanging relationship for mutual benefit;
3. Coordinating relationship, defined as both organizations changing plans and activities to accomplish something together; and
4. Collaborating relationship, defined as sharing resources, including staff, money, time, and facilities, between organizations.

Figure 2. Data collection timeline



Coordinating and cooperating relationships, which Himmelman described at two distinct relationship classifications, were combined in this study in order to simplify the survey tool and streamline definitions into four distinct categories.

Participants were sent an online Qualtrics survey link prior to the start of the first in-person HWC. In the event that they did not complete the online survey prior to the session, they were asked to complete the survey in-person at the first session. Participants were sent an online Qualtrics survey link again immediately following the final HWC session. Paper versions of the survey were administered to participants at 6-months and 12-months at in-person meetings at UIC. In the event that participants were unable to attend these in-person meetings, they were sent online Qualtrics survey links at these two time points.

3.2.2 Baseline Semi-Structured Interview Guide (Labor Expert TA Providers)

All labor experts who agreed to participate in the HWC as TA providers were invited to participate in an interview prior to the start of the first HWC session. The baseline interview guide was

designed to capture TA providers' initial expectations of their role as TA providers in the HWC, including their own readiness to provide TA, their motivations for participating in the HWC, and any expectations of TA recipients' needs and likely impacts of TA provision for recipients in the HWC.

3.2.3 Immediate Post-HWC Semi-Structured Interview Guide (Labor Expert TA Providers)

Labor expert TA providers were invited to participate in a follow-up interview in the days immediately following the last HWC session. The immediate post-HWC guide was designed to capture labor experts' perceptions of what TA recipients gained from the HWC process, perceptions of TA providers' own roles inside and outside of the HWC sessions, and perceptions of impacts that the HWC process had on TA providers' own thinking. The guide also aimed to capture any shifts in TA providers' perceptions of their role and the intensity of TA provided in the HWC as compared to their initial baseline expectations, as well as TA providers' impressions of the HWC process more generally.

3.2.4 Immediate Post-HWC Semi-Structured Focus Group Guide (UIC TA Providers)

The UIC TA providers were invited to participate in an in-person focus group in the days immediately following the final HWC session. The focus group guide was designed to capture UIC TA provider's perceptions of what TA recipients gained from the HWC process, perceptions of UIC TA providers' own roles inside and outside of the HWC sessions, and perceptions of impacts that the HWC process had on UIC TA providers' own thinking. Labor expert TA providers were invited to participate in a follow-up phone interview in this same time frame. The immediate post-HWC guide was designed to capture labor experts' perceptions of the same constructs as the UIC TA provider focus group guide, as well as labor experts' impressions of the HWC process more generally.

3.2.5 3-Month Post-HWC Follow-Up Semi-Structured Interview Guide

All TA recipients were invited to participate in a phone interview approximately three months after the final HWC session, as were TA providers who had continued to engage with non-TA

participants beyond the formal HWC six-meeting period. The three-month post-HWC interview guide was designed to capture TA recipient and TA provider impressions of what they had gained from participating in the HWC, any shifts in their thinking and action since participating, and their perceptions of the role of TA, provided by UIC and labor experts in the HWC. This interview guide was also designed to capture in-depth information about their relationships with other organizations represented in the HWC, any formal partnerships developed between these organizations post-HWC, and general information about new organizational priorities or activities that participants' organizations had undertaken since the conclusion of the HWC. The TA recipients were interviewed at the three-month time point instead of immediately post-HWC to better capture ways in which the TA recipients had applied what they had learned from the HWC since the conclusion of the sessions and any implementation of activities planned during the HWC sessions. The TA providers who continued to engage with non-TA participants were also interviewed at this time point to capture reasons for their continued relationships and any impacts of those relationships.

3.2.6 9-Month Post-HWC Follow-Up Semi-Structured Interview Guide

The same study participants who were interviewed at 3-month follow-up were also invited to participate in an interview at 9-month follow-up, as were any new individuals who had joined partnerships since the conclusion of the HWC (new partnership participants). The 9-month post-HWC interview guide was designed to capture some of the same information from the 3-month post-HWC guide, including in-depth information about their relationships with other organizations represented in the HWC, information about formal partnerships with other HWC participating organizations, and general information about organizational priorities or activities that participants' organizations had undertaken since the conclusion of the HWC. This interview guide also included more in-depth questions focused on features of formal partnerships that interviewees perceived were either contributing to or hindering the success of partnership activities.

3.3 Data Analysis

3.3.1 Quantitative Data

Data from the relationship surveys at each time point were used to examine the nature of relationships reported by the full sample and dyadic relationships between participants and other organizations. Basic descriptive analyses were conducted to understand relationship characteristics of the sample at each time point. Shifts in reported relationships were compared from baseline to immediate post-HWC follow-up and from baseline to one-year post-HWC follow-up. In the event that a participant did not complete surveys at two or more time points that were compared in the analysis phase (e.g. a participant did not complete both baseline and immediate follow-up surveys), that participant was not included in the analysis for that particular time frame. Similarly, organizations who were not represented in all 4 survey time points (e.g. an organization that was not originally involved in the HWC in-person sessions but joined a partnership later on) were also excluded from analyses.

3.3.2 Qualitative Data

All interviews and the focus group were audio recorded and professionally transcribed. The transcribed interviews were then analyzed using a hybrid approach that involved both inductive and deductive coding and theme development, similar to the approach described by Fereday and Muir-Cochrane (Fereday and Muir-Cochrane 2006). Preliminary codebooks for each set of interviews were developed prior to data collection with template codes based on applicable research questions. Separate codebooks were prepared for interviews with labor expert TA providers (baseline and immediate post-HWC semi-structured interviews); the focus group with UIC TA providers; 3-month post-HWC interviews with TA recipients and select TA providers; and 9-month post-HWC interviews with TA recipients, select TA providers, and new partnership participants. Some codes were used across multiple sets of interviews, while others were only relevant for one set of interviews. Two slightly different

analysis protocols were used in this study, each of which are further described below. Dedoose software was used for all qualitative analyses in this study.

Baseline and immediate post-HWC interviews with labor expert TA providers and the focus group with UIC TA providers were coded by a single coder. For each transcribed interview, the following analysis protocol was used:

1. Each full interview was read and key points were summarized in a memo. At this point, additional codes were added to the codebook based on new categories that emerged from the textual data.
2. A priori codes and emergent codes were then applied to the interview text where text segments were considered representative of and matched the definition of an individual code.
3. As segments of text were coded, each new excerpt was compared with segments that had previously been assigned the same code. In the event that a code did not seem to fit for both segments, a new code was added to the codebook and relevant sections of the transcribed interview were recoded.
4. After all interviews were coded and additions to and refinements of the codebook were complete, a new cycle of coding began. Each interview was re-coded using the updated codebook.
5. After the second coding cycle, final coded segments were read and a process of clustering around similar patterns and themes began. At this stage, differences in themes across interviewees were examined, as were differences in baseline and post-HWC responses from TA providers, specifically.

Three-month and 9-month post-HWC follow-up interviews were coded by two coders. For each transcribed interview, the following analysis protocol was used:

1-2. Steps 1 and 2 from the baseline, immediate post-HWC, and focus group protocol were used for this set of interviews as described above. Instead of a single coder, two coders completed these two steps.

3. After each transcribed interview was coded by both coders, coded segments were compared for agreement. In the event that the two coders did not agree on coding for a particular segment, they discussed the segment and attempted to come to agreement as to which code(s) should be applied. In the event that the two coders could not come to agreement, a third coder was asked to code the interview and discuss applied codes with the original two coders. Additionally, in the event that no codes seemed to fit a given segment, a new code was added to the codebook and relevant sections of the transcribed interview were recoded. Both coders reviewed already coded interviews for comparison of applied codes and recoded those interviews as needed to reflect codebook updates.
4. Final coded segments were read and a process of clustering around similar patterns and themes began. Differences across interviewee types were examined, as were differences from 3- to 9-month interviews.

3.3.3 Triangulation

Data from the various methodological components were triangulated to more fully answer the study's research questions. Data from the relationship surveys and interviews at various time points were used to better understand the various impacts of TA providers' and recipients' participation in the HWC; the role of TA and the impacts of TA provision by both UIC and labor experts in the HWC; and any changes in relationships between the various individuals who participated in the HWC. Dyadic relationship data from both relationship surveys and interviews at various time points were used to create relationship maps between members of more formal partnership. Overall themes were generated from the qualitative data to highlight the role that UIC played in organizing and facilitating the HWC and the impacts and limitations of this role related to organizations' activities, networks, and partnerships.

3.4 Researcher's Role

The researcher (Bonney) was involved in the development of the HWC and served as a UIC TA provider, helping to facilitate the HWC sessions. She conducted but did not participate in the focus group

with other UIC TA providers. She was involved in outreach to and recruitment of labor expert TA providers who participated in the HWC process. She worked closely with one partnership group throughout the six in-person HWC sessions and in the year following the HWC, helping to plan and implement some of their activities.

4. UNDERSTANDING THE ROLE OF ACADEMIC PARTNERS AS TECHNICAL ASSISTANCE PROVIDERS: RESULTS FROM AN EXPLORATORY STUDY TO ADDRESS PRECARIOUS WORK

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4.1 Introduction

In recent years, the National Institute for Occupational Safety and Health (NIOSH) has funded several *Total Worker Health*® Centers for Excellence at universities across the United States with the goal of building scientific evidence around innovative approaches to address complex problems faced by workers in the United States (National Institute for Occupational Safety and Health (NIOSH), 2015). Occupational safety and health researchers and practitioners are increasingly called to navigate the complexities of a changing work landscape, in which work arrangements have increasingly shifted away from standard, full-time employment with benefits towards non-standard, "atypical", and precarious work arrangements such as employment in temporary or contract jobs (Benach & Muntaner, 2007). The University of Illinois at Chicago (UIC) Center for Healthy Work, one of the NIOSH Total Worker Health (TWH) Centers for Excellence, has focused its efforts on understanding the barriers faced by workers in these precarious jobs in Illinois and building evidence around the development of interventions to remove those barriers (University of Illinois at Chicago School of Public Health, n.d.).

Over the past several years, a subset of researchers at the UIC Center for Healthy Work have engaged with individuals and organizations in Chicago and across the state of Illinois to better understand the causes and consequences of precarious work and initiatives that are already underway to address them. One of the Center for Healthy Work's aims is to work with a variety of organizational partners, across sectors and levels, to build organizations' capacities to develop and implement interventions to address the barriers to healthy work. While some studies have examined the value and impacts of community-university engagement in research and practice partnerships (Drabble et al., 2013; Leisey et al., 2012; Shannon & Wang, 2010), existing studies have not focused on universities as a convener for processes focused heavily on planning and preparing for action and focused less on traditional research methodology. The UIC Center for Healthy Work is examining the role that a university can play in supporting knowledge, skills, and overall capacity building efforts to foster the development of multi-level initiatives to address precarious work.

4.1.1 Precarious Work and the Healthy Work Collaborative Initiative

The term "precarious work" has been used to describe work that is "uncertain, unpredictable, and risky from the point of view of the worker" (Kalleberg, 2009). The rise in precarious work in the US can be linked to macroeconomic changes that resulted in increased global competition, which led to outsourcing of labor, weakened labor unions, and deregulation of the labor market (Kalleberg, 2009). Employers have sought to minimize costs by shifting jobs away from standard, full-time work arrangements toward a more flexible labor market. These more flexible, precarious work arrangements are characterized by low wages, lack of protection from termination, variable work schedules, disproportionate exposure to health and safety hazards in the workplace and working conditions that cause high psychosocial stress (Benach & Muntaner, 2007; Hadden et al., 2007; National Employment Law Project (NELP), 2009; Weil, 2009). Without intervention, a growing share of workers in the US will experience precarious employment conditions, regardless of occupation (Weil, 2014).

Although studies increasingly show that these highly precarious work arrangements adversely affect the health of workers (Azaroff et al., 2002; Benach et al., 2007; Benavides & Delclos, 2005; Park & Butler, 2001), interventions that improve the health of workers in these jobs are difficult to design and implement given the nature of their work arrangements (Baron et al., 2014). There is a substantial body of literature that posits that public health interventions that create the social and environmental conditions to promote and facilitate health are likely to be most effective and impactful on a population level (Allegrante, 2015; Golden et al., 2015; Phelan et al., 2010). Because many of the features of precarious work are not unique to a single occupation or to a single workplace, interventions aimed at addressing the causes of precarious work must be implemented at these broadly impactful social ecological levels. These types of interventions, typically in the form of policy, systems, and environmental (PSE) changes, are most effective when a diverse group of stakeholders are involved in intervention development and implementation and when these stakeholders understand the problem and relevant power dynamics (Freudenberg et al., 2015, 2016; Golden et al., 2015).

While there are several examples of successful, cross-sectoral PSE interventions to address public health issues, including tobacco control and measures to reduce automotive crashes (Allegrante, 2015), there is little evidence in the literature of similar strategies to address precarious work. Given the absence of existing best practices or evidence-based initiatives in this area, researchers at the UIC Center for Healthy Work engaged a group of multi-disciplinary stakeholders in a process designed to understand and begin to develop upstream action to address drivers of precarious work. This process, known as the Healthy Work Collaborative Initiative, involved a six-session series of instructional and planning-based activities for organizations that were interested in addressing precarious work.

The six session Healthy Work Collaborative (HWC) was part of a larger project in the UIC Center for Healthy Work. The overarching aim of this larger project was to use an action research framework to understand and address precarious work through cycles of inquiry and action planning (Stringer, 2013). The HWC was a component of this larger project, designed with an intent to increase stakeholders' individual and organizational capacities to apply PSE strategies to address drivers of

precarious work. The primary goal of the HWC was to bring together health and labor organizations to explore initiatives that may address health in the context of precarious employment. The goal of this manuscript is to report on a study that examined the role of university-based facilitation in this HWC process, conceptualized as technical assistance (TA) provided by UIC researchers. The HWC and TA in the HWC are further described below.

The UIC researchers recruited Chicago- and Illinois-based public health and healthcare organizations and their partners to participate in the six in-person HWC sessions; many participants were recruited through existing relationships between the School of Public Health researchers and representatives of these organizations. The researchers also recruited representatives of labor organizations, including Chicago-based worker centers and labor advocacy groups, to share content expertise with participants during the HWC sessions. All labor organizations represented in the HWC also had longstanding relationships with researchers in the UIC School of Public Health. All six in-person HWC sessions took place within a 10-week period in the spring and summer of 2018.

Collaborations between university groups and outside partner organizations have been described in various contexts in the literature. Much of the existing literature on community-university partnerships focuses on opportunities for knowledge translation, or application of research findings in the community, and service-learning and community-based research (Leisey et al., 2012; Shannon & Wang, 2010). While the HWC model shares some of the features of community-university partnerships highlighted in the literature, such as an opportunity to co-create knowledge and develop shared research and action agendas (Shannon & Wang, 2010), the purpose of the HWC was primarily to drive action rather than to generate knowledge.

The researchers designed the HWC using an Action Learning (AL) approach, which is an approach to problem solving that emphasizes learning through action and reflection on the results of that action (Revans, 1982). Action Learning was originally conceptualized by Reg Revans in the early 1980s but has been adapted by others to better suit emerging learning and action needs in different contexts. One of these adaptations is that of Marquardt et al in which AL is used with the intent to build and sustain

systems-level change (Marquardt et al., 2009). Like Revan's original AL approach, that described by Marquardt et al uses an iterative, participatory process, which combines scientific knowledge with evidence derived from learners' experiences to solve complex problems (Hawe et al., 1997; Marquardt et al., 2009). Unlike Revan's approach, however, Marquardt et al's AL approach relies on AL "coaches", or facilitators, who promote critical thinking through probing and prompting of learners throughout a process. In the HWC, UIC researchers served in this facilitator role, further described below.

Activities within each HWC session were designed to build upon one another so that participants would leave with foundational knowledge and skills to begin to plan for and take action to address the drivers of precarious work. The HWC sessions were grouped into three phases (Table I), all of which incorporated AL tools: 1) Understanding; 2) System, strategies, and approaches; and 3) Planning for action. A fourth phase, the Action phase, was not included in the HWC sessions. Each phase included two sessions. Table III (included in Chapter 1) details the purpose of each phase and the activities that were included in that phase's sessions.

Small stipends were provided to HWC participants to compensate for time spent preparing for and participating in the sessions. This aligns with the community-university partnership literature that suggests funding community engagement in university-sponsored activities both supports community involvement and demonstrates the value that the university places on community engagement (Leisey et al., 2012). Funding was also provided to representatives from local worker centers and other labor advocacy and educational organizations who served as TA providers in the HWC sessions. The various participant roles in the HWC are further described below.

4.1.2 Participant Roles in the Healthy Work Collaborative (HWC)

Participants in the HWC sessions fell into three categories: 1) the UIC researchers who organized and facilitated the overall HWC process and served as AL facilitators; 2) representatives from labor organizing, labor advocacy organizations, and labor-focused academic organizations who attended select

HWC sessions and led HWC activities during those sessions; and 3) representatives from primarily public health and healthcare organizations who attended and participated in all six HWC sessions.

The first two groups, the UIC researchers and the representatives from labor organizations, were termed "technical assistance (TA) providers" for the HWC. Together, these TA providers engaged the largely non-labor and non-academic health-focused participants in the various HWC activities. The TA providers also engaged with individuals or small groups in other capacities within and outside of the in-person sessions as they grappled with the issue of precarious work and plans for action in their own organizational or partnership-based contexts. The role of labor expert TA is examined elsewhere (see Chapter 5).

While there is no empirical research pointing to an ideal structure for a TA process for moving recipients towards action, some studies point to features of TA-recipient models that make them more effective than others. Effective TA models integrate several theoretical principles, including theories of change, adult learning, consultation, and facilitation (De Silva et al., 2014; Le et al., 2016; Trohanis TA Project, 2014). Using these principles, researchers and practitioners in several fields have conceptualized TA as a multi-tiered approach to build the capacity of individuals or organizations to achieve substantial change (Chilenski et al., 2018; Fixsen et al., 2009).

TA has also been classified along a continuum from less intensive, content-driven TA, to more intensive, relationship-based TA (Fixsen et al., 2009; Le et al., 2016). The intensity of TA provided to a recipient typically depends on the recipient's needs and their desired project outcomes. Less intensive TA typically involves sharing of content or skill knowledge with the TA recipient, which is most useful when the recipient already has structures and policies in place to support PSE change (Rushovich et al., 2015). This type of TA often involves fewer, less intensive TA-recipient encounters in which TA providers present information to the recipients but do not engage in longer-term collaborative work. More intensive TA, on the other hand, requires a more sophisticated relationship between the TA provider and the recipient. In this instance, the TA provider engages in sustained, in-depth work in partnership with the TA

recipient and takes on more responsibility for the outcomes of the program that they are supporting (Fixsen et al., 2009).

In the HWC, TA provided by UIC researchers was conceptualized as more intensive, relationship-based TA, focused on facilitating behavior and systems change, while TA provided by labor experts was conceptualized as more content-driven, focused on the transfer of knowledge to participants. For the duration of the HWC, UIC TA providers divided themselves up between TA recipient groups, helping to guide TA recipients through each of the HWC activities and exercises. The UIC TA providers also followed up with their TA recipient groups between HWC sessions, pointing them in the direction of resources, clarifying content from the sessions, and pushing them toward actionable next steps. This type of higher intensity TA, focused on facilitation of learning and action planning, aligned with the role of an AL "coach" described in the AL literature (Marquardt, 2000; Marsick & O'Neil, 1999). There is some evidence that higher intensity TA, facilitation, or coaching, involving frequent check-ins and tailored supports and feedback, increases sustained engagement of learners, or TA recipients, in later implementation or action phases (Le et al., 2016; Noell et al., 2005). With the HWC, UIC researchers positioned themselves in a way to both connect practitioners in different disciplines who do not already work together and support engagement between those practitioners as they move to bring about sustainable change. Little is known about universities operating in this role, and this study aims to contribute knowledge to this gap.

This study explores the role of TA provided by UIC researchers in the HWC process. Specifically, this study seeks to understand UIC TA providers' perceptions of their own roles in the HWC process, facilitators and challenges associated with these roles, and any outcomes of the HWC process that they attribute to these roles. This study also seeks to understand the perceptions of other HWC participants, including labor expert TA providers and health-focused TA recipients, regarding these same concepts. Given that TA and university-community partnerships have been identified as important mechanisms to close the "knowledge to action" gap, this study seeks to explore the importance of these factors in facilitating learning and development of PSE change interventions in the context of the HWC.

4.2 Materials and Methods

The UIC researchers used a mixed-methods approach to evaluate the overall HWC process. For this study, researchers used an exploratory qualitative study design with focus group and interview methodology to examine HWC participants' perceptions of the role of TA provided by UIC in the HWC, including during the period leading up to the six sessions, the periods between sessions, and the period after the sessions. The UIC Institutional Review Board approved this study in 2018.

All 31 individuals who participated in the HWC in some capacity were invited to participate in this study. Information about the HWC participants is included in Chapter 1.

Several instruments were developed to obtain information about UIC TA providers' roles in the HWC from the various HWC participants. A semi-structured focus group guide was developed to collect perspectives from the UIC facilitators immediately following the conclusion of the HWC. One semi-structured interview guide was designed to collect perspectives from the labor experts, who served as TA providers in the HWC sessions, immediately following their involvement in the HWC, and another semi-structured interview guide was designed to collect perspectives from non-labor, primarily health-focused TA recipients three months after the conclusion of the HWC sessions. Notably, both of the interview guides included questions aimed at understanding other features of the HWC and impacts of participating in the sessions. Results reported in this study focus on the aforementioned concepts around TA, provided by UIC. Table IV compares the content relevant to this study included in the interview guides and the focus group guide, all of which are further described below.

The UIC TA providers were invited to participate in an in-person focus group in the days immediately following the final HWC session. The focus group guide was designed to capture UIC TA provider's perceptions of what TA recipients gained from the HWC process, perceptions of UIC TA providers' own roles inside and outside of the HWC sessions, and perceptions of impacts that the HWC process had on UIC TA providers' own thinking. Labor expert TA providers were invited to participate in a follow-up phone interview in this same time frame. All TA recipients were invited to participate in a phone interview approximately three months after the final HWC session, as were TA providers who had

continued to engage with TA recipients beyond the formal HWC six-meeting period. The immediate post-HWC guide and the three-month post-HWC interview guide were designed to capture labor experts' and TA recipients' perceptions of the same concepts as the UIC TA provider focus group guide, as well as their impressions of the HWC process more generally. The TA recipients were interviewed at the three-month time point instead of immediately post-HWC to better capture ways in which the TA recipients had applied what they had learned from the HWC since the conclusion of the sessions and any implementation of activities planned during the HWC sessions.

TABLE IV. DATA COLLECTION INSTRUMENTS: ROLE OF UIC

Instrument	**Intended Audience**	**Key Constructs for this Study**
Immediate Post-HWC Focus Group Guide	UIC TA providers (process facilitators).	Observed impacts of UIC TA provider engagement with other participants. Perceptions of value of UIC TA provider role. Challenges and facilitators to HWC TA providers-recipient model. Opportunities for engagement beyond HWC.
Immediate Post-HWC Interview Guide	Labor expert TA providers (content experts).	Experiences with UIC TA providers; observed and experienced impacts of all participants' engagement with UIC TA providers. Perceptions of value of UIC TA provider role. Challenges and facilitators to HWC TA providers-recipient model. Opportunities for engagement beyond HWC
3-Month Post-HWC Interview Guide	All non-TA provider participants (TA recipients). Labor expert TA providers involved with TA recipients beyond HWC sessions.	Experiences with UIC TA providers; impacts of engagement with UIC TA providers. Perceptions of value of UIC TA provider role. Challenges and facilitators to HWC TA providers-recipient model. Opportunities for engagement beyond HWC.

4.2.1 Analysis

A preliminary codebook for this study was developed prior to data collection with template codes based on the study's research questions and relevant technical assistance literature similar to the code manual development described by Fereday and Muir Cochrane (Fereday & Muir-Cochrane, 2006). Four broad code categories were included in this a priori codebook: perception of TA role, intensity of TA, impact of TA, and importance of TA. These broad categories and sub-codes within each category were included in the a priori codebook with a definition and description of each code. Emergent codes were added during the preliminary analysis steps and are described below. The codebook used for this study was separate than that used for the overall evaluation of the HWC process.

The in-person focus group with UIC TA providers and all phone interviews with labor expert TA providers and TA recipients were audio recorded and professionally transcribed. The transcripts were analyzed using a hybrid approach that involved both inductive and deductive coding and theme development, similar to the approach described by Fereday and Muir-Cochrane (Fereday & Muir-Cochrane, 2006). Dedoose software was used for all qualitative analyses in this study.

Immediate post-HWC interviews with labor expert TA providers and the focus group with UIC TA providers were coded by a single coder. For each transcribed interview, the following analysis protocol was used:

1. Each full interview and the focus group transcript was read and key points were summarized in a memo. At this point, additional codes were added to the codebook based on new categories that emerged from the textual data.
2. A priori codes and emergent codes were then applied to the interview text where text segments were considered representative of and matched the definition of an individual code.
3. As segments of text were coded, each new excerpt was compared with segments that had previously been assigned the same code. In the event that a code did not seem to fit for both segments, a new code was added to the codebook and relevant sections of the transcribed interview were recoded.

4. After all interviews were coded and additions to and refinements of the codebook were complete, a new cycle of coding began. Each interview was re-coded using the updated codebook.
5. After the second coding cycle, final coded segments were read and a process of clustering around similar patterns. Themes were identified when all data supporting a given pattern were clustered saturation reached. At this stage, differences in themes across interviewees were examined.

Three-month follow-up interviews were coded by two separate coders and a slightly different analysis protocol was used. Steps 1 and 2 from the baseline and immediate post-HWC interview protocol were followed, as described above, with both coders reading and summarizing transcribed interviews and collaboratively making additions to the codebook. The following steps were then completed by the two coders in lieu of steps 3-5 from the baseline and immediate post-HWC analysis protocol: After each transcribed interview was coded by both coders, coded segments were compared for agreement. In the event that the two coders did not agree on coding for a particular segment, they discussed the segment and attempted to come to agreement as to which code(s) should be applied. In the event that the two coders could not come to agreement, a third coder was asked to code the interview and discuss applied codes with the original two coders. Additionally, in the event that no codes seemed to fit a given segment, a new code was added to the codebook and relevant sections of the transcribed interview were recoded. Both coders reviewed already coded interviews for comparison of applied codes and recoded those interviews as needed to reflect codebook updates. Final coded segments were read and a process of clustering around similar patterns and themes began. At this stage, differences in themes across participant type were examined.

4.3 Results

A total of 22 HWC participants (71%) participated in either the in-person focus group or at least one follow-up phone interview after the conclusion of the HWC. The immediate post-HWC focus group lasted approximately 90 minutes and was conducted in person, while the immediate post-HWC and 3-month post-HWC follow-up interviews lasted approximately 60-minutes and were conducted by phone.

Seven UIC TA providers participated in the immediate post-HWC focus group, representing all but one of the UIC representatives who helped to facilitate the HWC process. One UIC representative (the first author on this paper) facilitated but did not participate in the focus group. Five labor expert TA providers participated in interviews immediately post-HWC, and two of these TA providers also participated in 3-month post-HWC follow-up interviews. The two TA providers who participated in three-month follow-up interviews had substantial, continued involvement with at least one other non-TA HWC participant beyond the six HWC sessions, either in the form of more tailored and intensive TA provision or in the form a formalized partnership. Ten non-labor, primarily health-focused TA recipients also participated in 3-month post-HWC follow-up interviews.

The UIC TA providers, labor expert TA providers, and TA recipients shared a variety of perceptions of UIC TA in the HWC. Findings from the focus group and interviews are organized under the following broad categories: UIC's role in the HWC, facilitators and challenges associated with UIC's role, impacts of UIC's provision of TA, and future roles for UIC beyond the HWC.

4.3.1 Role of UIC TA in the HWC

All participants, including UIC TA providers, labor expert TA providers, and TA recipients, reflected on the utility of UIC researchers as TA providers in the HWC. Three main themes emerged from the focus group and interview data: (1) the value of UIC's role as a convener of the HWC; (2) UIC TA providers' ability to facilitate learning by guiding TA recipients through the HWC activities and holding them accountable to next steps; and (3) UIC researchers' ability to both fill a gap in the literature and aid in the development of actions to address a complex issue. Each of these themes is further described, below.

4.3.1.1 UIC's Role in Convening the HWC

In individual interviews, TA recipients and labor expert TA providers shared their perspectives of UIC's role as a convener of the HWC. Generally, interviewees noted that UIC was an appropriate

connector and host for such a process, given the value that UIC as an institution places on community engagement. Interviewees described their own experiences interacting with faculty and staff at the university, and several highlighted explicit value statements put forth by university groups that reinforce UIC's commitment to community-engaged activities. One TA recipient mentioned the UIC School of Public Health, which houses the Center for Healthy Work, as being particularly committed to community engagement:

> *"So I think that one of the public health school's missions, or part of the mission, is to be engaged with the community. And I think that this is one very strong way of doing it."* – TA recipient

Interviewees also highlighted the rigor that a university can bring to an initiative like the HWC. Several interviewees noted the reputation of the UIC School of Public Health and its recognition as a leading research institution in Chicago. At least one interviewee described the value of having a public health perspective when planning for action around upstream issues like work:

> *"I think there is certain rigor to having it, in a public health perspective, that maybe in a limited way could have come from some of the other participants in the collaborative… [UIC TA providers] brought that."* – TA recipient

4.3.1.2 UIC's Role in Facilitating Learning

An important observation of UIC TA providers' own role in the HWC was that of facilitating a shared language and fostering opportunities for open dialogue about the issues related to precarious work for all participants. The UIC TA providers generally agreed that establishing a definition of precarious work early on in the HWC sessions helped to facilitate engagement in subsequent HWC activities and deeper dialogue between the various participants. One UIC TA provider described both UIC and labor expert TA providers' role in establishing this shared language:

> *"So I think it was a skill that people were able to find a shared language and I think we helped facilitate that along with the TA providers, to be able to talk to one another."* – UIC TA provider

The UIC TA providers further described their role as "pushing" or "coaching" TA recipients toward action as they progressed through the HWC sessions. Several UIC TA providers shared examples

of ways in which they had helped TA recipients develop action steps based on what they had learned or created in HWC session activities; for example, one UIC TA provider had helped their group build a small action plan based on the Theory of Change that the group had developed during one of the HWC sessions. Several UIC TA providers noted that TA recipients were seemingly appreciative of this type of TA-led facilitation and encouragement, summarized by one UIC TA provider below:

> *"I did hear quite a bit that having somebody to push them to help them focus, give them that extra support ... They wouldn't be doing it, without that push. They need the push. They need the ... And, I don't mean pushing them out the door. But, the ... to help encourage, to build their self-advocacy/capacity."* – UIC TA provider

In interviews, many TA recipients shared similar reflections of the utility of UIC TA providers' facilitation or "pushing" of TA recipients throughout the HWC process. Several TA recipients described specific interactions with UIC TA providers during or between HWC sessions in which the TA provider had helped them to further refine or develop tools or plans to move the recipients toward action. One TA recipient described their experience as follows:

> *"I liked the idea that you had a staff person that was sort of assigned to each group, because it really kept us together, and then you organized us. You made sure we had meetings, and we decided to have a little pre-meeting before the actual training sessions, and you really facilitated sort of all of the logistics, as well as providing leadership in the groups. And I think we loved working with the folks that we were working with."* – TA recipient

TA recipients also recognized UIC TA providers' roles in guiding them toward a more profound understanding of precarious work and TA recipients' own roles in addressing its drivers. Several TA recipients noted the ways in which UIC TA providers helped TA recipients to think about the issues without being overly prescriptive or forceful in what their takeaways should be. One TA recipient described their experiences with UIC TA providers as follows:

> *"One of the things I liked is that with UIC facilitator and UIC facilitator and everybody, you all guided. You don't imprint on it...And it's a great way to learn. And you helped guide people to where, I think where we should have gotten to without saying, you know, you let us have a learning experience, that's what I guess I'm trying to say, without handing us a syllabus and saying, "You're going to be at this point, this point," you know what I'm saying? And so I really liked that approach. And it's really very beneficial."* – TA recipient

4.3.1.3 UIC's Role in Contributing Evidence and Facilitating Action

In the focus group, UIC TA providers reflected on the factors that made their role in organizing and coordinating the HWC feasible and appropriate. Several UIC TA providers described the gap in the literature around PSE strategies to address the drivers of precarious work, and how this gap presented an opportunity for the researchers in the UIC Center for Healthy Work to gather contributing evidence in this arena via the HWC. One UIC TA provider summarized these sentiments, below:

> *"…it's about building the evidence that doesn't exist, there is not good evidence around how to do PSE change around in particular precarious work for sustainable change, and that's what we've been trying to do and we are documenting it, we're building evidence, we're adapting theory based on feedback for practice and integrating it to do something we hope is impactful."* – UIC TA provider

The UIC TA providers also engaged in a discussion around academic expectations and needs for evidence building that allow for the dedicated time and funding to support an initiative like the HWC. At least one UIC TA provider mentioned the need to respond to the expectations of the funding agency for the Center for Healthy Work by collecting data and producing products for dissemination, which is made possible through the engagement of other stakeholders in the HWC.

> *"…we have to keep the funders in mind and research and building evidence in mind… So having a product, something that can be disseminated widely or policy change, environmental change, having something happen that can be counted, that's [the funder]'s perspective."* – UIC TA provider

4.3.2 Facilitators and Challenges Associated with UIC TA Role

Several themes emerged from the data regarding facilitators and challenges associated with the TA role that UIC researchers played in the HWC. While existing relationships between UIC researchers and representatives from organization that participated in the HWC and UIC's knowledge of the participants' needs and related opportunities emerged as facilitators associated with UIC researchers' role, constraints related to time, content, planning, and limitations to TA control emerged as challenges associated with this role. These facilitators and challenges are described below.

4.3.2.1 Existing Relationships

Labor expert TA providers and TA recipients described their existing relationships with UIC researchers as a catalyst to their involvement in the HWC. All labor expert TA providers described longstanding relationships with UIC faculty and staff in the Environmental and Occupational Health Division of the School of Public Health, while most of the non-labor TA recipients described existing relationships with faculty and staff at the MidAmerica Center for Public Health Practice, also in the School of Public Health, which provided training to public health professionals. Representatives from both School of Public Health groups were involved in the planning and coordinating of the HWC. One TA recipient described their relationship with UIC and their decision to participate in the HWC:

> *"We're fortunate enough to have a long standing working relationship with UIC… So I heard about the collaborative from [UIC facilitators], and we talked about some of the work that was going to be done and what the overall, I guess what the health outcomes might be. There was some issues that I've kind of wanted to work on, and so I just said, yeah, I kind of was interested in pursuing this."* – TA recipient

Several interviewees indicated that they felt UIC researchers had their organization's best interests and needs in mind when soliciting their involvement in something like the HWC. A labor expert TA provider summarized this sentiment:

> *"…we have relationships with individuals and the departments that span all my time here… we already have an idea of what kind of things that it would involve, or yeah, there's less uncertainty about, "Well, would this be a good use of my time?" That sort of thing 'cause we already have the relationship and are accustomed to working together. I think part of it is just experience is a factor in our decision making here to engage, being that we already have experience together."* – Labor expert TA provider

4.3.2.2 UIC's Capacity to Recognize Needs and Opportunities

Additionally, several interviewees described the university's unique capacity to recognize the need for and engage a diverse group of stakeholders to collaboratively learn about and plan for upstream action to address drivers of precarious work. Several interviewees described the unique features of the university as a convener, including its commitment to community engagement and its existing relationships with community organizations (further described below), that made the HWC especially

impactful in a way that it would not have been without UIC's involvement. One interviewee summarized these sentiments, below:

> *"I doubt we would have had the same kind of people, diversity of entities in the room and in conversation. Without you all…I doubt the conversation would have happened without the [HWC], the grant funding which all happened behind it."* – TA recipient

At least one TA recipient also noted that the representatives in the HWC would not have had the opportunity to connect if it were not for the convening of the HWC.

> *"It is really helpful to bring groups together who haven't worked together before and who we may not always think of – and see how it ties back to our work – unless we get connected and seek it out on our own, which we don't really have time for, we don't have access to these new relationships."* – Labor expert TA provider

4.3.2.3 Time and Content Balance

Despite the many touted benefits of UIC's TA provision in the HWC, participants described some of the limitations, challenges, and opportunities for change given their experience in this HWC process. Many of the TA recipients, in particular, described the challenges of digesting so much new content in such a short period of time. Some TA recipients also felt that there was not enough time built in to reflect upon and apply what they had learned in the HWC sessions. One TA recipient summarized these sentiments, below:

> *"It was super structured and a lot of stuff over a short timeline. There was a balance that it needed to be structured so it didn't lose the thread … But it still was quite a bit."* – TA recipient

Several UIC TA providers also attributed challenges in timing with what TA recipients were able to accomplish through the HWC process. The UIC TA providers felt that readiness of TA recipients to both engage with a complex new issue like precarious work and actively plan implementable interventions outside of the HWC sessions varied between groups and individual TA recipients. One UIC TA provider noted that the timing of the HWC was based solely on UIC researchers' own needs and not on the needs of participants, including both the readiness piece and the amount of time participants, including TA

recipients and labor expert TA providers, needed in between sessions to digest information and prepare for subsequent sessions. One UIC TA provider summarized these observations, below:

> *"I think the timing issue was really a very important factor in influencing what went on and what went well for some and what didn't go well for others."* – UIC TA provider

4.3.2.4 Time and Planning Constraints

The UIC TA providers noted some of the challenges related to the tight HWC timeline, both in terms of what content could be covered in the sessions and in terms of limitations in time to plan the sessions. Several UIC TA providers shared the challenges that stemmed from working within a time-bound grant structure, in which funds allocated to activities like the HWC needed to be spent down within a short time frame. This presented problems with HWC planning, limiting UIC TA providers' abilities to engage labor expert TA providers in much of the planning in advance of the meetings themselves:

> *"..ultimately we only had so much time to devote to developing this curriculum and structuring these meetings that there are certain things with the curriculum that I think we may have done differently that would facilitate learning in a different way. I wonder if we had brought in all of the ... if they had the capacity to do this, if we had brought in all of the TA providers from the get go to develop a curriculum in a more collaborative way."* – UIC TA provider

4.3.2.5 Limitations of UIC TA Role

Beyond the challenges related to content load and timing, UIC TA providers shared several limitations of what they as TA providers were able to bring about through the HWC process. Although they were able to provide tools to TA recipients, follow up with them between sessions, and push them to focus on particularly relevant content or action steps, UIC TA providers could not force TA recipients to actually move toward action. Many UIC TA providers described an obvious shift in TA recipients' thinking over the course of the HWC sessions, but in many cases felt that it was not apparent how those TA recipients will actually move toward action post-process. One UIC TA provider described this challenge, below:

> *"The "doing" part in their case, I struggled with … so I don't know what else I could have done or you could have done. We literally handed them a lot of stuff and I couldn't get them to really put a plan together ultimately, in terms of what was next."* – UIC TA provider

Another limitation encountered by UIC TA providers was their ability to promote diverse partnerships between TA recipients in the HWC. While some TA recipients entered the HWC with pre-determined partners (e.g. representatives of other organizations interested in developing interventions to address issues of shared interest), others began and ended the HWC process as individual representatives of their own organizations. One UIC TA provider, who worked primarily with one such individual, described this as an observed limitation during the HWC process:

> *"I think the other groups show was that coming in with a team with a diversity of voices really does make a difference, that that can foster learning… I think he had some shift in his ideas but I don't it was as much as with the groups where people came in as a diverse team."* – UIC TA provider

4.3.3 Impacts of UIC TA Provision

Despite some limitations to UIC TA providers' roles in the HWC process, UIC TA providers, labor expert TA providers, and TA recipients were able to articulate a number of impacts attributed to TA provision by UIC researchers in the HWC. Two themes that emerged from the data included pushing TA recipients towards a more concrete understanding of precarious work and holding TA recipients accountable to next steps throughout the HWC process. Both themes are described below.

4.3.3.1 Shifts from Abstract to Concrete Understanding of Precarious Work

In the focus group, UIC TA providers described the various ways in which they helped guide TA recipients toward a deeper understanding of the drivers and manifestations of precarious work, both within the HWC sessions and in follow-up calls with TA recipients between sessions. One UIC TA provider observed the most significant changes in TA recipients' understanding of the issues when debriefing the previous week's session by phone:

> *"I think for some of the groups that I was working with, it was a big transition between abstraction and like recognizing, "Yeah, this is an issue," and then putting pen to paper and actually devising a plan and having concrete ways to talk about it and to address it. I think that those changes have been the most in our individual phone calls with them."* – UIC TA provider

4.3.3.2 Accountability and Resultant Shifts toward Action

In addition to encouraging or "pushing" TA recipients toward actionable next steps, UIC TA providers and TA recipients agreed that UIC TA also helped hold individuals and groups accountable to those next steps. Several UIC TA providers described the utility in scheduling follow-up conversations, typically by phone, in between HWC sessions as means to check in with TA recipients about agreed upon next steps. One UIC TA provider highlighted this accountability role as particularly impactful for a TA recipient they were working with:

> *"I think having someone to hold him accountable and I feel like the same as the case with the other team too, being held accountable for something made a big difference."* – UIC TA provider

4.3.4 Role of UIC beyond HWC

Focus group and interview data revealed a range of anticipated needs for UIC TA provision post-HWC. In the focus group, which took place several days after the conclusion of the HWC, several UIC TA providers speculated that going forward, many of the TA recipients would need additional supports as they continued to both digest information from the HWC and move forward in their plans for action. At least one UIC TA provider expressed a feeling that TA recipients would require little content-related TA beyond the HWC sessions, but would instead require substantial guidance and continued structure and encouragement from UIC TA providers:

> *"I think going forward, it seems to me as though there may have to be less of a desire for the other TA providers and more of a desire for things that we can do. Which is sort of helping them navigate things and connect them to other resources that may not be one of our TA providers…"* – UIC TA provider

TA recipients echoed these sentiments in their interviews, indicating that they would value and benefit from additional facilitation and related supports from UIC TA providers moving forward. Some

TA recipients went so far as to describe a specific role for UIC in the implementation of their planned actions, with some describing UIC TA providers serving in coordination and evaluative capacity. One TA recipient commented on the utility of having UIC TA support beyond the HWC:

> *"I think just having [UIC] as technical assistance providers as we move our project forward … it would be really helpful if our team doesn't have to develop the next phases on our own or come up with the ideas… I think our group is open enough to your feedback on the direction to take the project."* – TA recipient

4.4 Discussion

This study examined HWC participants', including UIC TA providers', labor expert TA providers', and TA recipients' perceptions of UIC researchers' TA role throughout the HWC process. The findings centered on HWC participants' perceptions of the appropriateness and utility of UIC's role as TA in the HWC, challenges encountered in this TA provider-recipient model, and potential next steps for UIC's involvement with TA recipients beyond the HWC sessions. The findings provide insight into the role of a university, like UIC, in convening a learning and action planning initiative like the HWC and highlight the impacts of UIC TA providers' engagement with other participants throughout the HWC process. UIC's experience in convening and facilitating the HWC sheds light on factors that contributed to participants' perceptions of the success of the university-facilitated TA provider-recipient model for learning and action development, which may be useful to other universities or similarly positioned organizations interested in engaging diverse stakeholders with the aim of facilitating PSE change. Data from this study suggest that this unique model helped to prepare representatives of various organizations to develop PSE change initiatives to address the complexities of precarious work.

This study provides important insight into how universities, like UIC, can position themselves to support non-academic organizations across sectors and levels to facilitate evidence-informed development and implementation of actions to address complex problems like precarious work. The data from this study highlight the utility of having a community-engaged university bring together organizations that have existing relationships with the university but do not necessarily have existing relationships with one another. The data also highlight the benefits and challenges of having university researchers play a TA

role in a process like the HWC and suggest ways in which university researchers might be involved beyond initial capacity building activities to support the implementation of PSE change.

Findings that highlight the value that HWC participants placed on UIC's role as a research-focused and community-engaged institution offer support to UIC's decision to organize the HWC and convene its various participants in six in-person sessions. These findings align with much of the community-university partnership literature, which details community engagement with university researchers as a means for knowledge translation and development of shared action agendas (Shannon & Wang, 2010). This supports UIC's role in putting together an initiative that has the potential to help close a knowledge-to-action gap, though this initiative differs from many of the examples in the literature. Unlike other community-university partnerships, the HWC relied on the expertise of outside TA providers, in this case labor experts, to share knowledge with the groups who are well positioned to implement interventions to address a complex problem, in this case the multi-faceted drivers of precarious work. The UIC researchers' roles as facilitators differs from the more traditional knowledge-sharing role described in much of this literature.

Because of longstanding relationships with individuals involved in occupational health research and public health practice groups at UIC, labor expert TA providers and TA recipients described a level of trust and reciprocity that were vital to their decisions to participate in the HWC. These findings indicate that UIC was uniquely positioned to convene and facilitate the HWC, suggesting that the HWC participants may not have otherwise willingly participated in such an initiative. It is unlikely that without the HWC, participants would have interacted with one another at all, further highlighting the importance of UIC's role in supporting important steps toward PSE change. Without strong, pre-existing relationships between UIC researchers and members of the various organizations that were represented in the HWC, these representatives may not have decided to commit the time and resources to participate the inaugural HWC initiative. The time and effort that UIC researchers put into developing and maintaining their relationships with the labor- and health-focused organizations that ultimately agreed to participate in the

HWC, either as TA providers or TA recipients, cannot be overlooked as an important step in facilitating diverse engagement and commitment to participate in a pilot initiative like the HWC.

In addition to UIC's role as a convener of the HWC, data from the focus group and interviews reveal several perceptions of the function of UIC TA in the HWC sessions. These functions, from providing guidance, facilitation, encouragement, and accountability to TA recipients, display the range of intensity of TA provided by UIC researchers in the HWC model. This intensity differed from that described in the TA literature, with UIC TA providers serving in a capacity that might be likened to that of a coach or accountability manager instead of a role in which the TA provider takes on responsibility for some of the work. The HWC model seemed nevertheless effective for TA recipients, many of whom attributed their progress in digesting HWC content and planning for next steps to the involvement of UIC TA providers. This suggests that TA as it is described in the literature does not fit the HWC's model, and perhaps an expanded definition of TA is needed. Further, this suggests that university facilitation using AL, in a model like the HWC, may be effective in increasing knowledge to action. This aligns with calls for capacity building initiatives to foster more effective public health practice to address complex issues like precarious work (Brownson, Fielding, & Green, 2018).

Findings did highlight some of the limitations of this UIC TA model. Many of the limitations described by participants revolved around the timing and tight timeline of the HWC, both of which resulted from constraints of operating within a time bound grant period. The UIC TA providers described the challenges of planning and developing the HWC curriculum in such a short time period, which limited opportunities for cooperative planning between UIC and labor expert TA providers. Likewise, labor expert TA providers noted the challenges of not being involved in the planning of each session. This particular issue highlights the limitations of having a university group, which relies on grant funding, design and host such an initiative, given many of the factors, such as timing and funding, are determined the funder and are out of their immediate control.

Finally, findings from the focus group and interviews suggested that TA recipients would value and benefit from UIC TA beyond the HWC sessions. This finding highlights some of the ways in which

TA recipient organizations were underprepared for action following the HWC, likely requiring additional guidance and supports to move their plans forward. This finding also highlights the importance of sustained engagement between university groups, like the UIC TA providers in the HWC, and community groups, which is mirrored in the community-university partnership literature (Shannon & Wang, 2010). While this manuscript describes the role of university provided TA in developing strategies for addressing precarious work, evaluation of the HWC in promoting sustainable relationships and partnerships is ongoing. The impact of the HWC on organizational priorities and on process and systems change to better address precarious employment is also an area of ongoing and future research.

4.4.1 Limitations

There are a number of limitations in this study, including low participation in study components and the involvement of the author in the HWC process. Because the HWC process was a pilot, there were only a small number of representatives in both TA provider and TA recipient roles who participated in this study and approximately 30% did not participate in interviews. Because the TA provider sample was especially small (7 UIC TA providers and 7 labor expert TA providers), attempts were made to accommodate varying schedules and allow for participation in interviews or the focus group at times that best suited TA providers. For TA recipients, similar efforts were made to ensure that at least one representative from each team (see Table I) was interviewed to capture the team's experiences. An additional limitation was there were no opportunities to compare findings from this study to another similar collaborative process with multiple TA providers and TA recipients, as similar examples of TA provider-recipient models were not found in the literature.

Another potential limitation of this study is the author's involvement in the HWC as one of the UIC TA providers who helped with the design and facilitation of the HWC process. This presents a potential bias, both due to the author's own involvement and perceptions of the HWC and the potential bias in interviewees' responses to interview questions given their knowledge of my role in the HWC process. To partially address this limitation, assurances were made to participants that their data would be

both de-identified and reported in the aggregate and would not be shared outside of the UIC research team. Further, another UIC TA provider conducted interviews with the TA recipients who the author interacted with most directly in the HWC sessions. Although the author did facilitate the focus group with other UIC TA providers, she did not participate in the focus group herself (i.e. she did not share her own perceptions of the HWC process and the role of TA). The author worked with an external colleague to code and debrief transcribed data to both reflect upon and document potential biases and subjectivities.

4.5 Conclusions

The complex problems that workers face, especially those in precarious work arrangements, demand innovative and comprehensive solutions. The *Total Worker Health*® model recognizes the need for research and practice to improve the health of workers, and TWH Centers for Excellence, like the Center for Healthy Work at UIC, are tasked with understanding the conditions that workers face and developing strategies to improve those conditions through multi-disciplinary projects. Findings from this study, which focuses on an initiative at the UIC Center for Healthy Work, highlight the utility of university facilitation in engaging diverse stakeholders in learning and action planning, in the context of a process rooted in Action Learning, to promote action to address drivers of precarious work.

5. MULTI-ORGANIZATIONAL TECHNICAL ASSISTANCE MODEL AS CATALYST FOR TWO-WAY KNOWLEDGE EXCHANGE AND POLICY, SYSTEMS, AND ENVIRONMENTAL CHANGE TO ADDRESS PRECARIOUS WORK

5.1 Introduction

In the United States, standard full-time, permanent jobs with benefits are on the decline, while non-standard, atypical forms of employment, such as contingent or temporary work, part-time contract work, unregulated, underground work or home-based work, are on the rise (Benach & Muntaner 2007). As employment shifts from standard work arrangements to non-standard, atypical work arrangements, work becomes increasingly precarious and workers experience decreased economic security and social stability (Hadden, Muntaner, Benach et al. 2007).

The term "precarious work" has been used to describe work that is "uncertain, unpredictable, and risky from the point of view of the worker" (Kalleberg 2009). Precarious work is characterized by non-standard work arrangements with low wages, lack of protection from termination, variable work schedules, and working conditions that cause high psychosocial stress (Benach & Muntaner 2007; NELP 2009). In recent decades, formerly standard, stable jobs have become increasingly precarious, and many of the fastest growing jobs at present are low-wage temporary contract jobs (Weil 2014; BLS 2017). Precarious jobs exist in virtually all employment sectors in the United States, resulting in a large and growing population of vulnerable workers (Weil 2009; Kalleberg 2017).

There is mounting evidence that highly precarious work arrangements have adverse effects on the health of workers (Azaroff et al., 2002; Benach & Muntaner, 2007; Benach et al., 2007; Benavides & Delclos, 2005; Kalleberg, 2009; Park & Butler, 2001). This evidence, along with the longstanding recognition that the circumstances in which people work and the structural drivers of those conditions are important social determinants of health (Commission on Social Determinants of Health, 2008; Link & Phelan, 1995; M. Marmot, 2005), supports a need for multi-level intervention to address the causes and consequences of precarious work. Many studies have shown that societal-level changes to achieve supportive environments for change are especially necessary to both address upstream drivers of health

problems and maintain individual-level behavior (Brownson et al 2009; Glanz, Bishop 2010). To be most effective, these types of interventions, typically in form of policy, systems, and environmental (PSE) change, consider the myriad of needs of a particular population and aim to address those needs using public policies, organizational policies and activities, and changes to physical environments (Food Trust 2012). Successful PSE change also requires the buy-in of stakeholders from multiple sectors (e.g. public, private, health, labor) and at multiple levels (e.g. neighborhood, city, county, state) and infusion of resources from these stakeholders (Golden, Mcleroy, Green, Earp, Lieberman 2015).

Despite the recognition that precarious work adversely impacts the health of workers, there is little evidence of multi-level public health interventions aimed at addressing the causes and consequences of precarious work (Baron et al 2014). In general, interventions that improve the health of workers in precarious jobs are difficult to design and implement, as workers in these jobs are hard to reach and many of the contributors to adverse health outcomes are upstream social and economic policies that drive increases in precarious employment (WHO Commission on SDOH 2008; Baron et al 2014). Many public health professionals may also lack sufficient knowledge of the causes, characteristics, and consequences of precarious work that are necessary to design and implement effective interventions in this arena. Further, public health professionals may not have connections with organizations in other sectors, such as the labor sector, who are actively engaged in the planning and implementation of interventions aimed at the drivers of precarious work. There is a clear opportunity for groups from both the health and labor sectors to connect and work collaboratively to create multi-level, multi-sectoral PSE change.

To create PSE changes needed to address complex problems like precarious work, decision makers must ensure that they have the knowledge, tools, and resources necessary to mobilize for and engineer those PSE changes. Technical assistance (TA) providers can provide organizations with these supports as they aim to better understand and mobilize to tackle complex, unfamiliar problems. Several studies have described the benefits of involving TA in the development and implementation of PSE change, particularly helping to increase the capacity of TA recipient organizations to tackle complex problems through the translation of knowledge into policies and programs (Mitchell et al 2002; Trohanis

1980; Le et al 2016). Further, researchers and practitioners in many disciplines have highlighted the need to enhance and expedite the transfer of research findings into practice in order to minimize the "knowledge-to-action" gap (Graham et al 2006; Tetroe 2007), and several studies describe ways in which TA providers can support knowledge-to-action processes with varying intensity (Fixsen et al., 2009; Le et al., 2016; Rushovich et al., 2015). Public health, in particular, has benefitted from TA in other contexts as public health researchers and practitioners have mobilized to address complex problems in other contexts (Jolly, Gibbs, Napp, Westover, & Uhl, 2003; Katz & Wandersman, 2016; Mitchell et al., 2002).

5.1.1 The Healthy Work Collaborative Initiative

In an effort to foster knowledge about and begin to develop upstream action to address drivers of precarious work, a group of researchers at the University of Illinois at Chicago (UIC) Center for Healthy Work put together a six-session series of instructional and planning-based activities for organizations interested in addressing precarious work. These six sessions, referred to as the Healthy Work Collaborative (HWC) are further described in Chapter 1.

5.1.2 Participant Roles in the Healthy Work Collaborative (HWC)

Participants in the HWC sessions included 18 representatives from primarily public health and healthcare organizations who attended and participated in all six HWC sessions and two groups of TA providers. The first group of TA providers included the seven UIC researchers who organized and facilitated the overall HWC process. The second group of TA providers included seven representatives from labor organizations, including labor organizing, labor advocacy, and labor-focused academic organizations, who attended select HWC sessions and led various HWC activities during those sessions. Together, these two groups of TA providers engaged the largely non-labor and non-academic health-focused participants in the aforementioned HWC activities. The TA providers also engaged with individuals or small groups in other capacities within and outside of the in-person sessions as they

grappled with the issue of precarious work and plans for action in their own organizational or partnership-based contexts. Detailed descriptions of the HWC participants is included in Chapter 1.

5.1.3 Technical Assistance (TA) in the HWC

Many of the public health, healthcare, and other non-labor organizations that were represented in the HWC are well-poised to take on complex issues, like precarious work, that have many intricate root causes. Unfortunately, many organizations, like the non-labor HWC participant organizations, that are well-positioned to take on these problems lack the necessary knowledge and skills to translate their goals into action (Mitchell et al 2002). In cases like these, TA providers can fulfill recipient organizations' needs as they mobilize to act. UIC researchers saw an opportunity in the HWC to invite labor experts to provide TA to the primarily health-focused participants, with a goal to increase participants' and their organizations' capacities to design and implement PSE initiatives.

Unlike most TA models described in the literature, TA providers in the HWC were not convened based on an individual organization's self-identified need; rather, UIC researchers brought representatives from primarily health organizations together with representatives from labor organizations and organized the HWC process to fulfill the collective needs of the health organizations and their partners. Further, unlike most traditional TA provider and recipient engagements, the HWC involved multiple TA providers from various organizations sharing content and skill knowledge in a formal, instructional setting with pre-determined agendas and learning objectives. UIC TA providers recognized TA recipients' needs for basic, introductory information about precarious work, its drivers and consequences, and ways in which organizations in other sectors, like the labor sector were working to address those drivers and consequences. To fulfill these needs, labor expert TA providers engaged participants in a variety of activities, each of which aligned with specific learning objectives. While some activities were more didactic than others, all were intended to increase participants' knowledge of precarious work and its drivers and begin to build skills that would support action.

Given this focus on basic knowledge transfer from labor expert TA providers to TA recipients, , TA in the HWC was conceptualized as less intensive TA, focused on the sharing of content and skill knowledge with TA recipients in a few encounters, instead of more intensive relationship-based TA, which typically involves more established partnerships between TA providers and recipients and sustained engagement beyond a six-meeting structure like the HWC. (Le et al 2016; Fixsen et al 2009). This less intensive TA model is described in the literature as a mostly unidirectional knowledge transfer from TA providers to TA recipients, which fits with role of TA, provided by labor experts, conceptualized by UIC researchers at the outset of the HWC (Fixsen et al 2009).

This study explores TA providers' and TA recipients' perceptions of the role of TA, as well as their perceptions of the impacts of TA provider and recipient engagement in the HWC. The study examines changes in TA providers' perceptions over time, from baseline to post-HWC approximately 10 weeks later, and examines the intensity of the TA provider and recipient engagement in the HWC. Finally, this study highlights some of the unique features of a TA provider and TA recipient engagement in a setting like the HWC and considers the similarities and differences of this TA model to others described in the literature. The structure of the data allows for examination of TA providers' perceptions from their initial engagement with UIC in this model to the conclusion of the six-session HWC process and allows for an examination of shifts in perceived intensity of TA attributed to the HWC structure.

5.2 Methods

Prior to the start of the six Healthy Work Collaborative (HWC) sessions, several semi-structured interview guides were developed to obtain information from the various HWC participants. Two interview guides were designed to examine the perspectives of the labor experts, who served as technical assistance (TA) providers in the HWC sessions, once at baseline prior to the start of the HWC and again immediately post-HWC. A third interview guide was designed to examine the perspectives of the largely non-labor, primarily health-focused TA recipients three months post-HWC, as well as the perspectives of TA providers who continued to engage with other participants beyond the six-session HWC. Table V

compares these three interview guides, all of which are further described below. Although the perspectives of the UIC researchers, who also served as TA providers in the HWC, were also collected post-HWC, they are not reported in this paper.

All labor experts who agreed to participate in the HWC as TA providers were invited to participate in an interview prior to the start of the first HWC session. The baseline interview guide was designed to capture TA providers' initial expectations of their role as TA providers in the HWC, including their own readiness to provide TA, their motivations for participating in the HWC, and any expectations of TA recipients' needs and likely impacts of TA provision for recipients in the HWC.

Labor expert TA providers were invited to participate in a follow-up interview in the days immediately following the last HWC session. The immediate post-HWC guide was designed to capture labor experts' perceptions of what TA recipients gained from the HWC process, perceptions of TA providers' own roles inside and outside of the HWC sessions, and perceptions of impacts that the HWC process had on TA providers' own thinking. The guide also aimed to capture any shifts in TA providers' perceptions of their role and the intensity of TA provided in the HWC as compared to their initial baseline expectations, as well as TA providers' impressions of the HWC process more generally.

All TA recipients were invited to participate in a phone interview approximately three months after the final HWC session, as were TA providers who had continued to engage with non-TA participants beyond the formal HWC six-meeting period. The three-month post-HWC interview guide was designed to capture TA recipients' impressions of what they had gained from participating in the HWC, any shifts in their thinking and action since participating, and their perceptions of the role of TA, provided by UIC and labor experts in the HWC. The TA recipients were interviewed at the three-month time point instead of immediately post-HWC to better capture ways in which the TA recipients had applied what they had learned from the HWC since the conclusion of the sessions and any implementation of activities planned during the HWC sessions. The UIC Institutional Review Board approved this study in 2018 and all interviews were conducted in the summer and fall of 2018.

TABLE V. INTERVIEW GUIDES: ROLE OF LABOR EXPERT TA

Instrument	Intended Audience	Key Constructs for This Study
Baseline (Pre-HWC)	All invited labor expert TA providers.	- Attitudes and motivations for participating in HWC. - Preparedness for role as TA provider; relevant knowledge and experience. - Expectations for TA provider role. - Expected impacts of TA provision for participants.
Immediate Post-HWC	Labor expert TA providers.	- Outcomes of TA provider and TA recipient engagement; impacts of TA provision in HWC. - Perceptions of value of TA provider role in HWC. - Facilitators and barriers of TA provision in HWC.
3-Month Post HWC	All TA recipients. Labor expert TA providers involved with TA recipients beyond HWC sessions.	- Experiences with TA providers; perceptions of TA role in HWC. - Outcomes of TA provider and TA recipient engagement; impacts of TA provision in HWC. - Engagement with TA providers beyond HWC sessions.

5.2.1 Analysis

A preliminary codebook was developed prior to data collection with template codes based on the study's research questions and relevant technical assistance literature similar to the code manual development described by Feredy and Muir Cochrane (2006). Five broad code categories were included in this a priori codebook: perception of TA role, motivation for providing TA (to be applied to TA providers' interviews only), intensity of TA, shifts in thinking or action attributed to TA, and value of TA. These broad categories and sub-codes within each category were included in the a priori codebook with a definition and description of each code. Emergent codes were added during the preliminary analysis steps, further described below.

All interviews were audio recorded and professionally transcribed. Transcribed interviews were analyzed using a hybrid approach that involved both inductive and deductive coding and theme development, similar to the approach described by Fereday and Muir-Cochrane (Fereday and Muir Cochrane, 2006). Dedoose software was used for all qualitative analyses in this study.

Baseline and immediate post-HWC interviews with labor expert TA providers were coded by a single coder. For each transcribed interview, the following analysis protocol was used:

1. Each full interview was read and key points were summarized in a memo. At this point, additional codes were added to the codebook based on new categories that emerged from the textual data.
2. A priori codes and emergent codes were then applied to the interview text where text segments were considered representative of and matched the definition of an individual code.
3. As segments of text were coded, each new excerpt was compared with segments that had previously been assigned the same code. In the event that a code did not seem to fit for both segments, a new code was added to the codebook and relevant sections of the transcribed interview were recoded.
4. After all interviews were coded and additions to and refinements of the codebook were complete, a new cycle of coding began. Each interview was re-coded using the updated codebook.

5. After the second coding cycle, final coded segments were read and a process of clustering around similar patterns and themes began. At this stage, differences in themes across interviewees were examined, as were differences in baseline and post-HWC responses from TA providers, specifically.

Three-month follow-up interviews were coded by two separate coders and a slightly different analysis protocol was used. Steps 1 and 2 from the baseline and immediate post-HWC interview protocol were followed, as described above, with both coders reading and summarizing transcribed interviews and collaboratively making additions to the codebook. The following steps were then completed by the two coders in lieu of steps 3-5 from the baseline and immediate post-HWC analysis protocol:

3. After each transcribed interview was coded by both coders, coded segments were compared for agreement. In the event that the two coders did not agree on coding for a particular segment, they discussed the segment and attempted to come to agreement as to which code(s) should be applied. In the event that the two coders could not come to agreement, a third coder was asked to code the interview and discuss applied codes with the original two coders. Additionally, in the event that no codes seemed to fit a given segment, a new code was added to the codebook and relevant sections of the transcribed interview were recoded. Both coders reviewed already coded interviews for comparison of applied codes and recoded those interviews as needed to reflect codebook updates.
4. Final coded segments were read and a process of clustering around similar patterns and themes began.

5.3 Results

A total of 24 interviews were conducted with individuals who participated in the Healthy Work Collaborative (HWC) in some capacity (see Table VI). Interviews at baseline and at immediate post-HWC follow-up lasted approximately 30 minutes, while three-month follow-up interviews lasted approximately 60 minutes. All interviews were conducted by phone.

TABLE VI. DATA COLLECTION TIME POINTS: ROLE OF LABOR EXPERT TA

Time point	**Interview Participants**
Baseline - Pre-Healthy Work Collaborative	N=7 Labor Expert TA Providers: 7
Immediate Post-Healthy Work Collaborative	N=5 Labor Expert TA Providers: 5
3-Months Post-Healthy Work Collaborative	N=12 TA Recipients: 10 Labor Expert TA Providers: 2

All seven TA providers invited to participate in the HWC sessions agreed to participate in an interview at baseline and five of the seven agreed in a follow-up interview immediately post-conclusion of the six in-person HWC sessions. The two TA providers who did not participate in follow-up interviews immediately post-HWC attended only one of the six in-person sessions and did not respond to requests for follow-up. Ten of the sixteen non-TA HWC participants (TA recipients) agreed to participate in a follow-up interview at the three-month mark. The two TA providers who participated in a three-month follow-up interview had substantial, continued involvement with at least one other non-TA HWC participant beyond the six HWC sessions, either in the form of more tailored and intensive TA provision or in the form a formalized partnership.

Interviews with labor expert TA providers and non-labor TA recipients revealed a range of perceptions of the role of TA providers, the intensity of the TA provider-recipient engagement, and the impacts of TA provision in the HWC. The following results are organized under three broad categories to describe interviewees' perceptions of TA in the HWC. The TA providers' perceptions and TA recipients' perceptions are outlined separately, although there are some overlapping themes that emerged from the transcribed interview data.

5.3.1 Expectations for TA Provision in the HWC: TA Providers' Perspectives at Baseline

Interviews with labor experts at baseline offered some insight into their perceptions of their roles as TA providers and what they expected TA recipients might gain from TA provision in the HWC process. The TA providers also shared their reasons for participating in the HWC at baseline, which contributed to their perceptions of their roles as TA providers and their expectations of HWC outcomes.

5.3.1.1 Motivations for Participating as TA

Virtually all TA providers shared that their pre-existing relationship with UIC researchers, several of whom were involved in the development and facilitation of the HWC process, and their desire to maintain that relationship were instrumental in their decision to participate in the HWC. Some TA providers also described their interest in the opportunity to connect with new groups, and several were interested in understanding the non-labor participants' motivations for expanding their organizations' efforts to tackle drivers of precarious work.

> *"… the relationship with UIC and the idea that you know to be able to connect with a group of folks we wouldn't normally interact and maybe we wouldn't even be thinking of partnering up with, so I think that's really exciting of us too."* – TA provider, baseline

5.3.1.2 Perceptions of Role and Readiness

TA providers generally characterized themselves as labor experts. Many described ways that they engage directly with precariously employed workers to understand and address worker concerns, with examples ranging from grassroots organizing to policy advocacy at the city and state levels. At baseline, TA providers perceived their roles in the HWC as primarily instructional, focused on sharing this expertise with non-labor participants and fielding participant questions in response to TA presentations. Several TA participants noted that they might offer helpful resources to workers served by TA recipients' organizations, and that the HWC offered an opportunity to expand their networks outside of the in-session instructional activities.

> *"I feel like [TA providers] kind of fall into that category in terms of like being able to bring in day to day experience and on the ground experience and really a perspective of what's really going on in the work place now a days."* – TA provider, baseline

> "*[TA recipients' initiatives] won't be grounded in any reality of what precarious work gives unless there's some information, brought to the table from people who worked with precarious workers for a long time and understand the dynamics of the work and have done a lot of thinking about it."* – TA provider, baseline

Given their expertise, several TA providers noted that they felt well positioned to help non-labor primarily health recipients understand how their own organizations' positioning, networks, and resources might be leveraged to address drivers of precarious work. Some felt that their direct engagement with precariously employed workers, as well as their organizations' approaches to worker-centered policy advocacy would be especially relevant to participants in the HWC, especially those who sit at higher administrative levels and might rarely interact with workers on the ground.

> *"Well I think because we are specifically doing work that relates to the pathway to healthy work. So our policy work, our employer collaborative work, all of it is directing practices that ... practices that would be necessary to really make work less precarious…There [is] a very clear and very simple connection to be made with the issue of health and healthy work."* – TA provider, baseline

> *"Well hopefully we're in a position to help inform the projects that the collaborative members are embarking on. And share kind of any information, knowledge that we've gained kind of through our work with them as it would be relevant to their projects. I think as they are also developing those projects and kind of thinking them through, I think we also have the potential to be helpful in that sense on kind of the design side of things. But I think some of it's just acknowledging that this is often ... for some of the collaborative participants, it's going to be kind of areas of work or just a landscape that they may not be familiar with. And so I'm thinking that that is also ... it's content, but it's also concept that we can provide some help with."* – TA provider, baseline

5.3.1.3 <u>Expected Impacts of TA Provider-Recipient Engagement</u>

In general, TA providers expected participants' knowledge of precarious work to increase as a result of participating in TA-led activities. Beyond this, several TA providers hoped that participants might leverage TA providers for support on specific projects to address drivers of precarious work outside of the HWC sessions.

> *"I think that for some of the other partners, the industry partners, the governmental partners, I really hope that they will make use of me beyond just this process because I think that … it's [TA provider's organization's] obligation to provide these kinds of*

> *services to the state of Illinois in general and to workers across the state and interested stakeholders. I really am hoping that [TA recipients] think of me as a resource to bounce off ideas or even if they want to develop some sort of in house training program. I could be involved in those efforts beyond that because I'm not going anywhere."* – TA provider, baseline

5.3.2 Role and Impacts of TA in the HWC: TA Providers' Perspectives at Immediate Post-HWC and TA Recipients' Perspectives at 3-Month Post-HWC

In interviews following the conclusion of the HWC sessions, both TA providers and TA recipients reflected on their experiences interacting with one another in the context of the HWC. Interviewees from both groups described TA provider-recipient interactions of increasing intensity over the course of the six sessions, and several interviewees described shifts towards more formal engagements or partnerships with TA providers or recipients outside of the HWC. Interviewees' perceptions of the role of TA are described below, organized from less intense to more intense interactions.

5.3.2.1 Knowledge Sharing (One-Way)

In interviews immediately post-HWC, TA providers reflected on their roles as TA providers as being mostly aligned with their pre-process expectations. All TA providers described their formal duties as largely content and experience sharing with participants, with some opportunity to engage with smaller groups to provide more nuanced support around possible interventions. The TA providers described apparent learning among TA recipients and noted obvious enthusiasm for tackling drivers of precarious work from the group overall, even from the earliest HWC sessions. Several TA providers reported observing "aha" moments, where TA recipients were able to make clear connections between the content and their own or their organizations' abilities to advocate for or engineer changes at systems or policy levels.

> "*There was an enthusiasm for the issue, precarious work. It wasn't just people were happy to get the knowledge, when I say enthusiastic I mean they also wanted to do something about it.*" – TA provider, immediate post-HWC

TA recipients described the provision of TA in the HWC sessions as multi-faceted, with some general educational content shared around the drivers and manifestations of precarious work followed by more specific and focused skill sharing to meet individual organizations' needs. Interviews with TA recipients revealed expanded understandings of the complexities of precarious work and a growing awareness of their own organizations' abilities to address some of its drivers. Several TA recipients noted that the engaging, activity- or experiential learning-based ways in which TA providers presented content and led discussions helped them to think about precarious work more broadly and inspired creative thinking about action planning. Several TA recipients also noted very specific content and skill knowledge that TA providers shared that was particularly relevant to their needs, such as knowledge of the workers' compensation system, existing or proposed sick leave and minimum wage policies at the local and state levels, and best practices for conducting worker outreach.

> *"..what [TA provider's] organization does to try to mitigate [how people are taken advantage of] in a whole host of areas, whether it's, not only is it legal, in the legal area, but in, for example in the legal area on wage theft issues, and I am just shocked at how people are treated, and I think that that really opened my eyes, between [TA provider], and [another TA provider] that did the exercise [where we were workers] at the bread making factory. I don't think people have any clue about what ... and I may say this inartfully, but about what a non-skilled worker, and how they're taken advantage of, and what they go through just to make ends meet. I don't think people, it's just tough. It's just tough to see, to be honest with you. That kind of changed my attitude too, to be honest with you.* – TA recipient, 3-month post-HWC

> *"But what I saw in dealing with, in being up there in the collaborative, was how difficult the decisions that front line workers often have to make, impact their family life, which impacts their health, which impacts their kids, you know it just got through to me. I didn't think of that before I got into this. It made me just go, look further down the road at that…"* – TA recipient, 3-month post-HWC

5.3.2.2 <u>Shared Problem Solving & Relationship-Building (Two-Way; Increasingly Intense)</u>

Several TA providers shared that as much as TA recipients learned, so did the TA providers. A few TA providers described ways in which their own thinking about the role of non-labor, primarily health-focused groups in taking on some of the challenges that precariously employed workers face expanded, and at least one TA provider expressed the utility that she found in having to think about issues that she is very familiar with using a public health lens. New connections and opportunities for future

collaboration emerged as an important theme in post-HWC interviews, with shared learning in the HWC sessions described by several TA providers as a catalyst for thinking about future partnerships outside of a TA provider-recipient model.

> "*What I was impressed was that because of that diverse playing field we were able to talk, even the people who did have more knowledge about the subject, were able to talk about these issues in a way that maybe they're not used to or is not typical for them. There was tangible learning for everybody, but any time you bring people even who are very knowledgeable and you have them sit down in a concerted effort for a long period of time and talk with interested parties who aren't as knowledgeable that there's a real learning curve there. That impressed me. Just generally the fact that it was such a wide, just a diverse group of stakeholders, that was so beneficial to everybody, exploring these issues from different perspectives*." – TA provider, immediate post-HWC

> *"As much as they learned, I learned, too, right? … Even from hearing from some of the other institutions. How do they approach the work? Or how they want to change the work? And what's important to them. I think there was actually even a really cool mix of folks. I could see the academic people, the people within the hospital system, and even, for example, the [national non-profit organization]… They play a different role within the sector. So, I think that was really cool because you can hear all of those perspectives."* – TA provider, immediate post-HWC

Several TA recipients also noted that exposure to different approaches to thinking about and planning for action to address complex issues helped them think about innovative ways to approach problems like precarious work, potentially in partnership with TA providers from the HWC.

> *"Met a lot of people up there, a lot of free exchange of, discussion too… we got to talking so much and it's just like, you know, let's meet for lunch, and let's talk this over."* – TA recipient, 3-month post-HWC

5.3.3 <u>Unique Features of HWC TA Provider-Recipient Engagement</u>

In general, TA providers felt that the structure of the HWC allowed them to be responsive to TA recipients' needs and provided enough time and space for TA recipients to seek out TA to ask more individualized questions. Several TA providers noted that TA recipients seemed highly motivated to learn and were open to thinking broadly about complex issues and potential solutions, which TA providers attributed to recipients' readiness to participate in something like the HWC in the first place. One TA provider also noted the importance of the diversity of groups in the HWC, and that diversity facilitated robust, expansive conversations in a way that would not be possible in a more traditional TA provider-

recipient model with one TA provider and one TA recipient. Along these same lines, several TA providers also described the utility in meeting and interacting with so many organizations in one setting, which in addition to facilitating learning also facilitated networking and served as a jumping off point for future engagement between organizations.

> "*Even if it was just about, not even the projects, but just meeting with each other and learning from each other was an amazing result of this last three months*." – TA provider, immediate post-HWC

Although TA providers generally felt that the structure of the HWC allowed for robust discussions with TA recipients, there was a collective feeling that there was never enough time to complete activities and discuss them to a degree needed for greatest impact. Several TA providers also shared that information presented in sessions only scratched the surface of such a complex issue and noted at an on-going, long-term process is really needed to deepen TA recipients' knowledge about precarious work and their commitment to take meaningful action. A few TA providers found navigating between the larger group and individual organizations' needs difficult, and one felt that they might have had more impact working with groups of participants on a more individualized basis.

> *"I think learning about things is something that doesn't happen inside of a room. I think that learning requires experience, actually dealing with the issues, and then seeing the challenges that workers face. In order to have an idea of what makes sense to do or not do you have to get your hands dirty interacting with the workers and the real situations that they're facing, and trying to intervene and see what happens. If you don't do that then it is very theoretical."* – TA provider, immediate post-HWC

TA recipients shared many of the same sentiments regarding the HWC structure as TA providers, highlighting the utility of the in-person sessions and the openness of all attendees to engage with one another.

> *"I really liked the idea of having these sort of half-day sessions, and certainly being introduced to the issue of precarious work for the first time. So I felt that the teaching portion was really substantial for me. And working with a small group, as you're sort of learning that, and getting to know more people in areas that you don't necessarily connect with was also really a substantial piece for me in terms of my growth and also thinking about this work can feed back into our work here."* – TA recipient, 3-month post-HWC

Like TA providers, TA recipients felt that information presented in HWC sessions was impactful but difficult to digest in such a short time. Several TA recipients felt that they never had enough time to apply content learned in or between HWC sessions.

> *"I kind of feel like some of the stuff that [TA providers] presented to us was very new. With the information being so raw, I don't know if I really had an opportunity to digest it like I probably wanted to. It kind of surprised me that we would move to these different kind of concepts on such ... I guess back to back ... It was so much content in each session, and the sessions were so close together."* – TA recipient, 3-month post-HWC

Despite these limitations, TA providers and TA recipients both indicated that they were interested in continued engagement with one another in some capacity beyond the HWC sessions. Two TA providers in particular continued to engage with TA recipients in more formal partnerships post-HWC, and both attributed this deepening engagement to their dialogue and knowledge exchange within the HWC sessions. At the 3-month mark, several TA recipients shared instances in which they had connected with TA providers in the months since the last session, either for continued networking or for potential engagement in activities of shared interest. Nearly all TA providers and TA recipients expressed interest in staying connected with one another beyond the HWC, and most described the utility in having expanded networks in arenas in which they were previously unconnected.

5.4 Discussion

This study examined perceptions of TA, shared by labor expert TA providers and primarily non-labor TA recipients, in the six-meeting HWC process. The study specifically honed in on both groups' perceptions of TA providers' roles, features of TA provider-recipient engagement, and the impacts of TA provision on both providers' and recipients' thinking and actions in the HWC process. The findings from this study provide initial insight into the potential for innovative, university- or other third-party-brokered TA provider-recipient engagements, designed to catalyze development of PSE change to address complex issues, which shift along a TA continuum from less intensive, content-focused TA to more intensive, relationship-based TA.

As a prerequisite to examining perceptions of the role of labor expert TA in the HWC, this study considered the motivations of TA providers for participating in the process in the first place. Given the literature on the importance of diverse stakeholder involvement in both understanding complex issues and developing interventions to address them (Golden et al., 2015; Stokols et al., 2013), UIC researchers understood that engaging labor experts in the HWC in some capacity was likely to be important to the success of the initiative. The findings from this study suggest that labor experts' existing individual or organizational relationships with the university were paramount in their decisions to participate in the HWC sessions, highlighting the importance of leveraging existing networks to enlist TA providers in an engagement, like the HWC, that is brokered by a third party, like UIC, when the TA providers and TA recipients have little to know existing relationships with one another. Although the university served as this third party connector of sorts, other organizations with strong ties to various community organizations or other stakeholders may be able to function in a similar capacity to bring diverse groups together to explore complex issues in other contexts.

While UIC researchers envisioned the role of TA provided by labor experts to be primarily instructional, focused on sharing content and skill knowledge with TA recipients, findings suggest that this role evolved into a much more intensive and dynamic one. Instead of a TA provider-recipient arrangement focused on one-way knowledge transfer, TA providers and recipients in the HWC engaged in deeper, two-way knowledge exchange that resembled more intensive forms of TA described in the literature (Fixsen et al., 2009; Le et al., 2016).

Findings from baseline interviews with TA providers indicated that in additional to a perception of their TA role as instructional, several TA providers welcomed the opportunity to connect with the TA recipient organizations with the potential for resource sharing beyond the HWC. This openness to more intensive engagement with TA recipients beyond the HWC, despite the lack of existing relationships between TA providers and recipients, suggested early on in the HWC process, even before the start of the in-person sessions, that there was some potential for two-way knowledge exchange between the two participant groups.

Data from interviews post-HWC indicated that this two-way knowledge exchange did in fact occur in addition to the expected unidirectional knowledge transfer from TA providers to TA recipients. Both TA providers and TA recipients described what they had learned from the other; TA providers felt that they were able to present information in ways that the TA recipients understood, and TA recipients described significant shifts in their own thinking which they attributed to the content shared by TA providers and discussions that they had with them during the HWC sessions. The TA providers also shared ways in which their own thinking shifted given their exposure to TA recipients' perspectives, highlighting the shift toward two-way knowledge exchange. This was especially evident with TA providers who participated in several HWC sessions, all of whom were interviewed post-HWC, suggesting that these sorts of experiences were more profound with longer exposure to TA recipients. These findings suggest that there may be a natural tendency for diverse stakeholders to learn from one another when time allows for more intensive engagement, especially around complex issues of shared interest.

Along the same lines, interviews with TA providers and TA recipients showcased the ways in which the structure of the HWC process supported opportunities for deeper engagement over the course of the six sessions. One finding that emerged from the interview data was the readiness of TA recipients to engage with the issue of precarious work, which TA providers highlighted as a particularly important factor in their abilities to guide and engage with TA recipients. This readiness likely stemmed in part from the fact that the HWC was topically focused, and organizations with an interest in and readiness to engage with that topic were likely to be willing participants in the six sessions. It is likely that this resultant openness among TA recipients to learn more about the issue of precarious work contributed to the substantial shifts in thinking among both parties as they engaged with one another throughout the HWC process.

Despite findings that pointed to deeper engagement between TA providers and TA recipients than may have been initially expected, there were some limitations in what the HWC structure allowed both TA providers and TA recipients to accomplish. Although the HWC was designed to foster upstream

action planning to address the drivers of precarious work, data from interviews with both TA providers and TA recipients highlighted some of ways in which the HWC structure may have hampered movement toward action. Both TA providers and TA recipients opined that the tight HWC timeline limited the degree to which they were able to share and digest new information, with TA providers noting that the content that they shared only scratched the surface of what they felt TA recipients needed to know to begin planning for action to tackle drivers of precarious work. This perceived limitation aligns with some of the knowledge-to-action literature, which suggests that knowledge transfer alone may not be sufficient to inspire action (Graham et al., 2016).

In spite of this limitation, interview data from both TA providers and TA recipients indicated that the HWC structure allowed for TA providers to share broad, introductory knowledge about precarious work, which was uniformly reported as useful to TA recipients. This finding supports the utility of a systems approach to TA provider-recipient engagement, like the HWC TA model, in allowing diverse stakeholders to learn about and grapple with a complex issue in preparation for PSE strategy development to address it. Findings also suggest that this type of TA provider-recipient model allows for shifting in intensity of TA, even when the goals of the TA provider role are originally narrow and focused primarily on knowledge transfer. A shift toward more intensive TA over the course of the HWC's six sessions did inspire two-way knowledge exchange, which suggests that a model like this one, in which two diverse groups of stakeholders come together as TA providers and TA recipients with few existing relationships, has the potential to help close the knowledge gap between two diverse stakeholder groups.

Finally, although UIC researchers initially envisioned a less intensive TA arrangement in the HWC, the findings from this study suggest that at least some of the TA providers and TA recipients are likely to engage beyond the HWC process, potentially in the development and implementation of shared action to address precarious work. These findings highlight the potential of TA provider-recipient engagement models, like the HWC, in facilitating both knowledge exchange and networking opportunities that together prepare representatives from both groups for subsequent partnership. The literature suggests that transdisciplinary partnerships, such as those that might form between the labor

experts and largely health-focused organizations from the HWC, have the potential to create more sustainable and broadly impactful PSE change (Stokols et al., 2013; Golden et al., 2015).

5.4.1 Limitations

There are a number of limitations in this study, including the small sample size, the involvement of the author in the HWC process, and the lack of baseline interviews for TA recipients who participated in the HWC. Because the HWC process was a pilot, there were only a small number of representatives in both TA provider and TA recipient roles who participated in this study. Further, there were no opportunities to compare findings from this study to another similar collaborative process with multiple TA providers and TA recipients, as similar examples of TA provider-recipient models were not found in the literature.

Another potential limitation of this study is the author's involvement in the HWC as one of the UIC TA providers who helped with the design and facilitation of the HWC process. This presents a potential bias, both due to the author's own involvement and perceptions of the HWC and the potential bias in interviewees' responses to interview questions given their knowledge of my role in the HWC process. To partially address this limitation, assurances were made to study participants that their data would be both de-identified and reported in the aggregate and would not be shared outside of the UIC research team. Further, another UIC TA provider conducted interviews with the TA recipients who the author interacted with most directly in the HWC sessions.

Finally, the absence of interviews with TA recipients at baseline potentially limits our understanding of shifts in thinking that can be attributed to their engagement with TA providers in the HWC. All TA recipients were asked to consider their thinking and learning retrospectively, and there were no opportunities to compare post-HWC responses to TA recipients' perceptions of their own readiness, knowledge, or expectations of TA providers' roles prior to the HWC.

6. ROLE OF MULTI-LEVEL, MULTI-SECTOR CAPACITY BUILDING INITIATIVE IN FACILITATING EXPANDED NETWORKS AS A MEANS TO ADDRESS PRECARIOUS WORK

6.1 Introduction

The changing nature of work in the United States, from standard, full-time work arrangements toward more flexible and precarious work arrangements, presents a myriad of complex problems for workers. Studies increasingly show that features of precarious jobs, including low wages, lack of protection from termination, variable work schedules, and working conditions that cause high psychosocial stress (Benach & Muntaner 2007), have adverse effects on the health of individual workers. (Benach, Muntaner, Santana 2007; Azaroff et al 2002; Park & Butler 2001; Benavides & Declos 2005). Increased global competition over the past several decades has resulted in an increase of precarious jobs in virtually every industry, creating a large and growing population of vulnerable workers (Weil 2009; Kalleberg 2014).

The causes of this shift toward increasingly precarious work arrangements and related health concerns are complex and multi-faceted and do not have simple solutions. Interventions that improve the health of workers in precarious jobs are difficult to design and implement, as workers in these jobs are hard to reach due to the nature of their work arrangements, and interventions put forth by one organization are often unable to address the array of needs that a single worker might have (Baron et al 2014). Addressing complex problems, like the health of workers in precarious jobs, requires an understanding of the determinants of health at multiple social ecological levels and a range of strategies to address these determinants at each level (Glanz & Ammerman 2015). These types of problems also require the involvement of diverse organizations that represent multiple sectors (e.g. public, private, health, labor, etc.) and systems levels (neighborhood, city, county, state, etc.) in the development and implementation of interventions (Chisholm 1996).

Although there have been calls to develop multi-level, multi-stakeholder interventions to address complex problems like precarious work, actual interventions that meet these criteria remain scarce

(Scholmerich & Kawachi 2016). In a review of interventions that could be analyzed using the social ecological model, Golden and Earp (2012) found that the majority of interventions remained focused on individual and intrapersonal factors while few attended to factors at the institutional, community, or policy levels. Several studies have highlighted the limitations or barriers of implementing health protection and promotion interventions that address only "downstream" behavioral risks targeted specifically at precariously employed workers in the workplace (Baron et al 2015; Freudenberg et al 2015; Vermeulen et al 2009). Additionally, there is little evidence in literature that public health professionals are engaging in the development or implementation of cross-sectoral interventions focused on addressing the structural drivers of precarious work.

A prerequisite to the development of multi-sectoral interventions is the establishment of multi-sectoral networks. Networks have been defined as groups of interconnected individuals or organizations that have some level of relationship with one another (Jay 1964). Many studies have described the utility of establishing diverse networks, including an expanded ability for organizations to conceive of, design, implement, and sustain interventions in complex environments (Chisholm 1996). Networks of organizations typically form when members identify shared interests or potentially duplicative efforts to address an issue of mutual interest, and members of a given network might work together in some capacity to create and implement interventions (Chisholm 1996).

Several researchers have posited that relationships between organizations within a network can vary in intensity, depending on the mutually agreed upon purpose and goals of the network. Himmelman (2002) suggested that relationships between organizations can be classified along a continuum from less intensive, networking relationships to highly intensive, collaborating relationships. Himmelman developed four separate relationship classifications based on this theory, progressing from least to most intense: networking relationships, coordinating relationships, cooperating relationships, and collaborating relationships. Relationships on the less intensive end of this intensity spectrum are primarily focused on mutually beneficial information exchange between organizations, while relationships of increasing intensity involve altering of organizational activities to achieve a specific shared goal (Himmelman 2002).

Given the absence of literature linking public health to networks, interventions, or best practices focused on addressing the drivers of precarious work, researchers at the University of Illinois at Chicago (UIC) Center for Healthy Work decided to conduct key informant interviews with representatives in a variety of sectors to understand organizations' perceptions of the connections between work and health and identify any interventions aimed at addressing the root causes of precarious work. In 2016, UIC researchers conducted approximately 55 key informant interviews with representatives from a variety of local-, state-, and national-level groups across these focal areas: policy, research, and advocacy organizations; workforce development; labor unions and worker centers; non-profit community-based organizations; funding organizations; healthcare providers and healthcare-related associations; public health organizations; educational institutions; and employers or employer associations.

Findings from these interviews suggested that representatives from many of the health-focused organizations who were interviewed, including public health departments, advocacy groups, and healthcare providers, were doing little to engage with labor-focused organizations that are driving multi-level initiatives aimed at addressing precarious. Further, these interviews suggested that many health-focused organizations had no relationships whatsoever with these labor groups, despite overlapping populations served and shared interests in the health and well-being of workers.

In response to these findings, UIC researchers engaged a group of multi-disciplinary stakeholders, including representatives from health and labor organizations, in a process to better understand and begin to develop upstream action to address drivers of precarious work. This process, known as the Healthy Work Collaborative (HWC) Initiative, involved a six-session series of instructional and planning-based activities for primarily Illinois-based organizations that were interested in addressing precarious work. The details of the HWC sessions and its participants are included in Chapter 1.

Given the lack of multi-disciplinary networks and public health involvement in upstream intervention development around precarious work, the HWC presented an opportunity to better understand how relationships develop between previously unconnected groups of stakeholders as they explore ways to address issues of mutual interest. The goal of this study was to examine relationships

between individuals who were involved in the HWC before, immediately following, and in the 12 months following the conclusion of the in-person sessions.

6.2 Methods

All non-UIC HWC participants (24 total participants) were invited to participate in various components of this study, as were additional representatives of the organizations that joined or continued more formal partnerships post-HWC (6 additional participants). The UIC researchers conducted a longitudinal mixed-method study with two methodological components: (1) surveys of study participants' relationships with other organizations represented in the HWC; and (2) semi-structured interviews. The UIC Institutional Review Board approved these research components in 2018.

6.2.1 Relationship Surveys

Participants were asked to report the nature of their relationships with other organizations represented in the HWC at four time points: at baseline (May 2018); immediately post-HWC in-person sessions (July 2018); 6 months post-HWC (January 2019); and approximately 12 months post-HWC (June 2019). Participants were provided definitions for four relationship classifications and were asked to self-report the nature of their relationship with each of the other organizations that were represented in the HWC sessions. These relationship classifications aligned with Himmelman's organizational engagement strategies and included: no existing relationship, defined as having no interaction with the organization; networking relationship, defined as exchanging relationship for mutual benefit; coordinating relationship, defined as both organizations changing plans and activities to accomplish something together; and collaborating relationship, defined as sharing resources, including staff, money, time, and facilities, between organizations. Coordinating and cooperating relationships, which Himmelman described at two distinct relationship classifications, were combined in this study in order to simplify the survey tool and streamline definitions into four distinct categories.

6.2.2 Semi-Structured Interviews

Two semi-structured interview guides were developed to capture in-depth information about participants' relationships with other organizations represented in the HWC. Interviews were conducted at 3 months post-HWC (October 2018) and 9 months post-HWC (April 2019). All individuals who participated in the HWC sessions were invited to participate in an interview at 3 months post-HWC. These same individuals were invited to participate in an interview at 9 months post-HWC, as were any new individuals who had joined partnerships since the conclusion of the HWC. These were primarily individuals from organizations that had been represented during the HWC who subsequently became engaged with projects that stemmed from the HWC learning and planning sessions.

6.2.3 Data Analysis

Data from the relationship surveys at each time point were used to examine the nature of relationships reported by the full sample and dyadic relationships between participants and other organizations. Basic descriptive analyses were conducted to understand relationship characteristics of the sample at each time point. Shifts in reported relationships were compared from baseline to immediate post-HWC follow-up and from baseline to one-year post-HWC follow-up. In the event that a participant did not complete surveys at two or more time points that were compared in the analysis phase (e.g. a participant did not complete both baseline and immediate follow-up surveys), that participant was not included in the analysis for that particular time frame. Similarly, organizations who were not represented in all 4 survey time points (e.g. an organization that was not originally involved in the HWC in-person sessions but joined a partnership later on) were also excluded from analyses.

Interviews were audio recorded and professionally transcribed. The transcribed interviews were then analyzed using a hybrid approach that involved both inductive and deductive coding and theme development, similar to the approach described by Fereday and Muir-Cochrane (Fereday and Muir-Cochrane 2006). A preliminary codebook for this study was developed prior to data collection with

template codes based on the study's research questions and relevant literature on relationship and partnership development. Dedoose software was used for all qualitative analyses in this study. The analysis protocol employed by the study's researchers is further described below.

Two researchers added emergent codes after an initial reading, memoing, and discussion of the textual data. Both researchers coded each transcribed interview separately, applying *a priori* and emergent codes to the interview text where text segments were considered representative of and matched the definition of an individual code. Coded transcripts were then compared and discrepancies were resolved by the researchers. After each round of coding, new coded excerpts were compared with segments from previous interviews that had been assigned the same code. In the event that a code did not seem to fit for both segments, a new code was added to the codebook. After all interviews were coded and additions to and refinements of the codebook were complete, the two researchers reviewed all transcripts and recoded segments as needed. Clustering of codes and theme generation was completed after all codes were finalized. Data from both methodological components were triangulated to better understand participants' relationships during the year following the HWC in-person sessions.

6.3 Results

A total of 27 participants (90%) completed the relationship survey at least one of the four time points that it was conducted. Of these, 22 were individuals who participated in the in-person HWC sessions, while 5 were individuals who had joined formal partnerships that were established or expanded post-HWC. Twenty unique organizations were represented in this sample, and 13 of these organizations were part of a formal partnership. Twelve of these organizations were part of a formal partnership from the start of the HWC sessions, while 1 organization joined a partnership post-HWC. Table VII shows the number of participants in each data component. The table also shows the number of organizations represented in each component, the number of participants who were involved in formal partnerships at the time of the assessment, and the number of participants who were not involved in formal partnerships.

TABLE VII. DATA COLLECTION TIME POINTS: ENGAGEMENT BETWEEN ORGANIZATIONS

	Baseline	**Immediate follow-up**	**3-month follow-up**	**6-month follow-up**	**9-month follow-up**	**12-month follow-up**
Relationship survey	*n*=17 Orgs: 15 Partnerships: 15 Non-partnerships: 2	*n*=13 Orgs: 12 Partnerships: 11 Non-partnerships: 2		*n*=10 Orgs: 9 Partnerships: 9 Non-partnerships: 1		*n*=14 Orgs: 10 Partnerships: 5 Non-partnerships: 2
Interview			*n*=13 Orgs: 12 Partnerships: 10 Non-partnerships: 2		*n*=17 Orgs: 11 Partnerships: 16 Non-partnerships: 1	

A small percentage of study participants completed the relationship survey at all 4 time points. Given this limitation, data from the relationship surveys at the 6-month and 12-month post-HWC time points were only used to examine dyadic shifts in relationships over time. These data were triangulated with baseline and/or immediate follow-up survey data, as well as qualitative data from the 3-month and/or 9-month follow-up interviews to better understand relationship shifts between the various individuals and organizations represented in the HWC and subsequent meetings.

6.3.1 Shifts in Relationships: Before and After Participation in the HWC

Twelve of the 17 participants who completed the relationship survey at baseline also completed the survey at immediate follow-up. Relationship classifications reported by these 12 participants are included in Table VIII. At baseline, 61% of the relationships reported by these 12 participants were classified as "no existing relationship", while 39% were classified as some level of existing relationship (networking, coordinating, or collaborating). At immediate follow-up, the 12 participants reported not having a relationship with fewer than half (46%) of these same organizations, instead reporting some level of existing relationship with the majority of these organizations (54%). Networking relationships increased the most in this sample, with an additional 12 networking relationships reported at immediate

TABLE VIII. SELF-REPORTED RELATIONSHIPS: PRE- AND IMMEDIATE POST-HWC[a]

Reported Relationship	**Total N reported at baseline (%)**	**Total N reported at immediate follow-up (%)**	**Mean at baseline (min, max)**	**Mean at immediate follow-up (min, max)**
No existing relationship	102 (61)	78 (46)	9 (5, 11)	7 (0, 11)
Networking relationship	23 (14)	35 (21)	2 (0, 4)	3 (0, 10)
Coordinating relationship	16 (10)	20 (12)	1 (0, 4)	2 (0, 4)
Collaborating relationship	26 (15)	31 (18)	2 (0, 4)	3 (0, 6)
Missing	*1 (1)*	*4 (2)*	-	-
Total	168 (100)	168 (100)	-	-

[a]Table VIII shows self-reported relationships between the 12 participants who participated in both baseline and immediate post-HWC surveys and 14 other organizations (participants did not rate their relationship with their own organization). Organizations not represented in survey responses at both time points were excluded from analysis.

follow-up. Coordinating and collaborating relationships also saw net increases, with an additional 4 and 5 relationships classified as coordinating and collaborating, respectively.

Fifty-eight (35%) of the dyadic relationships reported at baseline shifted to a different relationship classification at immediate post-HWC follow-up (see Table IX). Of these, 41 shifted towards a higher-level relationship (e.g. a shift from no existing to a networking relationship or a shift from a coordinating relationship to a collaborating relationship), while 17 shifted towards a lower-level relationship (e.g. a shift from a collaborating relationship to a coordinating relationship). The majority of upward shifts were dyads originally reported as no existing relationship that then shifted to an existing relationship of some kind.

Interviews at 3-month follow-up offered some insight into participants' perceptions of shifts in their relationships with the other participants and organizations represented in the HWC sessions.

Interviewees largely attributed new relationships and strengthening of existing relationships to their participation in the in-person HWC sessions. Several interviewees noted that the large group atmosphere, along with dedicated time to network and share information about each organizations' interests and planned activities, allowed participants to learn about other organizations and motivated them to connect one-on-one post-HWC. One interviewee summarized these sentiments:

> *"I think it was probably also it was in the large group settings that for me was sort of like identifies who are some of the people that I should follow up with. If they weren't in my small group, then I sought them out to talk with them, just hearing their comments, or reacting to the things they were saying in a big group. So yeah, I think that was where the most events helped me say, "Oh, I should find out more about their organization."* – Worker Center representative

Several interviewees also felt as though the shared experience of participating in the HWC offered a strong enough foundation to reach out to other participants as a resource or potential partner for other activities in the future:

> *"We could you know, pick up the call and call them and they would answer and likewise if somebody called, and go, "Oh I was in that work collaborative with you, healthy work collaborative with you," oh absolutely and feel like a bond that needs to be helpful."* – LHD representative

Along these same lines, many interviewees talked about potential opportunities to engage with other HWC participants in specific initiatives of shared interest for their organizations. These interviewees primarily described potential engagement with HWC participants whose organizations represent different sectors from the interviewee's own (e.g. health organizations engaging with labor organizations). Interviewees mentioned a range of possible types of engagement between their organizations and the other HWC participant organizations, from directing their own patients, clients, or community members to the services offered by the other organizations to opportunities to create a new project or initiative in which both organizations would work together in a more formal capacity. Several interviewees noted that they had already followed up with other HWC participants since the conclusion of the sessions.

Although the quantitative relationship survey data indicated that some dyadic relationships had shifted toward less intensive relationships, or in some cases from some existing relationship to no existing

TABLE IX. DYADIC RELATIONSHIPS: BASELINE AND IMMEDIATE POST-HWC

	City LHD	Health Advocacy Org	Hospital System	Legal Org	National Health Advocacy Org	Public Health Advocacy Association	Rural County Board	Rural Economic Development	Rural LHD	Rural WDP	Urban County LHD	Worker Center 2	*Time*
City LHD	-	COL	COL	COL	**COR**	**NET**	NONE	NONE	NONE	NONE	**COL**	**COR**	*PRE*
City LHD	-	COL	COL	COL	**COL**	**COR**	NONE	NONE	NONE	NONE	**COR**	**COL**	*POST*
Health Advocacy Org	COL	-	COR	**NET**	**COR**	**NET**	NONE	NONE	NONE	NONE	COL	COL	*PRE*
Health Advocacy Org	COL	-	COR	**COR**	**NET**	**COR**	NONE	NONE	NONE	NONE	COL	COL	*POST*
Hospital System	NET	NONE	-	**NET**	**NET**	**NONE**	NONE	NONE	NONE	**NONE**	NET	NONE	*PRE*
Hospital System	NET	NONE	-	**COR**	**NONE**	**NET**	NONE	NONE	NONE	**NET**	NET	NONE	*POST*
Legal Org	NONE	NONE	COL	-	NONE	NONE	NONE	NONE	NONE	NONE	NONE	**NET**	*PRE*
Legal Org	NONE	NONE	COL	-	NONE	NONE	NONE	NONE	NONE	NONE	NONE	**COR**	*POST*
National Health Advocacy Org	COR	**NONE**	**COR**	**NONE**	-	COR	**NONE**	**NONE**	**NONE**	**NONE**	COR	**NONE**	*PRE*
National Health Advocacy Org	COR	**COR**	**NET**	**NET**	-	COR	**NET**	**NET**	**NET**	**NET**	COR	**NET**	*POST*
Public Health Advocacy Org	**COL**	**COR**	**COL**	NONE	**NET**	-	**NET**	NONE	COL	NONE	**COL**	NONE	*PRE*
Public Health Advocacy Org	**COR**	**NET**	**NET**	NONE	**COL**	-	**NONE**	NONE	COL	NONE	**NET**	NONE	*POST*
Rural County Board	**NONE**	**NONE**	**NONE**	**NONE**	**NONE**	**NONE**	-	COL	COL	COL	**NONE**	**NONE**	*PRE*
Rural County Board	**NET**	**COR**	**NET**	**NET**	**NET**	**COR**	-	COL	COL	COL	**COR**	**NET**	*POST*
Rural County Economic Org	NET	NONE	NONE	NONE	**NET**	COL	COL	-	COL	COL	NET	NONE	*PRE*
Rural County Economic Org					**NONE**		COL	-	COL				*POST*
Rural LHD	**NONE**	**NONE**	NONE	NONE	**NONE**	**NONE**	COL	COL	-	COL	**NONE**	NONE	*PRE*
Rural LHD	**COR**	**COR**	NONE	NONE	**NET**	**COL**	COL	COL	-	COL	**COR**	NONE	*POST*
Rural LHD	NONE	NONE	NONE	NONE	**NET**	**NONE**	**COR**	COL	-	COL	NONE	NONE	*PRE*
Rural LHD	NONE	NONE	NONE	NONE	**NONE**	**NET**	**COL**	COL	-	COL	NONE	NONE	*POST*
Rural WDP	**NET**	NONE	**COR**	NONE	**COR**	NONE	**NONE**	**NONE**	**NONE**	-		NONE	*PRE*
Rural WDP	**NONE**	NONE	**NONE**	NONE	**NONE**	NONE	**NET**	**COL**	**COL**	-	NONE	NONE	*POST*
Urban County LHD	**NET**	**NET**	**COL**	NONE	**NONE**	**NET**	NONE	NONE	NONE	NONE	-	NONE	*PRE*
Urban County LHD	**COR**	**NONE**	**COR**	NONE	**COR**	**NONE**	NONE	NONE	NONE	NONE	-	NONE	*POST*
Worker Center 2	**NONE**	**NONE**	**NONE**	**NET**	NONE	NONE	NONE	NONE	NONE	NONE	**NONE**	-	*PRE*
Worker Center 2	**COL**	**COL**	**NET**	**COL**	NONE	NONE	NONE	NONE	NONE	NONE	**COL**	-	*POST*

relationship, the interview data did not provide insight into why participants reported these shifts in their surveys. In at least one case, an interviewee described a long-term networking relationship, pre-existing the HWC, with another organization represented in the HWC in their 3-month follow-up interview, but had reported that same relationship as "networking" in the baseline relationship survey and then "no existing" at immediate follow-up. Overall, however, relationships described by participants in their 3-month follow-up interviews were reflective of the relationship levels and any shifts reported in their surveys.

6.3.2 Shifts in Relationships: Year Following HWC

Relationship surveys at the 6-month and 12-month post HWC time points, as well as interviews at both 3-month and 9-month follow-up, provided additional insight into relationships between HWC participants in the months following the HWC in-person sessions. Participation in study components beyond the HWC was inconsistent, likely because participants were engaged in data collection primarily remotely following the conclusion of the HWC, whereas they had been engaged in-person at baseline and immediate post-HWC time points. Only five of the 12 individuals who completed both the baseline and immediate post-HWC relationship surveys also completed relationship surveys at 6- and 12-month follow-up. Eight of the original 12 participated in an interview at 3-month follow-up, 9 participated in an interview at 9-month follow-up, and 7 participated in both follow-up interviews.

In general, participants who had reported coordinating or collaborating relationships with other organizations represented in the HWC reported similar levels of relationships with those same organizations in relationship surveys at 6-month and 12-month follow-up. Although some participants reported maintaining a networking relationship with some of the new connections they had made during the HWC, others did not report an existing relationship with new connections in surveys at 6- or 12-month follow-up. Interviews at 3- and 9-month follow-up largely corroborated these relationship survey data, as participants described relationships in interviews that matched the relationships reported in surveys, and filled in some of the gaps for those who had not completed surveys.

Differences in reported relationships over the course of the study period emerged between individuals who were part of formal partnerships at some point in the HWC or year following and those who did not have formal partners at any point in the process. Of the 27 individuals who participated in at least one study component, 21 were members of a multi-organizational partnership either during the HWC sessions or in the following year. One of these 21 individuals participated in the HWC as a labor expert and joined an existing partnership after the HWC, while five of the 21 did not participate in the HWC but joined a partnership in the months following the HWC.

In general, HWC participants who had formed more formal partnerships, either prior to or post-HWC, reported coordinating or collaborating relationships with their partners in relationship surveys completed in the year following the conclusion of the HWC. In several of these partnerships, partner organizations reported collaborating relationships at baseline and maintained this level of partnership throughout the in-person sessions and in the year following the HWC. Other individuals involved in partnerships, especially those partnerships formed immediately prior to the HWC, reported lower-intensity relationships with their partner organizations at baseline and reported higher intensity relationships immediately post-HWC and in the year following the HWC as their partnership evolved.

A small number of study participants were not members of multi-organizational partnerships at any point during or in the year following the HWC sessions. Although these individuals reported shifts in relationships, mostly from no existing relationship to networking relationships, they reported few, if any, shifts towards higher level relationship classifications, such as coordinating or collaborating relationships, beyond the immediate post-HWC follow-up survey.

6.4 Discussion

This study examined shifts in relationships between individuals from the various organizations that were represented in the six-meeting HWC process. This study specifically examined shifts in relationships from prior to the HWC meetings to immediately post-HWC meetings and any subsequent shifts in the year following the HWC. The findings from this study provide some insight into the utility of

a university-brokered process in bringing together diverse organizations that have few, if any, existing relationships with one another.

Both aggregate and dyadic data from the relationship surveys at baseline and at immediate post-HWC follow-up showcase shifts in relationships reported by various HWC participants from before and after attending the six in-person sessions. The most pronounced shifts from pre- and post-HWC participation are new, networking relationships that did not exist prior to the HWC, apparent in both the aggregate and dyadic data. These shifts indicate expanded networks for many of the HWC participants following the conclusion of the in-person sessions. All but one of the individuals who completed relationship surveys at baseline and at immediate post-HWC follow-up reported upward shifts in relationships (i.e. shifts from no existing relationship to an existing relationship or shifts from some level of existing relationship to a more intensive level of relationship). These findings suggest that the HWC structure helped to facilitate some of these relationship shifts, as individuals who participated in these sessions would likely not have interacted if not for their HWC attendance.

The qualitative interview data at 3-month follow-up provide further insight into these relationship shifts and the features of the HWC that participants attributed to these shifts. These qualitative findings suggest that the opportunity to hear from the various participants, including the description of what each organization does and interventions that the organizations were interested in developing, were instrumental in individuals' decisions to seek out additional conversations with participants that they were not originally connected to throughout the HWC process. Findings also suggest that some of the less structured time during each HWC meeting, like breaks or activities in which participants moved outside of their groups, allowed for opportunities to network that many participants reported as particularly valuable. This time seemed to allow participants to gain a deeper understand of what one another's organizations do and what sorts of initiatives participants might be interested in working on more collaboratively in the future.

Findings from the interviews at 3-month follow-up indicated that participants were able to identify potential opportunities for engagement with other organizations that had participated in the

HWC. These findings suggest that despite the fact that many organizations were not connected prior the HWC, their representatives were able to identify common interests and potential value in working together. Many interviewees expressed interest in connecting with other HWC participants even at 3-month follow-up, suggesting that interactions with others at the HWC sessions had a lasting impact on participants. The fact that some organizations had already come together outside of the HWC sessions to explore opportunities for engagement or more formal partnerships at 3-month follow-up suggests that the HWC was also effective in stimulating the creation of active networks and partnerships.

Findings from later data components, including 6- and 12-month post-HWC relationship surveys and 9-month follow-up interviews, suggested that relationships did not remain stagnant in the year after the HWC in-person sessions. In general, participants who had engaged in formal partnerships during or after the HWC sessions continued to report higher-level existing relationships with their partner organizations than they did with organizations that they were not formally engaged with. The 9-month follow-up interview data suggests that those who were engaged in formal partnerships continued to interact with one another in some capacity, either through continued in-person meetings or other virtual communication platforms, which allowed for sustained engagement and maintenance of dyadic relationships.

Although some participants mentioned potential opportunities for engagement with other HWC participants at 9-month follow-up, these were generally fewer than were mentioned at 3-month follow-up. This finding suggests that without continued in-person engagement, individuals may not follow-up with new acquaintances unless they are likely to engage in a formal capacity in the immediate future. The interview data provided some insight into reasons why participants had not engaged with others in the months post-HWC, including limited time, resources, and lack of concrete next steps for action. Although participant organizations may find more concrete opportunities to connect in the future, it is possible that without another in-person engagement to catalyze additional networking, participants may not reconnect. Some shifts from “networking” to “no relationship” in the months following the HWC may be attributed to this lack of continued in-person engagement.

6.4.1 Limitations

There are a number of limitations in this study, including inconsistent response rates to relationship surveys and some loss to follow-up for interviews. Many participants did not complete all four of the relationship surveys, which may have been due to the variability in how surveys were administered (e.g. in person versus online). Participants were more likely to complete surveys when they were administered in person than if they were asked to do so via a Qualtrics link sent out by email. To compensate for this, participants were asked about relationships with other HWC participant organizations in interviews at both 3- and 9-month follow-up. Several participants did not respond to requests for interviews at one or both time points. This limited researchers' abilities to examine shifts in relationships over time. This was especially challenging for participants who did not complete all relationship surveys and who did not participate in at least one interview.

Another limitation in this study was the variability in self-reported relationships in surveys and those described by participants in interviews. In several cases, participants reported a lower intensity relationship on a relationship survey than what they described in interviews. It is possible that the definitions provided for the relationship classifications on the surveys were not clear enough to participants. It is also possible that the example provided in the survey for a certain relationship classification did not reflect the interactions that the participant had with another individual or organization, and the participant therefore reported a relationship classification that did not truly reflect the level of interaction that they had with that organization. The interview data did help to clarify some of these inconsistencies, as individuals were asked to describe the ways in which they engaged with other HWC participants, which helped to reclassify relationships as needed.

6.5 Conclusions

Overall, the HWC structure seemed to help facilitate the formation of new relationships and the resultant expansion of participating organizations' networks. In general, HWC participants identified opportunities to engage with organizations that they had interacted with during the HWC sessions and

several had already engaged in some capacity post-HWC. Although it is too soon to determine whether new connections or deepened connections that resulted from the HWC were instrumental in the development and implementation of PSE change interventions to address precarious work, early findings indicate that many organizations that participated in the sessions are actively working together to identify next steps and plan for more concrete action.

7. IMPORTANCE OF TRANSDISCIPLINARY PARTNERSHIP DEVELOPMENT IN DESIGNING AND IMPLEMENTING SYSTEMS-FOCUSED INTERVENTIONS TO ADDRESS PRECARIOUS WORK

7.1 Introduction

For many years, public health researchers and practitioners have recognized that the conditions in which people live, work, and play have a determining impact on the health of the population. (Marmot 2005; WHO 2008). The social and economic policies in the United States have a determining impact on employment and working conditions that individuals experience, both of which have recognized implications for the population's health (Benach, Muntaner, Santana 2007). Increased global competition over the past several decades has led to outsourcing of labor, weakened labor unions, and deregulation of the labor market, all of which have contributed to a rise in insecure, risky, and low-wage work (Kalleberg 2009). The term precarious work has been used to describe this type of work, which is characterized by non-standard or atypical work arrangements, such as temporary work, part-time contract work, or unregulated, informal work such as day labor or domestic work (Benach & Muntaner 2007; NELP 2009).

While public health professionals recognize the importance of work as a social determinant of health, there is little evidence in literature of public health interventions focused on addressing the structural drivers of precarious work. Interventions to improve the health of workers in precarious jobs are difficult to design and implement, as workers in these jobs are hard to reach and many of the contributors to adverse health outcomes are upstream social and economic policies that drive increases in precarious employment (WHO Commission on SDOH 2008; Baron et al 2014). Interventions that are more likely to be effective and impactful on a broader population level, typically in the form of policy, systems, and environmental (PSE) changes, are often difficult to articulate, potentially limiting perceived feasibility and effectiveness, and are often difficult to engineer, requiring buy-in and infusion of resources from a variety of stakeholders (Golden et al 2015). Many public health professionals may also lack sufficient

knowledge of the causes, characteristics, and consequences of precarious work that are necessary to design and implement effective interventions in this arena.

One solution to help public health professionals overcome these limitations is for them to connect with other stakeholders who already have a deep understanding of precarious and who are already working to address its upstream contributors. Several studies suggest that team-based approaches to complex problem solving and intervention development are more effective than single disciplinary approaches, especially when collaborators from a variety of fields come together to explore and issue of shared interest and are able to offer a range of perspectives, knowledge, and approaches to address that issue (Jordan 2006; Stokols et al 2008; Wuchty et al 2007). Approaches to solving complex problems that emphasize transdisciplinary stakeholder engagement are growing in popularity in many disciplines, including in public health (Stokols 2006, Stokols et al 2013).

One frequently utilized approach in public health practice is a systems approach to intervention, which requires diverse groups of stakeholders to holistically consider interacting factors that contribute to a particular health problem (Best, Moor et al 2003; Best, Stokols et al 2003; Midgley 2005). Achieving PSE change using a systems approach typically requires formation of formal coalitions and partnerships between multiple diverse organizations or constituencies (CDC Healthy Communities Program Sustainability Guide, n.d.). In general, successful coalitions bring together various groups to pool resources and leverage respective areas of expertise to achieve meaningful and sustainable change, and funders have increasingly invested in interagency collaboration and coalition development as part of health promotion interventions (Butterfoss et al 1993; Cross et al 2009).

Organizations may form coalitions in order to achieve a common goal, and relationships between coalition members often vary in intensity (Butterfoss et al 1993). Existing organizational relationship literature suggests that relationships between organizations begin with low intensity exchanges, typically in the form of networking between members of two organizations (Riggs et al. 2013; Himmelman 2002). Relationships can progress along a continuum from less intensive to more intensive engagements depending on each organization's available time and willingness to engage, their commitment to an issue

of shared interest, and the level of trust between the two organizations (Himmelman 2002). Himmelman (2002) classified relationships with minimal involvement between organizations as networking relationships, focused primarily on information exchange. Himmelman posits that organizations that move beyond initial networking will reach a coordinating stage, in which they exchange mutually beneficial information and begin to alter organizational activities to serve a shared purpose. Increasingly intensive relationships, classified by Himmelman as cooperating relationships, require higher levels of trust and willingness to adapt organizational priorities from both organizations. Collaborating relationships are the most intensive, demanding significant organizational changes for both organizations to ensure that resources are appropriately leveraged and shared objectives are met.

In 2016, researchers from the University of Illinois at Chicago (UIC) Center for Healthy Work conducted key informant interviews with representatives from a variety of sectors to explore their perceptions of the relationships between work and health, identify existing systems approaches to address root causes of precarious work and promote and protect worker health more generally, and elucidate existing partnerships and communication channels for information sharing across groups. Key informants included individual representatives from a variety of local-, state-, and national-level groups across these focal areas: policy, research, and advocacy organizations; workforce development; labor unions and worker centers; non-profit community-based organizations; funding organizations; healthcare providers and healthcare-related associations; public health organizations; educational institutions; and employers or employer associations.

Findings from these interviews suggested that representatives from many of the health-focused organizations who were interviewed, including public health departments, advocacy groups, and healthcare providers, were doing little to engage with labor-focused organizations that are driving upstream PSE change initiatives aimed at addressing precarious work at local, state, and national levels. The interviews also suggested that even single-discipline public health initiatives that target the causes of precarious work were few and limited in scope, despite the fact that many of these interviewees were able to identify work as an important determinant of health.

7.1.1 Healthy Work Collaborative Initiative

Given the absence of existing coalitions, interventions, or best practices in this area, UIC researchers engaged a group of multi-disciplinary stakeholders in a process to better understand and begin to develop upstream action to address drivers of precarious work in the summer of 2017. This process, known as the Healthy Work Collaborative (HWC) Initiative, involved a six-session series of instructional and planning-based activities for primarily Illinois-based organizations that were interested in addressing precarious work. The details of the HWC sessions and its participants are included in Chapter 1.

To better understand the various impacts of participating in the HWC, UIC researchers conducted a longitudinal study in which they collected a variety of data from HWC participants before and after participating in the HWC sessions. These data were used to inform this study. The goals of this study were threefold: (1) examine relationships between members of more formal partnerships formed before, during, or after the HWC; (2) examine features of those partnerships that contribute to or hinder progress toward implementation of new interventions; and (3) examine organizational priorities and activities focused on precarious work that HWC participant organizations engage in post-HWC and explore any differences in those activities between organizations engaged in multi-sectoral partnerships and those working solely within their own organizations.

7.2 Methods

All non-UIC HWC participants (24 total participants) were invited to participate in specific components of this study, as were additional representatives of the organizations that joined or continued more formal partnerships post-HWC (6 additional participants). The UIC researchers conducted a longitudinal mixed-method study with two methodological components: (1) surveys of study participants' relationships with other organizations represented in the HWC; and (2) semi-structured interviews. The UIC Institutional Review Board approved these research components in 2018.

7.2.1 Relationship Surveys

Participants were asked to report the nature of their relationships with other organizations represented in the HWC at four time points: at baseline (May 2018); immediately post-HWC in-person sessions (July 2018); 6 months post-HWC (January 2019); and approximately 12 months post-HWC (June 2019). Participants were provided definitions for four relationship classifications and were asked to self-report the nature of their relationship with each of the other organizations that were represented in the HWC sessions. These relationship classifications aligned with Himmelman's organizational engagement strategies and included: no existing relationship, defined as having no interaction with the organization; networking relationship, defined as exchanging relationship for mutual benefit; coordinating relationship, defined as both organizations changing plans and activities to accomplish something together; and collaborating relationship, defined as sharing resources, including staff, money, time, and facilities, between organizations. Coordinating and cooperating relationships, which Himmelman described at two distinct relationship classifications, were combined in this study in order to simplify the survey tool and streamline definitions into four distinct categories.

7.2.2 Semi-Structured Interviews

Two semi-structured interview guides were developed to capture general information about new organizational priorities or activities that participants' organizations had identified or undertaken since the conclusion of the HWC and information about participants' relationships with partner organizations, if applicable. Interviews were conducted at 3 months post-HWC (October 2018) and 9 months post-HWC (April 2019). All individuals who participated in the HWC sessions were invited to participate in an interview at 3 months post-HWC. These same individuals were invited to participate in an interview at 9 months post-HWC, as were any new individuals who had joined partnerships since the conclusion of the HWC. These new participants were primarily individuals from organizations that had been represented during the HWC who subsequently became engaged with projects that stemmed from the HWC learning and planning sessions.

7.2.3 Data Analysis

Data from the relationship surveys at each time point were used to examine individuals' perceptions of the nature of their dyadic relationships with their partners. These data were used alongside data from the interviews to illustrate ways in which relationships between partners changed from baseline to one year following the conclusion of the HWC sessions. All dyadic analyses were performed using Excel.

Interviews were audio recorded and professionally transcribed. The transcribed interviews were then analyzed using a hybrid approach that involved both inductive and deductive coding and theme development, similar to the approach described by Fereday and Muir-Cochrane (Fereday and Muir-Cochrane 2006). A preliminary codebook for this study was developed prior to data collection with template codes based on the study's research questions and relevant literature on relationship and partnership development. Dedoose software was used for all qualitative analyses in this study. The analysis protocol employed by the study's researchers is further described below.

Two researchers added emergent codes after an initial reading, memoing, and discussion of the textual data. Both researchers coded each transcribed interview separately, applying *a priori* and emergent codes to the interview text where text segments were considered representative of and matched the definition of an individual code. Coded transcripts were then compared and discrepancies were resolved by the researchers. After each round of coding, new coded excerpts were compared with segments from previous interviews that had been assigned the same code. In the event that a code did not seem to fit for both segments, a new code was added to the codebook. After all interviews were coded and additions to and refinements of the codebook were complete, the two researchers reviewed all transcripts and recoded segments as needed. Clustering of codes and theme generation was completed after all codes were finalized.

Data from both methodological components were triangulated to better understand participants' relationships and partnerships during the year following the HWC in-person sessions. Dyadic relationship data from the surveys and the interviews were used to create relationship maps between members of more

formal partnerships. The aim of these relationship maps was to visually represent types or classifications of relationships between study participants.

7.3 Results

A total of 27 participants (90%) completed the relationship survey at least one of the four time points that it was conducted. Of these, 22 were individuals who participated in the in-person HWC sessions, while 5 were individuals who had joined formal partnerships that were established or expanded post-HWC. Twenty unique organizations were represented in this sample, and 13 of these organizations were part of a formal partnership. Twelve of these organizations were part of a formal partnership from the start of the HWC sessions, while 1 organization joined a partnership post-HWC.

Thirteen HWC participants participated in an interview at 3-month follow-up, and 11 of these same participants participated in an interview at 9-month follow-up. Twelve unique organizations were represented in interviews at 3-month follow-up, and one additional organization was represented at 9-month-follow-up. Five of the individuals who participated in a 9-month follow-up were new members of partnership groups who did not participate in the HWC in-person sessions.

Table VII (included in Chapter 6) shows the number of participants in each data component. The table also shows the number of organizations represented in each component, the number of participants who were involved in formal partnerships at the time of the assessment, and the number of participants who were not involved in formal partnerships.

7.3.1 Organizational Activities and Initiatives Post-HWC

Interviews at both 3-month and 9-month follow-up highlighted similarities and differences in organizational activities and initiatives undertaken by groups of study participants, including those who were engaged in formal partnerships with other HWC participants and those who were not engaged in partnerships at all. All interviewees, whether engaged in a formal partnership or not, described activities or initiatives that their organizations had undertaken, either alone or in partnership with other

organizations, in the months post-HWC, and detailed the ways in which their relationships with other HWC participants contributed or did not contribute to these pursuits. Interviewees engaged in formal partnerships detailed the ways in which each partner organization was working together and described features of the partnership that were contributing to or inhibiting the successful completion of the goals set forth by the partner organizations. Themes that emerged from interviews at each time point are included below.

7.3.1.1 3-Month Follow-Up: Early Stages of Planning

HWC participants who participated in interviews at 3-month follow-up generally described the early phases of planning for implementation of initiatives conceived or refined during the in-person sessions. All interviewees were able to articulate some kind of vision for the initiative(s) that they were planning, with varying levels of clarity and precision in terms of next steps. In general, interviewees engaged in formal partnerships tended to describe plans for initiatives that were more policy- or systems-based, incorporating multiple strategies aimed at more upstream factors that impact the health of precariously employed workers. One interviewee summarized the various activities that their group was working on:

> *"One thing was sort of the public communications plan that we were working on together, which included things like a press release, and published op-ed, and also we're planning different social media like social media strategy for working together so that's sort of one side we've been talking. The other side is on research looking at what research currently exists or what gaps in research currently exist that could be useful, so that's also something we're exploring. And then on the advocacy side, looking at how can the positions that we occupy be leveraged for advocating for the policies together as well. Those are kind of like the three buckets more or less that we're trying to have a partnership in, and still planning some of it."*

Interviewees that were working solo, within their own organizations, described plans for initiatives that were at least initially focused internally within their own organizations, but which had the potential to expand beyond their organization. One interviewee articulated their longer-term vision for a project internal to their organization that was the focus of their planning time in the HWC:

> *"In the short term, I think [interviewee's organization] will diversify its internship pool, both the people who apply as well as the people who intern here. Specifically, along the lines of race and class. And long term, I think that, I'm hopeful we set a new model and standard for others to do a similar thing and even longer term, that our public health conversations and our health policy conversations are more representative of the world in which we live."*

Interviewees who were engaged in formal partnerships described goals for their partnership that matched the goals described by their partners, but few described concrete next steps for achieving those goals at 3-month follow-up. Instead, most of these interviewees described a process of figuring out how each organization in the partnership might work together. One interviewee shared that partners continued to engage in conversations to determine their capacities to work together:

> *"Oh, and then also about [inaudible] that kind of like a more broader conversation than looking at just looking more at organizationally, how are each of our organizations working? Kind of like were in initial development conversation or initial capacity conversations."*

In a similar vein, several interviewees detailed ways in which they and their partners were navigating the various resources and organizational structures that comprise their partnerships, and how they were figuring out levels of commitment to their partnership early on. Couched in these descriptions were potential barriers that might accompany a collaborative approach between organizations with different missions, resources, and organizational structures. One interviewee summarized these sentiments:

> *"Part of it is just trying I think partly understanding, we're still trying to understand what resources each of us has. It's taking a bit of time to really figure out who is both eager to work together, and we're still trying figure out what that can look like. Part of it too I think is just that because the department is a large institution, it also takes time, so then to make decisions if we make proposals for things to do."*

Interviewees who were not engaged in formal partnerships focused largely on a vision and next steps for the initiative that were internal to their organization, without plans for involving outside partners. These interviewees described ways in which their involvement in the HWC in-person sessions impacted their decisions but did not expressly attribute shifts in plans or activities to specific relationships or potential partnerships with other HWC participants.

7.3.1.2 9-Month Follow-Up: Implementation

At 9-month follow-up, most interviewees were involved in the implementation phases of their initiatives. For the most part, interviewees described activities that aligned with those that they had been planning at 3-month follow-up. Some interviewees noted substantial progress towards the goals of their initiatives at 9-month follow-up, while others described a prolonged planning phase or periods of inaction since their previous interview. Similar to the 3-month follow-up, interviewees engaged in more formal partnerships described various phases of planning or implementation of community-focused initiatives, while those not engaged in partnerships continued to focus on implementation of initiatives within their own organizations.

For the most part, there were few deviations among ways in which members of a given partnership described how their own organization and their partner organization(s) were working together at 9-month follow-up (i.e. interviewees described their own organization's contributions to the partnership in the same way that their partner organization described them). Interviewees who described a more intensive engagement with their partners, largely aligned with Himmelman's criteria for a collaborating relationship between organizations, reported a range of facilitators and barriers to partnership at such intensity in the post-HWC context. Several themes emerged related to the facilitators and barriers of working in these various partnerships.

For those engaged in partnerships that involved cross-sectoral collaborations (e.g. partnerships between a health entity, like an LHD or hospital, and a labor entity, like a worker center), navigating the various organizations' missions, priorities, and approaches to work was both enlightening and challenging. Several interviewees noted that the ways in which their partner organizations approached planning and decision-making activities were new to them and inspired them to think differently about next steps both related to the partnership and related to other activities internal to their organizations. On the flip side, several interviewees described ways in which their organizations could not operate in the same ways and how those differences presented challenges when deciding upon priorities and action

steps. One interviewee described these differences, noting that their own organization operated at the level of a municipality, while their partner operated on a local level:

> *"I do think at the same time, they're maybe still not clear what we can do or what we can offer concretely. I think we're not also clear with them. I think there's also a culture change, kind of culture difference that we're also working with, not against. I don't want to say that, but they are always trying to respond to the immediate needs of their respective workers and so, with that, they're very hyperlocal, and they need to be. They organize, and I mean, they do incredible work."*

Navigating larger bureaucracies was also described as a challenge for those involved in partnerships that included large public-sector agencies, like city or county LHDs and large hospital systems. Partners in such teams that were employed by these large bureaucratic agencies described the challenges of being a single individual or a part of a small group trying to move work forward despite significant red tape, and outside partners expressed confusion about who was responsible for final decisions within such agencies. Several interviewees did note ways that they might creatively approach the challenges faced by the bureaucratic structures and barriers within their agencies. One employee of a large bureaucratic agency described their thought process:

> *"Like the way we started out this conversation with the barriers we face at the top. I think it would be good to talk about that in a way ... Not just talk about it but to make recommendations officially about how local health departments ... What directors should do, what staff should do, upper level staff, management staff. We might not be directors, but to say okay ... It's a given that 95% or more of health departments are going to have these structural barriers, so what do you do about it in order to have better pay, better working conditions, in order to try to eliminate precarious work*."

A partner from the same team described the agility of their own organization, that is much less bureaucratic:

> *"I think one of the things we're seeing is we're a smaller organization so we don't have all the bureaucracy and we're also non-profit so trying to navigate the timelines and who is responsible to who and what can we and can we not do. I think for us as worker centers, the doors a lot more open so that's also just an interesting ... trying to navigate with the department, what they can and cannot do."*

Commitment to the partnership and project and communication between members of the partnership was discussed by virtually all interviewees engaged in formal partnerships at 9-month follow-up. Together, these two constructs presented a variety of challenges to partners, as the projects that they

were working on together were in addition to their own day-to-day job tasks. Two different interviewees described these challenges:

> "*Communication and really if there's any barrier to any of our work, it's division of labor and commitment... I know it sounds horrible to say that, but commitment to the project. I think everybody's committed to it, but it's kind of like what is your commitment? Is your commitment just when you get an email? Or are you willing to take over some of this and do some of this?"*
>
> *"[Communication] is a tremendous barrier because there are times when people who, again, are tentative to their buy in but I need information or need to have a conversation with folks, they don't get back with you. So I understand that we all have our very distinct job and different job responsibilities in our respective agencies or organizations, but we all made a commitment to carve time out to talk and to work together and to build and to struggle over these issues together."*

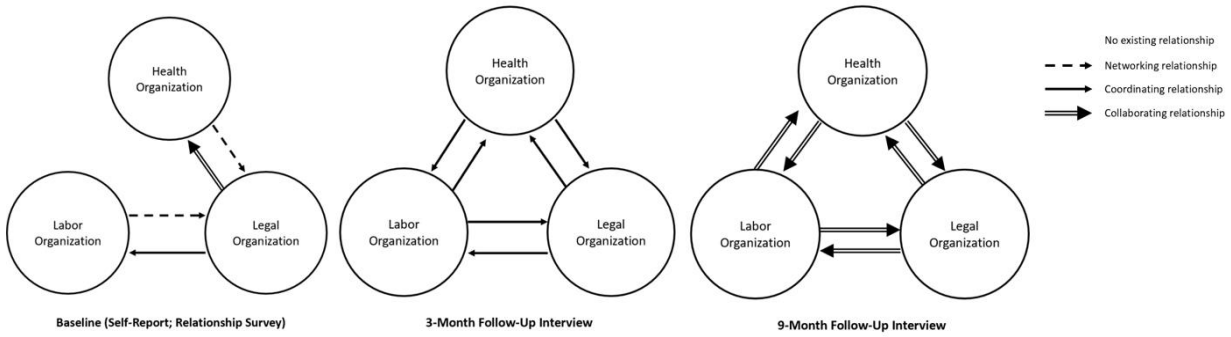
A theme related to variable commitment and communication emerged from a subset of interviewees, who described their concerns with movement towards action or implementation steps that was too fast, without sufficient planning. Although this was not a common concern among interviewees, this appeared to present a barrier for cohesive movement towards next steps within a partnership; while one partner was concerned that next steps were moving forward without sufficient discussion or planning, another partner was frustrated that the former wanted to continue planning and discussion instead of taking action.

7.3.1.3 Shifts in Relationships between Partners over Time

Despite the challenges described by interviewees in partnerships at 9-month follow-up, most described ways in which they were working together to implement activities that they had planned collaboratively. Interviews with partners from teams allowed for a deeper understanding of the level of engagement between each organization, as interviewees described in-depth the ways in which their own organization had shifted priorities and activities to accommodate the needs of their partners and vice versa. Comparison of interviewee data from 3- and 9-month time points, as well as self-reported relationship classifications from relationship surveys taken at baseline, prior to the start of the HWC in-person sessions, allowed researchers to better understand the evolution of cross-sectoral partnerships over time. Figure III shows the shifts in relationships between members of a partnership between members of a

health-focused organization, a labor-focused organization, and a legal-focused organization over the course of this study period.

Figure 3. Dyadic relationships described by members of a health-labor-legal partnership



7.4 Discussion

This study examined relationships between members of formal partnerships that were formed before, during or after the HWC and features of those partnerships that members felt contributed to or hindered progress towards the implementation of collaboratively planned interventions. This study also examined ways in which organizations' priorities and activities shifted throughout the study period, and whether these shifts were indicative of higher-level collaborating relationships (i.e. relationships in which organizations shifted their own activities to benefit their partner organizations and vice versa). Finally, differences between those in formal partnerships and those working insularly within their own organizations were explored. The findings from this study provide some insight into the ways in which partner organizations worked together in the nine months following the HWC and features of the various activities that organizations worked on, either in partnership with others or individually.

An important difference that emerged between organizations that had formal partners and those that did not was the difference in foci of activities that each group had planned and begun to implement over the study period. In this sample, interviewees from organizations that were engaged in partnership

with others described activities that were wide-ranging and multi-faceted, aimed at addressing contributors to a given problem at multiple levels. Conversely, organizations not engaged in formal partnership described activities that were focused within their own organization and were not, at the time of interview, outward facing or multi-level in nature. This key difference aligns with much of the literature on multi-level, systems-focused interventions, which suggests that team-based approaches are more likely to be broadly impactful and able to address multiple contributors to a given problem.

By conducting interviews at two time points, researchers were able to examine the progress of the various organizations and partnership teams as they planned and began to implement interventions. At earlier stages, interviewees described processes of planning and engaging partners in conversations to identify next steps, resources, and priorities, which then allowed for varying levels of movement to begin taking action. Interviewees who had expressed challenges in figuring out each organizations' capabilities and resources at 3-month follow-up continued to describe related challenges at 9-month follow-up. This was especially true for cross-sectoral partnerships in which organizations utilized different approaches to planning and action, and even more true for partnerships that included a large, bureaucratic agency.

Many interviewees noted ways in which their organizations were making shared progress at 9-month follow-up, despite the various challenges described by organizations in partnerships. The concerns or challenges shared by many interviewees were related to perceived commitment of partners and resultant communication issues, many of which seemed to stem from lack of sufficient time and resources to engage in the group's project. Several expressed challenges specifically associated with not having a single individual responsible for holding partners accountable and keeping track of next steps. A project coordinator might be able to address these various concerns. However, limited funding in this context did not allow for organizations to budget for a project coordinator in addition to their own representatives' time to work on this project. This is an important consideration for cross-sectoral partnerships in the future.

Despite many of the concerns shared by interviewees, organizations engaged in partnerships generally moved towards or maintained high-level collaborative relationships throughout the study

period. Interviews with representatives of the various partner organizations were a useful way to classify relationships and understand the features of organizations' interactions that contributed to successful partnership activities.

7.4.1 Limitations

There are a number of limitations in the study, including the small sample size, lack of baseline interviews with HWC participants, and inconsistent participation of HWC participants in the various study components. Given the nature of the HWC as a pilot project, there were only a small number of organizations who participated in the in-person sessions and subsequent data collection activities. Although there were five teams of organizations engaged in formal partnerships throughout the study period, each group had different goals and partner organizations within each group were different, making it difficult to compare features of partnerships throughout the study.

Another limitation in this study is the lack of baseline interviews with HWC participants. Although participants were asked to complete a survey in which they self-reported relationships with other organizations who participated in the HWC, the survey did not allow for elaboration or explanation of the features of these relationships at baseline. Subsequent data collection, in the form of interviews at 3- and 9-month follow-up, allowed for a much deeper understanding of individuals relationships with other organizations represented in the HWC process.

Finally, inconsistent participation of HWC participant in the various study components presented a limitation to this study. Although all HWC participants were invited to participate in baseline relationship surveys and interviews at both 3- and 9-month follow-up, not all participants participated in all three data collection activities. This presented a challenge when attempting to compare individuals' perceptions of their relationships and activities over time.

7.5 Conclusions

In general, participants in the HWC who were engaged in formal partnership during the study period described ways in which their partnership teams were working toward developing and implementing interventions that had the potential broadly impact precariously employed workers that fall within the partner organizations' purview. Despite challenges with commitment, communication, and varying approaches to problem solving, organizations reported progress towards their goals of using PSE change approaches to develop interventions focused on precarious work.

8. DISCUSSION

The scope of this study included four aims, all of which focused on the experience of various participants in the UIC Center for Healthy Work Outreach Core's HWC in-person meetings and in the months following those meetings. These four aims were as follows: (1) explore the role of TA provided by members of the UIC Center for Healthy Work Outreach Core in the six-meeting HWC process; (2) explore the role TA provided by members of labor organizations in the six-meeting HWC process; (3) examine relationships between individuals who were involved in the six-meeting HWC process at various time points before, immediately following, and in the year following the conclusion of the HWC process; and (4) examine relationships between members of more formal partnerships, whose organizations were represented in the HWC, established with the purpose of planning and implementing collaborative action to address precarious work.

8.1 University Role in Learning and Action

This study provides important insight into how universities can position themselves to support non-academic organizations across sectors and levels to facilitate evidence-informed development and implementation of actions to address complex problems like precarious work. The data from this study highlight the utility of having a community-engaged university bring together organizations that have existing relationships with the university but do not necessarily have existing relationships with one another.

While collaborations between university groups and outside partner organizations are not new, the HWC model, organized and facilitated by researchers in the UIC Center for Healthy Work Outreach Core, focused heavily on planning and preparing for upstream action to address precarious work without a heavy emphasis on application of academic research findings and traditional research methodology. There were not, to my knowledge, other models described in the literature similar to the HWC in which a university group organizes a process focused primarily on action development in which the university does not plan to take an active planning or implementation role. The results from this study highlight the

utility of UIC's role in organizing and convening the HWC and provide initial insight into the potential role that a university might play in building the capacity of partner organizations to develop and implement PSE change to address complex problems more generally.

8.1.1 Factors that Facilitated the HWC

Labor expert TA providers and TA recipients both described a level of trust and reciprocity that were vital to their decisions to participate in the HWC. These findings indicate that UIC was uniquely positioned to convene and facilitate the HWC and suggests that the HWC participants may not have otherwise participated in such an initiative. Without strong, pre-existing relationships between UIC researchers and members of the various organizations that were represented in the HWC, these representatives may not have decided to commit the time and resources to participate the inaugural HWC initiative. The time and effort that UIC researchers put into developing and maintaining their relationships with the labor- and health-focused organizations that ultimately agreed to participate in the HWC, either as TA providers or TA recipients, cannot be overlooked as an important step in facilitating diverse engagement and commitment to participate in a pilot initiative like the HWC.

8.1.2 Provision of Technical Assistance by University Researchers

The data from this study highlight the benefits and challenges of having university researchers play a TA role in a process like the HWC and suggest ways in which university researchers might be involved beyond initial capacity building activities to support the implementation of PSE change. Data from this study suggest that this unique TA provider-recipient model helped to prepare representatives of various organizations to develop PSE change initiatives to address the complexities of precarious work.

In addition to UIC's role as a convener of the HWC, data from the focus group and interviews reveal several perceptions of the function of UIC TA in the HWC sessions. These various functions, from providing guidance, facilitation, encouragement, and accountability to TA recipients, display the range of intensity of TA provided by UIC researchers in the HWC model. This intensity differed from that

described in the TA literature, with UIC TA providers serving in a capacity that might be likened to that of a coach or accountability manager instead of a role in which the TA provider takes on responsibility for some of the work. The HWC model seemed nevertheless effective for TA recipients, many of whom attributed their progress in digesting HWC content and planning for next steps to the involvement of UIC TA providers. This suggests that TA as it is described in the literature does not fit the HWC's model, and perhaps an expanded definition of TA is needed.

Finally, findings from the focus group and interviews suggested that TA recipients would value and benefit from UIC TA beyond the HWC sessions. This finding highlights some of the ways in which TA recipient organizations were underprepared for action following the HWC, likely requiring additional guidance and supports to move their plans forward. This finding also highlights the importance of sustained engagement between university groups, like the UIC TA providers in the HWC, and community groups, which is mirrored in the community-university partnership literature (Shannon & Wang 2010).

8.2 HWC as a Model for Two-Way Knowledge Exchange

While UIC researchers envisioned the role of TA provided by labor experts to be primarily instructional, focused on sharing content and skill knowledge with TA recipients, findings suggest that this role evolved into a much more intensive and dynamic one. Instead of a TA provider-recipient arrangement focused only on one-way knowledge transfer, TA providers and recipients in the HWC engaged in deeper, two-way knowledge exchange that resembled more intensive forms of TA described in the literature. These findings highlight the potential of TA provider-recipient engagement models, like the HWC, in facilitating both knowledge exchange and networking opportunities that together prepare representatives from both groups for subsequent partnership. The literature also suggests that transdisciplinary partnerships, such as those that might form between the labor experts and largely health-focused organizations from the HWC, have the potential to create more sustainable and broadly impactful PSE change.

8.3 University-Brokered TA Provider – TA Recipient Engagement

The findings from this study suggest that labor experts' existing individual or organizational relationships with the university were paramount in their decisions to participate in the HWC sessions. This highlights the potential to leverage existing networks to enlist TA providers in an engagement, like the HWC, that is brokered by a third party, like UIC, when the TA providers and TA recipients have little to no existing relationships with one another. In this case, UIC identified the potential for knowledge exchange and partnership between labor and health organizations in the Chicagoland area and leveraged UIC researchers' own relationships with representatives from these organizations to bring them together in the HWC. Although the university served as this third-party connector in the HWC, other organizations with strong ties to various community organizations or other stakeholder groups may be able to function in a similar capacity to bring diverse groups together to explore complex issues in other contexts.

8.4 HWC as a Catalyst for Relationship Development

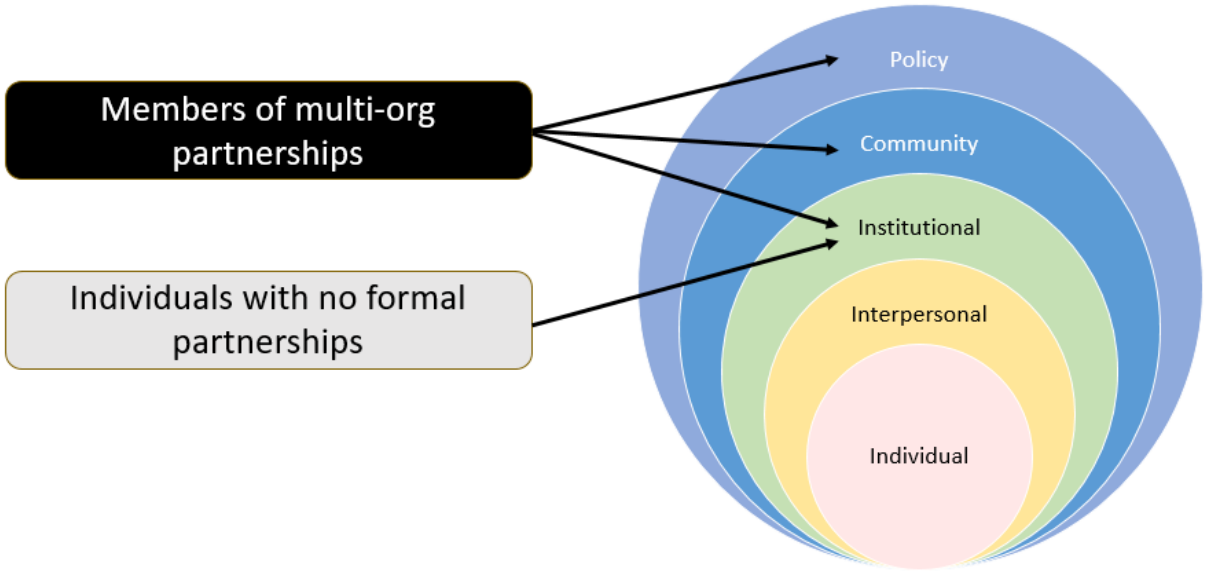
The most pronounced shifts from pre- and post-HWC participation were new, networking relationships between organizations that did not exist prior to the HWC. These findings suggest that the HWC structure helped to facilitate some of these relationship shifts, as individuals who participated in these sessions would likely not have interacted if not for their participation in the HWC sessions. Findings from interviews at several time points show that health and labor groups were able to identify opportunities to work together and in some cases formed or deepened partnerships with the goal of developing and implementing systems-focused projects to address precarious work.

8.5 Importance of Partnership in Moving Toward PSE Change

An important difference that emerged between organizations that had formal partners and those that did not was the difference in foci of activities that each group had planned and begun to implement over the study period. In this sample, interviewees from organizations that were engaged in partnerships with other organizations described activities that were wide-ranging and multi-faceted, aimed at

addressing contributors to a given problem at multiple levels. Conversely, interviewees from organizations that were not engaged in formal partnerships described activities that were focused within their own organization and were not, at the time of the interviews, outward facing or multi-level in nature. These differences are illustrated in Figure IV. This key difference aligns with much of the literature on multi-level, systems-focused interventions, which suggests that team-based approaches are more likely to be broadly impactful and able to address multiple contributors to a given problem.

Figure 4. Movement toward PSE change and differences in partnership status



8.6 <u>Conclusions</u>

Overall, the HWC structure seemed to effectively engage organizations from academic, labor, health, and several other sectors in a process that helped to deepen individuals' understandings of precarious work and the ways in which PSE change might address its drivers and consequences. The

university's existing relationships with the various organizations that participated in the HWC was instrumental in bringing each group to the in-person sessions. The dual TA model, in which both UIC researchers and labor experts supported primarily health-focused TA recipients in learning about precarious work and planning and preparing to implement interventions to address it was reported as both effective and impactful by the majority of participants.

The HWC structure also seemed to help facilitate the formation of new relationships and the resultant expansion of participating organizations' networks. In general, HWC participants identified opportunities to engage with organizations that they had interacted with during the HWC sessions and several had already engaged in some capacity post-HWC. Although it is too soon to determine whether new connections or deepened connections that resulted from the HWC were instrumental in the development and implementation of PSE change interventions to address precarious work, early findings indicate that many organizations that participated in the sessions are actively working together to identify next steps and plan for more concrete action.

In general, participants in the HWC who were engaged in formal partnership during the study period described ways in which their partnership teams were working toward developing and implementing interventions that had the potential broadly impact precariously employed workers that fall within the partner organizations' purview. Despite challenges with commitment, communication, and varying approaches to problem solving, organizations reported progress towards their goals of using PSE change approaches to develop interventions focused on precarious work.

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APPENDICES

APPENDIX A
Relationship Survey

Participants were asked to complete this relationship survey at 4 time points: at baseline (prior to the start of the HWC in-person sessions), immediately following the conclusion of the HWC sessions, approximately 6-months following the conclusion of the HWC sessions, and approximately 12-months following the conclusion of the HWC sessions.

Survey Instructions:

For the following questions we would like you to indicate whether or not you have a relationship with any of the other participating entities in the Collaborative. For those whom you already know, we would also like to better understand the nature of that relationship to date. Please use the following definitions and examples (Himmelmann, 2001) to describe your current relationship with any organizations with whom you are already acquainted.

Do you have **NO EXISTING** relationship? Have you not had any interaction with one another?
Example: May be aware of one another's work but little to no communication.

Do you have a **NETWORKING** relationship? Do you exchange information for mutual benefit?
Example: Sharing updates at monthly meetings.

Do you have a **COORDINATING** relationship? Do you change your plans and activities to accomplish something together?
Example: Working together on a campaign that promotes both organizations' work.

Do you have a **COLLABORATING** relationship? Do you share resources (staff, money, time, facilities) with one another?
Example: Provide joint skill development training for both organizations' staff.

Example question:

Please indicate the nature of your organization's relationship with the following organizations participating in the Collaborative.

Note: For organizations that do multiple activities with different parts of other organizations, please select the option that describes the highest level of partnership you share with the other organization.

[Organization Name]

○ No existing relationship
○ Networking relationship
○ Coordinating relationship
○ Collaborating relationship

NOTE: Participants were asked this same question for all organizations represented in the HWC.

APPENDIX B
Baseline TA Provider Interview Guide

Welcome to the Healthy Work Collaborative to Map Action for Social Change. As a reminder, the goals of the Healthy Work Collaborative are to:

- Further explore the root causes of precarious work and the pathways to healthy work;
- Connect public health and healthcare organizations with worker centers, labor unions, and other worker advocacy organizations to collaborate on resources and initiatives; and to
- Define actionable next steps to address the drivers of precarious work across systems levels.

We appreciate your participation in the Collaborative as well as in the evaluation components. We plan to use this data to better understand what Technical Assistance (TA) providers think about their role in this process, what they value about participating in this process, and how we could make improvements in this process if we conduct a similar process in the future.

The information collected through this interview will remain confidential. Only the HCHW team at UIC will have access to the data. Findings about any one individual will never be discussed. Thematic findings will be reported in the aggregate.

If you have any questions about this evaluation, please contact the Center for Healthy Work Program Coordinator, Liz Fisher, fishere@uic.edu. Again, thank you for your time and participation in the Healthy Work Collaborative to Map Action for Social Change.

<u>Role of Technical Assistance (TA)</u>

- I would like to start by asking you a bit about your perceptions of the role of technical assistance (TA) provider in the Healthy Work Collaborative.
    - What are your perceptions of why you were invited to be a TA provider in this process?
    - Do you (or other individuals from your organization who plan to attend the HWC) have experience coaching, facilitating, or leading group-based learning? Please describe this experience.
    - How do you view your organization's role as a TA provider as part of the Healthy Work Collaborative?
    - How important do you think that it is to include TA providers in this process?
    - What barriers or challenges, if any, do you think that TA providers will encounter in this process?

- Now let's talk about some of the features of TA that you think are most important for the HWC.
    - Considering your organization's expertise and experience, what content knowledge do you think is most important to share with participant organizations?
    - Considering your organization's expertise and experience, what skills and strategies for addressing complex problems, like precarious work, do you think are most important to share with participant organizations?

<u>Partnership with Health-Focused Organizations</u>

- As you know, many of the participating organizations in the HWC are health-focused (including public health departments, health care systems, healthy advocacy organizations, etc.).
    - How do you perceive your organization's role in taking on the challenges of precarious employment in the health sector?

APPENDIX B (continued)

- Does your organization already partner with health sector organizations (like public health departments, healthcare organizations, health advocacy organizations, etc.)?
  - If so, please describe partnership(s) and activities with this/these organization(s).
    - For how long have you partnered with this/these organizations?
    - Has/have the partnership(s) been successful?
    - What are primary challenges/barriers with the partnership?
  - If not, what do you think are the barriers for engagement/partnership with these organizations?
  - For how long? Has it been successful? What are primary barriers?
- How important is it for your organization to connect with health-sector organizations, both in general and in this process?

<u>Motivations for participating</u>

- What factors did you consider when deciding whether or not to participate in the HWC as a TA provider?
  - How important was funding?
  - How important was your existing relationship with UIC?
  - How important was the topic area (health focus)? The participants?

<u>Outcomes of HWC</u>

- What do you think would be the ideal outcomes of this process?
  - For TA?
  - For participants?
  - Other?
- Do you foresee your organization working with the participant organizations in the future?
  - If yes, in what capacity do you hope to work together? Please describe.
  - If not, why not?

APPENDIX C
Immediate Follow-up TA Provider Interview Guide

Welcome to the Healthy Work Collaborative to Map Action for Social Change. As a reminder, the goals of the Healthy Work Collaborative are to:

- Further explore the root causes of precarious work and the pathways to healthy work;
- Connect public health and healthcare organizations with worker centers, labor unions, and other worker advocacy organizations to collaborate on resources and initiatives; and to
- Define actionable next steps to address the drivers of precarious work across systems levels.

We appreciate your participation in the Collaborative as well as in the evaluation components. We plan to use this data to better understand what Technical Assistance (TA) providers think about their role in this process, what they value about participating in this process, and how we could make improvements in this process if we conduct a similar process in the future.

The information collected through this interview will remain confidential. Only the HCHW team at UIC will have access to the data. Findings about any one individual will never be discussed. Thematic findings will be reported in the aggregate.

If you have any questions about this evaluation, please contact the Center for Healthy Work Program Coordinator, Liz Fisher, fishere@uic.edu. Again, thank you for your time and participation in the Healthy Work Collaborative to Map Action for Social Change.

<u>Participant Outcomes</u>

- I would like to ask you about your perceptions of what participants gained through their participation in this process.
    - What do you think was the most important take away from this process for participants?
    - What content knowledge do you think that participants learned from this process?
    - What are the most important skills that you think participants learned from this process?

- What changes did you notice between your first and last encounters with participants?
    - Were participants more engaged by the end of the last meeting in which you participated?
        - If yes, in what ways?
        - If not, what were possible barriers to engagement?
    - Did the quality of the conversations shift throughout the process?
        - If so, why do you think this happened? (Conversations include those that you had with participants and those in larger groups that you witnessed)
    - What other changes did you notice?

<u>TA Experiences</u>

- Now I am going to ask you a few questions about your experience in the HWC process.
    - Did you feel prepared to share your content expertise with participants?
        - Did you feel prepared to share skills and strategies that you've used in your own practice?
    - Did your perceptions of your role as a TA provider shift throughout this process?
    - How do you perceive your organization's role in taking on the challenges of precarious employment in the health sector (including public health, healthcare)?
        - Do you think that your perceptions of your organization's role changed as a result of participating in this process?

APPENDIX C (continued)

- Do you think that it was important to include TA providers in this process? Why or why not?

Perceptions of Precarious Work

- Did your perceptions of precarious work in the health sector change as a result of this process?
  - Did your perceptions of participant organization's roles in addressing precarious work change?
  - Did your understand of the barriers and facilitators for addressing precarious work in this sector change?
- As a result of this process, do you think that participants changed their thinking about the causes of precarious work?
  - Why or why not?
  - If so, how did their thinking change?
- As a result of this process, do you think that participants are more likely to take action to address precarious work? Why or why not?

HWC Organization

- What did you think about the overall organization of the HWC meetings?
- Do you feel that the structure of each meeting was useful in facilitating networking opportunities for TA and participants?

Future Opportunities

- How important is it for your organization to connect with participant organizations in the future?
- When considering future partnership or TA opportunities with organizations in the health sector, how important are the following for your organization:
  - Shared organization values
  - Readiness of the partnering organization to take action
  - Motivations of partnering organization to work collaboratively with your organization
  - Communication of needs and expectations
  - External context in which work will take place (political environment, etc.)
  - Commitment to on-going partnership/engagement between you and partner organization
  - Funding opportunities

APPENDIX D
UIC TA Provider Focus Group Guide

As a reminder, the goals of the Healthy Work Collaborative are to:

- Further explore the root causes of precarious work and the pathways to healthy work;
- Connect public health and healthcare organizations with worker centers, labor unions, and other worker advocacy organizations to collaborate on resources and initiatives; and to
- Define actionable next steps to address the drivers of precarious work across systems levels.

Tessa plans to use this data as part of her dissertation to better understand what Technical Assistance (TA) providers, including the UIC facilitators from the Healthy Communities for Healthy Work team, think about their own role in this process, what they value about participating in this process, and how we could make improvements in this process if we conduct a similar process in the future.

The information collected through this interview will remain confidential. Only Tessa will have access to the data. Findings about any one individual will never be discussed. Thematic findings will be reported in the aggregate.

If you have any questions about this evaluation, please contact Tessa at tbonne5@uic.edu. Again, thank you for your time and participation in the Healthy Work Collaborative to Map Action for Social Change.

<u>Participant Outcomes</u>

- I would like to ask you about your perceptions of what participants gained through their participation in this process.
    - What do you think was the most important take away from this process for participants?
    - What content knowledge do you think that participants learned from this process?
    - What are the most important skills that you think participants learned from this process?

- What changes did you notice between your first and last encounters with participants?
    - Were participants more engaged by the end of the last meeting in which you participated?
        - If yes, in what ways?
        - If not, what were possible barriers to engagement?
    - Did the quality of the conversations shift throughout the process?
        - If so, why do you think this happened? (Conversations include those that you had with participants and those in larger groups that you witnessed)
    - What other changes did you notice?

<u>TA Experiences</u>

- Now I am going to ask you a few questions about your experience in the HWC process.
    - What is your perception of the role that you had throughout the HWC process?
    - To what degree did you share your own expertise with participants?
        - Did you share content knowledge about precarious work?
        - Did you share skills and strategies that you've used in your own practice?
    - Did your perceptions of your role as a facilitator shift throughout this process?
    - Do you think that it was important to include facilitators in this process? Why or why not?

APPENDIX D (continued)

Perceptions of Precarious Work

- Now I'd like to ask about the group's perception of roles in addressing precarious work.
    - Did your perceptions of UIC's role in addressing precarious work change?
    - Did your perceptions of participant organization's roles in addressing precarious work change?
    - Did your understanding of the barriers and facilitators for addressing precarious work in this sector change?
- As a result of this process, do you think that participants changed their thinking about the causes of precarious work?
    - Why or why not?
    - If so, how did their thinking change?
- As a result of this process, do you think that participants are more likely to take action to address precarious work? Why or why not?
    - What do you think that the Center for Healthy Work's role should be in facilitating these actions?

HWC Organization

- What did you think about the overall organization of the HWC meetings?
- Do you feel that the structure of each meeting was useful in facilitating networking opportunities for TA and participants (including labor TA and UIC facilitators)?

Future Opportunities

- How important is it for the Center for Healthy Work, Healthy Communities for Healthy Work team to connect with participant organizations in the future?
- When considering future partnership or facilitation/TA opportunities with organizations in the health and labor sectors, what are important considerations for the Center for Healthy Work? Consider the following:
    - Shared organization values
    - Readiness of the partnering organization to take action
    - Motivations of partnering organization to work collaboratively with your organization
    - Communication of needs and expectations
    - External context in which work will take place (political environment, etc.)
    - Commitment to on-going partnership/engagement between you and partner organization
    - Funding opportunities

APPENDIX E
3-Month Follow-Up Interview Guide

TA SKIP TO "TA ONLY" SECTION:

Introduction

1. First, I'd like to ask you a little bit about why you attended the Collaborative meetings this summer. Can you tell us a little bit more about how you got engaged in the Collaborative?
    a) Can you share a little bit about why you participated in the Collaborative?
    b) What was the problem or issue you identified that you wanted to address?
    c) Is this an area you had wanted to work on for a while beforehand?
    d) Was this a new area you had not worked on before?
    e) What were your expectations going into the process?
    f) What surprised you?

Participant Outcomes

2. I would like to ask you about what you gained through your participation in Collaborative meetings this summer.
    - What do you think was the most important take away from this process for you?
    - What content knowledge did you learn from this process that you did not know beforehand? Were there certain ideas and concepts presented that were new to you or that you learned something new about even if you were already familiar with them?
    - What are the most important skills that you learned from this process? Have you applied those skills? If so, how?
    - Were there tools that were new to you or that you learned something new about?
        - Root cause analysis?
        - Rich pictures?
        - Team charter development?
        - Problem framing?
        - Power mapping?
        - Theory of change?
        - Goal setting and backward mapping?
    - What of any of the above mentioned concepts, tools, or ideas that was presented was most valuable to you? What was least valuable? Why?
        - Of those that were valuable, could you see those being applied in other contexts?
        - Would the trainings for those concepts, tools, ideas be useful to your organization?

TA Experiences

3. Now I am going to ask you a few questions about your experience with TA Providers during the six-meeting process.
    a) What were your overall impressions about the information, skills, and knowledge that was shared by TA Providers? What sticks out as most notable?
    b) Do you think that it was important to include TA providers in this process? Why or why not?
4. What were your impressions of the role UIC played in this process?
    a) What was valuable about this role? What could have been improved?
    b) What role do you think that UIC can play going forward? *Probe for: convening, queuing up each session, supporting teams, etc.*
    c) What do you think an academic institution's role should be in a process like this? Should they have a role?

APPENDIX E (continued)

5. In other grants or projects, have you worked with technical assistance providers? Were your perceptions of the TA providers in this project, both the worker centers and UIC, similar with how you've worked with TA before?

Perceptions of Precarious Work

6. Did your thinking about precarious work in the health sector change as a result of this process?
    a) Did your thinking about participant organization's roles in addressing precarious work change?
7. Did your understanding of the barriers and facilitators for addressing precarious work in this sector change?
8. As a result of this process, do you think you are more likely to take action to address precarious work? Why or why not?
    a) How do you perceive your organization's role in taking on the challenges of precarious employment?
        - Do you think that your perceptions of your organization's role changed as a result of participating in this process?
9. How did TA influence any changes in your understanding of precarious work or perceptions of roles in taking on the challenges to address it?

HWC Organization

10. What did you think about the overall organization of the HWC meetings?
11. Do you feel that the structure of each meeting was useful in facilitating networking opportunities for TA and participants?

TA START HERE: (Participants SKIP to "Successes, Strategies, and Impacts")

TA Experiences (for TA providers)

12. I'd like to start by asking you some questions about your experiences as a TA provider. Since the conclusion of the Healthy Work Collaborative in-person meetings this summer, have any of the participant organizations approached you for further help or guidance?
    a) If yes, please describe.
    b) If no, would you be interested in future opportunities to provide guidance for these organizations?
13. What were your impressions of UIC's role in this process? What was valuable about this role? What could have been improved? What role do you think they can play going forward?

Partnerships and Networking **(ALL INTERVIEWEES COMPLETE THIS SECTION)**

During the Healthy Work Collaborative meetings over the summer, did you make new connections to organizations or individuals that you were not connected to previously? Did you deepen or enhance your relationships with any partners that you already knew or were connected to?

14. Is your organization currently engaging with any of the other participants from the Healthy Work Collaborative (including other labor organizations and health organizations) in any capacity?

    a) Can you describe your engagement with these organizations?
    Probe for – further networking, coordination, cooperation, collaboration.

        - What are the goals of this/these partnership(s)?

        - What are the most important features of this/these partnership(s)?

APPENDIX E (continued)

b) How did your participation in the Healthy Work Collaborative sessions influence your decision to engage with these organizations (or not engage with any organizations)?

c) <u>If you ARE currently engaged with other HWC participant organizations</u>, can you describe some things that you considered when deciding to partner with these organizations?

- What is most important?
- Can you describe any facilitators and/or barriers to partnership with other HWC participant organizations?
  Probe for:
  - *Shared organization values*
  - *Readiness of the partnering organization to take action*
  - *Motivations of partnering organization to work collaboratively with your organization*
  - *Communication of needs and expectations*
  - *External context in which work will take place (political environment, etc.)*
  - *Commitment to on-going partnership/engagement between you and partner organization*
  - *Funding opportunities*

d) Do you plan to continue involvement with these organizations long-term?
e) What are the goals of partnership long-term?

15. <u>If you are NOT engaged with other HWC participant orgs</u>, what things do you consider generally when deciding to partner with other organizations?
    - What is most important?
    - Can you describe any facilitators and/or barriers to partnership with other HWC participant organizations?
      Probe for:
      - *Shared organization values*
      - *Readiness of the partnering organization to take action*
      - *Motivations of partnering organization to work collaboratively with your organization*
      - *Communication of needs and expectations*
      - *External context in which work will take place (political environment, etc.)*
      - *Commitment to on-going partnership/engagement between you and partner organization*
      - *Funding opportunities*

16. Other than this interview, is your organization <u>currently</u> working with any individuals and/or groups at UIC, other than the Center for Healthy Work?

    a) Can you describe your engagement with these individuals or groups?
       Probe for – further networking, coordination, cooperation, collaboration.

       - What are the goals of this/these partnership(s)?

APPENDIX E (continued)

- What are the most important features of this/these partnership(s)?

b) How did your participation in the Healthy Work Collaborative sessions influence your decision to engage (or not engage) with these individuals or groups at UIC?

17. (EVERYONE) Can you describe your process for deciding to work with individuals or groups at UIC, in these cases and in general?
    - What things are most important?
    - Can you describe any facilitators and/or barriers to partnership with these organizations?
      Probe for:
      - *Shared organization values*
      - *Readiness of the partnering organization to take action*
      - *Motivations of partnering organization to work collaboratively with your organization*
      - *Communication of needs and expectations*
      - *External context in which work will take place (political environment, etc.)*
      - *Commitment to on-going partnership/engagement between you and partner organization*
      - *Funding opportunities*

18. I would also like to ask you about future partnerships. How important is it for your organization to connect with organizations in the health and labor sectors in the future?
    a) How did your participation in the Healthy Work Collaborative sessions and/or continued involvement with the participants from the HWC influence this feeling?

19. What else could have been done as part of the Healthy Work Collaborative to enhance networking and relationship building?

<u>Current work on precarious work/ Organizational priorities and activities</u>

20. How have your relationships with other HWC participants (including health, labor, UIC) impacted your organization's activities?
    a) Can you describe any changes to specific programs, campaigns, or other projects?
    b) To what do you attribute these changes?
       - *Probe for:*
         - *New or strengthened relationships*
         - *Funding/resource opportunities*
         - *Understanding of issues*
         - *Readiness to take action*

    c) Have you begun any new initiatives or activities as a result of your relationships with other HWC participants?
       - *Probes: new projects, such as (ex….); any beyond those developed in the HWC sessions?*

APPENDIX E (continued)

Successes, Strategies, and Impacts

21. If this project is successful and you continue the work, what would you imagine would happen in 5 years? What would success look like? Can you talk about a particular scenario of what success would look like? (Goal, strategies, what is required?)
22. What strategies do you think are needed to achieve that success? *Probe: transferring of power from constituents to workers; building constituency; communications; how do they see their role?*
    - Throughout process that you're doing, what strategies are you using to include/center the voices of workers? and communities of color?
23. What skills do you think are needed to undertake this vision?
24. What are barriers to complete this vision? What strategies would you use to overcome those barriers?
25. What supports do you need to get there? What supports might you need from UIC? From others?
26. What additional training or supports do you need?
27. How do you think you project will impact health/healthcare more broadly? When you think about the Healthy Work Collaborative, more generally, what impacts do you think this work will have on the field?

28. **[For Participants/ Teams ONLY]** Have you made any progress on implementing your workplan since the Collaborative ended in July? If so, what have you done? Have you done any of the following?
    a) Set goals?
    b) Communicated goals to key stakeholders?
    c) Built new relationships or partnerships?
    d) Identified funding opportunities?
    e) Identified champions to help propel action forward?
    f) Identified benchmarks against which to measure progress?
    g) Communicated any successes to key stakeholders?
    h) Other?
29. What were incentives for doing these things?
30. What have been the primary roadblocks and barriers to making progress? How have you navigated those?
31. I would also like to ask about your organization's future plans. Can you describe any future initiatives, projects, and/or campaigns that your organization is interested in undertaking related to precarious work?

    a) How have your relationships with other HWC participants (including health, labor, UIC) impacted these plans or decisions? Do you have plans to partner with any of the organizations that participated in the Healthy Work Collaborative sessions on these initiatives? If not, why not? If yes, please describe.
    b) What stage in development are each of these activities? (ex: just starting to think about, preparing to plan, actively planning, etc.)
    c) When do you plan to undertake these activities?
    d) Can you describe the target populations for these initiatives?
    e) Are any of these initiatives targeted at the policy level?

Final thoughts

32. What other thoughts do you have to share about your participation in the process or your work going forward?

APPENDIX F
9-Month Follow-Up Interview Guide

Team Goals, Structure, Functioning, Goals

To start, I'd like to ask you about your involvement in Phase II of the Healthy Work Collaborative.

- Can you walk me through the evolution of your project, and can you describe some of your team's major project-related activities and accomplishments to date? *Probe based on past activities from fall 2018 interviews.*

- Can you tell me a little bit about the goals of your project, or what your team is trying to achieve, more generally?

    - What would you say that your organization hopes to achieve in this project?
        - What needs to be done internally in your organization to meet the project goals?
        - Can you describe any facilitators and/or barrier to action within your organization? (*see probes, below*):
            - *Engaging stakeholders and/or key decision makers*
            - *Identifying champions*
            - *Setting a clear vision and goals*
            - *Identifying and mobilizing necessary resources*
            - *Communicating effectively*
            - *Documenting progress*

    - What would you say that your team members' organizations hope to achieve in this project?
        - Can you describe any facilitators and/or barriers to action within your team members' organizations?
        - Is there a common vision or common goals for the project among all team members?
        - If not, how is your team addressing the differences in goals or vision?

    - Can you describe any adjustments to project goals or plans that your team has had to make due to the barriers that you've described or due to any other constraints?

    - How has your team utilized the workplan, or any other tools, to achieve project goals? What has been most useful? Least useful?

    - How is your team addressing issues of power and equity, both internally within your team and externally with those affected by your project outcomes?

    - Throughout your team's process, what strategies have you used to hear from workers and engage workers in decision making?

- How has your UIC facilitator engaged with your team?

    - What role have they played with regard to your team's activities and/or processes?

    - What has been helpful about the role that your UIC facilitator has played thus far? Not helpful? Why?

APPENDIX F (continued)

- *Probe for – Helpfulness of having a neutral party? Helpful to connect team to resources? Helpful to have someone take notes/document progress, etc?*

- Is there anything that you would change about the role that your UIC facilitator plays?

- Can you describe the relationships or partnerships that you have with members of your project team?
  - How have team roles and responsibilities been identified?
    - How are roles and responsibilities divided between team members?
    - Are roles and responsibilities clearly defined?

    - *What is going well in these relationships/partnerships, in general?*
    - *What is not going well? What are some of the biggest hurdles?*

  - How does your team communicate most effectively?
    - How are decisions made within your team?
    - Can you describe any barriers to communication and/or decision making within your team?

  - What might be needed to address any barriers or issues with team functioning?
    - *Probe for: more frequent communication; someone taking the lead on facilitating meetings, checking in between meetings, etc.; outside help with goal setting, task delegation, etc.*

  - Are there other individuals or groups, internal or external to your current team, who you feel should be involved in this project at this phase?

- How is your team documenting progress towards your goals?
  - How have lessons learned from the work that has been done influenced your team functioning?

  - How has this influenced your project goals?

  - How do you envision using the case study process? How might it be helpful for you and your team?

<u>Relationships, Partnerships, TA</u>

I'd like to ask you about some of the relationships that you may have with **<u>other participants</u>**, TA providers, or UIC facilitators who also participated in the Healthy Work Collaborative meetings last summer.

- How have your relationships with other participants and/or TA providers changed since the conclusion of the Healthy Work Collaborative sessions last fall? For example, are you engaged in more formal partnerships with any other participants or TA providers?
  - Can you describe your relationship or engagement with these individuals and/or organizations?

APPENDIX F (continued)

        - What catalyzed any changes in your relationships with these individuals and/or organizations?
- Has UIC helped facilitate connections between your organization and other Healthy Work Collaborative participants and/or TA providers and their organizations? *If yes, ask interviewee to describe.*

- How has your relationship with UIC changed since the conclusion of the Healthy Work Collaborative sessions last fall?

- [*If interviewee does not describe relationships/activities in response to above questions, SKIP this question*] How have the relationships and/or partnerships that you've mentioned, including those with other participants, TA providers, and UIC, impacted your organization's activities?

    - Can you describe any changes to specific programs, campaigns, or other projects?

    - Have you begun any new initiatives or activities as a result of your relationship with other participants and/or TA providers?

    - Have you allotted time and resources to issues related to your project or otherwise related to work and health in ways that are different than before the Healthy Work Collaborative?

- Outside of your project team and other than what you've already mentioned, is your organization <u>currently</u> engaging with any of the other participants or TA providers from the Healthy Work Collaborative in any formal capacity? This might include activities that are not directly or not at all related to your HWC project.

    - [If YES] Can you describe your engagement with these individuals and/or organizations?
        - Can you describe the goals of this/these partnership(s)?
        - Can you describe the most important features of this/these partnership(s)?
        - Are there other participants who you'd like to connect with or plan to connect with in the future? If yes, please describe how and why you would like to or plan to engage.

    - [If NO] Can you describe any instances or opportunities in which you would be likely to seek out other participants and/or TA providers?

- Other than what you've just mentioned, can you describe any instances in which another participant or TA provider has reached out to you for information or partnership, etc.?

<u>Healthy Work Collaborative Phase II</u>

- How have you applied concepts, skills, or tools that were introduced during the Healthy Work Collaborative meetings last summer to your team's project? *Tools include rich picture, power mapping, Theory of Change, Theater of the Oppressed.*

    - Can you describe specific activities that you may not have undertaken had it not been for your involvement in the HWC meetings?

APPENDIX F (continued)

  - How have you applied what you learned in the HWC meetings to other facets of your work, outside of your team's project?

- What features of the Healthy Work Collaborative Phase II have you found useful? Not useful? *Features include in-person sessions, such as the meeting in January; on-line sessions, such as the webinar for the case study activities; calls or check-ins with UIC facilitators; workplan and case study templates; other TA from UIC that group might be utilizing.*

  - What feedback do you have about the way that Phase II has been structured, generally?

  - We wanted to offer a balance of both in-person and phone- and web-based connectivity. How has this worked for you, or not worked for you?

  - Have you found the requirements for Phase II to be clear? *Requirements include completion of a case study, participation in calls and check-ins with UIC facilitators, participation in quarterly meetings, and development of a deliverable such as a curriculum, guidebook, etc.*

    - What has been most valuable to your project? To your team functioning?

    - Do you have any recommendations about the requirements in the event that we replicate this process in the future?

- If not for the Healthy Work Collaborative Phase II, do you think that your organization would be working on the issue at the crux of your project?

  - How has the HWC Phase II facilitated your organization's work in this area?

  - How has the HWC Phase II been a barrier to your organization's work in this area?

  - What role has partnership with organizations from other sectors influenced your work in this area? Would this work be moving forward without the partnerships that you've made?

- Are there additional supports that you, your organization, or your team needs to complete the short-term goals of your project, within this grant time period? To complete the long-term goals of your project? Specifically, what might you need, if anything, after July?

<u>Final Thoughts</u>

- What other thoughts do you have to share about your participation in the process, Phase I and/or Phase II, or your work going forward?

APPENDIX G
Master Codebook

Code	Description/Definition
UIC	Interviewee is referring to UIC alongside another code. *Do not code with "Relationship with UIC".*
Labor	Interviewee is referring to a labor organization that provided TA. These include any of the worker centers (1-5) or the worker advocacy organization or the academic labor organization. *If interviewee is talking about activities from Healthy Work Collaborative, those provided by TA included everything *except* rich picture and current-state-future-state activity.
Health	Interviewee is referring to a health organization. These organizations include the health departments, hospital system, health advocacy groups, state-level health organizations, etc.
Other (non-labor/health/UIC)	Interviewee is referring to an organization that does not fall into the UIC, Labor, or Health categories. These organizations include legal organizations, workforce development organizations, government organizations that are not health-related, etc.
Technical Assistance (TA)	
Perception of TA role (from perspective of TA provider)	Interviewee (TA provider) describes perceived role of their own role as TA AND/OR perceived role of other TA providers in the Healthy Work Collaborative six meetings.
Attitudes and motivations (for providing TA)	Interviewee (TA provider) describes why they agreed to participate in Healthy Work Collaborative process as TA provider.
Ideal outcomes for TA-recipient engagement	Interviewee (TA provider) describes ideal outcomes of TA-recipient engagement during and following Healthy Work Collaborative summer sessions.

APPENDIX G (continued)

Outcomes of TA-recipient engagment (for TA provider)	Interviewee (TA provider) describes what they got out of the TA-recipient engagement during the Healthy Work Collaborative summer sessions.
Opportunities for TA	Interviewee describes other opportunities for providing TA, or other needs that they feel TA recipients have that might be met by TA providers.
Relevant experience (for providing TA)	Interviewee (TA provider) describes relevant expertise and/or experiences that are applicable to TA provision in Healthy Work Collaborative.
Fills knowledge/expertise gap	*Sub-code - Interviewee (TA provider) describes relevant expertise that might fill a gap in the TA recepient's knowledge and/or experience and/or might change recipient's thinking about or action to address precarious work.*
Barriers/challenges for providing TA	Interviewee describes any challenges or barriers that they forsee or experienced to providing TA in the Healthy Work Collaborative meetings.
Impact of TA	Interviewee describes ways in which TA providers' activities, presentations, conversations, etc. may or do elicit change in interviewees' thinking about and/or action to address issue of interest.
Provides new perspective	*Sub-code - Interviewee (TA provider) describes ways in which they might provide or offer a new perspective on a particular issue to TA recipient. *Applied only to TA provider interviews - this is what TA provider perceives that they might offer to recipient.*
Thinking	*Sub-code - Interviewee indicates that knowledge and/or experience of TA was important or impactful in changing the interviewee's THINKING about issues related to work generally (not limited to interviewee's project focus).*
Project	*Sub-code - Interviewee indicates that knowledge and/or experience of TA was important or impactful in the interviewee's PROJECT goals, plans, activities, etc.*

APPENDIX G (continued)

Intensity of TA	Interviewee describes degree to which they are interacting or interfacing with TA recipients or provider(s) in relation to a participants' project, specifically. **Does NOT include interactions that are NOT relevant to the participant's project, like outside networking/conversations or other partnership unrelated to interviewee's Healthy Work Collaborative project*.
Type of TA	Interviewee indicates or references type of TA provided during Healthy Work Collaborative meetings and/or related to interviewee's project, including: facilitation of meetings, discussions, etc.; presentation, activity, or discussion in which content-specific information was shared; or presentation, activity, discussion, or guidance in which skills, strategy, or tools were shared.
Facilitation	*Sub-code - interviewee mentions interactions in which TA provider(s) helped to facilitate meetings and discussions related to Healthy Work Collaborative and/or interviewee's project.*
Content	*Sub code - interviewee mentions interactions in which TA provider(s) shared content-specific information related to precarious work/work.*
Skills, strategies, or tools	*Sub code - interviewee mentions interactions in which TA provider(s) shared skills, strategies, or tools that can be used to plan and implement actions to address precarious work.*
Unique approach to TA (compared to literature)	Interviewee describes TA from Healthy Work Collaborative in a way that is different from TA described in literature. In the literature, TA is typically conceptualized as a support to a particular recipient based on that recipient's identified need (the recipient requests the TA services, specifically).
Unique approach to TA (compared to participants' experiences)	Interviewee describes ways in which TA provision in Healthy Work Collaborative is different than TA-recipient engagement that interviewee is familiar with or has experienced in the past.

APPENDIX G (continued)

Importance of TA	Interviewee describes the importance of including TA in the Healthy Work Collaborative meetings and process, generally. *This is typically in response to the question "Was it important to include TA in this process?"
Relationship/Partnership	
Relationship/partnership	Interviewee describes relationship or partnership with other organization(s) involved in the Healthy Work Collaborative, including with UIC.
New connection/networking	*Sub code - relationship/partnership with minimal involvement; interviewee describes informal conversations and "getting to know each other" type interactions.*
No existing relationship	*Sub code - interviewee describes lack of relationship or partnership with other individual(s) or organization(s).*
Existing relationship	*Sub code - interviewee notes that they/their organization had a relationship with another individual/organization prior to their involvement in the Healthy Work Collaborative meetings.*
Deepened/strengthened connection	*Sub code - relationship/partnership evolves beyond networking and is NOT a new relationship.*
Coordinating	*Sub code - relationship/partnership in which organizations/individuals exchange information that will benefit each other.*
Cooperating	*Sub code - relationship/partnership in which organizations/individuals share organizational resources (not just information). Resources might include personnel time and expertise, physical space, funding streams, etc.*
Collaborating	*Sub code - relationship/partnership in which organizations/individuals both make changes to ensure that resources are appropriately leveraged and shared objectives are met.*

APPENDIX G (continued)

Opportunity for future engagement/partnership	*Sub code - interviewee describes potential for engagement or partnership with another org that participated in the Healthy Work Collaborative. Future engagement might include but is not limited to the scope of the interviewee's project.*
Importance of relationship	Interviewee describes why relationship with another organization is important to them/their organization (can include any organization that participated in Healthy Work Collaborative, including UIC TA, labor TA, or other participant).
Impact of relationship(s)/partnership(s)	Interviewee describes ways in which relationship(s) or partnership(s) with other Healthy Work Collaborative participants (including TA and health participants) elicit change in interviewee's thinking about and/or action to address issues of interest. (*Different than impact of TA - here focused on relationship and not presentations and activities in sessions. If talking about TA, talking about OUTSIDE of Collaborative meetings*).
Important features/needs of partnerships	Interviewee describes things that they/ their organization look for when partnering with other organizations.
Decision making	Interviewee describes ways in which partners are making decisions.
Evidence of shared decision making	*Sub-code - interviewee describes ways in which decision making is shared between individual partners and their organizations.*
Notable ssues with shared decision making	*Sub-code - interviewee describes ways in which partners are being left out of decision making processes OR describes evidence that decision making is occuring in siloed ways (for example, only one organization is making key decisions)*

APPENDIX G (continued)

Facilitators of relationship/partnership	Interviewee describes things that POSITIVELY influence success/effectiveness of relationship/partnership with other organizations.
Internal Team Relationships/Partnerships	*Sub-code - interviewee is talking specifically about facilitators of their relationship or partnership with other individuals or organizations that are part of their HWC project team.*
External Relationships/Partnerships	*Sub-code - interviewee is talking about facilitators of relationships/partnerships external to their HWC project team or are speaking about relationships/partnerships more generally.*
Barriers of relationship/partnership	Interviewee describes things that NEGATIVELY influence success/effectiveness of relationship/partnership with other organizations.
Internal Team Relationships/Partnerships	*Sub-code - interviewee is talking specifically about barriers to their relationship or partnership with other individuals or organizations that are part of their HWC project team.*
External Relationships/Partnerships	*Sub-code - interviewee is talking about barriers to relationships/partnerships external to their HWC project team or are speaking about relationships/partnerships more generally.*
Relationship with UIC	Interviewee describes their personal or organizational relationship with UIC (including but not limited to the Center for Healthy Work or SPH). **Not limited to Healthy Work Collaborative. Should NOT be coded with "UIC" code.*
Long-term engagement with partners	Interviewee indicates that they/their organization plans to begin or continue engagement with another individual/organization over long-term (beyond Healthy Work Collaborative meetings). *This is NOT limited to the partner for the interviewee's project, but could include any other participant or participant's organization from the HWC meetings.

APPENDIX G (continued)

Vision	Interviewee articulates ideal outcomes and/or activities that they would like to see in the future. *This can include the interviewee's vision for their project from the Healthy Work Collaborative meetings AND/OR their vision for additional outcomes or activities that are not part of their HWC project (but still related to precarious work).
Interviewee's organization	*Sub-code - interviewee is describing their perceptions of their OWN organization's vision of ideal outcomes and/or activities that they would like to see in the future.*
Partner's organization	*Sub-code - interviewee is describing their perceptions of their PARTNER organization's vision of ideal outcomes and/or activities that that organization would like to see in the future.*
Capacity	Interviewee articulates currently available or ideas of organizational structures and/or resources that suggest that organization has the ability to undertake new initiatives/activities and accomplish goals. *This can include the interviewee's articulation of structures and/or resources relevant to their HWC project AND/OR those relevant to other new initiatives/activities (but still related to precarious work).
Readiness	Interviewee describes past and/or current activities in a manner that suggests some level of readiness to take on future activities in a concrete and actionable manner.
High	*Sub-code - interviewee describes clear and effective past or current activities that suggest that they are well-prepared and capable to act upon future plans. This may include completion of clear, actionable workplan for the Healthy Work Collaborative.*
Low	*Sub-code - interviewee describes past and/or current activities in a manner that is vague, lacks clarity, or does not suggest readiness to move beyond a visioning phase into concrete action.*

APPENDIX G (continued)

Activities/Accomplishments	Interviewee articulates organizational or team activities and/or accomplishments that have already taken place that have moved plans or vision forward. *This can include activities/accomplishments that have taken place that are related to the interviewee's HWC project AND/OR those not part of their project (but still related to precarious work).
Plans	Interviewee articulates organizational plans, activities, iniatives, campaigns, etc. that they will begin in the future. *This can include plans, activities, initiatives, campaigns, etc. related to the interviewee's HWC project AND/OR those not part of their project (but still related to precarious work).
Facilitators and barriers to organizational change	Interviewee describes factors that impact their organization's ability to engage in NEW activities or change organizational practices. *New activities or change in organizational practices can be related to interviewee's HWC project or other activities/organizational practices.
Current	*Sub-code - interviewee describes facilitors and barriers that are CURRENTLY affecting their organization's ability to make changes and/or engage in new activities.*
Potential	*Sub-code - interviewee describes facilitators and barriers that will POTENTIALLY affect their organization's ability to make change and/or engage in new activities.*
Impacts of decision making	Interviewee describes direct outcomes of decisions that have been made that are relevant to interviewee's project. *NOTE: this is likely to be coded alongside the partnership code of "Decision Making". This may also be coded alongside "Activities/Accomplishments".
Positive	*Sub-code - interviewee describes perceived positive outcomes of decision making.*
Negative	*Sub-code - interviewee describes perceived negative outcomes of decision making.*

APPENDIX H
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Bonney, T.; Welter, C.; Jarpe-Ratner, E.; Conroy, L.M. Understanding the Role of Academic Partners as Technical Assistance Providers: Results from an Exploratory Study to Address Precarious Work. Int. J. Environ. Res. Public Health 2019, 16, 3903.

If you have any further questions, feel free to let us know.

Best regards,
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VITA

TESSA BONNEY

EDUCATION

2016 – Present Ph.D. Candidate, University of Illinois at Chicago, School of Public Health, Division of Environmental and Occupational Health Sciences, [Role of Technical Assistance and Relationships in Development of Initiatives to Address Precarious Work]. *Defended 9/27/19. Expected graduation December 2019*.

2014 – 2016 M.P.H., University of Illinois at Chicago, School of Public Health, Division of Health Policy and Administration, *Addressing Insufficient Workplace Health and Safety Protections for Temporary Workers in Illinois*.

2008 – 2012 B.S., DePaul University, Biological Sciences.

RESEARCH EXPERIENCE

Principal Investigator 2018 – 2019
NIOSH Grant #T42/OH008672, Occupational Safety and Health, ERC, UIC
Pilot Project Research Training Program (PPRT)

- Designed one-year study protocol to examine important features and impacts of relationships and partnerships between labor and health organizations following participation in a multi-sectoral skill-building institute.
- Develop instruments for data collection, including interview and focus group guides and online surveys.
- Manage a small research group and oversee all data collection activities.
- Perform qualitative analyses using Dedoose software and synthesize findings; prepare reports and manuscripts for publication.

Research Assistant 2016 – 2019
UIC Center for Healthy Work

- Collaborate with large team of researchers, staff, and community stakeholders to plan and execute a variety of research activities aimed at elucidating relationships between precarious work and health.
- Organized and oversaw a series of presentations and activities, provided by labor organizations, as part of a skill-building institute targeted at public health organizations.
- Facilitate meetings between and develop presentation and evaluation tools for multi-sectoral organizations whose work is supported by the Center.

Research Assistant 2018 – 2019
UIC MidAmerica Center for Public Health Practice

- Prepare comprehensive literature reviews for a variety of research and evaluation projects within the Center.
- Coordinate and conduct data collection activities, including surveys, interviews, and focus groups for a variety of research and evaluation projects.

- Perform mixed methods analyses using SAS, Excel, and Dedoose software; summarize findings and prepare reports and presentations for funders and other stakeholders.
- Participate in strategic planning, research design and evaluation meetings with Center research team.

Co-Investigator 2017 – 2018
NIOSH Grant #T42/OH008672, Occupational Safety and Health, ERC, UIC
Pilot Project Research Training Program (PPRT)

- Conducted approximately 70 in-person surveys of individuals enrolled in re-employment programs in the Chicagoland area.
- Performed preliminary quantitative and qualitative analyses; prepared presentations and reports for dissemination of research findings.

Occupational Health Intern 2015
Occupational Health Internship Program (OHIP), Association of Occupational and Environmental Clinics

- Surveyed approximately 50 temporary workers over 4 weeks in the Chicagoland area to document exposures to occupational hazards.
- Consolidated and interpreted data for use by two non-profit organizations that directly support and advocate for temporary workers.
- Developed an informational website with warehouse-specific safety regulations and an online reporting mechanism to direct health and safety concerns to both organizations.

Research Assistant 2010 – 2012
Kipp Laboratory at DePaul University

- Examined effects of vitamin A deficiency on fertility and overall reproductive health with particular interest in ovarian follicular development in mice.
- Performed laboratory techniques including dissection, cell culture, and basic microscopy.
- Conducted independent research project with funds awarded through DePaul Undergraduate Summer Research Grant.

TEACHING EXPERIENCE

University of Illinois at Chicago

Teaching Assistant, Occupational Health and Safety Practice, Graduate Level	Fall 2019
Teaching Assistant, Physical Hazards, Graduate Level	Fall 2019
Teaching Assistant, Occupational Health and Safety Practice, Graduate Level	Fall 2018
Teaching Assistant, Determinants of Population Health, Graduate Level	Fall 2017
Teaching Assistant, Health and the Public, Undergraduate Level	Spring 2016

Roberto Clemente High School, Chicago Public Schools 2012 – 2014
Biology and Chemistry Teacher, Grades 9-12

HONORS AND AWARDS

NIOSH Predoctoral Trainee in Industrial Hygiene	2016 – Present
AIHA Fred Tremmel Presentation Award	2019

Graduate Travel Award	2018
Health Policy and Administration Director's Scholarship, University of Illinois-Chicago	2014 – 2016
Outstanding Student Leader Award, DePaul University	2012
Presidential Scholarship Recipient, DePaul University	2008 – 2012
St. Louise de Mirrellac Women of Spirit and Action Award, DePaul University	2012

PUBLICATIONS

Bonney, T., Welter, C., Jarpe-Ratner, E., Conroy, L. Understanding the role of academic partners as technical assistance providers: results from an exploratory study to address precarious work. *International Journal of Environmental Research and Public Health*, in press.

Bonney, T., Forst, L., Rivers, S., Love, M., Pratap, P., Bell, T., Fulkerson, S. Occupational Safety and Health in the Temporary Services Industry: A Model for a Community-University Partnership. *New Solutions*, May 2017.

Contributor to *The Skokie Environmental Action Plan: 2016 – 2021*. Published on the Village of Skokie's website in 2016.

CONFERENCE PRESENTATIONS

Bonney T. Impacts of Technical Assistance in a Capacity Building Process to Address Precarious Work. American Public Health Association (APHA) Conference. 2019. Philadelphia, PA. (*Accepted for oral presentation*)

Bonney T, Madigan D. Needs Assessment for Re-employment. American Public Health (APHA) Association Conference. 2018. San Diego, CA.

Bonney T. Building Resistance to Hazardous Work among Chicago's Contingent Workers. International Congress on Occupational Health (ICOH). 2018. Dublin, Ireland.

Bonney T, Yankelev A, Fisher E. Turning Unhealthy Work into Healthy Work: Healthy Communities through Healthy Work Action Research. 2nd International Symposium to Advance *Total Worker Health®*. 2018. Bethesda, MD.

Bonney T, Bell T, Fulkerson S, Campbell L, Patino M, Rivers S, Love M. "I Do Have Rights": Taking Action Against Hazardous Conditions in the Temporary Services Industry. American Public Health Association (APHA) Conference. 2016. Denver, CO.

Bonney T, Bell T, Fulkerson S. I Do Have Rights: Fight for Safe Working Conditions. Labor Research & Action Network Conference. 2016. Chicago, IL.

Jacobs S, Riley K, Kirkland K, Harrison R, London M, Delp L, Denis I, Zielke K, Cabasag C, Leukou O, **Bonney T**, Larson A, and Surratt D. Occupational Health Internship Program (OHIP): Twelve Years On – Still Shaping the Future of OHS. American Public Health Association (APHA) Conference. 2015. Chicago, IL

PROFESSIONAL ACTIVITIES

American Industrial Hygiene Association (AIHA)
Member, Local Section 2016 – Present
Treasurer, UIC Student Section 2017 – Present

American Conference of Governmental Industrial Hygienists (ACGIH)
Member 2017 – Present

American Public Health Association (APHA)
Member 2015 – Present
Student Liaison, Occupational Health and Safety Section 2015 – 2018

CERTIFICATIONS

Certified in Public Health (CPH) 2015
Certificate of Professional Writing, UIC Graduate College 2014
Secondary Teaching License, Grades 6 – 12 2012
Teaching Endorsements in Biology and French