Partnerships for Hypertension Management in Washington State

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Abstract

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Introduction: Under the new guidelines for defining and diagnosing high blood pressure set forth by the American Heart Association and American College of Cardiology, 46% of adults in the United States are now living with hypertension. Hypertension management has traditionally been addressed in clinical settings. However, only 54% of adults with hypertension have their condition under control. Improved partnership among clinic staff, pharmacists, community

organizations, and community health workers could bridge community-clinical silos to improve medication adherence and promote lifestyle changes necessary to manage hypertension. Our purpose was to explore partnerships for hypertension management in Washington State.

Methods: We conducted 41 semi-structured interviews via telephone with clinics (n=10), community organizations (n=10), pharmacies (n=10), and community health workers (n=11) in Washington State. We asked participants about their partnerships for hypertension management, facilitators and barriers to developing partnerships for hypertension management, and strategies public health could apply to promote these partnerships. We coded interview transcripts in Atlas.ti using deductive and inductive thematic analysis that included *a priori* codes from the CDC-adapted Himmelman Collaboration Continuum.

Results: Participants from the clinical sector, including clinic staff and pharmacists, engaged in partnerships with fewer sectors and at more extreme levels in comparison to participants from the community sector, including community organizations and community health workers. Facilitators to partnership included shared priorities and trust. Barriers to partnership included lack of awareness of community resources, competition (turf), lack of time, and exclusion from electronic health records.

Conclusion: Facilitating partnerships among sectors would help patients who have traditionally only received health care within clinical settings access community resources to better manage their condition. Future efforts to promote partnerships for hypertension management should focus on reducing barriers by bringing potential partners together to discuss shared priorities, increasing technological support, and building awareness of community resources. Reducing barriers and leveraging facilitators is key for bridging across clinical and community silos for improved continuity of care and hypertension management at the population level.

Background

High blood pressure, or hypertension, is a major public health concern costing the United States $46 billion annually (1-2). Hypertension is a preventable and modifiable condition that often co-occurs with diabetes and is a risk factor for heart attack, stroke, chronic heart failure, and kidney disease (1-5). Uncontrolled hypertension contributes to about 1,000 deaths per day (3,6). To allow for earlier intervention and more lives to be saved, the release of new guidelines for diagnosing, preventing, evaluating, and treating high blood pressure set forth by the American Heart Association and American College of Cardiology effectively increased the prevalence of hypertension among US adults from 32% to 46% (7). Over 103 million US adults are now living with hypertension (7).

Hypertension control has been traditionally addressed by primary care providers who prescribe medications and nonpharmacological treatments to patients who meet certain criteria (7-12). According to statistics from 2013-2014, 70% of US adults with hypertension were being prescribed medication for their condition, but only 54% of them had their blood pressure under control (1,13). Depending on hypertension severity, primary care providers recommend lifestyle changes in lieu of or in conjunction with antihypertensive medication such as weight loss, smoking cessation, reducing alcohol consumption, being more active, and improving diet (7,9,11,14-16). In a study by Fang and colleagues, the vast majority of primary care providers self-reported addressing at least some of these lifestyle factors with their patients to help them prevent or manage high blood pressure (12). However, a primary care provider spends only about 16 to 20 minutes with a patient during each office visit, addressing an average of six topics each visit with about five minutes spent on the longest topic and about one minute spent addressing each of the other topics (17-18). Interprofessional team-based care that includes

physicians, nurses, and pharmacists on care teams is an evidence-based strategy that has been shown to improve hypertension management and reduce systolic blood pressure significantly more than standard care (7,9,15-16,19-20). In addition to pharmacists being integrated into team-based care models, integrating community health workers (CHWs) is also associated with improved chronic disease management outcomes as they can refer patients to community resources and perform many other roles (7,15,25-26). However, the clinical setting alone may not have sufficient staffing or infrastructure to provide all the support patients need to make lasting lifestyle changes. Successful management of hypertension may require a population health approach and partnerships extending beyond the clinical setting (7,15-16,21).

The Chronic Care Model emphasizes the role of the community sector in chronic disease management and states that patient involvement with community resources activates them to improve self-management of chronic diseases such as hypertension (15,22-24). Community pharmacists and CHWs remaining in community settings can play important roles in screening, health education, medication adherence, delivering programs, and supporting self-monitoring of blood pressure (7,15,21,25-28). Community organizations can also play a role in improving hypertension control by delivering evidence-based programs that help patients manage hypertension through lifestyle improvements and chronic disease self-management skills (15,21). For example, Check It Change It is a multifaceted community-based program combining technological, health coach, and physician assistant support that has shown to be effective at improving hypertension management in a diverse population (24). Without ongoing partnerships between community and clinical sectors, primary care providers may be unaware of community programming, have out of date information, or lack the technological infrastructure to refer patients to community resources (29).

Facilitators and barriers to developing interorganizational partnerships have been established in the literature. Himmelman posited turf (competition), time, and trust as important considerations for coalition-building (21,33-35). Trust can be viewed as a cycle involving expectation setting and risk taking (36-41,43). Time refers to the time potential partners have for working together (21,33-35,40,42-43), which is an element of capacity in some frameworks (42). Turf, or competition, is viewed as a barrier to partnership with shared goals being its corresponding facilitator (21,33-35). Technological capability is another component of partnerships because it facilitates communication and shared resources (36,42). Flexibility can also facilitate partnerships as it allows partnerships to persist despite changes and conflicts that can occur (36-40). Literature specific to community-clinical partnerships is sparse (44). In a 2017 study on a community-clinical hypertension screening program for underserved populations, researchers found personnel capacity (e.g., competing responsibilities), professional development capacity (e.g., lack of time for training), and technological capacity (e.g., electronic health record) as facilitators and barriers during each stage of implementation (42). These factors are important to consider in light of public health efforts toward community-clinical linkages (21,30,43).

Establishing, deepening, and maintaining boundary-spanning partnerships across clinic and community sectors has the potential to support patients in managing chronic conditions such as hypertension (15,20-21). The State and Local Public Health Actions to Prevent Obesity, Diabetes, and Heart Disease and Stroke (DP14-1422) (1422 Program) is an Affordable Care Act-funded program to prevent obesity, diabetes, heart disease, and stroke and reduce health disparities through community and health system interventions (30). One of the aims of the 1422 Program is to facilitate partnerships between clinical and community sectors to prevent and

manage chronic diseases, especially among those who are most at risk (30-32). The Centers for Disease Control and Prevention (CDC) allocates 1422 Program funding to US state health departments such as Washington State Department of Health (WA DOH) (30). WA DOH works with seven Healthy Community Organizations (HCOs) serving as Community Lead Organizations (CLOs) to coordinate activities and administer the Program (30-31). CLOs are coalitions that aim to improve population health through health system transformation at the local level (30-31).

The 1422 Program focus on developing community-clinical linkages for hypertension control in Washington State presents an ideal opportunity to gain a better understanding of partnership levels between clinics, pharmacists, CHWs, and community organizations working to assist patients in managing hypertension. Our aims are threefold. First, we describe what partnerships are taking place among these sectors. Second, we describe facilitators and barriers to developing partnerships, and third, we outline strategies public health could apply to promote these partnerships. Our results may inform future efforts to develop intersectoral, population health approaches to hypertension management.

Methods

In this qualitative study, we conducted interviews to facilitate an in-depth understanding of nature and depth of intersectoral partnerships for hypertension management as well as their facilitators and barriers. Guided by advisors from Washington State Department of Health (WA DOH) as part of an evaluation of the 1422 Program, we gathered data via semi-structured telephone interviews of participants from four health-related sectors -- clinics, pharmacies, community health workers (CHWs), and community organizations -- to explore partnerships related to hypertension management in Washington State (Appendix 1). We obtained

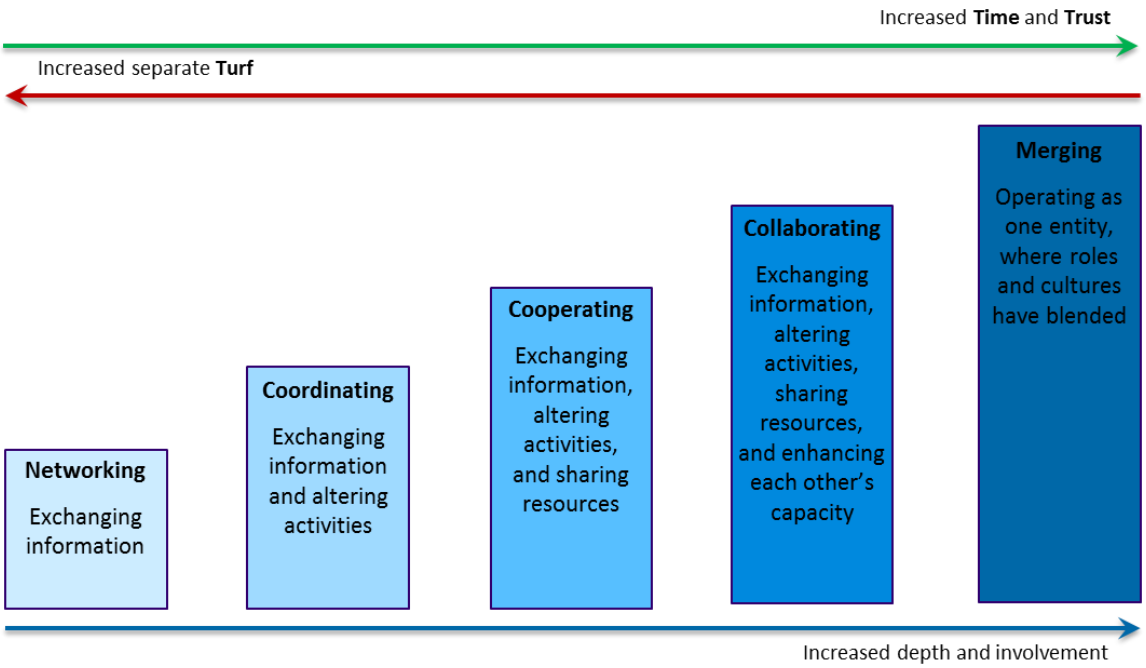
Institutional Review Board approval for this study from the University of Washington Human Subjects Division (Study #00000178) and used the Consolidated Criteria for Reporting Qualitative Research (COREQ) to guide the description of our methodology and results (45).

Framework

We used the CDC-adapted Himmelman Collaboration Continuum (Collaboration Continuum) as a framework to inform this study. The Collaboration Continuum outlines levels of partnership with stepwise increases in depth and involvement (21,33-35). The Centers for Disease Control and Prevention's (CDC) adaptation of the framework added a fifth "merging" level of partnership to Himmelman's first four partnership levels (Figure 1; Appendix 2). The CDC used the Collaboration Continuum to describe community-clinical linkages, or partnerships among clinical, community, and public health sectors for the prevention and management of chronic diseases (21). The Collaboration Continuum synthesizes pertinent theories about interorganizational partnership from institutional economics and organizational sociology and is ideal for our purposes because it provides a framework for systematically understanding depths of partnerships and identifying facilitators and barriers (46).

The Collaboration Continuum highlights turf, time, and trust, known as the "3Ts," as potential facilitators and barriers to partnership (21,33-35). Turf denotes an organization's sphere of activity or influence. Time refers to how much time an entity has to work on establishing, maintaining, and deepening partnerships (21). Time is often a prerequisite for developing trust (21,33). Trust is the confidence one entity has in another to be reliable and do what is right (33). Trust helps ensure a mutually respectful and understanding partnership (21). The 3Ts are present to a different extent at each level of partnership.

Figure 1. CDC-Adapted Himmelman Collaboration Continuum (21,33-35)



There are five levels of partnership outlined in the Collaboration Continuum. Networking, the first level of partnership, is considered an informal relationship and involves exchanging information for mutual benefit. It is characterized by minimal time commitment and trust between partners. Networking does not require sharing turf, resources, responsibilities, or rewards (21,33-35).

The next level of partnership, coordination, is considered a formal partnership in which information is exchanged and activities are altered for mutual benefit and to achieve a common purpose (34). Coordination is characterized by increasing accessibility to services and resources. Coordination requires moderate time and trust but no shared turf. At the coordination level, there are minimal shared resources, risks, responsibilities, and rewards (21,33-35).

Cooperation is considered a formal partnership defined as exchanging information, altering activities, and sharing resources for mutual benefit and to achieve a common purpose (34). What distinguishes cooperation from coordination is its moderate to extensive sharing of

resources, risks, responsibilities, and rewards (34). Cooperation involves high time commitment, trust, and shared turf (21,33-35).

Collaboration is considered a formal partnership defined as exchanging information, altering activities, sharing resources, and enhancing each other's capacity for mutual benefit and to achieve a common purpose (34). Collaboration requires an extensive time commitment and a very high level of trust. Collaboration is characterized by extensive sharing of turf and full sharing of resources, risks, responsibilities, and rewards (21,33-35). The final level of partnership occurs when two partners merge into a formal partnership.

While not in Himmelman's original framework, merging was added in CDC's 2016 *Community-clinical Linkages for the Prevention and Control of Chronic Diseases: A Practitioner's Guide* (21). Merging is a formal partnership defined as "integrating information, activities, and resources to enhance each other's capacity for mutual benefit and to achieve a common purpose. […] The primary focus of merging is organizational restructuring to operate as one entity with a shared culture. (21)" Merging requires extensive time commitment and trust, and fully sharing turf, resources, risks, responsibilities, and rewards (Appendix 2) (21).

Study Participants

Potential participants were eligible for the study if they were working in community or clinical settings in Washington State and engaging in hypertension management activities as part of their occupations as clinic staff, pharmacists, community health workers (CHWs), or community organization staff. We used purposive network sampling procedures to identify potential participants. We contacted relevant members of our professional networks including Washington State Department of Health (WA DOH), Community Lead Organization (CLO) consultants, the WWAMI region Practice and Research Network (WPRN), the Washington State

Pharmacy Association (WSPA), and the Diabetes Network Leadership Team (DNLT) to help us recruit prospective study participants. We provided professional networks sample email verbiage containing information about the study and how prospective participants could contact us via email and phone, as well as a link to an online screening survey. Our goal was to interview 10 participants representing diverse perspectives in each sector.

Data Collection

We developed an interview guide specific to each sector (Appendix 1). In addition to asking about each organization's activities related to hypertension management we also asked about their use of evidence-based strategies, partnerships across each sector, facilitators and barriers to the development and sustainment of partnerships, ideas about how WA DOH could improve partnerships for hypertension management, and demographic information. We piloted the interview guides with at least one expert from each sector and made changes based on their feedback.

A trained interviewer (MTV) conducted semi-structured telephone interviews in English with participants who gave verbal consent between December 2016 and July 2017. Interviews lasted approximately 25-45 minutes. We provided a $50 incentive to participants. All interviews were audio-recorded and professionally transcribed (Proof Positive Transcriptions, Garland, Texas). The interviewer captured salient themes by writing memos after interviews (47-50).

Data Analysis

We used inductive and deductive thematic analysis to understand activities and partnerships related to hypertension management across the four study sectors (48). In the earliest phase of codebook development, two researchers (MTV, MPP) read a sampling of transcripts and developed an initial codebook. We included the Collaboration Continuum

partnership levels and the 3Ts as deductive codes (Figure 1). Then, three researchers (MTV, MPP, CCT) used the initial codebook to code one transcript from each sector. We met and discussed how we coded each transcript until we reached consensus on how our codes should be applied to each of the transcripts.

We considered the codebook complete when no new themes emerged and we agreed on the definitions and applications of the codes. Then two of our research team members (MTV, CCT) used Atlas.ti Version 7.5.18 (Scientific Software Development GmbH, Berlin, Germany) qualitative analysis software to double-code sets of transcripts. We met and discussed coded text until we reached consensus; the study principal investigator resolved areas of disagreement (MPP). We refined the codebook and code definitions based on our reconciliation meetings and continued double-coding and reconciliation until we reached consistent 80% agreement between coders in each of the four organizational sectors (47-50). We then divided the remaining transcripts for independent coding and "code-checked" one transcript from each sector of our coding partner's assigned transcripts to ensure our coding remained consistent throughout the independent coding process. We wrote analytic memos after coding each sector to help summarize main themes for our analysis (47-50).

We tallied demographic and organizational setting characteristics about the participants by sector and overall and counted how many of our interviews mentioned working with each type of partner. We applied the Collaboration Continuum (Appendix 2) to identify the levels of partnership described in each interview and to identify the 3Ts as facilitators and barriers to partnership (21) and captured strategies participants identified that WA DOH could apply to promote interorganizational partnerships. We provided exemplar quotes and paraphrased examples to illustrate partnerships for hypertension management in Washington State.

Results

Characteristics of Study Participants

We conducted 41 semi-structured interviews via telephone with clinics (n=10), community organizations (n=10), pharmacies (n=10), and community health workers (n=11) in Washington State. We interviewed 45 of the 57 potential participants who expressed interest in our study, resulting in a participation rate of 78.9% (Table 1). Most interviews were one-on-one, but we conducted one group interview with four community pharmacists working in a grocery store retail pharmacy and one group interview with two community organization staff members. Participants were mostly female and identified as white (Table 1). Clinic staff consisted of seven physicians, two nurses, and one behavioral health specialist. The clinic staff we interviewed came from mostly regional hospital systems (n=8), a small, free clinic (n=1), and an FQHC (n=1). We interviewed nine pharmacists working in clinical settings (clinical pharmacists) and four community retail pharmacists (community pharmacists). Pharmacy interviews were from large, integrated hospital systems (n=8), an educational institution (n=1), and a grocery store (n=1). The community health workers (CHWs) we interviewed were employed by community lead organizations (CLOs) (n=5), low-income housing (n=3), and other health-focused non-profits (n=3). The types of community organizations represented in our study were public health-focused (n=5), other non-profits (n=3), and educational institutions (n=2). All participants' organizations served low-income communities. There were 12 prospective participants who did not participate in an interview because we had met our quota in a given sector (n=6), they did not meet our inclusion criteria (n=3), they did not respond to follow-up requests (n=2), or they did not feel they focused enough on hypertension management in their work to be interviewed (n=1).

Table 1. Participant Demographic Characteristics

	Clinic Staff	Pharmacists	Community Organization Staff	Community Health Workers	Total
Number of Interviews	10	10	10	11	41
Number of Participants	10	13	11	11	45
Age Mean (SD)	41.1 (12.2)	35.9 (9.8)	49.1 (14.3)	58.4 (9.1)	44.7 (14.1)
Missing Age	1 (10.0)	0 (0.0)	1 (9.1)	3 (27.3)	4 (8.9)
Gender [a] n (%) Female	7 (70.0)	10 (76.9)	11 (100.0)	10 (90.9)	38 (84.4)
Race or Ethnicity n (%)					
Asian	3 (30.0)	3 (23.1)	0 (0.0)	0 (0.0)	6 (13.3)
Black	0 (0.0)	0 (0.0)	0 (0.0)	4 (36.4)	4 (8.9)
Hispanic	1 (10.0)	0 (0.0)	0 (0.0)	1 (9.1)	2 (4.4)
White	6 (60.0)	10 (76.9)	9 (81.8)	4 (36.4)	29 (64.4)
Multi-racial	0 (0.0)	0 (0.0)	1 (9.1)	1 (9.1)	2 (4.4)
Missing Race or Ethnicity	0 (0.0)	0 (0.0)	1 (9.1)	1 (9.1)	2 (4.4)
Education n (%)[a]					
High School	0 (0.0)	0 (0.0)	0 (0.0)	3 (27.3)	3 (6.7)
Bachelors	1 (10.0)	2 (15.4)	6 (54.5)	4 (36.4)	13 (28.8)
Masters	1 (10.0)	0 (0.0)	5 (45.5)	1 (9.1)	7 (15.6)
Doctoral or Professional	8 (80.0)	11 (84.6)	0 (0.0)	0 (0.0)	17 (37.8)
Missing Education	0 (0.0)	0 (0.0)	0 (0.0)	3 (27.3)	3 (6.7)

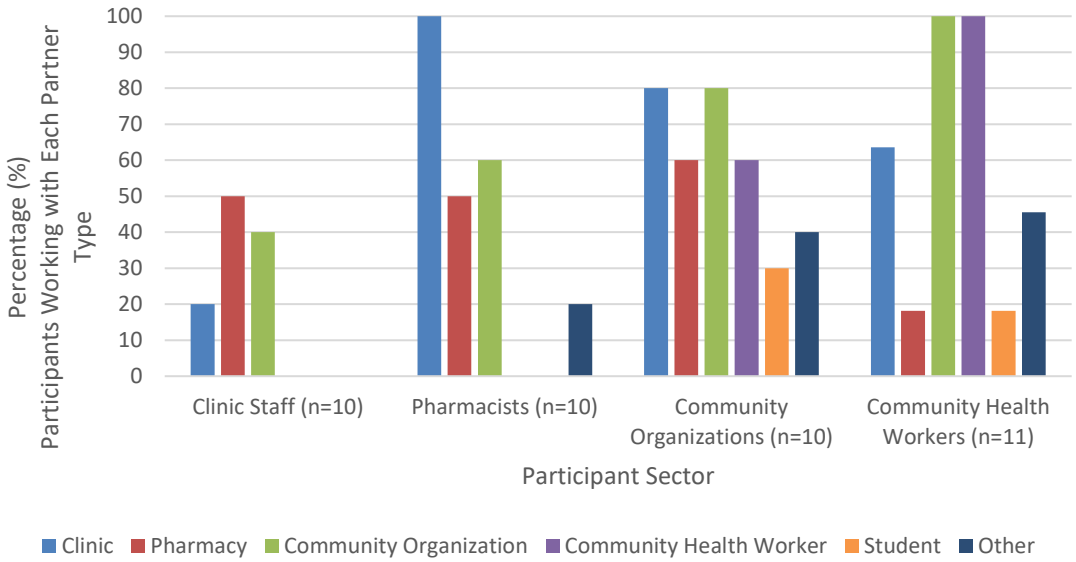
[a] There are no missing responses in the gender category.

Partnerships for Hypertension Management

Our interview guide included questions about partnerships with clinics, pharmacies, community health workers, and community organizations (Appendix 1), but two additional partnership sectors emerged in the interview data. First, partnerships with health science students and their academic institutions became apparent. We labeled this partnership sector, "students." Second, organizations that have not traditionally played a role in delivering health services such as churches, low-income housing, laundromats, and barber shops emerged as our "other" category (Figure 2).

The frequency of partnerships reported varied, with clinics partnering with other sectors for hypertension management the least in comparison to the other sectors we interviewed (Figure 2). Clinics reported partnering only with other clinics (n=2), pharmacies (n=5), and community organizations (n=4). All pharmacist participants reported working with clinics and other pharmacies. Pharmacists also reported partnering with community organizations (n=6). Community organizations and CHWs reported partnering with all sectors (Figure 2).

Figure 2. Partnership Frequency Distributions among Organizations by Sector



Levels of Partnerships for Hypertension Management across Sectors

In this section, we describe the types of partnerships mentioned in the interviews as well as the level of partnership described according to the CDC-adapted Himmelman Collaboration Continuum (Collaboration Continuum). Our qualitative analysis of these partnership levels by sector is summarized in Table 2.

Clinic staff. Clinics tended to partner at the lowest and highest levels of the Collaboration Continuum. Clinics partnered at networking and coordination levels with pharmacists (Table 2). For example, clinics shared information with pharmacies about patients when calling in prescriptions (networking) and helped each other resolve insurance issues (coordination). Clinics reported merging partnerships in the context of team-based care with pharmacists integrated into their care teams. The clinic staff we interviewed did not engage at the cooperation or collaboration levels of partnership for hypertension management.

Pharmacists. Similar to clinics, pharmacists tended to partner at the lowest and highest levels of the Collaboration Continuum. While pharmacists tended to engage in networking and coordination often, there was only one mentioning of cooperation with a clinic and one mentioning of collaboration with a clinic. Nine of the clinical pharmacists we interviewed discussed being integrated into clinical care teams (merging).

Community organizations. Community organizations partnered with all other sectors (Table 1) and engaged in partnerships at all levels. Networking activities community organizations often involved sharing information and promotional materials with other sectors or giving clinics a presentation about the programs they offer. Community organizations cooperated with community health workers (CHWs) by sharing their resources, such as blood pressure cuffs, and sometimes provided CHWs training in order to mutually enhance capacity (collaboration).

Community organizations also employed CHWs to serve as liaisons between the organization and the community (merging). Community organizations sometimes had multiple partners from different sectors working toward a single goal. For instance, a community organization was working with CHWs, a low-income housing facility, farmers' markets, a food bank, student nurses, and a bilingual pharmacist to coordinate events that would help control hypertension in their community (Table 2).

Community health workers. Similar to community organizations, CHWs partnered at all levels with all the other sectors. CHWs reported working together in teams within their own organizations. Networking occurred when CHWs shared information about their events, fairs, and screenings with clinics. At those screening events, coordination occurred when CHWs referred patients with high blood pressure to clinics. Cooperation occurred when food banks shared programming and resources with CHWs, and their clients and CHWs referred clients to food banks. CHWs and public health organizations offered joint training to enhance each other's capacity (collaboration). Also, CHWs are employed by community organizations to serve as liaisons between the community and the organization (merging). CHWs engaged in deeper and more complex relationships than clinical and pharmacy sectors overall (Table 2).

Table 2. Levels and Types of Partnerships for Hypertension Management by Sector, Washington State, December 2016-July 2017

Sector	Partnership Level	Partners	Example
Clinic	Networking	Pharmacists, Community organizations	Clinical staff exchanged information about a patient with a community pharmacist.
Clinic	Coordinating	Other clinics, Pharmacists	Pharmacists and clinic staff helped each other resolve an insurance issue for a patient.
Clinic	Cooperation	N/A	N/A
Clinic	Collaboration	N/A	N/A
Clinic	Merging	Pharmacists	Pharmacists worked on care teams.
Pharmacy	Networking	Clinic, Other pharmacists	Pharmacists shared information with community organizations.
Pharmacy	Coordination	Community organizations, Other pharmacists	Pharmacists referred patients to community organizations' programs.
Pharmacy	Cooperation	Community organizations	A pharmacy was funded by a community organization to mine data related to medication adherence.
Pharmacy	Collaboration	Other pharmacists	Community retail and clinical pharmacists trained each other on medication management.
Pharmacy	Merging	Clinics	Clinical pharmacists were embedded in team-based care.
Community organizations	Networking	Clinics, Pharmacists, Other clinics	Community organizations shared flyers and brochures about their programming with clinics.
Community organizations	Coordination	Clinics, Community health workers (CHWs)	Community organizations and community health workers (CHWs) attended or promoted each other's community events and health fairs.
Community organizations	Cooperation	Other community organizations	Community organizations shared resources with other community organizations such as their facilities and personnel for activities.
Community organizations	Collaboration	CHWs, Students, Other	A community organization trained CHWs on blood pressure management.
Community organizations	Merging	CHWs	CHWs were employed by community organizations.

Community health workers (CHWs)	Networking	Clinics, Pharmacists, Community organizations	CHWs shared information about health fairs and screening events with clinics, pharmacies, and community organizations.
CHWs	Coordination	Clinics, Pharmacists	CHWs referred people with high blood pressure to clinics for treatment.
CHWs	Cooperation	Other	Food banks shared programming and resources with CHWs and their clients. CHWs referred clients to food banks.
CHWs	Collaboration	Community organizations, Student, Other	CHWs and public health organizations offered joint training to enhance each other's capacity.
CHWs	Merging	Community organizations, Other	CHWs were employed by community organizations to serve as liaisons between them and the community.

Facilitators and Barriers to Partnership

In this section, we summarize our findings related to the *a priori* barrier and facilitators themes of turf, time, and trust that are posited by the Collaboration Continuum, as well as emergent themes we identified during the analysis: Electronic health records (EHR), mission alignment, and awareness of community resources.

Turf. Each sector mentioned turf, or competition, as a barrier to partnerships for hypertension management, but clinic staff mentioned turf the least. Only one clinic staff member mentioned the barrier of turf. The participant from the clinical sector reported that physicians may feel it is their responsibility to take the lead on hypertension management with patients, rather than being directed by top-down treatment protocols. One physician explained how a primary care provider who is accustomed to having the authority to treat their patients as they saw fit might view new treatment protocols as infringements on their turf:

> All of these former private practices used to do whatever they wanted, right? They weren't part of a system and they certainly didn't have anybody writing protocols for them. […] In order to have a large system and sort of write a hypertension protocol for them and say, 'Okay, hundreds of primary care doctors — your primary care providers and nurse practitioners and PAs included — I expect you to follow this kind of care protocol for the better control of hypertension.' That would be a sort of radical change for them, because they've never had a larger organization overseeing all of these primary care practices before. It's not that it can't be done, but it's just a culture shift. (Clinic staff 1)

Participants from two pharmacies (one clinical, one community) mentioned turf as a barrier to partnership. Despite acknowledging that pharmacists were being integrated more often into clinical settings than they had been in the past and sometimes leading evidence-based programs for chronic disease management, the group of four community retail pharmacists we interviewed felt clinic staff have authority to provide medical care and community organizations have authority to provide programming services. One community retail pharmacist explained this barrier, "I think what's very different about our setting is the fact that every patient that we come in contact with has their primary care provider and their own doctors that they see. So then for us to have a decree or like a hypertension service, it's a little bit more difficult, because we don't want to be necessarily stepping on anyone's toes to provide these services," (Pharmacist 10).

Five community organizations mentioned turf barriers during their interviews. Community organizations confirmed the existence of competition between organizations and clinics that may be offering similar programs. One community organization staff member said, "Well, I mean, healthcare is a business, right? It's a competitive business and so some clinics, like the community clinics don't care. They'll invite us in all the time, but there are a lot of clinics that wouldn't want you to come in and tell them how to do stuff, because you're basically their competition," (Community organization 7).

Two CHWs mentioned turf barriers. They described being excluded from clinical systems because potential partners might only work with people within their own systems. One CHW explained why they have been unable to partner with the clinical sector, "Some organizations are just unwilling to engage in collaboration. I don't really know the reasons for that. It would be interesting I guess to find out why — whether they think they can do it better, whether it's ego-related, power-related, or just keeping things in-house," (CHW 8).

Time. Time was a major factor mentioned by each sector, and participants seemed aware of potential partners' time constraints working in other settings. Some participants said that not having enough time makes partnership seem unfeasible. Seven clinic staff discussed the role of time in forming partnerships and counseling their patients about hypertension management. Clinic staff said they were very busy and acknowledged that it takes time to build partnerships. Physicians said they only have three to four minutes during each appointment to educate patients about lifestyle factors that affect blood pressure and do not have time to develop interorganizational partnerships; this statement about physician time was corroborated by clinical pharmacists. One physician said:

> Rarely is the visit about their blood pressure. It's just because a lot of our patients have a lot of medical problems, and it's hard to see the doctor. They're not going to come in for something as boring as their blood pressure. They're coming in because of something that they really care about like their pain, or something that's really going on with their health. Usually, the blood pressure thing I would say rarely takes up more than ten minutes, and it's typically more like five minutes […] I usually talk three to four minutes about [lifestyle factors for improving hypertension control]. (Clinic staff 6)

Eight pharmacists discussed how time can act as a barrier and facilitator when partnering for hypertension management. Clinical pharmacists said that physicians and community retail pharmacists have little time and acknowledged that it takes time to build relationships with

patients, but none of the clinical pharmacists said they have too little time to form partnerships or work with patients to manage their hypertension.

Those who were engaged in partnerships noted that partnerships save time. Clinical pharmacists involved in team-based care mentioned how they can save physicians' time by using protocols to triage patients:

> The pharmacist is taking these lower acuity patients and opening up the doctor's time to see the higher acuity patients that they get more reimbursement for and so it's a very cost-effective system where the pharmacist gets reimbursed, although at a slightly lower rate, but it's opening up the physician time to see these more acute higher-paid patients and so it's a win-win. (Pharmacist 1)

There were eight community organizations that explained the role of time in forming partnerships. Community organizations understood that potential partners from the other sectors were very busy. In relation to partnering with clinics, a community organization staff member said, "I think that over the last few years with the Affordable Care Act (ACA) and all of the changes that our medical providers have had to institute, they really have a full plate. I think that sometimes they just don't want to have to think about something different to commit to," (Community organization 8).

Three CHWs saw time as a barrier to partnership. CHWs felt they did not have enough time to network to build more partnerships for hypertension management. One CHW said, "I've noticed that we've not been very consistent about trying to connect with I guess the clinics to provide more and to get ourselves in there to try to get more support with having more things available in our community. I guess that one of the things I think we need to work on a little bit more is making time," (CHW 1).

Trust. When potential partners have historically worked in separate silos and come from different backgrounds, trust issues can arise (21,31-33,38). Trust was mentioned in four of our

interviews with clinic staff. Not all clinic staff trust other clinical providers in team-based care. One physician said, “I don't think that it’s that the primary care providers don’t want team-based care. It’s just that those people have to be trained on how to do it, and primary care providers have to feel that it would be good care and appropriate care,” (Clinic staff 1).

The same physician also described not being able to trust community partners unless they see positive outcomes from their partnerships, “Then after a while they’re going to give up on the program, right? They’re not going to go through all of that extra effort to work with a community-based partner if they really don’t feel like there is any positive change happening,” (Clinic staff 1).

Participants from community organizations mentioned trust in seven of their interviews. A community organization staff member described an awareness that clinical providers do not trust community providers without positive outcomes from their programming and efforts, “That’s where I continually bump up against some challenges myself, because I don’t report or have something to report. Well, I’m sending the awareness that me not reporting anything means to somebody else that nothing is happening. Well, it is, it’s happening, but there are just no results yet,” (Community organization 9).

Trust was a barrier identified in all ten pharmacist interviews. As pharmacists join clinical teams, they feel they have to prove their worth and gain trust from clinic staff. A pharmacist said:

> My role is new here. […] I’ve been here a little over two years. I’ve had to establish myself — for one, gaining trust within the clinic with nursing, the faculty, the residents. It’s not that they don’t trust pharmacists, but just kind of learning what can we do and how can we help with efforts with our patients. And then as things have kind of come on, they've recognized that wow, you can definitely help us with things. (Pharmacist 4)

Seven CHWs mentioned trust as a facilitator or barrier to partnership. Some CHWs reported that they do not feel trusted for their expertise. Many of the CHWs we interviewed had a nursing degree and years of experience in the health care field. One CHW mentioned her perception that CHWs are not trusted to take blood pressure properly, despite being trained to do so: "These blood pressure cuffs that we've got now, all you have to do is put them on and push a button. You don't do anything else. It's different when I learned. It's so much easier, but our people here think that a nurse ought to do it. We're trained but okay, that's fine," (CHW 4).

Facilitators and barriers to partnerships for hypertension management went beyond turf, time, and trust to include the electronic health record (EHR), mission alignment, and awareness of community resources.

Electronic health records (EHRs). Each sector mentioned the EHR as a barrier or facilitator to partnership. Seven clinic staff members spoke about the EHR, and most of them found it to be a facilitator to partnership. A clinic staff member described EHR as a facilitator to within-system partnership and said the EHR system helped with referrals to programming. The clinic staff member said that when looking at the hospital's electronic record, "I could see that [our hospital system] might try a clinical pharmacy program that involved [our hospital system's clinical] pharmacists […] I know that the pharmacists run a tobacco cessation pharmacotherapy program that we do refer people to. I could see that we would have a program that used [our hospital system's] pharmacists [in the EHR and make a referral]," (Clinic staff 1).

An example of how clinic staff can see the EHR as a barrier to partnership has to do with the cost and time delay in incorporating additional providers and community resources into EHRs. The clinic staff member said, "Well, electronic medical record (EMR) changes are extremely, extremely expensive to make and very slow in coming. So even if we requested some

kind of medical record change […] it may happen months later, and there is a huge queue and a long list of people in various specialties that all have their wish list," (Clinic staff 1).

Most of the six pharmacist interviews mentioned the EHR as a facilitator to partnership. Pharmacists can use the EHR to refer patients to community resources. Expanding on this, a clinical pharmacist said:

> Well, it depends on the health record. We just switched actually and this one is fairly easy to get providers added […] vendors or suppliers or whatever it may be that we're trying to do […] it's fairly easy to add places to that. The forms and documentation sometimes when it's cumbersome can be a very big barrier. The easier the referrals, the more likely that resource is to get used. (Pharmacist 7)

Seven community organizations mentioned the EHR, and most of them found it to be a facilitator in their partnerships. However, their organization not being included in EHRs for referrals was seen as a barrier. Another barrier regarding EHR was the inability of community organizations to access the EHR from community settings. A community organization involved in blood pressure screenings indicated a need for EHR access while in the field:

> I think the biggest problem is the electronic record business. There is all kinds of blood pressure screening going on out in the community, but people are writing it down on those little paper cards. The nurses tell us that when they leave a free blood pressure screening they see those things laying around in the parking lot. What we know is that people often don't take those home. They don't take them to their doctor […] I guess what I'm trying to say is that there's a lot of information that's available, if we had a way to get it to the clinic. (Community organization 5)

All four CHWs who mentioned EHR found it to be a barrier to partnership because they could not access it. A CHW confirmed the issue Community organization 5 discussed, "We can't access their medical records, but we can give them literature and things like that," (CHW 10).

Contrasting the sentiment of Community organization 5 and CHW 10, community organizations that are included in EHRs said it is one of the most useful facilitators to community-clinical partnerships. One community organization staff member said, "We have a

direct referral system in place […] where we receive referrals directly from providers through their EHR. We have secure fax where we receive referrals to the program. I would say that those are probably the strongest relationships we have [between] the community and clinic," (Community organization 6).

Shared mission, goals, and priorities. Shared mission, goals, and priorities was a prominent facilitator mentioned by each sector. Four clinic staff mentioned shared mission, goals, and priorities as a facilitator to partnership. One clinic staff member described working with pharmacists to solve insurance problems for the mutual goal of helping the patient obtain their medications.

Five pharmacists mentioned shared mission, goals, and priorities as a facilitator to partnership. One clinical pharmacist said:

> I think understanding the approach and ensuring that our goals are going to be the same to get the patient's blood pressure under control, but then how you get to that endpoint can sometimes be different. I think one of the first steps is [understanding whether] our visions, our values, and what we believe to be the best way to help our patients aligns with the organization that we hope to partner with — I think that alignment in that is extremely important. (Pharmacist 6)

All ten community organizations mentioned shared mission, goals, and priorities as a facilitator to partnership. In an example that highlights mission alignment, one community organization staff member described how their organization collaborated with a non-traditional partner for public health:

> It kind of was an interesting door for us to knock on with housing, you know, recognizing that folks want healthy tenants and residents. They realize that they want to pay the rent on time and not cause any trouble and be community contributors, but obviously to me that's health. That's what you want. It's just identifying the mission alignment and seeing both sides so that we're successful together. (Community organization 9)

Six CHWs mentioned shared mission, goals, and priorities as a facilitator to partnership.

One CHW summarized how natural it is to partner with organizations that have similar missions, goals, and priorities to their own, “Most of the organizations have the same — not the same, but their mission is on the same path. So then the more help that they can get the better it is, and it lightens the load. Most organizations are open to different types of support,” (CHW 3).

Awareness of community resources. Awareness of community resources, or lack of awareness, was mentioned by each sector. All ten clinic staff members mentioned their awareness or lack of awareness of community resources for hypertension management. Clinic staff members’ lack of awareness of community resources was coded more often than their awareness of community resources. Clinic staff who were aware of community resources knew about community organizations offering programming in their communities because these organizations had previously shared information about their programs with them. A clinic staff member who lacked awareness of community resources said, “I think that also in order for community partners to be involved, I think knowledge [is important], too. I don't know what community organizations are doing to manage hypertension; what they’re doing to work with clinics or healthcare providers to do so,” (Clinic staff 2).

Community organization staff mentioned their awareness of community resources in all ten of our interviews. Many community organization staff listed their community partners, how their partnerships were formed, and ways they go about building partnerships through their knowledge of community resources. One community organization said:

> Really, it’s just the connections. […] It’s that kind of stuff that helps you find out what people are doing so that you know whom to reach out to — which I think that is helpful. I feel like we have a good pulse on our community and so I feel like I do get those linkages a lot. I’m not sure that everybody would say that, but I don’t really have a problem. I feel like we make good connections and we could get in other places. (Community organization 7)

All eleven CHWs noted awareness of community resources as a facilitator to partnerships. One CHW mentioned that it was awareness and building relationships with a local church and local laundromat which facilitated setting up hypertension screening events in the community. Another CHW noted the importance of having an up-to-date knowledge of community resources in order to form partnerships and share resources with clients, "As community health workers (CHWs) we always need to learn more about what kind of resources there are, because the resources are always changing," (CHW 1).

Solutions, Strategies, and Roles of WA DOH

Our participants suggested three main ways WA DOH could mitigate barriers to partnerships for hypertension management. First, our participants suggested that WA DOH play a role in facilitating meetings between potential intersectoral partners. This could mitigate the barrier of turf because it would allow potential partners to see their common goals rather than competition. It would also save time that potential partners would have to spend finding and meeting one another on their own. Getting to know potential partners before partnering with them would build trust and would raise awareness of resources that exist in the community. Second, our participants said that addressing funding such as the sustainability of the 1422 Program would allow for time to be devoted to developing community-clinical partnerships. Third, participants requested assistance from WA DOH in facilitating access to the EHR in community settings, sharing of EHRs across platforms, and community organization and CHWs inclusion in EHR referral systems. Participants said addressing this technological concern is important for communication, trust building, carrying out intersectoral partnership activities, and tracking outcomes.

Discussion

In this study, we examined partnerships for hypertension management involving clinic staff, pharmacists, community health workers (CHWs), and community organizations in Washington State. We identified facilitators and barriers to the development of such partnerships and strategies Washington State Department of Health (WA DOH) could take for mitigating the barriers. Our results may inform efforts to build and strengthen partnerships for population-level hypertension management in Washington and other states.

We found substantial variation across health sectors in the frequency of partnerships for hypertension management as well as in the intensity of these partnerships based on the levels defined by the CDC-adapted Himmelman Collaboration Continuum (Collaboration Continuum) (21). Participants from the clinical sector generally reported fewer partnerships than participants from the community sector, and those partnerships tended to be mainly with traditional clinical partners such as pharmacists. Participants from the clinical sector generally reported partnering at the extremes of the Collaboration Continuum, while partnerships originating from the community sector occurred at each level of the Collaboration Continuum. For example, clinic staff and pharmacists exchanging information about a patient while filling a prescription was mentioned often in interviews as an example of networking, but the clinical sector also engaged in merging partnerships with pharmacists by integrating them into their settings and care teams. This pattern of partnership engagement represents a missed opportunity because community pharmacists and CHWs who are not integrated in clinical teams may be more effective if they had deeper involvement from clinical sectors (19-20,25).

We also found that partnerships for hypertension management among our participants' organizations were influenced by a number of internal and external factors including turf, time,

and trust. Turf was mentioned by all sectors but was mentioned by clinic staff the least, perhaps because they have historically had the most authority to treat chronic conditions such as hypertension (8,15). Time was another barrier; our participants stressed this was especially salient given the transformative changes occurring in the healthcare system as a result of the Affordable Care Act including shifts in incentives, reimbursement, and other innovations to which the system is adapting at a rapid pace. However, those engaging in partnerships for hypertension management noted the time efficiency of working together toward a common goal. Finally, some participants mentioned they do not feel trusted for their experience, but rarely admitted they do not trust others.

Improving trust may be the most actionable step to facilitating partnership development and could have a secondary benefit of mitigating other barriers. Improving trust between potential partners could reduce turf barriers, which could facilitate more efficient use of time (21,33-35). Trusting potential partners could facilitate more awareness of and referral to community or clinical resources (21,33-35). Trust could also facilitate innovation because trusting partners would be more willing to take risks (36). The first key to improving trust will be bringing potential partners together to discuss shared priorities (38,40,4246), which our participants highlighted as the primary way WA DOH could help facilitate partnerships. This would build trust by allowing potential partners to get to know one another and view their work in terms of aligned priorities rather than turf or competition (38). Uniting toward shared and mutually agreed-upon common goals is a key component of successful and trusting partnerships (40). Additionally, providing sustained incentives for partnership was highlighted by our participants as a way to build trust instead of competition and would allow the necessary time and resources for interorganizational action (38). Once partnerships have formed, partners can

continue to build trust in one another by setting reasonable, achievable goals and taking reasonable risks in the beginning, focusing on larger goals and risks as more trust is gained (36,41). Another key component of trust in partnerships is in responding to conflict or emotional incidents in ways that build rather than inhibit trust (39). Given the research on trust-building and the role of trust in intersectoral partnerships, WA DOH could facilitate evidence-based trust training workshops where potential partners could not only learn how to build trust when they are working together, but also apply that knowledge to establish ground rules, goals, and role definitions with potential partners during the workshops (38,40,42).

In addition to trust, the electronic health record (EHR) as a facilitator to interprofessional provider communication and partnership has been widely established (51-54) and verified by our participants with EHR access. Those who did not have EHR access (e.g., CHWs, community organizations) sometimes remained fragmented from clinics. To promote partnership and continuity of care for patients with hypertension and other chronic diseases, CHWs and community organizations should be included in EHR referral systems and have the ability to input patient progress and outcomes into their EHR for tracking by clinic staff (27-28), which our clinical participants claimed would help them build trust in the community sector. Patient privacy (HIPAA) concerns could arise if community organizations are given access to patient medical records (52) and could be overcome by providing HIPAA training to CHWs and community organization staff and allowing them only limited access to a patient's EHR (27-28). Integrating more EHR infrastructure in the community sector could impact systems with less resources for EHR and other technologies, which are more likely to serve the most vulnerable populations (53). Alternatively, findings from a study of Canadian primary care providers

recommended an online database of community-based services for providers to make appropriate referrals to community settings (29).

To our knowledge, this is the first study rigorously applying the Collaboration Continuum to examine partnerships for chronic disease management. Not all partnerships are created equal, and the Collaboration Continuum was a valuable tool for assessing the depth of partnerships described during interviews. When applying the Collaboration Continuum, we were faced with interpreting and refining the definitions in the framework to be more clear and applicable to the real-world partnerships taking place. An example of this was with the merging category. It is relatively rare for organizations to complete a formal merger. We believe integration would be a more accurate way to describe pharmacists and community health workers being integrated into interprofessional team-based care. Furthermore, whether called "merging" or "integration," the concept of two entities joining together into one entity, as outlined in the Collaboration Continuum, raises the question as to whether this type of engagement should be considered a partnership at all because partnerships are typically between two separate entities. More research and theory development are necessary to clarify the concepts and make them more applicable to practice if the Collaboration Continuum is to become a reliable tool for empirically assessing interorganizational partnerships for chronic disease management.

This study had several limitations. We made an attempt to interview a heterogeneous sample of participants to get the broadest range of perspectives possible (55), but the characteristics of our study participants may not necessarily be representative of the broader population within each occupational sector. For example, our participants being from a single state may reduce generalizability because regulations, initiatives, and medical cultures may vary

in other states. Additionally, knowing the study was about partnerships for hypertension management, people engaging in these types of partnerships may have been more likely to volunteer to participate. Furthermore, there may have been social desirability bias that could have caused an underreporting of turf (competition) and trust barriers by our participants despite the interviewer asking about these topics indirectly (56-57). Underreporting of turf and trust issues may have intersected with the status of participants' occupations and their social identities in relation to the interviewer or the other occupations participants were aware we were interviewing. Lack of patient voice is another limitation of the study. While including the patient perspective was outside the scope of this study focused at the organizational level, patient perspectives should be included in future research. Including patients would improve our ability to evaluate the effectiveness of intersectoral partnerships for hypertension management and assess what needs remain unmet (55-56).

There have been major pushes from policy and practice perspectives to form partnerships across clinical and community sectors to improve chronic disease management (43), such as the 1422 Program (30), and the new guidelines for diagnosing, preventing, evaluating, and treating high blood pressure set forth by the American Heart Association and American College of Cardiology make community-clinical linkages more important now than ever before. Our findings and application of the Collaboration Continuum could contribute evidence to CDC's framework for implementing and evaluating community-clinical linkages and can serve to inform potential partners about what facilitators to leverage and what barriers may be necessary to overcome when embarking on partnerships. Dissemination of best practices for forming, deepening, and maintaining community-clinical linkages for chronic disease management is

warranted to support health behavior improvements among the 46% of US adults who currently have hypertension (7,9,21).

In summary, we found that the clinical sector had lower frequencies and less variety in partnership levels for hypertension management than the community sector. Because the clinical sector has historically been responsible for taking the lead on hypertension management and clinical intervention alone may not be sufficient for controlling hypertension at a population level, more attention should be focused on facilitating partnerships between clinical and community sectors (21). Reducing barriers and leveraging facilitators to partnership is key for bridging across clinical and community silos for improved continuity of care and hypertension management at the population level.

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Appendices

Appendix 1

Example Verbal Consent Script and Interview Guide (Clinic Staff)

INTRODUCTION AND CONSENT

Verbal Consent Script

Hello, this is _____ from the University of Washington. Earlier this month, we set up this time to talk to you about the partners you are working with to improve hypertension control in your community. Is this still a good time to talk?

(If "no" try to schedule another time, if "yes" keep reading.)

Great. Now I will read you the consent script.

The interview will last approximately 30-45 minutes and will be audio recorded.

The degree of risk is perceived as very minimal in this study, although you may be uncomfortable when asked certain questions. You are not required to answer the questions and may end the interview at any time.

The purpose of this study is to better understand how providers are partnering to manage patients' hypertension.

Results from this research will help us learn about ways that Department of Health can support how clinical and community partners can work together to improve hypertension control in Washington State.

This interview will be audio recorded. Recordings will be destroyed when contents have been transcribed – no later than September 30, 2017.

Your name and the name of your organization will not be linked with your answers—all interview results will be combined so that your answers are not identifiable to you.

If you have questions about your rights as a research subject, you may call the Human Subjects Division at (206) 543-0098. Would you like me to repeat this phone number?

Participation is voluntary.

Do you have any questions about this research?

OK. I am now going to turn on the audio recorder.

Do you consent to participating in this interview and being recorded?

(If "yes," continue with interview. If "no," thank them for his/her time)

Great. Let's get started!

Researcher states:

Let's start with some information about you.

- What is your job title?
- Briefly, please describe what you do in this position.
- What is the name of the organization where you work?
- How large is your organization? (How many people does your organization employ?
- What is the mission of your organization?
- What type of work does your organization do?
- Who do you primarily serve?

Now I would like to ask you some questions about how your organization is working to improve hypertension control.

1. What are you currently doing to manage and control blood pressure with your patients who have hypertension?

2. Next, I want to ask you about which evidence-based strategies you are currently doing. Please state your answers as "yes," "no," "partially," or "I don't know."

a. Are you working to promote the creation of registries to manage panels of patients and track indicators?

(If yes), Tell me more about what you are doing…
(If not), Will you please share why, in your opinion, this isn't happening?

b. Are you working to promote the use of standardized hypertension treatment protocols to improve the treatment and control of hypertension in clinical settings?

(If yes), Tell me more about what you are doing…
(If not), Will you please share why, in your opinion, this isn't happening?

[c. Are you working to promote the use of Clinical Decision-Support Systems (CDSS)?]

(If yes), Tell me more about what you are doing…
(If not), Will you please share why, in your opinion, this isn't happening?

d. Are you working to promote the use of Team-Based Care to Improve Blood Pressure Control?

(If yes), Tell me more about what you are doing…
(If not), Will you please share why, in your opinion, this isn't happening?

e. Are you working to promote self-measured blood pressure (SMBP) monitoring with additional

(If yes), Tell me more about what you are doing…
(If not), Will you please share why, in your opinion, this isn't happening?

f. Are you working to promote self-measured blood pressure (SMBP) monitoring used alone?

(If yes), Tell me more about what you are doing…
(If not), Will you please share why, in your opinion, this isn't happening?

Next, I would like to ask you about which partners you are working with to help improve hypertension management.

3. Which clinical and community partners are you currently working with to support your hypertension management activities? *By "partners", we mean both individual providers and organizations.*

   a. (If not already mentioned), are you currently working with ***pharmacists****, for example at Walgreen's or pharmacists working in hospitals, to help manage patients' hypertension?*

(If yes), Tell me more about partnering with pharmacists to support hypertension management.

(If no), Will you please share why, in your opinion, this isn't happening?

b. (If not already mentioned), are you currently working with ***community health workers****, for example FQHCs, to help manage patients' hypertension? By community health workers, we mean peer health educators, promotoras, and other frontline public health workers who are trusted members of a community and serve as a liaison between health services and the community.*

(If yes), Tell me more about partnering with community health workers to support hypertension management.

(If no), Will you please share why, in your opinion, this isn't happening?

*c. (If not already mentioned), are you currently working with **community organizations**, for example the YMCA or community centers, to help manage patients' hypertension?*

(If yes), Tell me more about partnering with community organizations to support hypertension management.

(If no), Will you please share why, in your opinion, this isn't happening?

4. What helps, or facilitates, partnering with these providers and organizations to manage hypertension?

5. What hinders or hurts partnering with these providers and organizations to manage hypertension?

6. Are there any other lessons learned from partnering with community and clinical providers and organizations to help manage other health issues (e.g., tobacco cessation; diabetes)?

7. How can Department of Health help support these partnerships?

8. Who else should we be talking to better understand how clinical and community partners are working together to better manage hypertension?

Demographic Questions:

Now I'd like to ask you a few demographic questions so we can get a better understanding of who we've interviewed:

9. How old are you?
10. What is your race?
11. What gender do you identify as?
12. What is your highest level of education?
13. Do you have anything else you would like to share?
14. Are there any other questions we should be asking?

Closing:

Thank you so much for your time and input. I really appreciate it! In the near future, you will be getting an e-mail for a $50 incentive gift card as a token of our appreciation for your time. Please

share with me a good e-mail address for us to send this to you:_____
(or: is the email address I have on file a good email address to send your gift card to?)

When you receive your e-mail about the incentive, it will give you a choice among many different types of gift cards from the Tango website or you can choose to donate the $50 to one of the charitable organizations they have listed.

The University of Washington policy requires that we collect and maintain a record of the recipient's name, home address and value of each gift card provided to study participants. This information will be stored in a secure file and will not be shared with anyone except in the case of an audit. May I please have your home address?

Do you have any questions about the interview you just participated in or any of the questions I asked you? If not, **thank you and good-bye.**

Appendix 2

Table: CDC-adapted Himmelman Collaboration Continuum Refined Framework of Partnership

Himmelman Partnership Level (Formality)	**Activities**	**Primary Focus**	**Time and Trust**	**Shared Turf**	**Shared Resources, Responsibilities, and Risks**
Networking (Informal)	Exchanging information	Exchanging information	Minimal	No	No
Coordination (Formal)	Exchanging information and altering activities	Increasing accessibility to services and resources	Moderate	No	No or minimal
Cooperation (Formal)	Exchanging information, altering activities, and sharing resources	Extensive sharing of resources, risks, responsibilities, and rewards	High	High	High
Collaboration (Formal)	Exchanging information, altering activities, sharing resources, and enhancing each other's capacity	Enhancing each other's capacity for mutual benefit	Extensive	Extensive	Extensive
Merging / Integration (Formal)	Integrating information, activities, and resources to enhance each other's capacity	Organizational restructuring to operate as one entity	Extensive	Full	Full