Published in final edited form as:

Res Social Adm Pharm. 2014 ; 10(6): 824–836. doi:10.1016/j.sapharm.2013.12.002.

Using a Conflict Conceptual Framework to Describe Challenges to Coordinated Patient Care from the Physicians' and Pharmacists' Perspective

Leigh Maxwell, PhD [Assistant Professor],

Department of Communication Studies at Edgewood College

Olufunmilola K. Odukoya, BPharm, MS [PhD candidate],

Social & Administrative Sciences Division at the University of Wisconsin – Madison, School of Pharmacy

Jamie A. Stone, MS [Associate Researcher], and

Social & Administrative Sciences Division at the University of Wisconsin – Madison, School of Pharmacy

Michelle A. Chui, PharmD, PhD [Assistant Professor]

Social & Administrative Sciences Division at the University of Wisconsin – Madison, School of Pharmacy

Abstract

Background—In an effort to increase cost-effectiveness of health care and reduce overall costs, patient-centered medical homes have been proposed to spur fundamental changes in the way primary care is delivered. One of the chief principles that describe a patient-centered medical home is that care is organized across all elements of the broader health care system, including community pharmacies.

Objectives—To identify and describe challenges to a physician-pharmacist approach to coordinating patient care.

Methods—A descriptive, exploratory, non-experimental study was conducted in Wisconsin (U.S. State) from June–December, 2011. Data were collected through two rounds of face-to-face interviews with physicians and community pharmacists. The first round involved one-on-one interviews with pharmacists and physicians. The second round brought pharmacist-physician dyads together in an open-ended interview exploring issues raised in the first round. Content

© 2013 Elsevier Inc. All rights reserved.

Corresponding author: Michelle A. Chui, PharmD, PhD, Assistant Professor, Social & Administrative Sciences Division, University of Wisconsin – Madison, School of Pharmacy, 777 Highland Avenue, Madison, WI 53705, (t) 608-262-0452, (f) 608-262-5262, mchui@pharmacy.wisc.edu.

The authors and/or immediate family members declare no conflicts of interest or financial interests in any product or service discussed in the manuscript.

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

analysis was guided by a conflict management conceptual framework using NVivo 10 qualitative software.

Results—A total of four major themes emerged from the conflict analysis of interviews that illustrate challenges to coordinated patient care: Scarce resources, technology design and usability, insurance constraints, and laws and policy governing patient care. The study findings indicate that both groups of healthcare professionals work within an environment of conflict and have to negotiate the challenges and strains that exist in the current healthcare system. Their need to work together, or interdependence, is primarily challenged by scarce resources and external interference.

Conclusions—Bringing physicians and pharmacists together for a face-to-face interaction successfully stimulated conversation about opportunities in which each profession could help the other to provide optimal care for their patients. This interaction appeared to dispel assumptions and build trust. Results of this project may provide pharmacists with the confidence to reach out to their physician colleagues to improve efficiencies and overall patient care.

Keywords

Patient Care Coordination; Physician-Pharmacist Collaboration; Conflict Management; Interprofessional Teamwork; Patient-centered medical home

Introduction

In an effort to increase cost-effectiveness of health care and reduce overall costs, the U.S. Patient Protection and Affordable Care Act was enacted in 2010.¹ This was primarily motivated by the widespread agreement of the need for fundamental reform of both healthcare delivery and payment systems.¹ As part of the Patient Protection and Affordable Care Act, numerous provisions for enhancing primary care and medical homes were included. The medical home is a model of primary care that is patient-centered, comprehensive, team-based, coordinated, accessible, and focused on quality and safety.² It is a model for how primary care should be organized and delivered throughout the healthcare system, promoting a team-based approach to care.

Embedded in the idea of medical homes is the need for increased patient coordination between healthcare providers from different health care settings³ such as primary care providers, hospitals, long-term care, and community pharmacies. Most patients receive medical care from multiple health care providers, including community pharmacies that may not be part of the same healthcare organization and typically do not share the same computer system. This can often complicate the ability for any given health care professional to develop working relationships and/or access the patient's information as it can be located in many places. Therefore, a challenge facing policy makers is how to ensure implementation of medical homes across community based health care settings where much of primary health care is delivered.⁴ In order to improve coordination of care for patients, physicians and pharmacists practicing in different settings need to be able to communicate and collaborate effectively and efficiently to ensure patients receive high quality, patient-centered care.

A small number of successful physician-pharmacist medical home models have been published in the literature. However, most are typically conducted in an information-rich ambulatory clinic where physicians and pharmacists are housed in the same building, allowing for greater face-to-face interaction^{5, 6} or in academic environments where pharmacy faculty and residents contribute significantly to the patient care coordination.^{7,8} These projects may not be generalizable to a free-standing community pharmacy,⁹ and no studies could be found describing the patient coordination challenges faced by physicians and community pharmacists, that work in separate settings and do not share the same computer system.

With calls for team-based, coordinated patient care and an emphasis on communication among healthcare providers in different settings, this study focuses on the particular challenges facing physicians and pharmacists. Conflict is inevitable within teams; healthcare teams with multiple professions are not immune to such conflict¹⁰. To better understand the intricacies of interpersonal relations and interprofessional teamwork, we apply a conceptual framework from the field of communication, specifically conflict.¹¹ Conflict literature often focuses on interpersonal relationships. However, within the context of this study, conflict is examined not only between the interpersonal relationship of physicians and pharmacists but also between the professional roles and within the environment where each practices as they try achieve the same goal - rendering high quality coordinated patient centered care.

Conceptual Framework

Conflict is an inevitable and sometimes stubborn part of personal, professional and organizational life.¹² How conflict is managed has more influence on tensions and ongoing relationships than the conflict itself. Wilmot and Hocker (2011) define interpersonal conflict as an expressed struggle between interdependent parties with perceived incompatible goals, scarce resources, and interference from others in achieving goals.¹¹ A more extensive breakdown of this definition is useful for this particular study and serves as our conceptual framework for conflict analysis.

The first part of this definition refers to how conflict is described or expressed. How individuals discuss the conflict, problem, or challenge can have a significant impact on how the conflict unfolds. Most *expressed struggles* are activated by a triggering event. The triggering event brings awareness of the conflict to everyone's attention.¹¹

A relationship is considered *interdependent* when one person's choices or actions affect the other. Interdependence requires that parties have some mutual interests. In interpersonal conflict the individuals may be interdependent on each other in some way, such as family, friends or colleagues. In a larger context, interdependencies can exist between roles within a system (such as pharmacist and physician). Interdependence carries elements of cooperation and elements of competition.^{10,12} If people view conflict as involving shared interests and common goals, this results in cooperative outcome interdependence.¹³ From this cooperative viewpoint, conflict is perceived as, "when one goes down, we all go." Individuals who practice cooperative outcome interdependence are more likely to debate issues and opposing points of view with an open mind, and seek solutions that benefit

everyone involved. If on the other hand people view conflict as involving opposing interests and goals, competitive outcome interdependence results.^{12,13} In this situation, conflict is perceived as, “when you lose, I win”. Individuals who practice competitive outcome interdependence are more likely to value relative advantage and put down the opposing side as well as their values.

Perceived incompatible goals can occur when two parties want the same thing and there is only so much to go around (scarcity), or they may want two different things. Incompatible goals involve priorities. Everyone might agree that health care would be improved if physicians and pharmacists communicated regularly and frequently about their shared patients, but the priority of physicians to protect and control their time and the priority of pharmacists to contact physicians for quick confirmation of a prescription can be incompatible. Incompatible goals are not static but often transform through communication. How parties formulate, alter, and explain their goals within a conflict play a significant part in the success of the conflict experience.¹¹ When parties work together to clarify goals and specify what the conflict is and is not about, constructive problem solving, or collaboration, is more likely to occur.

A *resource* is defined as “any positively perceived physical, economic or social consequence”.¹⁴ They may be real or perceived as real. The scarcity of the resource may also be real or perceived as real. Resources can be tangible such as time, money, support staff, jobs, knowledge and technology. Resources can also be intangible including power, self-esteem, respect and attention.

Interference can occur when one party blocks another from attaining a desired outcome or goal. Interference can come from external forces, outside the parties directly involved such as the political or social structure, policies, and administration. Interference can also come from within the relationship of the individuals involved. An example of internal interference would be, a pharmacist asking a physician to authorize blanket approval to exchange for generics whenever available and the physician deferred a decision to his/her upper management.

Closely related to definitions of conflict are the causes. Conflict can result from differences in goals, values, attitudes, needs, beliefs, perceptions, expectations and interests.^{13,15} Conflict can also erupt from scarce resources, competition for those scarce resources such as time, responsibilities, status, and budgets. Rapid change, heavy workloads, lack of communication and power struggles can all lead to conflict in interpersonal as well as organizational relationships.¹⁵

Rationale and Objective

Little is actually known about challenges that currently exist to improve patient care coordination between physicians and pharmacists in outpatient settings. This is important as health care systems move towards a patient centered care approach through the establishment of patient-centered medical homes. Using constructs from the conflict conceptual framework, the investigation focused on identifying and describing challenges

faced by physicians and those faced by pharmacists not currently in a medical home or accountable care organization in their efforts to provide coordinated quality patient care.

Methods

Overview of the study

This qualitative study consisted of open-ended interviews with pharmacists and physicians during the summer and fall of 2011. The purpose of the interviews was to explore the concerns shared by physicians and pharmacists and the challenges that limit working together to coordinate patient care. Approval for this project was received from the University of Wisconsin Institutional Review Board.

Study Participants

A convenience sample of eight physicians and eight pharmacists were recruited. Researchers worked with the Wisconsin Medical Society and the Pharmacy Society of Wisconsin to identify physicians and pharmacists who might be interested in the study and willing to participate. Once a physician or a pharmacist in a particular geographic area agreed to participate, he or she was asked if they knew of a counterpart (a physician if the individual was a pharmacist and vice versa) in the area who might like to participate. The eight dyads were formed based on the following criteria: close geographic proximity with the potential to serve a shared patient population and a job position that requires prescribing/dispensing to ambulatory home-dwelling patients. All physicians were part of a group practice and affiliated with a Health System. Their specialties included: two in family medicine/geriatrics, two in internal medicine/geriatrics, two in psychiatry, one in family medicine and one in pediatrics. Pharmacists in the sample included three working in independent pharmacies, one in a national mass merchandise pharmacy, 3 in regional mass merchandise pharmacies, and one at a regional grocery store chain. The dyads were recruited from a mix of communities in Wisconsin (U.S. State) with some in or in close proximity to urban areas and others in more rural areas. Each participant consented and received \$100 for his/her participation in the study. Table 1 lists each dyad.

Data Collection

Data were collected in two stages. The first stage involved one-on-one interviews with each physician and pharmacist individually. All interviews were conducted by the same researcher (who is a pharmacist) and assisted by one other member of the research team. Interviews were audio recorded and later transcribed. Each interview took place at the workplace of the interviewee, either in his or her office or a conference room. The interviews took approximately 45 minutes to 1 hour. The purpose of the first stage of interviews was to identify issues, challenges, and facilitators to working directly with the other provider to improve patient care. The interview guide for the first stage (Appendix A) was developed by two members of the research team, a Pharmacist and communication researcher¹⁶. Responses from the first stage of interviews resulted in the creation of a “pharmacist wish list” and a “physician wish list”¹⁷. These lists included key topics that physicians and pharmacists mentioned most frequently as areas where they could most benefit from working together to meet their goals.

The second stage involved bringing each dyad together for an open-ended semi-structured interview (See Appendix B for interview guide). The same researcher who conducted the initial interviews facilitated the dyad interviews and was assisted by a member of the research team. Interviews were audio recorded and later transcribed. Each interview took place at either the physician or pharmacist's workplace. The interviews took approximately 45 minutes. The purpose of the second stage of interviews was to bring these professionals together face to face to seek common ground and identify areas where they could work together and challenges that hinder such direct interaction, all related to improving patient care. The interview guide for the dyad interviews (Appendix D) was created by the research team. The wish lists that were developed from the first stage of interviews were also referenced in the dyad interviews.

Data Analysis

The qualitative software NVivo was used to conduct a content analysis of the transcripts from the second stage or dyad interviews. Based on the conflict theoretical framework provided through Wilmot and Hocker's (2011) definition of conflict,¹¹ the following codes were used to analyze how the physicians and pharmacists conceptualized the challenges to team-based coordinated healthcare:

- Expressed struggle
- Interdependence
- Perceived incompatible goals
- Perceived scarce resources
- Interference (external and internal)

Coders also specified who made each statement, the pharmacist or physician, in order to determine if there was a difference in the way each perceived their current environment, limitations, and priorities. The analysis team consisted of a group of four individuals which included two pharmacists, one communication researcher, and one human factors engineer. The dyad interview transcripts were coded separately by two researchers on the study team (one pharmacist and the human factors engineer) who then met together to review the codes. The researchers discussed any inconsistencies between codes and made adjustments to codes once consensus was reached. In cases where consensus was not easily reached, questions were taken back to the full research team and discussed until agreement was reached. Once all transcripts had been coded according to the conflict conceptual framework, two members of the research team, one pharmacist and the communication researcher separately reviewed all coded data to check for accuracy and consistency. The two met afterwards to discuss any discrepancies and questions regarding how particular items had been coded. Following the completion of the deductive coding, the data contained in each of the 10 categories (5 conflict constructs by both pharmacists and physicians) were then further analyzed to identify common or sub themes within and across each category.¹⁸

Results

Through analysis with the conflict coding scheme, four sub themes inductively emerged from the interviews that directly reflect the challenges pharmacists and physicians face when trying to work together to improve patient care. *These four themes essentially place the conflict codes within the context of real-life challenges facing healthcare professionals* and include scarce resources (time and information), technology design and usability, insurance constraints and laws and policy governing patient care. Table 2 demonstrates the relationship between the conflict codes and four sub themes.

Scarce Resources

A resource was described as any positively perceived physical, economic or social consequence. The primary resources described as being limited or scarce were time and information.

Time as a Scarce Resource—In terms of time, physicians and pharmacists both described inadequate time to perform patient care related services and inadequate staffing to cover a growing workload. Time consuming activities included handling prior authorizations, reaching a physician or pharmacist for clarification or confirmation, entering data into the electronic health record system, responding to phone calls and messages, and researching patient history and medications.

One physician described his time constraints related to medication management as: *“We just don’t have that much time to do the research, and not having the time to look at all the other medications carefully might affect your choice of those medications.”* Another physician when describing the complications involved in processing prior authorizations said, *“I won’t always do prior authorization the same day. I don’t have the time. That may require chart review. It may require seeing the patient because I don’t know off the top of my head what they’ve tried before.”*

One pharmacist captured what many described when he said, *“Well it’s just difficult to keep up with the phone calls and the consultations and everything else;”* The trend to do more with less was described by one pharmacist as, *“They [management] want more hours to be open, but less overlap. And by going back to less overlap, that means the one guy is just, information overload. It’s just too hard to keep up with everything.”*

Information as a Scarce Resource—Inadequate access to information was another scarce resource described by both physicians and pharmacists. Both healthcare professionals discussed a lack of information about patients, medications, and prescriptions. Limited access to information affects physicians in terms of not having enough information necessary to manage patients’ prescriptions. One physician described the effort required when a patient has comorbidities and numerous medications, *“That’s a real problem trying to keep up with all that, that’s where I could use pharmacy help. I know they’re busy too. I don’t have the clinical staff to understand what this medication is doing. Do you really understand why you have to take it at this time? Sometimes I don’t understand all those things. The patient is asking, which pill can I take at the same time together during the day?”*

It gets very complicated.” Physicians also expressed significant concern over tracking controlled substance use and abuse. One physician explained, *“It’s hard to know what these patients are doing because there’s no system to really find it ...they’re picking up other prescriptions from other places. Once in a while, a pharmacist will pick up on something and call us, which is really helpful.”*

Limited access to information affects pharmacists in fundamental ways, most specifically having incomplete prescription information which can leave the pharmacist unable to fill the prescription. The prescript clarification issues seem to be at the heart of the pharmacists’ struggles. Information that often needs to be clarified includes dosage, switching to cheaper medication, 30 to 90 day switch, prior authorization, and formulary management. Calling the physician’s office and quickly resolving the issue is not as easy as it used to be according to one pharmacist: *“It was always easier when I was dealing with the nurse. I could call the clinic, get the nurse on the phone and boom, done, you know. You don’t have that ability anymore.”* Pharmacists also described concerns relating to not having a full medical profile. One pharmacist said: *“yeah, that is a problem with medical records. You ask the patient what they’re on...’ well I take a white one for my blood pressure, and I take this one...’ it’s like, would these drugs have names?”* Mail order is also challenging the effort toward more thorough medical profiles as described by one pharmacist, *“Because patients are going mail order for some of their [chronic medication] stuff, I only see their Vicodin, Amoxicillins, [urgent medication needs] etc...”*

Technology Design and Usability

Both physicians and pharmacists reported that health information technology (health IT) such as electronic medical records or electronic prescribing could be a hindrance to patient care in their respective practice settings. Physicians in particular brought up usability issues related to electronic prescribing systems. Electronic prescribing systems were designed to auto-generate default drug or patient information that was sometimes incorrect or could be easily missed by the physician and sent to the pharmacy. For instance one physician commented, *“part of the problem, I think, is our EMR [electronic medical record], which, you know, that’s the default is a 30-day supply, and you just kind of click on that and off it goes [to pharmacy].”* Other usability issues raised by physicians included having too much information presented at the same time on their EMR screens. Physicians commented that their EMR systems were not user friendly in terms of finding information easily, information being transparent or computer screens being intuitive. One physician stated *“E-prescribing has a comments section that, I guess, probably gets transmitted [to pharmacy]. See, that’s the other thing with e-prescribing, I really don’t know exactly what is popping up on their [the pharmacy] screen.”* Physicians explained that they did not know what the pharmacists’ system looked like. With electronic prescribing, physicians wanted to be able to view the transmitted electronic prescription as it would be presented in the pharmacy; however this is not possible with the current EMR systems. One physician said, *“it would be nice to see, what you [pharmacist] see on your screen before we hit that transmit button.”* Another important issue for physicians using the EMR systems was the lack of integration of up to date patient insurance information and drug coverage. To complicate matters more, even when such information was in the EMR it was often inaccurate.

Physicians raised more issues than pharmacists with regard to the ways health IT hindered patient care activities. However, pharmacists' stated that challenges with how physician EMR systems were designed, such as auto-generation of information, led to problems for pharmacists. One pharmacist stated, *"you know, it just depends on the, how their IT team has it set up, they might have a default like directions, and then the doctor is free formatting"*. Also important to pharmacists was integrating their system with physicians' EMR systems. This would enable direct and immediate communication with physicians and provide pharmacists access to patient information necessary for prescription dispensing. One pharmacist stated, *"you just can't pick up the phone necessarily anymore and get that call to go straight through. But it would be nice if there was a way to at least maybe leave one step out, maybe, where there was a way that I could enter the note in myself into the [physician's] EMR system"*.

Insurance Constraints

A third theme that emerged that presented challenges for both pharmacists and physicians was working with and satisfying the requirements of insurance companies. Both physicians and pharmacists discussed how difficult and time consuming it can be to work with insurance companies when there are multiple companies with different formularies that are constantly changing. As described by one pharmacist, *"Uh, I, we spend a lot of time managing formularies and, you know, calling doctors' offices or faxing physicians' offices to get things covered for patients. So that's my least favorite part of the whole part of, uh, part of pharmacy is the third party issues that we deal with every day."* When discussing the challenge of juggling what works for the patient with what's approved on the formulary, one physician said, *"It goes nowhere, because the preauthorization forms ask you, have you tried Nexium. Have you tried all the preferred products? And the answer is, well, no. That happened to be the samples we had on the shelf and...Protonix works. They would prefer Protonix. Well, that's not going to fly. So it's, from that approach, what I, what all of us want to hear is I can't give you Protonix without a PA, but I can certainly give you NEXIUM."* On the same subject of formularies and the role of insurance in shaping healthcare, another physician stated, *"You mentioned the formularies too, which, I mean, that's, you know, we know that the pharmacy has nothing to do with it. It's all insurance company driven. And so, a lot of this stuff is, we're just reacting to what other people's requirements are, whether it be, you know, insurance, typically, or, you know, outside parties"*.

Both physicians and pharmacists were also frustrated by the fact that pharmacists often had to call the physician to change a prescription to fit insurance requirements (e.g. changing from a 30 day supply with 2 refills to a 90 day supply). Pharmacists did not like to bother the physicians for questions such as these nor did physicians feel to the need to be contacted, but as the pharmacists explained, it was necessary to confirm and document the change in case the pharmacy is audited. *"It is very silly, and it's not changeable because insurance companies will come in and audit us. And if it's written for 30 and we give 90 [day supply of patient's medication], they'll take away all the money for the prescription."* Another pharmacist shared her frustration when she said, *"Why do I have to call the doctor every single time and ask him, can I change this from one, you know, 10 milligram to half a 20?"*

That should be in the, in the, in the clinical and the professional ambit of the pharmacist to make that decision without bothering the doctor.”

Physicians also cited the insurance company (payer) as a source of interruption, often contacting the physician to make a medication change for a patient. The physicians noted that this was quite disruptive and happened outside the context of a patient visit, so the physician did not have the patient’s information in the forefront of his/her mind. “... we get, you know, from insurance companies, particularly a lot of these mail-order places and stuff now that want to be faxing us and interrupting us during the day and saying, well, what about this or changing to that, and, you know, it’s like, I haven’t seen that patient in three months, you know, why are you bothering me now about this, you know?” A pharmacist noted that when requests such as these occur, the patient might not be kept in the loop. “Yeah, and sometimes the insurance will contact the doctor directly. We don’t have anything to do and then all of a sudden we receive a script and... And sometimes we don’t know to deactivate the old prescription. Um, I guess the insurance companies have kind of butted in and not...maybe spoke with either the physician or the pharmacist to let them know what’s going on, so that can be kind of frustrating too. Then we have the patient who has no idea this letter was even sent because they don’t, don’t go through their mail. They get filled the wrong prescription. At least not, not the one that the insurance company wanted them to have...”

When discussing insurance-driven medication changes, one pharmacist noted how difficult it is to process such requests without a complete medical profile or diagnosis for patients. “the problem is, of course, we don’t have full access to the medical record. I can look at, um, my file, but I don’t, you know, we don’t, there’s no shared [patient medical information], the pharmacy gets a very little piece. We don’t get a diagnosis”

Laws and Policies Governing Patient Care

A fourth theme that emerged that presented challenges to more patient care coordination was associated with laws and corporate policies that were not in the physicians’ and pharmacists’ control.

Both physicians and pharmacists discussed how the law, as it is currently understood by physicians and pharmacists, does not allow them to practice in a collaborative way. Physicians focused on legal difficulties related to prescribing controlled substances. The law prohibiting the electronic submission of controlled substance prescriptions did not make any sense to them. Indeed, they felt the law was inefficient and made it more difficult to monitor the controlled substance use of their patients. According to one physician, “And they’ve turned this into a nightmare, because you cannot electronically prescribe ..., supposedly, because they can’t identify me. I have to have a retinal scan or a fingerprint, or that’s what we were told. But, I can print this out, sign it, and then fax it, which makes no sense.”

Pharmacists also discussed how frustrating it was that the law prevented them from performing simple tasks that can get in the way of patient care, and that they needed a formal mechanism such as a collaborative practice agreement to proceed. In one example, a pharmacist was describing how he needs to get a physician’s authorization to switch a

prescription from a 30 day supply to a 90 day supply. *“I mean, legally I know it’s required, but a lot of it just seems silly. Why, if you write a prescription for 30 tablets with 12 refills, can’t I switch it to 90 with 3? But the law doesn’t allow me to do that. I don’t have [authority to change the prescription], but as it stands right now, and I’m hoping there’s something we can do to allow us to do that to save you time, save me time, save the patient time. So but that’s a lot of frustration I feel.”*

Another issue related to the law was how ambiguous the law was, and how there appeared to be a lack of knowledge and confidence in terms of how physicians and pharmacists understood and applied the law. In several interviews, physicians and pharmacists admitted that they did not have a firm grasp of the law and were unsure whether they were legally allowed to move forward with ideas to more effectively collaborate. One physician spoke about how a lack of understanding of the law resulted in an over-concern over being sued, *“I think either clarifying what the current legal, you know, what the current, current legal interpretation is...”* One pharmacist, referring to comments written on a prescription, stated *“I don’t know if this would be legally acceptable, but if we could have added that [controlled substance prescription] can only be filled in one specific pharmacy. But then there would need to be legal obligation that another pharmacy then can’t fill it out.”*

In addition to the laws that govern physicians’ and pharmacists’ practices, participants cited a number of corporate policies that appeared to restrict the way they practice as well. These corporate practices were perceived as being a challenge to individualizing patient care and providing necessary and up-to-date information about patients. When asked about his corporate structure, one physician responded, *“I work for this hospital that we’re sitting in right now. And so I’m an employee. I don’t own my own practice or anything. And, certainly, I think there’s lots of laws and rules. We have to go through training [so we all do it the same way].”*

When discussing strategies to inform fellow colleagues about a potential substance abuser, a pharmacist suggested that corporate policies can get in the way of effectively addressing drug abuse, *“We can put [information about a potential substance abuser] in [the computer], but I can tell you that [name of pharmacy] will not like it. They’re not allowed ... It has to be like an off the record, because, and my boss cannot condone a policy in which I [document], ‘ check the Medicaid registry for a cash paying narcotic patient’”.*

Discussion

This study set out to better understand the intricacies of interpersonal relations and challenges that physicians and pharmacists face to coordinate patient care. By initially coding data according to a conceptual framework founded in conflict literature, further analysis within those codes identified four sub themes: scarce resources, technology design and usability, insurance constraints, and laws and policy governing patient care.

The conflict management framework was useful for analyzing the dyad interviews. The five elements of the conflict definition allowed the researchers to explore a comprehensive list of factors that affect inter-professional patient coordination. Importantly, the framework led us

to think beyond factors that have already been cited in the literature,¹⁹ and to conceptualize the challenges facing physicians and pharmacists from a communicative perspective. These challenges include demands for increased efficiencies and productivity, coordination of care among professionals, rapid change in terms of technology and policy, and the separation of space and time between physicians and pharmacists. Viewing these challenges from a conflict management framework reminded us that how a conflict is managed can have a bigger impact on the final outcome than the actual conflict itself.

The study findings indicate that the physicians and pharmacists who participated in this study work within an environment of conflict and have to negotiate the challenges and constraints that exist in the current healthcare system. According to the conflict conceptual framework, when parties work together to clarify goals and specify what the conflict is and is not about, constructive problem solving is more likely to occur.¹³ This research enabled physicians and pharmacists to be brought together to clarify goals and determine how to work together across different settings that are: (1) physically separate from each other; and (2) have work contexts or environments with unique priorities and constraints. Examining how physicians and pharmacists describe their challenges using the conflict framework highlighted how interdependent they are in terms of their need to work together and the challenges that exist in their day-to-day practice primarily scarce resources and external interference. By examining the interdependencies, scarce resources, and external interference, it can be seen how these challenges influence interprofessional team work and how to address them.

First, the conflict framework emphasizes the concept of interdependence. The description of interdependence suggests that individuals who practice cooperative outcome interdependence are more likely to debate issues and opposing points of view with an open mind and seek solutions that benefit everyone involved.¹³ The healthcare professionals who participated in this study were cooperative, not competitive, and willing to work together. This finding is consistent with work conducted by Doucette et al, who found that physicians and pharmacists evolve through a process of setting and reinforcing mutual expectations and thus become more interdependent.¹⁹

Second, this study's findings suggest that another important concept of the framework, and challenge to interdependence is scarce resources such as time, responsibilities, status, and budgets. Conflict can erupt from scarce resources and competition for those scarce resources. Rapid change, heavy workloads, lack of communication and power struggles all can lead to conflict in interpersonal as well as organizational relationships.¹⁵ These same issues were described by the participants in this study as hindering their ability to coordinate patient care and improve services. Respondents reported that a contributing factor to the scarce resources associated with time was the implementation of electronic medical record technology and electronic prescribing. Indeed, studies have shown that implementation of such technology has resulted in increased time to perform certain tasks. It is now known that the use of health information technologies such as electronic prescribing can both positively and negatively impact patient care and coordination between physicians and pharmacists.^{20–23} Careful consideration must be given to how these technologies are

designed to ensure that they aid coordination of patient care between different healthcare settings.

This study found that there is a significant need to improve access to information for both physicians and pharmacists not only to improve workflow efficiencies but also to improve their ability to work together to coordinate patient care. Improving access to information could be accomplished through changes in both policy and technology, which are two primary sources of external interference, challenging interdependence. Consistent with others,³ legal and regulatory issues surrounding provider coordination and engagement need to be addressed. To efficiently and effectively coordinate patient care, portions of patient records need to be available to all healthcare providers involved in a given patient's care. Providers need access to information related to individual patients, specific prescriptions and medications. Easing access to information would improve efficiencies and ultimately improve the demands on time and workload. This improved efficiency would also impact the service given to patients, for example in terms of timelier and safer prescriptions with access to full medical profiles. Technology, insurance companies, corporate policies and legal regulations play a significant role in tightening or easing access to information. Additionally, in order to increase coordination of patient care between pharmacists and physicians, issues related to insurance regulations, and standardization and structuring of information sharing need to be addressed. Future research should examine in greater depth interventions related to these challenges to collaboration identified by physicians and pharmacists.

The current healthcare environment calls for strategies to promote and maintain a team-based approach.^{2, 24} Team conflict is inevitable. Inherent in the causes and resolutions of conflict are interpersonal relationships and communication. This study looked at the issues and concerns of physicians and pharmacists as they consider working together as a team to coordinate patient care. Using conflict framework identified the dynamics involved when individuals from different professions with varied skills, knowledge, and experience and are expected to work together as a team. The primary challenges were found to revolve around communication and access to information, access to each other, and external policies. If technology can support communication and open up access, it can greatly improve efforts to work together to coordinate patient care. The tendency to solve problems by spending more money or legislating action does not necessarily create the results our health care needs demand. Examining what is taking place directly between the individuals making up the healthcare inter-professional teams is essential.

Future research suggests exploring the implications for fostering interpersonal relationships among dispersed healthcare providers. At this stage, technologies seem to be hindering interaction, based on our data. As health information technology continues to evolve and transform how health care is administered, future study should focus on how technology can support communication among team members as well as deliver access to information. This is particularly pressing given the national plan to support the development of health information exchange (HIE) infrastructure and procedures for exchanging patient information among health care professions. Additional research should be conducted to provide evidence for community pharmacies to participate in HIEs.

Related to communication among health care providers, future research could also examine the nature of interpersonal relationships and how that impacts coordinated patient care. Also of interest is whether physicians' specialty might affect their relationship with pharmacists. Are there certain specialties that naturally lend themselves to a closer working relationship with pharmacists? One final line of research to pursue relates back to the conflict conceptual framework. This study focused on elements of the definition of conflict, but future research could incorporate conflict management approaches and how they affect team based efforts to coordinate patient care.

Limitations

There were a number of limitations that should be noted. First, the authors interviewed only eight pairs of physicians and pharmacists from Wisconsin, with a larger proportion of participants from the South-Central region of the state. Pharmacist participants were employed by all types of pharmacy organizations except for national chains. Second, it is probable that those who agreed to be interviewed were more open to team-based healthcare. Third, when asked to identify areas that they could work together, participants chose to discuss issues and solutions to real time day-to-day constraints, rather than address more comprehensive patient care activities such as medication management. As a result, while this project sheds light on many assumptions that are made by both professions, and that issues and strategies may be similar, it would be inappropriate to generalize these findings to all physicians and pharmacists or to challenges beyond simple prescribing or dispensing activities.

The primary interviewer was a pharmacist. She attempted to frame the questions and facilitate the discussion in an unbiased manner, so that both the pharmacist and physician were on equal footing during the interview. However, in analyzing the transcripts, it is clear that she was more comfortable talking with the pharmacists than with the physicians. For instance, she referred to the pharmacist by first name, whereas she referred to the physician as "Dr. so and so". There were several instances in which she may have framed the question that implies that the pharmacist should accommodate the physician rather than support an opportunity for them to discuss, compromise, or ultimately collaborate on an issue or strategy. Future research should consider using interview facilitators that understand characteristics of primary care and community pharmacy but are more discipline-neutral.

Conclusion

This study is the first study known to the authors that used a conflict conceptual framework and describes a unique effort to bring inter-professional health care providers together to clarify goals and determine how to work together across their different settings (physically separate from each other) and contexts (unique priorities and constraints). Bringing these professions together and encouraging them to discuss their common concerns and goals highlighted their interdependence and the challenges to teamwork; those challenges being scarce resources in terms of time and access to information, and external interference, specifically technology and policy. Efforts to coordinate patient care through teams of

interprofessional healthcare providers will be more successful if they provide the infrastructure for interdependence and support interpersonal communication.

Acknowledgments

To Kari Trapskin, Pharm. D., from the Pharmacy Society of Wisconsin and Susan Wiegmann Ph.D., from the Medical Society of Wisconsin for their assistance in recruiting participants.

Funding:

Community Pharmacy Foundation and the Clinical and Translational Science Award program, previously through the NIH National Center for Advancing Translational Sciences grant UL1TR000427. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH.

References

1. Shortell, SM.; Casalino, LP.; Fisher, ES. Society for Healthcare Strategy and Market Development of the American Hospital Association, American College of Healthcare Executives. *Futurescan 2010 : healthcare trends and implications 2010–2015*. Health Administration Press; Chicago, IL: 2010. Implementing accountable care organizations.
2. Coordinating Care in the Medical Neighborhood: Critical Components and Available Mechanisms. White paper by AHRQ Publication #11-0064, June 2011.
3. McClellan M, McKethan AN, Lewis JL, Roski J, Fisher ES. A national strategy to put accountable care into practice. *Health Aff (Millwood)*. May; 2010 29(5):982–990. [PubMed: 20439895]
4. Fisher ES, Shortell SM. Accountable care organizations: accountable for what, to whom, and how. *JAMA*. Oct 20; 2010 304(15):1715–1716. [PubMed: 20959584]
5. Moczygemba LR, Goode JVR, Gatewood SBS, et al. Integration of collaborative medication therapy management in a safety net patient-centered medical home. *JAPhA*. 2011; 51:167–172. [PubMed: 21382806]
6. Kozminski MK, Busby R, McGivney MS, et al. Pharmacist integration into the medical home: qualitative analysis. *J Am Pharm Assoc*. 2011; 51:173–183.
7. Scott MA, Hitch B, Ray L, Colvin G. Integration of pharmacists into a patient-centered medical home. *J Am Pharm Assoc*. 2011; 51:161–166.
8. Lenz ML, Monaghan MS. Implementing lifestyle medicine with medication therapy management services to improve patient-centered health care. *J Am Pharm Assoc*. 2011; 51:184–188.
9. Hunt JS, Siemieniczuk J, Pape G, et al. A randomized controlled trial of team-based care: impact of physician-pharmacist collaboration on uncontrolled hypertension. *J Gen Intern Med*. Dec. 2008; 23:1966–1972.
10. Brown J, Lewis L, Ellis K, Stewart M, Freeman T, Kasperski M. Conflict on interprofessional primary health care teams – can it be resolved? *J Interprof Care*. 2011; 25:4–10. [PubMed: 20795830]
11. Wilmot, WW.; Hocker, JL. *Interpersonal conflict*. 8. McGraw-Hill; New York, NY: 2011. p. 11-19.
12. Kolb D, Putnam L. The multiple faces of conflict in organizations. *J Organ Behav*. 1992; 13:311–324.
13. Deutsch, M. *The resolution of conflict: Constructive and destructive processes*. Yale University Press; New Haven, CT: 1973. p. 352-353.
14. De Dreu C. The virtue and vice of workplace conflict: Food for (pessimistic) thought. *J Organ Behav*. 2008; 29:5–18.
15. Singleton R, Toombs L, Taneja S, Larkin C, Pryor M. Workplace conflict: A strategic leadership imperative. *IJBPA*. 2011; 8(1):149–163.
16. Hoffman RR, Crandall B, Shadbolt N. Use of the Critical Decision Method to Elicit Expert Knowledge: A Case Study in the Methodology of Cognitive Task Analysis. *Human Factors*. 1998; 40

17. Chui MA, Stone JA, Odukoya OK, Maxwell L. Facilitating collaboration between pharmacists and physicians using an iterative interview process. *J Am Pharm Assoc.* 2014; 54:475–482.
18. Pope C, Ziebland S, Mays N. Analyzing qualitative data. *BMJ.* 2000; 320(7227):114–116. [PubMed: 10625273]
19. Doucette WR, Nevins J, McDonough RP. Factors affecting collaborative care between pharmacists and physicians. *Res Social Adm Pharm.* 2005; 1:565–578. [PubMed: 17138496]
20. Ammenwerth E, Schnell-Inderst P, Machan C, Siebert U. The effect of electronic prescribing on medication errors and adverse drug events: a systematic review. *JAMIA.* 2008; 15(5):585–600. [PubMed: 18579832]
21. Odukoya OK, Chui MA. e-Prescribing: characterization of patient safety hazards in community pharmacies using a sociotechnical systems approach. *BMJ Quality & Safety.* 2013 epub.
22. Odukoya OK, Chui MA. E-prescribing: A focused review and new approach to addressing safety in pharmacies and primary care. *Res Social Adm Pharm.* 2012 epub ahead of print.
23. Odukoya OK, Chui MA. Relationship between e-prescriptions and community pharmacy workflow. *J Am Pharm Assoc.* 2012; 52(6):168–174.
24. O'Toole TP, Cabral R, Blumen JM, Blake DA. Building high functioning clinical teams through quality improvement initiatives. *Qual Prim Care.* 2011; 19:13–22. [PubMed: 21703108]

Appendix A. First Stage Interview Guide

1. Can you give us an example in your day-to-day practice when a patient's care was improved by your interaction with a physician/pharmacist?
 - What lead to this instance?
 - Was there anything different or particular about this patient or situation from others?
2. In what ways have you reached out to a physician/pharmacist to improve patient care?
3. In what ways would working with physicians/pharmacists improve your patients' healthcare?
4. How do you feel about working with physicians/pharmacists?
5. Do you think other people would be aware if you worked with physicians/pharmacists?
6. Do you know of other pharmacists/physicians who routinely call physicians/pharmacists to clarify questions and make recommendations to improve patient care?
7. In what ways does your office manager/owner encourage you to routinely interact with physicians/pharmacists?
8. How likely are you to initiate a conversation with a physician/pharmacist about a patient's care?
9. What barriers do you perceive would limit your collaboration with a physician/pharmacist?
10. Do you think physicians/pharmacists would be interested in accepting inquiries and recommendations from you about a patient's care?

11. How likely is it that you would contact a physician/pharmacist about conducting a CMR for a patient?
12. How likely is it that you would contact a physician/pharmacist about a medication addition or deletion?
13. How likely is it that you would visit a physician's/pharmacist's clinic to meet the physician/pharmacist and his/her staff face-to-face?
14. How likely is it that you would offer to visit the physician's/pharmacist's clinic for a short period of time to field clinical questions on the spot?
15. How likely would you work with a physician/pharmacist if he/she approached you about a patient or service?
16. How likely is it that you would offer/accept any of the following services for a physician's/your patients?
 - medication device instruction
 - focused adherence intervention
 - dose optimization
 - therapeutic duplication
17. Can you think of anything in particular you would like for a physician/pharmacist to do that you believe would help improve the care you are able to give your patients?

Appendix B. Second Stage Interview Guide

1. Please describe your practice, the types of patients you see (both get a turn)
 - a. This is an opportunity for them to introduce themselves to teach other, where they work, what type of MD/RPh they are, etc.
2. Please describe what your typical day looks like (both get a turn)
 - a. Probe for what good things happen in a day
 - b. Probe for why they are busy, what things stress them out
 - c. Probe for responsibilities that don't have to do with patient care i.e., chart review, etc.
3. Ask the other participant what did you learn that surprised you?
 - a. Probe for surprises about types of patients, technology interfaces, the way in which MDs/RPhs are incentivized and paid, potential issues with management/technicians/nurses, etc.
 - b. Probe for why pharmacists communicate with physicians the way they do, for the reasons that they do;

- c. Probe for why physicians may not respond to pharmacists the way pharmacists want them to respond, etc.
 - d. May provide some examples of what people said to facilitate discussion if necessary
4. Provide a wish list from the MD and RPh. Ask them to rank order their top three wishes for each discipline.

Physician Wish List	Pharmacist Wish List
1. Controlled Substance Monitoring Contract	1. Blanket authorization and/or collaborative practice agreement, with FYI communication to MD, regarding therapeutic substitutions
2. Managing diabetic patients	2. Mechanism to facilitate more direct communication with MD when necessary (i.e., not having to go through receptionist, MA, nurse for a complicated clinical problem)
3. New clinical guideline procedure	3. Adding diagnosis and other pertinent info to prescription
4. Face to Face time with pharmacist	4. Mechanism to work with physician to prescribe less costly drugs (i.e., making physicians aware of the cost, and how that might related to a patient's medication adherence)
5. Information about their patients' medication adherence/compliance	5. Follow-up communication back to the pharmacist (uncertainty as to whether messages to clinic are received and understood)
6. Improving patient's medication adherence	6. Greater clarity regarding when a nurse can make a decision, and when the physician must okay a recommendation
7. Managing CHF patients	
8. Blanket procedures for issues that are "black and white", not "case by case" for the physician	
9. Inhaler and other device instruction (possibly assumed that pharmacist is doing this)	
10. Timely immediate feedback when there is a problem with a prescription (i.e., not on formulary or too many narcotics)	

- 5. Ask them to jointly choose one wish for each to work on together
- 6. Going back and forth, identify barriers for implementation of the wish (on big paper)
- 7. Brainstorm ways to minimize those barriers
- 8. Final question - What is one thing that you can take away from this discussion (not necessarily implementation of the wish list project)

Table 1

Participant Description

Dyad	Physician	Pharmacy	Region
1	Pediatrician	Independent pharmacy	South-Central WI
2	Family medicine/geriatrician	Regional mass merchandise pharmacy	South-Central WI
3	Psychiatrist	Independent pharmacy	Southeast WI
4	Family medicine/geriatrician	Regional mass merchandise pharmacy	South-Central WI
5	Family Medicine	Regional mass merchandise pharmacy	Southeast WI
6	Psychiatrist	Independent pharmacy	South-Central WI
7	Family Medicine	National mass merchandise pharmacy	Central WI
8	Internist/geriatrician	Small grocery store chain pharmacy	Central WI

Table 2

Coding Scheme and Sub Themes

Code	Example Quotes	Related Sub themes
Expressed Struggle	"The controlled substance issue is actually kind of a big problem we have here." ~Pharmacist	<ul style="list-style-type: none"> • Scarce Resource ~ Information
Interdependence	"We've got to stay on each other's good side. You know, we don't know when we might need each other." ~Physician	<ul style="list-style-type: none"> • Scarce Resource ~ Information
Incompatible Goals	"Should I just round down? I've had my **** chewed by physicians for not calling, and you can't win unless you've actually had that conversation with the nurse." ~ Pharmacist	<ul style="list-style-type: none"> • Scarce Resource ~ Information and Time • Technology Design and Usability
Scarce Resources	"We don't have any excess staff, so there's not somebody waiting around to take a call, pretty much ever." ~Physician	<ul style="list-style-type: none"> • Scarce Resource ~ Information and Time • Technology Design and Usability
Interference	"That's the question when you work for a corporation, but if you were just like an independent practitioner, and I was like an independent pharmacy, wouldn't we just work that out?" ~Pharmacist	<ul style="list-style-type: none"> • Scarce Resource ~ Information and Time • Technology Design and Usability • Insurance Constraints