

Published in final edited form as:

Int J Pharm Pract. 2012 October ; 20(5): 285–293. doi:10.1111/j.2042-7174.2012.00202.x.

Older Patient, Physician and Pharmacist Perspectives about Community Pharmacists' Roles

Derjung M. Tarn, MD, PhD,

Department of Family Medicine, David Geffen School of Medicine at UCLA, 10880 Wilshire Blvd, Suite 1800, Los Angeles, CA 90024, Phone: (310) 794-8242; Fax: (310) 794-6097, dtarn@mednet.ucla.edu

Debora A. Paterniti, PhD,

Center for Healthcare Policy and Research and Department of Sociology, University of California-Davis, 2103 Stockton Blvd., 2224 Grange Bldg., Sacramento, CA 95817, Phone: (916) 734-2367; Fax (916) 734-2349, dapaterniti@ucdavis.edu

Neil S. Wenger, MD, MPH,

General Internal Medicine and Health Services Research, David Geffen School of Medicine at UCLA, 911 Broxton, Los Angeles, CA 90024, Phone: (310) 794-2288; Fax: (310) 794-0732, nwenger@mednet.ucla.edu

Bradley R. Williams, PharmD, and

Clinical Pharmacy & Clinical Gerontology, University of Southern California School of Pharmacy, 1985 Zonal Avenue, Los Angeles, CA 90089-9121, Phone: (323) 442-1559; Fax: (323) 442-1395, bradwill@usc.edu

Betty A. Chewning, PhD

Sonderegger Research Center, School of Pharmacy, UW-Madison, 2523 Rennebohm Hall, 777 Highland Ave., Madison, WI 53705, Phone: (608) 263-4878, bachewning@pharmacy.wisc.edu

Abstract

Objectives—To investigate older patient, physician and pharmacist perspectives about the pharmacists' role in pharmacist-patient interactions.

Design: Eight focus group discussions.

Settings: Senior centers, community pharmacies, primary care physician offices.

Participants: Forty-two patients aged 63 and older, 17 primary care physicians, and 13 community pharmacists.

Measurements: Qualitative analysis of focus group discussions.

Results—Participants in all focus groups indicated that pharmacists are a good resource for basic information about medications. Physicians appreciated pharmacists' ability to identify drug interactions, yet did not comment on other specific aspects related to patient education and care. Physicians noted that pharmacists often were hindered by time constraints that impede patient counseling. Both patient and pharmacist participants indicated that patients often asked pharmacists to expand upon, reinforce, and explain physician-patient conversations about medications, as well as to evaluate medication appropriateness and physician treatment plans. These groups also noted that patients confided in pharmacists about medication-related problems

before contacting physicians. Pharmacists identified several barriers to patient counseling, including lack of knowledge about medication indications and physician treatment plans.

Conclusions—Community-based pharmacists may often be presented with opportunities to address questions that can affect patient medication use. Older patients, physicians and pharmacists all value greater pharmacist participation in patient care. Suboptimal information flow between physicians and pharmacists may hinder pharmacist interactions with patients and detract from patient medication management. Interventions to integrate pharmacists into the patient healthcare team could improve patient medication management.

Keywords

pharmacist-patient interactions; provider-patient communication; prescription medication; qualitative research methods

Introduction

Globally, the potential role of the pharmacist in enhancing patient care is receiving increased recognition.[1, 2] Throughout the years, the pharmacist's role has ranged from that of a primary medical practitioner (prior to the early 1900s), to a dispenser of medication.[3] In the United States, the Omnibus Budget Reconciliation Act of 1990 (OBRA-90) expanded this role by mandating that pharmacists educate patients about their medications. During these interactions, pharmacists may help patients manage their medications more effectively as well as intervene to reduce the potential for harm when medication problems arise.[5] The World Health Organization (WHO) and International Pharmaceutical Federation also have promoted increased pharmacist involvement in patient care,[1] with the WHO describing a pharmacist's role as that of "a caregiver, communicator, decision-maker, teacher, life-long learner, leader and manager." [6] Thus, pharmacists have called to expand and revitalize the pharmacist's role in patient health care and within the healthcare team.

Patient medication misuse can result in substantial morbidity and mortality,[7–9] and can be particularly problematic in older patients,[10–12] for whom polypharmacy may contribute to difficulties with prescription cost and concerns about side effects or interactions.[13, 14] In the United States, older patients are dispensed almost three times as many medications per capita as younger patients. Over 25% of newly prescribed medications may not be dispensed at all.[16] Pharmacists are often the last healthcare provider with whom patients talk before obtaining their medications, and they may influence patient medication-related decision-making. Most studies have focused on pharmacist information-provision to patients [17] and few studies have considered how patients approach or perceive pharmacists as healthcare providers. One study on the related topic of pharmacist health counseling suggested that patients are receptive to pharmacists playing a larger role in their healthcare and providing counseling about non-medication related topics such as smoking cessation.[18]

A better understanding of patient perceptions about the pharmacist's role might lead to the development of community-based pharmacy interventions to improve patient medication use, and provide insight into how pharmacists might better be utilized as part of the healthcare team. Recognition and use of pharmacists' full capabilities could result in better patient medication management. Accordingly, the objectives of this study were to investigate: 1) perspectives about the pharmacists' role in pharmacist-patient interactions, and 2) barriers to pharmacist-patient and pharmacist-physician interactions that may affect patient care. We conducted a secondary analysis of focus group discussions with older patients, pharmacists, and physicians (originally collected for a different objective)[19] to achieve our current objectives. We chose this approach because qualitative research methods

such as focus groups are important for learning about topics that are not well understood, since they allow for discussion of topics that one person may not independently raise.[20]

Methods

Focus groups were conducted in the Los Angeles metropolitan area between December 2006 and January 2007 with patients aged 63 years and older (4 groups), community-based primary care physicians (2 groups), and community-based pharmacists (2 groups). Recruitment strategies varied based on the targeted group. Physicians and pharmacists were recruited by telephoning community-based physicians and community pharmacies within a 5-mile radius of focus group locations. These focus groups were conducted in University of California, Los Angeles offices in the Los Angeles metropolitan area. Physicians were identified through a website (WebMD) containing comprehensive physician listings, and community pharmacies were identified using telephone book listings. Patients were recruited from two local senior centers by a research assistant, who posted flyers in prominent locations in the senior centers, and presented seniors with information about the study prior to senior center group activities. All participants had to speak English, and to be able to hear conversation in a group setting. Patients were all aged 63 years and older.

Focus groups were conducted by physician-investigators trained in focus group moderation (DMT, NSW). Discussions were audio taped and transcribed verbatim for analysis. All transcriptions were anonymised. Patient and pharmacist discussions lasted 2 hours, and physician groups 1 hour. Physician focus groups were scheduled for less time because their schedules were more restricted than those of the other groups, and we anticipated that their responses would be more focused. Discussions were guided by an open-ended protocol, which was modified slightly after each focus group discussion to prompt better participant responses.[20, 21] The schedule was similar for all groups. The original aim of the focus group discussions was to investigate perspectives on critical information to provide when patients receive new medication prescriptions.[19] As such, the interview protocol contained questions about information patients should be given when prescribed a new medication, and inquired about participant discussions about new prescriptions. The interview protocol did not specifically ask about pharmacists' roles in conveying information about a new medication. A new prescription was defined as one that the patient had not previously taken. Participants were asked to describe recollections of their personal interactions (with patients or providers, as appropriate for the focus group) regarding new medication prescriptions in detail, and to discuss both positive and negative aspects of their conversations. They also were encouraged to elaborate about potential points of confusion. The main results from the primary analysis and the focus group interview questions are reported elsewhere.[19]

Two auditors (DMT, DAP) reviewed the transcripts and notes in depth. One is a practicing primary care physician who does research on communication about medications, and the other is a medical sociologist. They independently noted recurring themes concerning patient utilization of pharmacists for care, and identified themes related to pharmacist-patient interactions. The two auditors then worked together to generate consensus on redundant themes and categories. Subsequently, they both assigned agreed upon coding categories to all of the transcripts.[21, 22] Disagreements were resolved through discussion with a third collaborator (NSW) and arrival at consensus. The investigators used ATLAS TI 5.2 (Scientific Software Development, Berlin, Germany) to code the data and to search within and across transcripts for recurring themes and patterns. Ethics of the study protocol was approved by the institutional review board at the University of California, Los Angeles in 2006.

Results

We conducted eight focus groups with 72 total participants. There were four patient groups (n=42), two physician groups (n=17), and two community pharmacist groups (n=13). Focus group participant characteristics are described in Table 1. Coders identified five distinct themes from focus group comments regarding pharmacists' role in pharmacist-patient interactions, which were: 1) resource for basic medication information; 2) intermediary to supplement physician-patient discussion; 3) medication expert; 4) confidante to patients; and 5) barriers to communication. Further, several subthemes were identified within use of the pharmacist as an intermediary. The following section presents examples of focus group comments to elucidate each of these themes.

Resource for basic information about medications

Patients, physicians, and pharmacists all indicated that pharmacists were a good resource for providing basic information about prescription medications, such as directions for use, side effects, and interactions. Many patients said they wanted to hear basic information about medications from a pharmacist in addition to hearing the information from their physicians. Some patients accepted information from the pharmacist in place of information from their physician. A few patients felt that pharmacists were the experts when it came to medications, especially information about side effects, and knew more about medications than physicians. Patient and physician groups expressed appreciation for pharmacists' ability to identify potential medication interactions. As one physician stated:

Physician "Sometimes fortunately [pharmacists will] let you know if maybe there is an interaction that you might not have been aware of...I mean, that's like finding gold or something when that happens." (FG1:1)

Intermediary used to supplement physician-patient discussions

Discussions within all focus groups indicated that pharmacists often functioned as an intermediary between patients and physicians--to expand upon, reinforce, and explain physician-patient discussions about medications, as well as to help patients negotiate medication refills and insurance issues.

Expand upon medication-related information not discussed by physicians—

The pharmacist focus groups included extensive discussions about needing to supplement the information given by physicians, particularly since physicians often provided suboptimal counseling about medications. As one pharmacist stated:

Pharmacist "...a lot of times they leave the doctor's office not knowing what was given to them." (FG7: 2)

Many patients indicated similar experiences, for example:

Patient "...doctors don't take the time to explain about medications...if you ask they might give you a short answer, but it's really up to you to talk to the pharmacist." (FG4:2)

One patient mentioned that his physician told him to approach his pharmacist with any questions about his medications.

A few physicians mentioned instructing patients to ask pharmacists for details about a prescription when a medication required more detailed instructions for use, or as an adjunct to physician counseling. As one physician stated:

Physician “Once in a while I’ll tell a patient to ask the pharmacist. If I’m really busy and I give someone [the medicine] albuterol [salbutamol (INN name)]...I say look, if you’ve never used this, just ask the pharmacist how you’re supposed to use that and they’ll do it.” (FG1:2)

One physician commented that pharmacy handouts could be helpful for patient education about new medications.

Reinforce information—Participants in both the patient and pharmacist focus groups indicated that patients often relied on pharmacists to reinforce information discussed with their physicians. Many patients said it was reassuring when the pharmacist and physician said the same things about prescribed medications. One patient stated:

Patient “...what my doctor says to me...if the pharmacist confirms it, then I’m very happy.” (FG5:10)

Pharmacists also mentioned the importance of concordant discussions, as exemplified by the following participant:

Pharmacist “When we reinforce it, I find a lot of patients, not necessarily elderly patients, ...find that that’s comforting. ‘That’s what the doctor told me.’ Just that two people are confirming the same expectations or something. It’s comforting for them and maybe for me too.” (FG8:6)

Physicians did not comment about pharmacists’ role in reinforcing information, but instead discussed pharmacists’ potential to find interactions and catch errors, such as problems with dosing.

Explain physician recommendations—Both patient and pharmacist groups referenced the role of pharmacists in clarifying information provided by the physician. Several pharmacists noted that patients were commonly confused about which medications to continue when a new medication was prescribed. Pharmacists said they also were called upon to clarify information about directions for medication dosing, such as the timing of use. Pharmacists described typical interactions in which patients questioned them about physician treatment plans, for example:

Pharmacist “They want to know, ‘Why do I have to take three different medications for my blood pressure?’ They don’t understand.” (FG8:4)

A few patients indicated that physician directions were not always so clear, requiring them to ask pharmacists for further information. Physicians did not comment about the pharmacists’ role in clarifying information.

Negotiate medication changes, refills—Sometimes pharmacists assisted patients in negotiating medication changes or obtaining medication refills. According to one pharmacist, patient questions such as, “Can’t the doctor give me something that doesn’t cause one of these side effects?” (FG8:2) often prompted them to contact physicians for a potential medication change.

Many pharmacists noted that patients sometimes misunderstood the dynamic introduced by insurance plan formulary changes. These occur when the pharmacist changes a prescribed medication to a different but equivalent medication paid for by a patient’s insurance plan. These changes need to be approved by the prescribing physician, but patients may not understand this, as evidenced by pharmacists stating that patients were, at times, displeased

when they felt the pharmacist was thwarting physician intentions. One pharmacist noted that patients would sometimes say: “You’re not giving me the right medicine. Dr. X wanted this,” (FG8:4) and another pharmacist remarked, “They think we’re just giving them something other than what the doctor said.” (FG8:7)

Poor understanding about pharmacists’ roles in medication prescribing was evidenced by one of the patients, who expressed frustration over having to go back to his doctor for a new prescription, and commented that pharmacists are: “...kind of like the middle man. I don’t understand that.” (FG3:4)

However, another patient was grateful that a pharmacist suggested a way to decrease medication costs, as shown in the following example:

Patient “...[generic] simvastatin came on the market and the pharmacist told me that I can get the simvastatin cheaper price than the Zocor and I went to the doctor...and the price is really different.” (FG5:1)

Physicians did not comment about this aspect of pharmacist care.

Medication Expert

In the pharmacist focus groups, discussions often revealed that patients approached pharmacists as “medication experts” - a source for more than just basic medication-related information such as directions for use or side effects. Several pharmacists said that patients often asked them to evaluate the appropriateness of prescribed medications and physician treatment plans. Patients and physicians did not comment about these types of pharmacist-patient interactions. One pharmacist’s description of these discussions suggested that some patients were seeking a second opinion about their medications:

Pharmacist “They just ask a lot of things about possible alternatives to treatments, like the doctor prescribed this, what may be the alternative? What may be some different ideas? What is the best treatment regimen and so on?” (FG8:1)

Patients frequently used pharmacists as a resource for medication management. Though not all patients agreed, several felt that pharmacists knew more about medications than physicians, as evidenced in the following exchange:

Patient 1 “I think they know more than the doctor.” (FG6:1)

Patient 2 “Yes, I agree with her. They’re better than the doctor.” (FG6:3)

Many pharmacists also described encounters in which patients used them as a supplementary resource for medication expertise. As shown in the example below, pharmacists said patients often approached them for advice about medications:

Pharmacist “Or they go home and call you if they’re confused, they call you and say, oh, I forgot how to use this or – so you would help them.” (FG7:4)

In most of the scenarios described, pharmacists indicated that patients approached them prior to contacting their physicians. While the pharmacists said that they advised these patients to inform their physicians, they rarely mentioned notifying physicians themselves about patient problems or concerns.

Pharmacists also indicated that patients used them as a resource for recommending or discussing the appropriateness of taking over-the-counter medications along with their current medications, as depicted by the following pharmacist comment:

Pharmacist “They ask a lot of over-the-counter questions. They’re fine with all the medications, so they come and say, ‘Oh, is it going to interact with the medications that I’m taking?’ ... we are the only people they talk to about the [over-the-counter medications].” (FG8:7)

Confidante

A few pharmacists indicated that patients sometimes told them about difficulties with medication cost or adherence before disclosing the problems to their physicians:

Pharmacist “They’ll confess to me... ‘I don’t take as much as the doctor said because it’s so expensive.’ I said, ‘Did you tell the doctor?’ ‘No.’” (FG8:2)

Pharmacists also said they routinely addressed patient fears about side effects, and sometimes influenced patients to continue a medication, as in the following example:

Pharmacist “Like Boniva. It’s a new medication and it’s once a month and the patient is like, ‘Am I going to get sick?’ It’s very strong and she didn’t want to take it and then I explained to her...it’s not that bad, and she took it.” (FG7:4)

As shown in the following example, one patient admitted to confiding in her pharmacist, rather than her physician, about not wanting to complete her antibiotics.

Patient “And it will also say on the bottle, complete the prescription. And I said to the pharmacist, oh, you know, I don’t want to take it all. God, I feel better. I’m taking six of the antibiotics and I feel great. No, take the complete prescription because if you don’t, you could have a relapse. So I took the whole thing. (FG3:10)

In this case, the pharmacist’s counseling contributed to appropriate patient medication use.

Barriers to communication

Focus group participants identified multiple barriers to pharmacist-patient and pharmacist-physician communication. Pharmacists said that their discussions with patients were often limited because of incomplete information about patient medical conditions, indications for prescribed medications, and physician treatment plans. As one pharmacist explained regarding a patient who presented with a prescription for a new medication:

Pharmacist “We are confused a lot of times. We just don’t know if it’s a combination therapy, or one that’s being discontinued. So I think the doctor’s part, it’s a good thing if they could on the top put [discontinue one medication and start the other].” (FG8:7)

Good pharmacist-physician communication could potentially enhance pharmacists’ ability to communicate effectively with patients, but many pharmacists expressed frustration with reaching physicians in a timely manner with questions, for example:

Pharmacist “...don’t ask the doctor, you know, that would take 12 seconds to resolve. Please fax it and you may or may not get the answer promptly. Usually not.” (FG7:6)

One pharmacist admitted that physicians may have problems contacting pharmacists: “... [doctors] may not have time to call us. We put you on hold for a long time.” (FG8:4)

Uncertain about whether physicians would be responsive to phone calls, a few pharmacists said they were reluctant to call physicians with questions. Many commented that they advised patients to contact their physicians about certain issues, but only a few indicated that they themselves reached out to physicians. In fact, it appeared that pharmacists sometimes did not even consider the option of calling a physician about a perceived problem, as evidenced by the following discussion about possible prescription drug abuse:

Pharmacist "...some of the elderly...are basically taking a lot of habit forming medication. Kind of like you think they are abusing it...taking too much, going to different doctors to get all these control medications, especially for sleep and for pain...we basically do not know what to do with them." (FG7:1)

In the above situation, alerting physicians about a patient's potential medication misuse would be a reasonable first step, but was not considered. Several pharmacists mentioned occasionally contacting physicians when they were particularly concerned about a patient, but most noted that these situations were rare.

All groups noted that pharmacists were under a great deal of time pressure. As one patient noted:

Patient "...[pharmacists are] under even more pressure because the huge line up [of patients] there...the phones are jangling, ringing all the time, they're even under more pressure" (FG5:5)

Several physicians also recognized the problem, and one commented:

Physician "...I think a lot of people just feel like there is a big line behind them and they don't want to hold up the line [to receive medication counseling], several people just say no, that's okay." (FG1:1)

Physicians were especially concerned about what they perceived to be variations in the quality and content of pharmacists' counseling, as expressed in the following example:

Physician "In terms of pharmacy, there is a big variation depending on where you go and who you talk to and yes, if it's one of the assistants, you may not get somebody who can answer the patient's questions and explain things correctly." (FG1:1)

Another physician commented:

Physician I've had the experience where if [there's] one pharmacist and lots of technicians...they dispense information and they don't dispense it correctly or they don't inform the patient." (FG1:4)

As a result of these concerns, many physicians were wary about relying on pharmacists to provide medication-related information, unless they knew which pharmacy (and pharmacists) their patients were frequenting.

Discussion

This study analyzed focus group discussions with older patients, pharmacists, and physicians to describe perspectives about the pharmacist's role in patient care. The results indicate that community-based pharmacists are often asked to address multiple patient needs. The major study strength is the use of focus groups to solicit conversations about the roles of community pharmacists. Focus group discussions often give rise to insights and experiences

beyond what are scripted by research questions or that might be disclosed by participants as a direct response to study questions alone. Study limitations include those specific to focus group methodology. The attitudes and opinions expressed by purposefully-sampled group participants may not reflect those of the general population, and could even exaggerate experiences by creating “group think” around a specific set of circumstances. However, this limitation is often outweighed by a skilled group moderator. All of the patients in the study spoke English, most had at least some college education, and all were mobile and able enough to participate in senior center activities. While the study sought to include patients aged 65 and older, one 63-year old patient initially misrepresented her age and participated in a focus group discussion. We included her comments in our analyses and informed the UCLA Institutional Review Board about the protocol deviation. The guiding questions for the focus groups did not specifically query participants about physician-pharmacist or pharmacist-patient communication. Thus, lack of detailed commentary about these sorts of interactions should not be interpreted as a lack of perceived importance of these interactions by group participants. Despite these limitations, the interactions described by focus group participants provide valuable insight for including pharmacists as part of patient healthcare teams.

All groups recognized community-based pharmacists as a good resource for basic medication information, which is consistent with mandates that pharmacists educate patients about medications.[23] The groups also described pharmacists as good intermediaries to supplement physician-patient discussions, particularly for expanding upon information not provided by physicians. Patient and pharmacist focus groups provided insight into other ways in which pharmacists served as intermediaries (e.g. reinforcing and explaining physician recommendations, negotiating medication changes and refill requests). These groups also claimed that pharmacists frequently played more substantial roles in medication management, serving as medication experts and patient confidantes. Only one of the two physician focus group extensively discussed pharmacists’ roles, and the participants commented minimally about pharmacists’ more involved roles in patient care. However, it is difficult to know if the absence of detailed discussion about the pharmacists’ role was due to poor recognition of these roles or because focus groups were not asked to provide detailed comments about the specific role of pharmacists in counseling about medications. Future studies should probe for greater detail about physician perspectives on pharmacists’ contributions to patient care.

Pharmacists asked to serve as medication experts or patient confidantes may be presented with opportunities to promote patient medication adherence. In fact, pharmacists may play an integral role in patient adherence, since patients may use them as sounding boards when they are reluctant to disclose medication difficulties to their physicians. These conversations may facilitate recommendations to improve prescribed regimens.[24–26] It is unknown whether patients seek out pharmacists in order to circumvent the time and costs associated with physician office visits, for their additional expertise or because pharmacists are more readily accessible than physicians. Regardless, patients trust pharmacists to provide information about medications,[27] and this study suggests that community-based pharmacists may have ample opportunities to address medication regimen problems and adherence. Better physician communication about medications is associated with increased medication adherence, [28, 29] but to date pharmacists’ process of encouraging medication adherence has not been well explored.

Focus groups identified several barriers to pharmacist-patient and pharmacist-physician communication that may impede pharmacists’ ability to promote good medication use. Pharmacists expressed frustration about not having enough information about a prescribed medication and about a patient’s clinical situation to effectively counsel patients. Yet there

was little recognition among focus group participants of the potential role of collaborative physician-pharmacist interactions in optimizing patient medication management. Surprisingly, pharmacists sometimes did not even consider contacting physicians when they identified a problem that could have benefited from consultation with a physician. Similarly, few pharmacists mentioned informing physicians directly about patient concerns, and instead advised patients to inform physicians on their own.

Collaborative pharmacist-physician team approaches have led to better patient outcomes for a variety of disease processes,[30–33] but few interventions have been conducted in community pharmacies, where pharmacists have a large number of competing tasks. Improved collaboration in these settings might result in better patient care, but research exploring facilitators of increased physician-pharmacist collaboration is still in its infancy. [34–37]

These focus groups suggest that the pharmacist currently is an underutilized member of the healthcare team. Both patient and pharmacist focus group participants noted that poor integration of pharmacists into patient healthcare teams detract from pharmacists' ability to provide more complete medication-related care. Attention should be given to educating physicians about the breadth of services that pharmacists can provide, building pharmacist-physician relationships to enhance patient care, and developing systems to promote pharmacist-patient communication.

Systems encouraging better physician-pharmacist communication could facilitate patient medication management. Physicians could include more information when prescribing medications. Information about medication indications and how medication changes fit within the overall regimens would help pharmacists provide more effective patient counseling. Instant communication messaging and e-mail correspondence would allow pharmacists to alert physicians when patients decide not to fill a medication prescription or admit to non-adherence. Though increased communication would require extra time for both parties, it may save time in the long run by contributing to better coordination of patient medication management. Physicians also could facilitate pharmacist-patient interactions by explaining to patients that pharmacists can be used as a medication resource, and making explicit referrals to pharmacists for medication consultation and follow up.[37]

Older patients, physicians and pharmacists all value greater pharmacist participation in patient care. Suboptimal physician-pharmacist communication may hinder pharmacist interactions with patients and detract from patient medication management. Interventions to integrate pharmacists into the patient healthcare team can assist improved medication management and use by patients.

Conclusion

In conclusion, pharmacists currently communicate with patients about a wide range of topics, and often serve as medication experts and confidantes when patients have difficulties with their medications. These roles may provide opportunities for pharmacists to encourage proper patient medication use and adherence. However, barriers to pharmacist-physician communication may impede pharmacists from fully utilizing their skills.

Acknowledgments

This work was supported by a UCLA Mentored Clinical Scientist Development Award (5K12AG001004) and by the UCLA Claude D. Pepper Older Americans Independence Center funded by the National Institute of Aging (5P30 AG028748). The content does not necessarily represent the official views of the National Institute on Aging or the National Institutes of Health.

References

1. Wiedenmayer, K., et al. Developing pharmacy practice. A focus on patient care. Handbook. Geneva, Switzerland: World Health Organization and International Pharmaceutical Federation; 2006. Available at <http://apps.who.int/medicinedocs/en/m/abstract/Js14094e/>
2. Emmerton L, et al. Pharmacists and prescribing rights: review of international developments. *Journal of pharmacy & pharmaceutical sciences : a publication of the Canadian Society for Pharmaceutical Sciences, Societe canadienne des sciences pharmaceutiques*. 2005; 8(2):217–225.
3. Higby, GJ. From Compounding to Caring: An Abridged History of American Pharmacy. In: Knowlton, CH.; Penna, RP., editors. *Pharmaceutical Care*. Bethesda, MD: American Society of Health-System Pharmacists; 2003. p. 19-42.
4. Omnibus Budget Reconciliation Act of 1990 Public Law 101–508, S 4401. 1990 Nov 5.
5. Schnipper JL, et al. Role of pharmacist counseling in preventing adverse drug events after hospitalization. *Archives of internal medicine*. 2006; 166(5):565–571. [PubMed: 16534045]
6. Geneva: World Health Organization; 1997 Aug 27–29. The role of the pharmacist in the health care system. Preparing the future pharmacist: Curricular development. Report of a third WHO Consultative Group on the role of the pharmacist, Vancouver, Canada. 1997. WHO/PHARM/97/599. Available at <http://apps.who.int/medicinedocs/en/d/Js2214e/>
7. McDermott MM, Schmitt B, Wallner E. Impact of medication nonadherence on coronary heart disease outcomes. A critical review. *Arch Intern Med*. 1997; 157(17):1921–1929. [PubMed: 9308504]
8. Liberopoulos EN, et al. Compliance with lipid-lowering therapy and its impact on cardiovascular morbidity and mortality. *Expert Opin Drug Saf*. 2008; 7(6):717–725. [PubMed: 18983218]
9. Vestbo, J., et al. Adherence to inhaled therapy, mortality, and hospital admission in COPD. *Thorax*; 2009.
10. Safran DG, et al. Prescription drug coverage and seniors: findings from a 2003 national survey. *Health Aff (Millwood)*. 2005;W5-152–W5-166. **Suppl Web Exclusives**. [PubMed: 15840625]
11. Budnitz DS, et al. National surveillance of emergency department visits for outpatient adverse drug events. *JAMA : the journal of the American Medical Association*. 2006; 296(15):1858–1866. [PubMed: 17047216]
12. Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. The DAWN Report: Emergency Department Visits Involving Adverse Reactions to Medications among Older Adults. Rockville, MD: 2011 Feb 24.
13. Wilson IB, et al. Physician-patient communication about prescription medication nonadherence: a 50-state study of America's seniors. *J Gen Intern Med*. 2007; 22(1):6–12. [PubMed: 17351835]
14. Soumerai SB, et al. Cost-related medication nonadherence among elderly and disabled medicare beneficiaries: a national survey 1 year before the medicare drug benefit. *Arch Intern Med*. 2006; 166(17):1829–1835. [PubMed: 17000938]
15. The Kaiser Family Foundation, statehealthfacts.org. Data Source: United States Prescription Drugs, Retail Prescription Drugs Filled at Pharmacies (Annual per capita by age) 2009, SDI Health, L.L.C.: Special Data Request, 2010. Available from: <http://www.statehealthfacts.org/profileind.jsp?ind=268&cat=5&rgn=1>.
16. Fischer MA, et al. Primary medication non-adherence: analysis of 195,930 electronic prescriptions. *J Gen Intern Med*. 2010; 25(4):284–290. [PubMed: 20131023]
17. Shah B, Chewning B. Conceptualizing and measuring pharmacist-patient communication: a review of published studies. *Res Social Adm Pharm*. 2006; 2(2):153–185. [PubMed: 17138507]
18. Patwardhan PD, Chewning BA. Tobacco users' perceptions of a brief tobacco cessation intervention in community pharmacies. *J Am Pharm Assoc (2003)*. 2010; 50(5):568–574. [PubMed: 20833613]
19. Tarn DM, et al. Which providers should communicate which critical information about a new medication? Patient, pharmacist, and physician perspectives. *J Am Geriatr Soc*. 2009; 57(3):462–469. [PubMed: 19175439]
20. Morgan, DL.; Krueger, RA.; King, JA. Focus group kit. Thousand Oaks, Calif.: SAGE Publications; 1998.

21. Strauss, AL.; Corbin, JM. Basics of qualitative research : techniques and procedures for developing grounded theory. 2nd ed. Thousand Oaks: Sage Publications; 1998. p. 312xiii
22. Denzin, NK.; Lincoln, YS. Handbook of qualitative research. 2nd ed. Thousand Oaks, Calif.: Sage Publications; 2000.
23. Omnibus Budget Reconciliation Act of 1990 Public Law 101–508, S 4401. 1990 Nov 5.
24. Weber CA, et al. Pharmacist-physician comanagement of hypertension and reduction in 24-hour ambulatory blood pressures. *Arch Intern Med*. 2010; 170(18):1634–1639. [PubMed: 20937921]
25. Carter BL, et al. Physician and pharmacist collaboration to improve blood pressure control. *Arch Intern Med*. 2009; 169(21):1996–2002. [PubMed: 19933962]
26. Carter BL, et al. A cluster randomized trial to evaluate physician/pharmacist collaboration to improve blood pressure control. *J Clin Hypertens (Greenwich)*. 2008; 10(4):260–271. [PubMed: 18401223]
27. Donohue JM, et al. Whom do older adults trust most to provide information about prescription drugs? *Am J Geriatr Pharmacother*. 2009; 7(2):105–116. [PubMed: 19447363]
28. Zolnieriek KB, Dimatteo MR. Physician communication and patient adherence to treatment: a meta-analysis. *Med Care*. 2009; 47(8):826–834. [PubMed: 19584762]
29. Hall JA, Roter DL, Katz NR. Meta-analysis of correlates of provider behavior in medical encounters. *Med Care*. 1988; 26(7):657–675. [PubMed: 3292851]
30. Machado M, et al. Sensitivity of patient outcomes to pharmacist interventions. Part I: systematic review and meta-analysis in diabetes management. *Ann Pharmacother*. 2007; 41(10):1569–1582. [PubMed: 17712043]
31. Machado M, et al. Sensitivity of patient outcomes to pharmacist interventions. Part II: Systematic review and meta-analysis in hypertension management. *Ann Pharmacother*. 2007; 41(11):1770–1781. [PubMed: 17925496]
32. Machado M, et al. Sensitivity of patient outcomes to pharmacist interventions. Part III: systematic review and meta-analysis in hyperlipidemia management. *Ann Pharmacother*. 2008; 42(9):1195–1207. [PubMed: 18682540]
33. Nkansah N, et al. Effect of outpatient pharmacists' non-dispensing roles on patient outcomes and prescribing patterns. *Cochrane Database Syst Rev*. 2010; 7:CD000336. [PubMed: 20614422]
34. Brock KA, Doucette WR. Collaborative working relationships between pharmacists and physicians: an exploratory study. *J Am Pharm Assoc (2003)*. 2004; 44(3):358–365. [PubMed: 15191246]
35. Doucette WR, Nevins J, McDonough RP. Factors affecting collaborative care between pharmacists and physicians. *Res Social Adm Pharm*. 2005; 1(4):565–578. [PubMed: 17138496]
36. Owens C, Baergen R, Cady P. Multistate survey of primary care physician and midlevel provider attitudes toward community pharmacists. *J Am Pharm Assoc (2003)*. 2009; 49(4):538–543. quiz 2p following 543. [PubMed: 19589766]
37. Worley-Louis MM, Schommer JC, Finnegan JR. Construct identification and measure development for investigating pharmacist-patient relationships. *Patient Educ Couns*. 2003; 51(3):229–238. [PubMed: 14630379]

Table 1

Focus Group Characteristics

	Pharmacists	Patients	Physicians
N	13	42	17
Mean age (SD)	39.3 (12.8)	78.3 (6.8)	43.5 (9.2)
Age range	28–69	63–89	33–61
Female, %	69	76	41
Ethnicity, %			
White	54	74	47
Latino	23	21	12
Other	23	5	41
Education, % *			
High school or less	N/A	12	
Some college		54	NA
College graduate		34	
Mean percentage of time spent on pharmacy tasks (SD)			
Patient counseling	16 (9)		
Prescription preparation	61 (20)		
Contacting providers	11 (7)		
Contacting insurers	6 (6)		
Pharmacy administration	5 (8)		
Other	3 (6)		

* n=41; one participant did not respond to the question