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Which Providers Should Communicate Which Critical Information About a New Medication? Patient, Pharmacist, and Physician Perspectives

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Abstract

OBJECTIVES—To investigate older patient, pharmacist, and physician perspectives about what information is essential to impart to patients receiving new medication prescriptions and who should provide the information.

DESIGN—Qualitative focus group discussions.

SETTINGS—Senior centers, retail pharmacies, and primary care physician offices.

PARTICIPANTS—Forty-two patients aged 65 and older, 13 pharmacists, and 17 physicians participated in eight focus groups.

MEASUREMENT—Qualitative analysis of transcribed focus group interviews and consensus through iterative review by multidisciplinary auditors.

RESULTS—Patient, pharmacist, and physician groups all affirmed the importance of discussing medication directions and side effects and said that physicians should educate about side effects and that pharmacists could adequately counsel about certain important issues. However, there was substantial disagreement between groups about which provider could communicate which critical elements of medication-related information. Some pharmacists felt that they were best equipped to

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discuss medication-related issues but acknowledged that many patients want physicians to do this. Physicians tended to believe that they should provide most new-medication education for patients. Patients had mixed preferences. Patients aged 80 and older listed fewer critical topics of discussion than younger patients.

CONCLUSION—Patients, pharmacists, and physicians have incongruent beliefs about who should provide essential medication-related information. Differing expectations could lead to overlapping, inefficient efforts that result in communication deficiencies when patients receive a new medication. Collaborative efforts to ensure that patients receive complete information about new medications could be explored.

Keywords

provider–patient communication; physician–patient communication; prescription medication; older patients; qualitative focus group interviews

Almost 90% of older adults take at least one prescription medication,¹ but medications are often underused, with 40% of seniors reporting medication nonadherence in the previous year.² Inadequate instruction about proper medication use can contribute to nonadherence.^{3,4} Older patients may be vulnerable to poor communication with healthcare providers, because they have mixed views about participating in medication-prescribing decisions⁵ and often do not ask questions in clinical encounters.⁶ Thorough physician–patient communication can increase patient adherence to physician-recommended behaviors, including medication use.^{7–10}

Studies demonstrate that patients want as much information as possible about their medications.¹¹ Those receiving a new medication want counseling about possible medication side effects, directions for use, why a medication is right for them, potential associated lifestyle changes, what a medication does, treatment options, duration of treatment, and medication costs,^{12,13} but studies have not explored which information patients believe is essential to receive from providers and which provider should dispense the information.

Physicians agree about the importance of discussing medication directions but downplay the importance of side-effect discussions.¹⁴ Despite concerns that patients educated about side effects will experience more symptoms and be less adherent,¹⁵ studies have not shown this to be true.^{16–20} Moreover, physicians often provide suboptimal counseling about guideline-recommended information (medication name, purpose, directions for use, side effects, and duration of use)^{21–25} when prescribing new medications.^{10,26–30} Physicians attribute these deficiencies to time constraints and to greater pharmacist involvement in counseling.¹⁵ Patients generally want to discuss their medications with their physicians,^{12,31,32} but for easier accessibility may turn to package inserts, the Internet,^{5,12,33} family and friends,¹² or pharmacists¹² for information. However, pharmacists also are pressed for time, may provide less information than patients desire,³⁴ and may lack requisite information about patient diagnoses to provide adequate counseling.¹²

Prior work has shown that physicians and pharmacists can successfully co-manage chronic diseases such as hypertension^{35,36} and manage chronic patient medications.³⁷ One study suggested that physicians and pharmacists mostly believe that their own profession should counsel patients about medications.³¹ It is unclear whose responsibility it should be to educate patients about the various aspects of a new prescription and how patients might best receive information in an efficient, yet comprehensible, manner. The acceptability of collaborative efforts, in which providers communicate different medication-related topics to patients receiving new prescriptions, has not previously been explored. This study extends upon previous work concerning what information patients want to know about medications by exploring the views of patients, pharmacists, and physicians about what information is essential

for older patients to hear when a new medication is prescribed and which healthcare providers could effectively communicate this information.

METHODS

Eight focus groups were conducted between December 2006 and February 2007 with the aim of including patients, pharmacists, and physicians from localities in the Los Angeles metropolitan area. Patient focus group interviews were conducted at senior centers in Culver City and Hollywood, California. Provider groups were held in Santa Monica, Alhambra, and Westwood, California.

All participants had to speak English and be able to hear conversations in a group setting. Patients aged 65 and older were recruited from two senior centers through flyers in main areas of the senior centers and information sessions about the study before senior center group activities. Pharmacists were recruited using telephone calls to all retail pharmacies within a 5-mile radius of the focus group locations. A primary care physician (DMT) telephoned primary care physicians working in community-based groups or private practices within a 5-mile radius of the focus group locations (as listed on the Web site Web MD). Patients and providers received \$25 and \$100 gift cards, respectively, for their participation.

Before the focus group, all participants provided written informed consent and completed a brief demographic questionnaire. Providers were queried about their training and practice characteristics. A health professional trained in focus group moderation was present at each focus group (DMT, NSW) and used an open-ended protocol to guide the group interview.³⁸ Literature review and discussion within the multidisciplinary team generated interview questions, which were pilot-tested for clarity. Study investigators assessed the questions after each focus group and made slight modifications to the interview guide to prompt better responses from participants.^{38,39} The institutional review board of the University of California at Los Angeles approved the study protocol.

Table 1 outlines the general questions used to guide the focus group interviews. Participants were asked to focus on their experience with a recent new medication prescription and to consider positive and negative aspects of the interactions concerning the prescription. They also were queried about what information should be discussed when a new prescription is given, which elements are critical to transmit, and what sort of provider could adequately communicate this information. The moderators asked questions to elicit additional information about unclear comments and to explore in greater detail the themes that a group raised. All focus groups were audio-recorded and transcribed verbatim for qualitative analysis. A research assistant who observed the focus group interactions took written notes that were used to supplement focus group interview data.

Two of the study authors, a clinician who was present at the focus groups (DMT) and a medical sociologist who was not (DAP), reviewed focus group interview transcripts and notes in depth. The two coders independently reviewed all transcripts and developed categories that described themes concerning discussions about information patients should receive when prescribed a new medication, information that is critical for patients to hear, which healthcare providers *could* effectively counsel about what critical medication-related information, and which healthcare providers *should* educate about critical medication-related information.

Analysis consisted of individual review of complete focus group transcript content (initial coding), generation of team consensus on redundant themes and thematic categories (thematic identification and organization), and systematic assignment of mutually agreed-upon coding categories across all transcripts (focused coding).³⁹ A third coder (CSC) examined the coding categories and examples generated to ensure coding consistency and validity of the codes in

the context of the transcripts. All three coders reviewed and compared positive and negative examples of the identified themes. Disagreements about categorization were resolved through critical discussion and arrival at consensus by the team. Transcripts were uploaded to a qualitative software program (ATLAS TI 5.2, Scientific Software Development, Berlin, Germany) for coding. Investigators used the software program not only to index, but also to search across categories for recurring patterns and themes in the data.^{39,40}

RESULTS

Patient and pharmacist focus groups lasted approximately 2 hours and physician groups approximately 1 hour. Two focus groups were conducted with patients aged 65 to 80 ($n = 23$), two groups with patients aged 80 and older ($n = 19$), two pharmacist groups ($n = 13$), and two physician groups ($n = 17$). The mean age $\pm$ standard deviation for patients in the younger group was 73.3 ± 4.8 , and the mean age for participants in the older group was 84.3 ± 2.7 . Pharmacists had a mean age of 39.3 ± 12.8 and physicians 43.5 ± 9.2 . The patients and pharmacists were predominately female and the physicians predominately male. More than 85% of the patients had at least some college education. Fifty-three percent of physicians were family physicians, and the rest were internists. Pharmacists reported spending a mean of 16% of their time counseling patients (Table 2).

What Information Should Patients Receive When Prescribed a New Medication?

Participants in all focus groups stated that patients receiving new medications should be told the medication name, purpose, directions (including number of pills, frequency, and timing of intake), potential side effects, and how long to take the medication. All groups had extensive discussions about side effects. Physicians lacked consensus about whether patients should be told about major versus common side effects. Some physicians expressed hesitation about discussing side effects because of the fear of alarming patients and creating nonadherence, whereas others mentioned the importance of using side-effect discussions to educate patients. One physician captured the views of many.

DOC: It's a double-edged sword ... a lot of my patients will appreciate that I've taken the time to explain and to inform them, but at the same time if you give them too much information they come back with a package insert, and: "I had nausea, diplopia," and they go through ... and so I think there is a fine line there that you really have to know as you get to know your patient better, where that line is.

Pharmacists emphasized that patients wanted to discuss side effects: "They really are fixated on side effects. Elderly people somehow think that everything is going to happen to them." Many patients wanted complete disclosure about potential medication side effects, and some expressed dissatisfaction toward their physician for not mentioning a side effect that they experienced after starting a medication. A small number of patients expressed reluctance to hear or read the litany of side effects given to them at the pharmacy; as one patient acknowledged, "Sometimes I think it's psychological. You think it's going to happen ... and sometimes it happens."

Patients did not spontaneously suggest that healthcare providers should state the names of drugs when prescribing medications. Participants in the younger and older groups disputed the importance of hearing the medication name.

PAT: The [physicians] might tell you the name, but to a patient, the name is meaningless. You know, the brand name, even the generic, what do we know one from the other?

PAT: To hear the name? The only reason it might be good is so I'll know *not* to take it, to avoid it.

PAT: We have to hear the name if only to pay attention to advertisements. That's the only way you would know the name, whether it's familiar to you or not, so it's who advertises the most is the name you know.

Pharmacists felt that it was important that patients know the names of their medications, although they often encountered patients who were unaware of medication names; these patients often described their medications in other ways.

PHARM1: They don't know what it is, just a blue pill or white pill or yellow pill.

PHARM2: And that changes.

PHARM1: Exactly.

Physicians were the only group to mention giving information about medication refills and desired therapeutic goals, but physicians also were the only ones who did not talk about medication expiration dates and efficacy.

What Information Is Critical for Patients to Hear?

When asked what information concerning new medications is critical for a physician to communicate to patients, physicians and patients aged 65 to 80 mentioned the greatest number of topics. Participants were in general agreement about the importance of discussing information endorsed by quality measures^{21,22} and organizational guidelines,^{23–25} although patients aged 80 and older cited fewer of these topics than the other groups. All focus groups discussed medication side effects at length, but medication name was mentioned only by the focus groups aged 65 to 80 as being critical to discuss. All groups except physicians identified medication purpose as being essential to discuss, but physicians were the only group to say that the number of tablets and frequency of medication dosing was an important point of discussion. Although patients thought it was crucial to talk about when to take their medications (timing of intake), no provider groups mentioned the topic as being critical to provide. All groups except for patients aged 80 and older mentioned the importance of discussing duration of medication intake.

Only the physician groups mentioned the critical nature of information about medication dose, potential therapeutic options, and whether the prescription was a generic or brand name medication. Physicians also discussed the potential importance of conversations about medication cost.

DOC: Some of my patients, it seems critical to know about the cost, the financial cost. So sometimes we talk about potential cost of these medications, if they're covered or whatever in their plan, if there are generics available, and are there alternatives that are cheaper?

All patient groups considered discussion about special instructions associated with medication-taking (such as whether to take the pills with food) and physicians' previous experiences with a newly prescribed medication important. Physicians and patients aged 80 and older cited the importance of giving directions for continued medications, and pharmacists mentioned medication storage and handling (Table 3).

Which Healthcare Providers Could Effectively Counsel About What Critical Medication-Related Information?

Table 3 also indicates each group's thoughts concerning the healthcare provider from whom it could hear critical information about new medications. When queried about whether different

types of healthcare providers could convey different medication-related information, most groups focused on side-effect discussions. Physicians emphasized the importance of their own ability to prioritize side effects:

DOC: The problem is that, when they get the same list of side effects from the pharmacist, it's jumbled up in such a way that there is no way to prioritize what is really a significant side effect and one that is totally insignificant or superfluous.

DOC: There may be 30 listed side effects, but really the physician is the one that has the experience to know which side effects are common and which side effects are dangerous.

Physicians also commented that discussions about side-effects might "cement your relationship a little bit" and increase patient trust in physicians. Recognizing that time constraints might mean that patients will discuss medications with pharmacists or other healthcare providers, one physician said:

DOC: You tell the pharmacist to say the same thing that we want them to say because I have a patient that was upset at me: "Doctor, you didn't tell me all these details of side effect, and I had to talk to my pharmacist and I wish you told me." And I say, "I can't go through everything."

Pharmacists stated that pharmacists should review side effects with patients but were mixed about the extent to which physicians should discuss side effects. One respondent captured the views of several pharmacists by saying that "maybe side effects and stuff could mainly be said at the pharmacy." Others thought that physicians could discuss major side effects with patients and leave the "more subtle or esoteric side effects" to the pharmacist, because physicians "don't cover everything and it's a tough job to cover everything. [Physicians] spend an awful lot of time doing that." Pharmacists also mentioned the importance of providing patients with consistent information.

PHARM: When we reinforce [side effect information], I find a lot of patients ... find that's comforting. "That's just what the doctors told me." Just that two people are confirming the same expectations or something. It's comforting for them and maybe for me too.

Patients had varied opinions about who should discuss side-effect information with them. Some felt comfortable obtaining side-effect information solely from a pharmacist or from written handouts that accompany the prescriptions, whereas others wanted to hear the information from both pharmacists and physicians: "After the doctor, I always question the pharmacist." Others stressed the importance of talking with their physician about potential adverse effects.

PAT: I fill prescriptions, and I read what the printout says, and then I don't want to take that medication, *and I don't*. ... better that he say it and I can say, "Why are you giving me this?" and I have the chance to ask. When I get the write-up, it's already too late.

PAT: I trust the doctor more than the pharmacist, so it would be better all around ... if the doctor would take two extra minutes and explain ... the reaction.

There were several discrepancies about whom the different groups believed should communicate other elements of critical information. All but the physician groups thought that physicians should discuss medication purpose. Patients thought physicians should relay information about drug interactions, but physicians did not raise this issue as being critical. Physician groups said that pharmacists should convey information about medication directions, yet pharmacists did not consider this topic in their discussion. The groups did not spontaneously delve deeper into how counseling about specific medication-related information might be divided between different healthcare providers.

Who Should Provide Critical Information About New Medications?

Physician and pharmacist groups said that nonphysician healthcare providers (such as nurses, physician assistants, respiratory therapists, and pharmacists) could counsel patients about selected types of medications, such as oral contraceptives, inhaled respiratory medications, and injections. Pharmacists mentioned their legal obligation to counsel every patient picking up a new prescription but conceded that typically less than half of the eligible patients were counseled, mostly because of patient refusals. At the same time, some pharmacists felt that physicians could leave the bulk of medication counseling to the pharmacist.

PHARM: We [pharmacists] should probably take care of the rest [of the information].
At least the doctor tells them that there's a new medicine on board.

Other pharmacists recognized the importance of repetition for patients: "I would prefer it in a perfect world that they heard [about the medication] from both [the physician and the pharmacist], because the more they hear it, the more they're going to remember," and acknowledged the significance of the physician–patient relationship: "Things that doctors emphasize the importance [about], sometimes they'll listen more than if the pharmacist said."

As Table 4 illustrates, patient focus groups had diverse opinions about who should provide important information about new prescriptions. Some patients preferred to receive this information from pharmacists, whom they believed to be more knowledgeable than physicians about medications, whereas others believed that physicians were a better resource than pharmacists because of better understanding of patients' overall medical conditions. Other patients favored hearing the same information from both types of healthcare providers.

DISCUSSION

Older patients, pharmacists, and physicians generated similar lists of information that patients should receive when prescribed a new medication, yet there was substantial disagreement between groups about what information is critical to convey. Even some guideline-specified topics^{21–25} were not universally specified. Furthermore, physician, pharmacist, and patient groups had varied beliefs about who should provide critical medication-related information. Time constraints for patient counseling increase the importance of clinicians understanding their expected role.

Many participants felt that pharmacist education about certain important topics was acceptable, suggesting that physicians and pharmacists might collaborate to provide patients with comprehensive communication about new medication prescriptions. Pharmacist–physician collaborations to manage chronic patient medications in one study led to more-appropriate prescribing and lower patient medication costs.³⁷ These models could be adapted to new medication counseling by allocating responsibility for transmitting new medication information to improve prescription practices. Physician and pharmacist professional groups could work together to delineate roles in medication prescribing in a manner that allows for comprehensive counseling in a time-efficient manner. In the current system, important information may be inefficiently transmitted because of overlapping discussion, although some patients and pharmacists valued repetition. Information may be missed because of diffusion of responsibility. Physicians often do not communicate essential information²⁷ and may believe that pharmacists will fill in the gaps.¹⁵ Although the Omnibus Budget Reconciliation Act of 1990 mandates that pharmacists counsel patients receiving new prescriptions, pharmacists are exempt from this responsibility if a patient refuses to receive the information.⁴¹ As a result, pharmacists do not speak with nearly 40% of persons receiving new medications.³⁴

In general, physicians were reluctant to rely on pharmacists to convey essential medication-related information. This may be because physicians consider themselves to be the primary

source of patient information,¹⁵ although it may also be that physicians are unfamiliar with working with pharmacists as part of a healthcare team and are hesitant to entrust an unknown pharmacist with the task of imparting important medication-related information. Many physicians do not know what to expect from pharmacists.⁴² Better delineation of new medication information transmission responsibilities by both parties could enhance and streamline this important process.

Nearly all focus groups concluded that physicians or pharmacists could adequately discuss potential medication side effects of a new prescription, although the postulated content of these conversations varied. Physicians in this study queried whether these conversations would scare patients, but studies have shown that side-effect discussions do not adversely affect patient medication adherence^{16–19} and do not increase the number of side effects experienced.²⁰ The majority of patients want as much side-effect information as possible from their physicians,^{11,43} but this study suggests that patients may be amenable to obtaining this information from other sources, such as from pharmacists or written materials. Time-pressured physicians might assess patients' level of interest and then relay contextually grounded information of the desired depth, giving patients a plan should they encounter adverse reactions.

This study has several limitations. A focus group format was chosen for the study to facilitate sharing of thoughts and ideas, but this method is susceptible to incomplete ascertainment. For example, physicians did not state that it was critical for them to describe a medication's purpose but routinely convey this information in practice. All of the patients in the study spoke English, most had at least some college education, and all were active enough to participate in senior center activities. Because the moderators were physicians, some focus group participants may have curtailed their comments. Physician focus groups were of shorter duration than the other groups, which may have constrained the amount of time physicians spent talking about some topics, yet physicians raised more critical aspects of new medication information than any other group.

In conclusion, this study demonstrates incongruent beliefs about medication-related counseling among older patients, pharmacists, and physicians, which may lead to inadequate communication when a new medication is prescribed. Delineation of responsibilities concerning counseling patients about new medications and models to transmit information in an efficient fashion is needed.

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REFERENCES

1. Wilson IB, Schoen C, Neuman P, et al. Physician-patient communication about prescription medication nonadherence: A 50-state study of America's seniors. *J Gen Intern Med* 2007;22:6–12. [PubMed: 17351835]
2. Safran DG, Neuman P, Schoen C, et al. Prescription drug coverage and seniors: Findings from a 2003 national survey. *Health Aff (Millwood)* 2005;W5-152–W5-166. [PubMed: 15840625]

3. Malhotra S, Karan RS, Pandhi P, et al. Drug related medical emergencies in the elderly: Role of adverse drug reactions and non-compliance. *Postgrad Med J* 2001;77:703–707. [PubMed: 11677279]
4. Taylor SA, Galbraith SM, Mills RP. Causes of non-compliance with drug regimens in glaucoma patients: A qualitative study. *J Ocul Pharmacol Ther* 2002;18:401–409. [PubMed: 12419091]
5. Belcher VN, Fried TR, Agostini JV, et al. Views of older adults on patient participation in medication-related decision making. *J Gen Intern Med* 2006;21:298–303. [PubMed: 16686804]
6. Jones D, Seymour R, Woodhouse K. Use of pharmacists by older people in the community. *Arch Gerontol Geriatr* 1997;24:9–13. [PubMed: 15374131]
7. Hall JA, Roter DL, Katz NR. Meta-analysis of correlates of provider behavior in medical encounters. *Med Care* 1988;26:657–675. [PubMed: 3292851]
8. Bull SA, Hu XH, Hunkeler EM, et al. Discontinuation of use and switching of antidepressants: Influence of patient-physician communication. *JAMA* 2002;288:1403–1409. [PubMed: 12234237]
9. Hulka BS, Cassel JC, Kupper LL, et al. Communication, compliance, and concordance between physicians and patients with prescribed medications. *Am J Public Health* 1976;66:847–853. [PubMed: 961952]
10. Svarstad, BL. Sociology PhD Dissertation. University of Wisconsin: 1974. The Doctor-Patient Encounter: An Observational Study of Communication and Outcome.
11. Bajramovic J, Emmerton L, Tett SE. Perceptions around concordance—focus groups and semi-structured interviews conducted with consumers, pharmacists and general practitioners. *Health Expect* 2004;7:221–234. [PubMed: 15327461]
12. Nair K, Dolovich L, Cassels A, et al. What patients want to know about their medications. Focus group study of patient and clinician perspectives. *Can Fam Physician* 2002;48:104–110. [PubMed: 11852597]
13. Berry DC, Gillie T, Banbury S. What do patients want to know: An empirical approach to explanation generation and validation. *Expert Syst Appl* 1995;8:419–428.
14. Berry DC, Michas IC, Gillie T, et al. What do patients want to know about their medicines, and what do doctors want to tell them?: A comparative study. *Psychol Health* 1997;12:467–480.
15. McGrath JM. Physicians' perspectives on communicating prescription drug information. *Qual Health Res* 1999;9:731–745. [PubMed: 10662256]
16. Lamb GC, Green SS, Heron J. Can physicians warn patients of potential side effects without fear of causing those side effects? *Arch Intern Med* 1994;154:2753–2756. [PubMed: 7993161]
17. Howland JS, Baker MG, Poe T. Does patient education cause side effects? A controlled trial. *J Fam Pract* 1990;31:62–64. [PubMed: 2193996]
18. Myers ED, Calvert EJ. The effect of forewarning on the occurrence of side-effects and discontinuance of medication in patients on amitriptyline. *Br J Psychiatry* 1973;122:461–464. [PubMed: 4718283]
19. Myers ED, Calvert EJ. The effect of forewarning on the occurrence of side-effects and discontinuance of medication in patients on dothiepin. *J Int Med Res* 1976;4:237–240. [PubMed: 1026548]
20. Morris LA, Kanouse DE. Informing patients about drug side effects. *J Behav Med* 1982;5:363–373. [PubMed: 7131550]
21. Shrank WH, Polinski JM, Avorn J. Quality indicators for medication use in vulnerable elders. *J Am Geriatr Soc* 2007;55:S373–S382. [PubMed: 17910560]
22. Knight EL, Avorn J. Quality indicators for appropriate medication use in vulnerable elders. *Ann Intern Med* 2001;135:703–710. [PubMed: 11601953]
23. Agency for Healthcare Research and Quality. Rockville, MD: [Accessed October 20, 2008]. Questions are the Answer: Getting a Prescription. [on-line] Available at http://www.ahrq.gov/questionsaretheanswer/level3col_1.asp?nav=3colNav05&content=05_0_prescription
24. National Institute on Aging. Bethesda, MD: 2007 Apr [Accessed October 20, 2008]. Medicines: Use Them Safely. [on-line] Available at www.niapublications.org/agepages/medicine.asp
25. NIH Senior Health: Talking with Your Doctor-Asking Questions-Asking About Your Medications. National Institutes of Health. 2007 Jul 26 [Accessed October 20, 2008]. [online] Available at <http://nihseniorhealth.gov/talkingwithyourdoctor/askingaboutyourmedications/01.html>

26. Richard C, Lussier MT. Nature and frequency of exchanges on medications during primary care encounters. *Patient Educ Couns* 2006;64:207–216. [PubMed: 16781108]
27. Tarn DM, Heritage J, Paterniti DA, et al. Physician communication when prescribing new medications. *Arch Intern Med* 2006;166:1855–1862. [PubMed: 17000942]
28. Scherwitz L, Hennrikus D, Yusim S, et al. Physician communication to patients regarding medications. *Patient Educ Couns* 1985;7:121–136. [PubMed: 10272530]
29. Cockburn J, Reid AL, Sanson-Fisher RW. The process and content of general practice consultations that involve prescription of antibiotic agents. *Med J Aust* 1987;147:321–324. [PubMed: 3657656]
30. Makoul G, Arntson P, Schofield T. Health promotion in primary care: Physician-patient communication and decision making about prescription medications. *Soc Sci Med* 1995;41:1241–1254. [PubMed: 8545677]
31. Law AV, Ray MD, Knapp KK, et al. Unmet needs in the medication use process: Perceptions of physicians, pharmacists, and patients. *J Am Pharm Assoc* 2003;43:394–402.
32. Lisper L, Isacson D, Sjoden PO, et al. Medicated hypertensive patients' views and experience of information and communication concerning antihypertensive drugs. *Patient Educ Couns* 1997;32:147–155. [PubMed: 9423497]
33. Lee D, Armour C, Krass I. The development and evaluation of written medicines information for Type 2 diabetes. *Health Educ Res* 2007;22:918–390. [PubMed: 17947249]
34. Svarstad BL, Bultman DC, Mount JK. Patient counseling provided in community pharmacies: Effects of state regulation, pharmacist age, and busyness. *J Am Pharm Assoc (Washington, DC)* 2004;44:22–29.
35. Von Muenster SJ, Carter BL, Weber CA, et al. Description of pharmacist interventions during physician-pharmacist co-management of hypertension. *Pharm World Sci* 2008;30:128–135. [PubMed: 17710561]
36. Borenstein JE, Graber G, Saltiel E, et al. Physician-pharmacist comanagement of hypertension: A randomized, comparative trial. *Pharmacotherapy* 2003;23:209–216. [PubMed: 12587810]
37. Zermansky AG, Petty DR, Raynor DK. Randomised controlled trial of clinical medication review by a pharmacist of elderly patients receiving repeat prescriptions in general practice. *BMJ* 2001;323:1340–1343. [PubMed: 11739221]
38. Morgan, DL.; Krueger, RA.; King, JA. Focus Group Kit. Thousand Oaks, CA: Sage Publications; 1998.
39. Strauss, AL.; Corbin, JM. Basics of Qualitative Research Techniques and Procedures for Developing Grounded Theory. Vol. 2nd Ed.. Thousand Oaks, CA: Sage Publications; 1998.
40. Denzin, NK.; Lincoln, YS. Handbook of Qualitative Research. Vol. 2nd Ed.. Thousand Oaks, CA: Sage Publications; 2000.
41. Huang SW. The Omnibus Reconciliation Act of 1990: Redefining pharmacists' legal responsibilities. *Am J Law Med* 1998;24:417–442. [PubMed: 9876784]
42. Smith WE, Ray MD, Shannon DM. Physicians' expectations of pharmacists. *Am J Health Syst Pharm* 2002;59:50–57. [PubMed: 11813467]
43. Ziegler DK, Mosier MC, Buenaver M, et al. How much information about adverse effects of medication do patients want from physicians? *Arch Intern Med* 2001;161:706–713. [PubMed: 11231703]

Table 1
Focus Group Topic Guide

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- When you get/prescribe/dispense a new medication, what sorts of things do you want to know/think you should tell the patient?
 - Think back to the last time you had an interaction where you received/prescribed/discussed a new medication. Describe what that discussion was like.
 - Let's get more specific: Can you describe what was actually said about the new medication?
 - Give an example of a particularly good discussion about a new medication. What makes this a good discussion?
 - What about one that was confusing or unclear? What was particularly confusing or unclear?
 - I'm sure you and your doctor/patients often have a lot of things to talk about in a very short period of time. If you had to decide what you think is absolutely critical for a doctor to tell you/a patient about a new medication, what would that be?
 - Is there critical information that would be sufficient to hear from another healthcare provider? What healthcare provider could give this critical information?
 - How do you get/give information about a new medication so that you/patients can remember the information?
 - Are there things a doctor/pharmacist should say or do to get a patient to take their medication exactly the way it should be taken?
 - What do you think could be done to improve communication about new medications?
-

Table 2**Focus Group Characteristics**

Characteristic	Patients Aged 65–80 (n = 23)	Patients Aged ≥80 (n = 19)	Pharmacists (n = 13)	Physicians (n = 17)
Age, mean ± SD	73.3 ± 4.8	84.3 ± 2.7	39.3 ± 12.8	43.5 ± 9.2
Female, %	83	68	69	41
Ethnicity				
White, %	65	84	54	47
Latino	26	16	23	12
Other	9	0	23	41
Education, % [*]				
High school or less	14	10	NA	NA
Some college	54	53		
College graduate	32	37		
Percentage of time spent on pharmacy tasks, mean ± SD				
Patient counseling			15.8 ± 9.2	
Prescription preparation			60.8 ± 20.2	
Contacting providers			10.8 ± 7.3	
Contacting insurers			5.7 ± 6.4	
Pharmacy administration			5.4 ± 8.3	
Other			3.3 ± 5.7	
Percentage of time spent on patient care, mean ± SD				88.4 ± 13.8
Years in practice, mean ± SD [†]				12.6 ± 10.0

^{*} n = 22 for patients aged 65 to 80; one participant did not respond to the question.

[†] n = 16.

SD = standard deviation.

Which Healthcare Provider Could Counsel About What Critical Medication-Related Information

Table 3

Critical Information	Physician Focus Groups		Pharmacist Focus Groups		Patients Aged 65–80 Focus Groups		Patients Aged 80+ Focus Groups	
	Physician	Pharmacist	Physician	Pharmacist	Physician	Pharmacist	Physician	Pharmacist
Medication name								
Purpose								
Directions								
Number of pills								
Frequency								
Timing of intake								
Side effects								
Duration of intake								
Cost								
Directions for taking continued medications								
Dose								
Follow-up and medication monitoring								
Generic versus brand name								
Interactions with other drugs								
Onset of medication effect								
Prior experience with medication								
Special instructions (e.g., with food)								
Storage and handling								
Therapeutic options								
What if dose missed								
What if extra medication taken								
What if medication not started								
What if problems arise								

Table 4
Focus Group Participant Responses Regarding Who Should Provide Critical Medication-Related Information

Focus Group	Healthcare Provider	Example Responses
Patients Aged 65–80	Pharmacists	<p>“The pharmacist, believe it or not. The doctor will put it on the prescription, but I always question the pharmacist.”</p> <p>“I don’t think it’s totally important what the doctor tells me about the prescription because I can always read up on it and also ask the pharmacist. I would just as soon he spend his time trying to diagnose what the problem is.”</p> <p>“They’re into that business and that’s who you’d ask more than the doctor, really.”</p>
	Physicians	<p>“I think it should be the doctor because he’s the only one who knows about the ten prescriptions as a group that you’re taking. The pharmacist doesn’t know.”</p> <p>“It should be the doctor as the one guiding me.”</p>
	Physicians and pharmacists	<p>“I think it’s both. From the doctor and then repeat it from—because once is not enough. They tell you once. That not enough, so you get it from the doctor and then from the pharmacist. That would help.”</p> <p>“I believe in the pharmacy and the doctor together. You know, they are together because when the doctor prescribes something, they don’t know what the pharmacy knows and then the pharmacy don’t ... they know better all the interactions ...”</p>
Patients Aged ≥80	Pharmacists	<p>“... that’s [the pharmacist’s] sole study, that’s their sole livelihood. A doctor has many other things that he has to be up to, you know, up to date on. Now medicines change very often, and the pharmacist actually does know more than the doctor.”</p> <p>“I think [pharmacists] know more than the doctors ... they’re better than doctors.”</p>
	Physicians	<p>“It would be better to get it from the doctor because you assume that he knows.”</p>
	Physicians and pharmacists	<p>“So what my doctor says to me, and if the pharmacist confirms it, then I’m very happy ... as long as their thoughts coincide with each other and the medication they are giving me is what it’s assigned for, then there is no question.”</p> <p>“If you heard it from a doctor and a pharmacist, it would mean more to you.”</p>
	Written pharmacy materials	<p>“I think the write-up [from my mail-order pharmacy] is sufficient for me. If I get information from a doctor, it may not be one hundred percent.”</p> <p>“When I get a medicine from the correspondence pharmacy, the mailing pharmacy, I very often get two descriptions. One is from the maker of the medication, which is about this long, very small writing and so forth, and it goes into great detail, and I get a sheet, which gives me the main points. And those things are sufficient.”</p>