Opinions of a Small Sample of Pharmacists About Pharmacy Setting and Patient Adherence to Antiretroviral Therapy

Jennifer Kibicho, PhD; Jill Owczarzak, PhD; and Steven D. Pinkerton, PhD

Many private and public health insurance plans increasingly encourage their beneficiaries—either through mandates or incentives—to fill prescriptions for long-term chronic conditions through a mail order pharmacy or at a community-based or mail order specialty pharmacy designated by the pharmacy benefit manager. Approximately 90% of employers as of May 2011 and 25 state acquired immune deficiency syndrome (AIDS) Drugs Assistance Programs (ADAPs) for uninsured and underinsured persons living with human immunodeficiency virus (HIV) as of June 2010 offered a mail order service option; 18% of employers and 17 of the 25 ADAPs mandated the use of mail order pharmacy for chronic medications. Although the shift to mail order pharmacy may have been motivated by perceived economic benefits of mail order, including improved efficiency and reduced prescription drug costs accruing to payers, there is evidence to suggest that mail order pharmacy use is associated with improved adherence because of greater convenience. However, a study by Khandelwal et al. (2011) found only a 1 percentage point difference in medication possession ratio (MPR) comparing patients receiving 90-day supplies dispensed in community versus mail order pharmacies, and a study by Liberman et al. (2011) found that mandatory mail order benefit design was associated with decreased patient adherence.

Health plans may require use of specialty pharmacy distribution channels for costly medications associated with complex management issues, including medication adherence, because of a belief that the “high-touch” services offered by specialty pharmacies (e.g., patient education, identification of sources of financial assistance) provide a therapeutic benefit to the patient. Of the 74% of employers that offered a specialty pharmacy benefit in May 2011, 48% required specialty drugs to be channeled through a designated specialty pharmacy (either community-based or mail order). Similarly, 14 ADAPs used central pharmacy distribution, and 18 ADAPs had designated ADAP pharmacies for pick-up in June 2010.

Adherence to antiretroviral therapy (ART) is a challenge for persons living with HIV (PLWH), with an estimated 40% dropping out of care within the first 2 years of starting treatment. In a variety of therapeutic classes, inconsistent adherence is associated with poor clinical outcomes, treatment failure, and increased health care costs.

In general, patients utilizing specialty community pharmacies receive more personalized care and have better adherence rates compared with those in nonspecialty community pharmacies. A pilot study found that Medi-Cal beneficiaries with HIV who received medication therapy management (MTM) in community pharmacies that specialized in providing HIV-intensive MTM services had higher adherence rates that persisted over 3 years, compared with patients in pharmacies not providing these services. Although the dispensing of 90-day prescription supplies in community pharmacies is generally increasing, mail order pharmacy may be appropriate for PLWH who are stabilized on therapy and comfortable with their medication regimens, and may be more attractive than community-based pharmacy services for those patients who prefer online ordering of medication. The impact of mail order pharmacy compared with community-based pharmacy on ART adherence is unknown.

While the primary focus in the pharmacy literature and in public health and insurance policy decision making has been differences between mail order and community-based specialty versus traditional pharmacies, less is known about differences between mail order and community pharmacies. In particular, little research attention has focused on adherence promotion activities in mail order settings offering differentiated products—traditional versus specialty mail order—or compared adherence promotion practices and patient health outcomes in community-based specialty and mail order specialty pharmacies. This information might be important in light of a recent pharmaceutical industry report that 60% of employers are covering 90-day supplies of maintenance medications in community pharmacies, and 90% offered mail order pharmacy services. Khandelwal et al. found that patients filling 90-day supplies of maintenance medications (e.g., antiasthmatics, antidiabetics, diuretics) in community-based pharmacies had a slightly higher mean medication possession ratio compared with those who filled their prescriptions by mail order (77.0% vs. 76.0%, respectively). Patwardhan et al. (2011) found slightly higher adherence rates and a reduced rate of gaps in therapy exceeding 30 days among patients filling prescriptions at a worksite pharmacy compared with mail order service and attributed this finding in part to the pharmacist-patient interaction.

Pharmacist Survey
To obtain information about adherence promotion practices for patients with HIV, we recruited a convenience sample of 31 pharmacists (28 from community-based pharmacies and 3 from a single mail order pharmacy) providing care to PLWH in
4 midwestern cities (Chicago, Illinois; Columbus, Ohio; Kansas City, Missouri; and Minneapolis, Minnesota). Community-based pharmacists were recruited from diverse settings—specialty, semispecialty, and nonspecialty pharmacies—that represent the range of community-based pharmacy settings where HIV-infected patients fill their antiretroviral medication prescriptions. (Specialty pharmacies provide personalized value-added services, such as disease management, to chronically ill and expensive-to-treat patients who require close monitoring for adherence and therapy response;\textsuperscript{14,35} semispecialty pharmacies dispense both specialty and regular medications; and nonspecialty pharmacies fill prescriptions that do not require specialized administration.) At the request of 1 pharmacy organization participating in the study, we interviewed mail order pharmacists from a single mail order facility where patients are enrolled in either traditional or specialty mail order, depending on the insurance contract.

The first author interviewed pharmacists individually at their pharmacy locations between August and October 2009. Using semistructured interview guides, pharmacists were asked a range of questions about their ART adherence promotion practices, including facilitators and challenges to providing these services. Adherence promotion activities are defined as pharmacist-implemented activities that are above and beyond prescription dispensing services mandated by law—for example, adherence assessment, medication-specific counseling (e.g., how to manage side effects associated with a given drug), and monitoring and follow-up. Interviews took between 40 and 100 minutes and were digitally recorded for later transcription.

We used the principles of grounded theory to code the extracted transcripts for major recurring themes (e.g., adherence promotion activities, challenges). We generated subcodes under each theme (e.g., patient interactions, face-to-face interactions, access to pharmacists). We then compared and contrasted pharmacists’ responses about various adherence promotion activities and the issues surrounding adherence promotion in community-based pharmacy versus mail order pharmacy and within different community-based settings (specialty versus nonspecialty). We selected quotations to illustrate the range of pharmacists’ opinions about adherence promotion practices in different pharmacy settings. The present study is part of a larger project that examined pharmacists’ involvement in promoting adherence to ART.\textsuperscript{34,35}

Characteristics of the 31 pharmacists who participated in the study are summarized in Table 1. All 3 mail order pharmacists had previous community-based pharmacy experience, but none of the community-based pharmacists reported having worked in a mail order facility. All 3 mail order pharmacists and 50% of the community-based pharmacists had more than 5 years of post-licensure experience.

### Survey Results Identify Areas for Future Research

In this report, we summarize pharmacists’ opinions about similarities and differences in adherence promotion practices between specialty and nonspecialty mail order pharmacies and between community-based specialty and nonspecialty pharmacies, and we explore potential implications for PLWH. Based on these preliminary findings, we identify areas for further research regarding the role that pharmacists can play in improving medication adherence for PLWH.

1. **Distinctions between mail order pharmacy and community-based pharmacy were sometimes blurred.** Both specialty community and specialty mail order pharmacies provide automatic refill reminder and medication delivery services, and both monitor adherence through frequent patient contacts (sometimes by phone) and by provider collaborations. The automatic refill and home delivery services can benefit patients and improve their adherence because they shift the onus of initiating medication refills from the patient to the pharmacy. If medications are not delivered to patients in a timely manner, therapy can be interrupted. A number of pharmacists reported experiencing problems with medication deliveries for transient

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\textsuperscript{a}Specialty pharmacies provide personalized services including disease management to chronically ill and expensive-to-treat patients who require close monitoring for adherence and therapy response.

\textsuperscript{b}Semispecialty pharmacies dispense both specialty and nonspecialty medications and offer some specialty services including medication deliveries to patients with chronic conditions.

\textsuperscript{c}Nonspecialty pharmacies fill prescriptions that do not require specialized administration.
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populations and because of delays at the post office:

“With our specific patient population it is a lot more challeng-
ing because the patient might not live at the same address. We have patients who literally move every month—we are delivering to a homeless shelter or their sister’s house—and that would be very problematic. We make a couple of phone calls and it may take 20 or 30 minutes out of day but we will eventually get a hold of them. The biggest problem is a lot of our patients don’t have phone access all month long. They have limited minutes on their cell phone.” [community-based pharmacist, 5 years experience]

“We rely on the U. S. Postal System to deliver the medication. I can’t predict when someone is going to get their medication—it’s not the same every month—sometimes they get delivered and sometimes they don’t.” [community-based pharmacist, 3 years experience]

In some specialty mail order and specialty community-based pharmacies, patients on very expensive maintenance medications are enrolled in an MTM program in which they are closely monitored for missed doses and medication side effects by clinical staff who might not be pharmacists. The use of clinical teams helps to build rapport and create trusting relationships with patients through maintaining regular phone contact. Patients receiving consistent care from a pharmacist—even without face-to-face interaction—can grow to trust and depend on the pharmacist:

“We had 1 pharmacists who was devoted to her group. She had quite a few patients that she was the only one that they wanted to talk to. She took very good care of the patients and they very much appreciated [her].” [mail order pharmacist, 19 years experience]

Similarly, specialty pharmacies focus on small select patient populations with chronic conditions such as HIV, cancer, or kidney disease. These pharmacies get patients through referrals from physicians and can schedule their workloads to meet individual patient needs. One community-based specialty pharmacist noted he has flexibility to devote time and effort to individual patients:

“Our pharmacy operates more on a referral basis than on people just walking in off the street. So we won’t have that many people come in at once. Our staff model is set up that we will make time for everyone—someone will get the phone, someone else will take care of the other patients—and give me time to talk to the patient.” [community-based pharmacist, 3 years experience]

In traditional mail order, less expensive maintenance prescriptions are automatically refilled every 90 days and shipped using standard mail delivery service. Detection of patient nonadherence can be delayed or missed altogether just as easily as in a busy community-based retail setting where there are not enough resources to conduct adherence promotion activities. In short, just shipping medications each month in a traditional mail order pharmacy or filling prescriptions in a busy community-based nonspecialty setting will not ensure adherence to therapy.

2. Community-based pharmacists can talk to patients both face-to-face and by telephone, whereas mail order pharmacists can talk to patients only on the telephone. Community-based pharmacists value the ability, through face-to-face interactions, to directly observe a patient’s nonverbal cues to help them assess the patient’s status and identify possible points of intervention. For example, a specialty community-based pharmacist reported conducting a suicide assessment for a patient who appeared distraught and noted that he could observe changes in the patient’s demeanor that might not be possible over the telephone:

“I can physically look at the patient and know that they are depressed and they are not admitting to it. Whereas [mail order pharmacy] is going to ask them, ‘have you had changes in mood lately?’ The patient is going to probably say ‘no.’ It’s rare that a patient is going to admit to that and if they do that is awesome because they are obviously crying out for help.” [community-based pharmacist, 11 years experience]

As reported elsewhere, we found that some community-based pharmacists used face-to-face encounters with patients to reinforce messages on the importance of adherence and the need to recruit a social support system to help with maintaining adherence. For example, 1 community-based pharmacist recounted encouraging a 40-year-old patient with AIDS-defined illness to include his mother in his life and described how that change markedly increased the patient’s ART adherence. Another study found that community-based pharmacists have substantially more patient contacts compared with mail order pharmacists and that patients who received face-to-face counseling had higher adherence rates for diabetes medications compared with those who received telephonic counseling.

Regardless of pharmacy setting, direct access to a pharmacist who can respond to patients’ medication-related questions and concerns either in person or over the phone without excessive delay was considered an important element of patient care by the pharmacists in our study. Of course, not all patients desire face-to-face interactions with pharmacists or require close personal interactions with the pharmacist to remain adherent to therapy.

3. Nonspecialty community and mail order pharmacists face similar challenges that affect their ability to promote adherence to therapy. Both traditional community-based and mail order pharmacists have limited face-to-face interactions with their patients but for different reasons (e.g., high volumes in community pharmacies and no physical interface in mail
order pharmacies) and confront similar challenges, including lack of close monitoring of patient adherence to therapy and no compensation for adherence promotion activities. Because patients in a traditional mail order pharmacy may not necessarily have direct telephone access to a pharmacist, they may experience problems contacting a pharmacist who can answer their questions. Additionally, as illustrated by the quotation below, making reminder phone calls to patients who struggle with adherence is not always effective:

“Customer service or an automated system will call the patients when they have 7 days of meds left to schedule their next dose. But as far as somebody that is not adherent, that doesn’t really get anywhere.” [mail order pharmacist, 8 years experience]

The environment at high-volume, very busy community-based pharmacies may not be conducive for adherence promotion activities either. As a community-based pharmacist in a nonspecialty setting noted, filling prescriptions can be a very mechanical process:

“It’s just like filling and going, filling and going, and the counseling sessions tend to be very quick and probably quicker than they need to be. I think of all people, the HIV patients probably need something extra, above and beyond what we are able to provide in a normal retail setting. There is no doubt about that.” [community-based pharmacist, 8 years experience]

Community-based pharmacists in busy settings may have multiple responsibilities and are expected to multitask, which constrains their ability to interact with patients. At peak hours of operation, if the pharmacy is short staffed, pharmacists may engage in activities that take time away from counseling patients:

“When you are required to do the job of 4 people—filling the actual prescription, answering the phone, helping technicians out when the line gets long, entering prescriptions, and taking care of insurance issues—you can't spend the amount of time that you want to with each patient. You can’t multitask 4 things and be a good pharmacist.” [community-based pharmacist, 7 years experience]

In contrast, some mail order pharmacists are expected to spend time on the telephone talking to patients. A mail order pharmacist compared her previous experience at a community pharmacy with her current work environment and noted the following:

“When you are in retail and you are trying to counsel somebody, you have 15 other things that you should be doing. But at least here, if I’m counseling, there is somebody else that can handle everything else for that moment.” [mail order pharmacist, 8 years experience]

Crowded pharmacy settings may not provide the kind of privacy needed to discuss sensitive issues such as HIV, especially if the patient is afraid that his or her HIV-positive status could be disclosed. As a community-based pharmacist pointed out, physical proximity does not necessarily translate to access to the pharmacist:

“As pharmacists get busier, people have a harder time getting access to the pharmacist. I can ask someone at my window ‘do you have any questions,’ but if they see me running around and they see a line of people waiting they are not going to take the time.” [community-based pharmacist, 9 years experience]

Both community-based nonspecialty and traditional mail order pharmacies may lack disease management/MTM programs that reimburse pharmacists for providing adherence promotion activities. The prescription order fulfillment process is no different at the traditional mail order pharmacy compared with nonspecialty community-based pharmacy with the exception that medications are mailed to the patient:

“Traditional operations are on a first in, first out basis. The patient just mails their prescription scripts and as soon as we get them, we process them, send them back out through United States Post. That could take 5 days in transit to get back to the patient.” [mail order pharmacist, 16 years experience]

Respondents reported that reduced profit margins through cutbacks in prescription drug reimbursements have forced pharmacies to reduce staffing budgets and increase prescription volume to stay in business. Pharmacy staff shortages mean that individual pharmacists have to dispense more prescriptions, and their workload is heavy. In this kind of business environment, pharmacists devote time and effort to activities that generate income, and when patient counseling is not a reimbursable procedure, there is no incentive for the pharmacist to devote time or effort to it. As a community-based pharmacist explained, there are no metrics for assessing patient counseling, an activity that takes time away from filling prescriptions efficiently:

“If I spend an hour a day counseling patients, my supervisor isn’t going to say ‘that’s awesome that you do that,’ they are going to see how many prescriptions I do and how long patients have to wait. There is no measurability of how much time you spend counseling patients. If we were getting paid for it, that would start to change things. Unfortunately everything is about money.” [community-based pharmacist, 9 years]

Although pharmacies have an indirect financial incentive to improve medication adherence, the lack of specific reimbursement for adherence promotion activities—whether in traditional mail order or nonspecialty community-based pharmacy—makes it economically infeasible for pharmacists to spend the time necessary with patients to promote medication adherence.
4. Health insurance plans largely determine where patients fill their prescriptions, giving patients little ability to choose a pharmacy that meets their specific needs. Insurance companies may be motivated to use mail order pharmacy for economic reasons:

“With health care the way it is, with the insurance companies the way that they are, some insurance companies have bought pharmacies of their own and so they want to do a mail order process every 90 days.” [community-based pharmacist, 13 years experience]

According to a mail order pharmacist, insurance preference may be driven by perceived value from high quality of patient care received in a specialty mail order setting:

“The insurance is attracted to us because if they are going to pay $1,800 a month for a product, they want some assurance that the patient is using it properly, that they are going to stay adherent. The insurance company is not wasting their money and that is why we are here.” [mail order pharmacist, 16 years experience]

Our interviews suggested that pharmacists outside of mail order settings may not be aware of the type of adherence promotion activities conducted by mail order pharmacists. According to 1 mail order pharmacist, insurance companies can choose from a range of mail order service packages, specialty mail order pharmacy patients have access to a clinical team that works with physicians to closely monitor patient therapeutic outcomes, a service that is not available to traditional mail order pharmacy patients.

Insurance companies may require patients to use different pharmacies for different medication needs, for example, a mail order pharmacy for chronic medications and a community-based pharmacy for acute medications. In general, it is unlikely that mail order patients will fill all their prescriptions at a single mail order pharmacy; they will invariably use the local community-based pharmacy for nonmaintenance prescriptions. Pharmacists in these settings may not have a complete medication history of prescriptions filled at other pharmacies:

“There is always this disconnect between the medicines that they get prescribed at a dialysis center as compared to what we are providing [because] they are seeing 2 different doctors. I’ve seen multiple times where they will get their dialysis meds from whatever mail order pharmacy that the dialysis center uses and so we are missing drug interactions.” [community-based pharmacist, 11 years experience]

The same mail order pharmacist explained that for a person who has not come to terms with his or her HIV-positive diagnosis, the mail order arrangement could negatively impact a patient’s sense of power and ownership over his or her therapy because he or she is not directly involved in the prescription procurement process:

“They have HIV; they know it’s a chronic issue that they are going to have to deal with. They have already lost their hand on that and can’t really control that. So now they can’t control where they are getting their medications. I think that’s a big down for the patients.” [mail order pharmacist, 8 years experience]

The aforementioned previous study by Liberman et al., which found that mandating mail order pharmacy for statins and other chronic medications may result in some patients discontinuing therapy rather than switching to mail order service, suggested possible unintended consequences including poor adherence and potentially increased health care costs. However, it is not clear if findings from that study are generalizable to PLWH.

5. Health plans may need to be selective about which patients to enroll in mail order pharmacies, depending on patient characteristics and circumstances. Previous research has suggested that mail order utilization rates may be low even when there are financial incentives to use the mail order pharmacy. In our study, respondents reported that mandating mail order service may not be appropriate for recently diagnosed patients new to treatment or struggling with adherence. Newly diagnosed persons with HIV who are still becoming accustomed to their ART regimens may benefit from face-to-face interactions with pharmacists who can answer their questions and concerns. Similarly, PLWH struggling to adhere to therapy may require more pharmacist help than can be provided by a minimal level of interaction at the pharmacy counter in a nonspecialty pharmacy setting or over the telephone by a mail order pharmacist. While many PLWH have already been stabilized on therapy, newly diagnosed patients not comfortable with their regimen may need face-to-face interaction with a pharmacist for adherence support:

“Some of the patients that have been on it [ART] for a long time are pretty knowledgeable about their condition. But some of the newer diagnosed patients, you can just tell that they haven’t spent that much time with their doctor and they don’t know. I think that someone whose dose doesn’t fluctuate much and are basically on the same type of medication for a long time, I think that is really the kind of person that should do mail order.” [mail order pharmacist, 8 years experience]

The same mail order pharmacist explained that for a person with poor adherence and potentially increased health care costs.
Conclusions

Although the choice of pharmacy is largely determined by insurance benefits coverage, the effect of that choice on adherence may be more nuanced than is captured by distinctions between community-based versus mail order pharmacy or even between community-based settings (i.e., specialty versus nonspecialty pharmacy). Although mail order pharmacies are convenient and less expensive than community-based pharmacies, the lack of face-to-face patient interaction (particularly for newly diagnosed PLWH), potential delays in receiving prescriptions and identifying nonadherence, and lack of patient involvement in processing prescriptions are concerns that could influence adherence outcomes.

Because of the significant growth in the use of mail order pharmacies and the lack of evidence about their effects on adherence for PLWH, there is need for more research that informs policy. We suggest 4 areas of research based on findings from the present study: (1) how mail order pharmacists promote adherence for newly diagnosed or poorly adherent PLWH; (2) the skills and systems needed to overcome the lack of face-to-face encounters in a mail order pharmacy; (3) how to appropriately target mail order pharmacy services without compromising care for patients who could benefit from face-to-face interactions with a community-based pharmacist; and (4) when to switch patients from community-based to mail order settings. There is a need for more research that increases our understanding of mail order adherence promotion activities and their impact on health outcomes for PLWH.

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REFERENCES


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