ORIGINAL ARTICLE

Exploring the Use of Nonmedical Sources of Prescription Drugs Among Immigrant Latinos in the Rural Southeastern USA

Aaron T. Vissman, MPH;[1] Fred R. Bloom, PhD;[2] Jami S. Leichliter, PhD;[2] Laura H. Bachmann, MD, MPH;[3,4] Jaime Montaño;[5] Michael Topmiller, MA;[6] & Scott D. Rhodes, PhD, MPH[1,3,7]

1 Department of Social Sciences and Health Policy, Wake Forest University School of Medicine, Winston-Salem, North Carolina
2 Division of STD Prevention, Centers for Disease Control and Prevention, Atlanta, Georgia
3 Section on Infectious Diseases, Department of Internal Medicine, Wake Forest University School of Medicine, Winston-Salem, North Carolina
4 Infectious Diseases Section, W.G. Hefner Medical Center, Salisbury, North Carolina
5 Chatham Social Health Council, Siler City, North Carolina
6 Department of Regional Planning, University of Cincinnati, Cincinnati, Ohio
7 Maya Angelou Center for Health Equity, Wake Forest University School of Medicine, Winston-Salem, North Carolina

This study was funded by a grant to Dr. Scott D. Rhodes from the Centers for Disease Control and Prevention (CDC) and the North Carolina Department of Health and Human Services—02885-08. For further information, contact: Scott D. Rhodes, PhD, MPH, CHES, Department of Social Sciences and Health Policy, Division of Public Health Sciences, Wake Forest University School of Medicine, Medical Center Boulevard, Winston-Salem, NC 27157-1063; e-mail srhodes@wfubmc.edu.

doi: 10.1111/j.1748-0361.2010.00323.x

Abstract

Background: Little is known about access to medicine among immigrant Latinos in the United States (US). This study explored access to, and use of, prescription drugs obtained from nonmedical sources among recently arrived, Spanish-speaking immigrant Latinos in rural North Carolina (NC).

Methods: Our community-based participatory research partnership collected, analyzed, and interpreted data from individual in-depth interviews with Latino community members and rural health service providers. A purposive sample of 30 community members, including traditional healers, religious leaders, transgender Latinos, heterosexual Latino men and women, and Latino gay men, were interviewed to gain emic ("insider") perspectives on use of nonmedical sources of prescription drugs. Six local Latino health service providers also were interviewed to gain etic ("outsider") perspectives on use.

Results: Participants described the roles of *tiendas* (grocers), family, and social networks in accessing treatment advice and prescription drugs. They described health care expectations among immigrants and contingencies for accessing prescription drugs in the US. Prescription medicines (eg, antibiotics, hormones, Viagra, analgesics), injection equipment (eg, syringes), and medical advice were identified as readily available from nonmedical sources.

Conclusions: Increased access to formalized health care and effective health education initiatives are needed to meet the challenges facing immigrant Latinos.

Key words Health education, Hispanic/Latino, immigrant, prescription drugs, rural.

Throughout the past 20 years, employment opportunities have led to rapid increases in Latino immigration to the southeastern United States (US). North Carolina (NC), in particular, has had one of the fastest-growing Latino populations in the US.[1] These immigrant Latinos tend to be young and relatively healthy and have low literacy rates.[2] Most often, immigrant Latinos coming to NC are from southern Mexico and rural communities in Central America where access to formalized health care is limited.[2-4] Research in southern Mexico and Central America also has suggested that pharmaceutical regulations are not uniformly enforced, and many medicines, which require a prescription in the US, are sold without prescription and often without treatment advice and

follow-up.[4-6] Furthermore, individuals within southern Mexico and the Central American countries may rely heavily on family and community leader recommendation, as opposed to physicians, for medical and treatment advice, including which drugs to purchase and how to use them.[4]

Within the US, immigrant Latino communities tend to be politically, socially, and economically disenfranchised.[7] Among southeastern states, Latinos encounter fragmented systems of health care and numerous barriers to services.[2] For example, as recently as 2002, the NC State Department of Health and Human Services (DHHS) was found in violation of title VI of the Civil Rights Act due to linguistic and cultural barriers to health care encountered by Spanish-speaking Latinos.[8] Public health departments and NC DHHS agencies were found to not be providing adequate interpretative and translation services to Latinos. Since 2002, NC DHHS has taken steps to increase access for persons with limited English proficiency. However, publicity over partnerships between local law enforcement and US Immigration and Customs Enforcement, and recent allegations that public health department records have been used in deportation proceedings, have contributed to fears about accessing and distrust of NC health systems among many Latinos.[9,10]

Distrust of the US health care system providers, limited clinic hours, lack of bilingual and bicultural services, and insufficient public transportation also are often-identified barriers to accessing health care for this population.[9,11,12] For Latinos with, and at increased risk for, HIV and sexually transmitted infections (STIs), fear and mistrust may result in not seeking testing and counseling, longer delays in obtaining medical care, and inadequate management of disease.[13-16] Given the multilevel barriers that limit access to and utilization of formalized health care and thus prescription drugs, and prior experiences with health care systems outside of the US that may provide easier access to prescription drugs, some immigrants have reported self-medicating with antibiotics such as penicillin to treat illness.[17] Immigrant Latinos have reported traveling to pharmacies back in their countries of origin for medicines.[18] Some Latinos also have reported obtaining prescription drugs from local nonmedical sources such as *tiendas* (grocers) in the US.[19,20]

Lay health advisors (LHAs) in NC have described staff at *tiendas* as important providers of informational and instrumental social support and identified *tiendas* as common locations to buy difficult-to-find products.[21] Our ongoing research with immigrant Latinos has demonstrated easy access to prescription drugs that may be used for STI treatment (eg, Azithromycin), or that potentially increase risk (eg, Viagra) through *tiendas* and other nonmedical sources.[22] In fact, use of these drugs obtained without a prescription may be widespread; however, there has been little research exploring how immigrant Latinos obtain prescription drugs, their referral networks, or the type and quality of medicines sent from outside the US. This study was designed to explore access to and use of prescription drugs obtained from local nonmedical sources among immigrant Latinos in the southeastern US.

Methods

Setting

Data for this study were collected among 5 rural counties in central NC as defined by Rural-Urban Commuting Area (RUCA) designation.[23] These counties experienced some of the largest Latino population increases during the late 1990s and early 21st century.[24] Latinos comprise the workforce majority in these areas for industries such as poultry processing, textiles manufacturing, and construction. These counties are not identified as Primary Care Health Professional Shortage Areas (HPSAs); free clinics or other safety-net organizations provide health care services for the uninsured in each of these counties and include programs to increase medication affordability (eg, 340B drug pricing discounts).[25]

Community-Based Participatory Research Approach

This study was developed and implemented in partnership with the local Latino community using an iterative and co-learning Community-Based Participatory Research (CBPR) approach with a core group of partners, as previously described.[26] This partnership's capacity for research has increased based on members' active participation in previous studies.[12] Two community-based organizations (CBOs) serving central NC contributed bilingual and multicultural staff, trained in qualitative data collection methods, to administer individual in-depth interviews. We used a purposive snowball sampling method to select participants defined as: Spanish-speaking men and women who reported advising Latino community members on prescription drug use and Latinos who reported using nonmedical sources to obtain prescription drugs.[27] Staff interviewers from a partner CBO selected initial participants based on their deep knowledge of the community. The interviewers elicited participation from 7 categories of participants identified by a CBPR partnership subcommittee as either possessing characteristics or living in circumstances relevant to the use of nonmedical sources of prescription drugs: traditional healers, religious leaders, transgender Latinos, heterosexual Latino men and women, Latino gay men, and local Latino health service providers.

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Individual In-Depth Interviews

In October 2008, participants were recruited to complete a semi-structured interview, guided by an in-depth interview guide.[28] This guide was developed, reviewed, and approved by a subcommittee of the CBPR partnership. It was developed iteratively through literature review; brainstorming potential domains and constructs; and development, review, and revision of potential interview questions and probes. The purpose was to explore access to and use of prescription drugs obtained from local nonmedical sources among predominantly Spanish-speaking Latinos in the rural southeastern US. The final draft was translated into Spanish using a "committee approach" to translation and assessment.[26] This approach to translation uses a committee whose members have diverse skill sets beyond those of a translator. The translation was completed by the translators independently. A committee of individuals with complementary skills met to discuss versions of the translation; a reconciled version of the interview guide was created and reviewed by the adjudicator prior to implementation. This approach addresses weaknesses of traditional translation/back-translation approaches because often independent translators are not sufficiently knowledgeable about the content area, some content area can be linguistically challenging, and a committee of individuals with complementary skills and playing various roles can lead to more comprehensive text translation.

Sample domains, items, and probes in the guide are outlined in Table 1.

Human subject protection and oversight was provided by the Institutional Review Board (IRB) of Wake Forest University Health Sciences. Each interview participant provided informed written consent and was paid $40 for participation.

Table 1 Sample Domains, Items, and Probes From the In-depth Interview Guide

Background
What languages do you speak?
How well do you speak each of them?
Community involvement
Tell me about your role in (or involvement with) Hispanics/Latinos in this community?
Contemporary health issues
What are some reasons Hispanics/Latinos seek medical attention?
Health services for Hispanics/Latinos
Where do most of the Hispanic/Latinos go for health care? How would this be different back home in their countries of origin?
What are some of the challenges Hispanics/Latinos face in getting medicine?
What about medicines for HIV or STIs?
What do people do when they are sick?
What about the roles of people like you in providing health information, advice, and/or treatment?
Accessing and using medicine
When Hispanics/Latinos in this area need medicine, where do you think they go to obtain them?
What happens if someone does not feel better after taking medicine?
What about in your home country? What is health care and medicine like? How does it compare to here?
Harm minimization
What do you think would be good ideas or ways to ensure that Hispanics/Latinos take medicine safely?
Health education
What are Hispanic/Latino community resources specifically?
Conclusions
Do you have anything that you'd like to share with me, like do you have any further thoughts about what we talked about today?

Data Analysis and Interpretation

All interviews were transcribed verbatim. Rather than beginning the inquiry process with a preconceived notion of what was occurring, grounded theory was used, focusing on understanding a wide array of experiences and building understanding on real-world patterns inductively to generate theory that is based in empirical data.[29] Open coding was used to explore, examine, and organize the transcript data into broad conceptual domains.[30] Codes were reviewed and revised to identify common themes.[31] Themes were finalized and interpreted by the authors. In this analysis, we use the terms "domains" and "themes" to organize the findings. Following Spradley,[30] domains refer to topical areas drawn from our data and relevant to our discussion. Within those areas, themes were developed.

Results

Demographics

A total of 39 Latino community members and health service providers were approached and 36 agreed to participate. The mean age was 39.5 (range: 23-64) years. The sample included 20 (56%) men, 14 (39%) women, and 2 (6%) male-to-female transgender participants. Seven men self-identified as gay. Participants included 6 professional health service providers, 2 Christian pastors and 1 Catholic priest, 11 factory and construction workers, 2 traditional healers, and 1 *tienda* owner, among others.

Professional health service providers included 1 physician and 1 pharmacist who reported serving mostly rural Latinos living in NC, 1 Acquired Immune Deficiency Syndrome (AIDS) case manager, 1 domestic violence case manager, 1 medical interpreter who worked for a local

public health department, and 1 community health educator.

One provider participant reported "average" Spanish language ability; the other 35 participants were fluent Spanish speakers and 3 reported also speaking Huastec or another indigenous language. Nearly half the sample, including the domestic violence case manager, reported speaking no English. Twenty-five (69.4%) of the total 36 participants were born in Mexico and 5 (13.9%) in the US; other participants reported being from Cuba, Guatemala, El Salvador, Honduras, and Ecuador. Demographics of participants are presented in Table 2.

Table 2 Participant Characteristics

Characteristic	Participants, No. (%)
Age, mean (range)	39.47 (23-64)
Gender	
Men	20 (56)
Women	14 (39)
Transgender	2 (6)
Work in the United States	
Social service/medical interpreter	4 (11)
Physician/pharmacist	2 (6)
Factory	9 (25)
Domestic/babysitter	4 (11)
Retail /"store"	3 (8)
Priest/pastor	3 (8)
Traditional healer†	2 (6)
Construction	2 (6)
Tienda Owner	1 (3)
Hair stylist	1 (3)
Other*	5 (14)
Education	
No formal education	3 (8)
Primary	5 (14)
Secondary	15 (42)
Post secondary	13 (36)
Birthplace	
Mexico	25 (69)
USA	5 (14)
Cuba	2 (6)
Ecuador	1 (3)
Honduras	1 (3)
El Salvador	1 (3)
Guatemala	1 (3)
Language spoken‡	
Spanish-proficient	35 (97)
Spanish-some	1 (3)
English-proficient	14 (41)
English-some	4 (12)
English-none	16 (47)
Huastec	2 (. . .)
Mixtec, Chinancla, and Mije	1 (. . .)
Zapotec	1 (. . .)

*Other jobs include: cook, nursing student, *Herbalife* distributor, community organizer, retired.
†Both healers reported having other jobs including: fast-food supervisor and business owner; construction and food services.
‡The denominator for English proficiency was 34 because 2 participants were not probed for English ability; percents were not calculated for indigenous languages because many participants were not probed about their ability to speak languages other than English.

Qualitative Themes

Themes that emerged from the analysis are presented within 2 general domains, which include: (1) Nonmedical sources for prescription drugs and (2) Contingencies for accessing prescription drugs among immigrant Latinos in the southeastern US. Domains and their corresponding themes are presented within Table 3.

Nonmedical Sources for Prescription Drugs

Tiendas Commonly Distribute Advice and Medicine

Participants identified local *tiendas* as primary locations where many immigrant Latinos purchase medicines for themselves and their family members, particularly when they assume they know what medicine is needed. Participants also reported that among those who purchase medications in *tiendas*, most would either request a particular brand-name medicine that they have used in the past or ask about what they could buy for a generalized category of illness, such as an "infection." Participants noted that it would be uncommon for an immigrant Latino to describe in detail his or her symptoms to *tienda* staff.

Moreover, participants described *tienda* inventories of medicines as limited and hidden from view, but most *tiendas* were reported to have some type of prescription medicine available for sale. *Tiendas* also were described as responsive to community needs. As a participant remarked, "Basically anything you think you could get in Mexico, you can get here in North Carolina . . . it's not hard at all." However, participants explained that if a customer was not known to or trusted by *tienda* staff, he or she would not be offered or sold prescription medicines or even legal syringes reportedly used for injecting vitamins, hormones, and antibiotics. A participant, who emigrated from Mexico, described being denied a prescription medicine by *tienda* staff because the staff member did not know him.

Whereas some participants characterized *tienda* staff as unwilling and/or unable to offer detailed treatment advice, others described staff as sources of practical guidance including what medicines other customers purchased for what symptoms and which other *tiendas* have specific medicines for sale. Participants even noted that some

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Table 3 Domains and Qualitative Themes

Nonmedical sources for prescription drugs
Tiendas commonly distribute advice and medicine.
Family and social networks provide medicine from countries of origin.
Contingencies for accessing prescription drugs among immigrant Latinos in the southeastern United States
Familiar brand-name medicines are preferred.
Immigrant Latinos have experiences with less-regulated health systems.
Antibiotics are believed to be appropriate for most common illness.
Convenience and price of nonmedical sources and inaccessibility of rural health providers promote the use of nonmedical sources.
Sexual silence delays consultation and treatment.

tienda staff members would take orders for medicines that were not in stock.

Furthermore, participants described *tiendas* as selling prescription medicines by-the-pill, oftentimes without product packaging. They described *tienda* staff as having access to the drug labels and other materials that may be included in the packaging. However, they noted that *tienda* staff infrequently offered this labeling, packaging, or other information, such as dosing instructions and side effects, to the customer.

Family and Social Networks Provide Medicine From Countries of Origin

Participants identified family members and friends in the US and in their countries of origin as primary sources of both treatment advice and prescription medicines. These individuals were described as providing familiar and understandable treatment options and social support during health crises. Participants reported that some Latinos regularly receive medicines in the mail from family and friends living in their countries of origin to have available in case of flu, infection, and other illness.

Participants described mothers or grandmothers in the US and in their countries of origin as primary sources for diagnosis. As a participant remarked, "She [mother] sends the same ones all of the time [such as] naproxen and ampicillin. You use them for the flu, for headaches." Moreover, Latina women were characterized as responsible for obtaining and administering medicines within the family. As a participant noted,

> If you are in the United States and you are a young mother, you call your mother [in your country of origin] and say, "My daughter has so and such." In fact, the mother over there buys the medicine and she mails it here so you have a little stack of emergency medicines and you give that to your children.

Several participants stated that medicines sent from friends or family in their countries of origin could be received in the US within 5-14 days. Participants also reported that medicines are brought across the US border by persons claiming that the medicines are for their own use when, in fact, they may be planning to sell them. A few participants reported that increased customs enforcement periodically reduces the reliability of these networks, particularly injectable medicine such as penicillin.

Furthermore, participants described church congregation members and less commonly, traditional healers (eg, *curanderos* [folk-healers], *hueseros* [bone-setters], and *parteras* [midwives]) and people at *pulgas* (flea markets) as sources of treatment advice and prescription medicine.

Contingencies for Accessing Prescription Drugs Among Immigrant Latinos in the Southeastern US

Familiar Brand-Name Medicines Are Preferred

Participants noted that immigrant Latinos often are familiar with and choose to buy certain brand-name medicines, including types of antibiotics, analgesics, hormones, psychotropic drugs, decongestants, de-worming medicine, and anti-inflammatories. Medicines reported to be commonly purchased from nonmedical sources include prescription-only and over-the-counter medicines typically available in US pharmacies and other locations as well as medicines with brand names or contents that are otherwise inaccessible to US consumers. Among the 12 medicines that were named by participants, 2 are not approved for human use in the US, including Pentrexyl (a brand of ampicillin not approved in the US) and Terramycin (an oral antibiotic approved only for veterinary use in the US). Six are approved for prescription-only use in the US, including Chloromycetin (antibiotic), Viagra (phosphodiesterase type-5 inhibitor), Premarin (conjugated estrogen), Perlutal (estrogen), Depo-Provera (contraceptive injection), and Valium (psychotropic). Over-the-counter medicines included XL-3 and Desenfriol, which are derivatives of decongestant medications, and Flanax (anti-inflammatory) and Naproxen (analgesic).

Immigrant Latinos Have Experiences With Less-Regulated Health Systems

Participants reported being "surprised" by restrictions on antibiotic and other pharmaceutical sales in the US. Participants recalled multiple challenges associated with utilizing health care in their home countries due to limited numbers of providers and the travel required to access

providers, but they stated that prescription drugs were always accessible locally. Furthermore, participants reported that many immigrant Latinos are accustomed to receiving a prescription for medicine during provider visits, thus not receiving a prescription from a US provider when one is expected discourages future utilization of provider services and thus may increase the use of nonmedical sources of prescription medicine. As a father noted, "They told me, 'Just give him fruit juice and he'll be all right.' It was $80 and we lost 2 hours, so they can say, 'The child is fine.'... That is when, unfortunately, they force you to learn, 'What can I give my child?'"

Many participants expressed high self-efficacy related to identifying what medicines to take for themselves and immediate family members. As a participant reported, "You become a little bit of a doctor yourself... so your first child had this symptom, so your second child has the same symptom, and the doctor will prescribe whatever. Why shouldn't the second child have the same medicine if it's the same symptom?" Participants identified potential side effects, such as allergic reactions, from medicines taken from nonmedical sources, but few participants reported negative outcomes.

Antibiotics Are Believed to Be Appropriate for Most Common Illness

Participants reported that most immigrant Latinos have experience purchasing antibiotics without a prescription to treat themselves and family members. Nonmedical sources for antibiotics were often described as the foremost treatment options for immigrant Latinos experiencing sore throat, cough, fever, flu, and other respiratory symptoms. Although over-the-counter medicines (eg, XL-3 and Desenfriol) were also reported to be purchased from nonmedical sources for cough, flu-like symptoms, and other illness, participants reported that antibiotics and analgesics are often used when symptoms are persistent or become more serious. As a participant noted, "I take Pentrexyl or XL-3, which is for the flu... penicillin, when I had a serious lung infection."

Some participants also reported that *tiendas* sold "stronger" antibiotics than the ones dispensed by prescription at US pharmacies. Furthermore, some participants perceived that injections of antibiotics were more effective than capsules as a form of treatment.

Convenience and price of nonmedical sources and inaccessibility of rural health providers promote the use of nonmedical sources. Participants described the process of buying prescription drugs from nonmedical sources as more convenient when compared to waiting several hours at a hospital or several weeks for a provider appointment. Many highlighted the financial practicality of nonmedical sources as alternatives for treating common illness and described feeling compelled to use nonmedical sources in order to avoid unaffordable and unnecessary health care bills. As one participant noted, "If I know I have tonsillitis, I am not going to pay the doctor $40 for a visit and $60 for medicines I can get at a *tienda* for $10."

Most participants described lack of insurance among many immigrant Latinos, lack of awareness and understanding of discounted health programs, lack of transportation, and inability to take time away from work, and high and indeterminate costs of provider services as overriding factors that each contribute to the use of nonmedical sources for prescription drugs. Furthermore, participants, including health care provider participants, described a shortage of qualified bilingual staff among rural providers and an inability to schedule sufficient evening and weekend appointments to meet the scheduling demands of working Latinos. Participants also described the challenges that some Latinos face when they travel to out-of-town hospitals to receive health services and local discount pharmacies then are unable to fill their prescriptions without a co-signing local physician. As one pharmacist remarked, "They can get their medicine [from the academic medical center] and then are not billed immediately... But, we can't give them their medicine because the doctor that ordered the medicine is not one of our providers." Thus, Latinos who have successfully navigated the health care system may still be dissuaded from using formal sources and may obtain needed medicines from nonmedical sources.

Sexual Silence Delays Consultation and Treatment

Participants described how Latino cultural norms may preclude conversations about STI among friends and family members. Fear of stigmatization and embarrassment also prevents immigrant men and women from disclosing potential risks and requesting physical examination of genitalia and STI screening. According to a few participants, obtaining penicillin and creams through nonmedical sources was a primary and preferred option, particularly for Latino men. In fact, participants described how most immigrant Latino men would consider providers as a primary source for STI treatment only after unsuccessful treatment using nonmedical sources. As a participant noted,

> They look and they look for antibiotics. I know of some who have had venereal diseases, and their apparatus almost bursts from waiting so long to get an antibiotic... I have bought it in pills and they cost $28 a box, about $1.00 each.

As a participant explained, "You don't ask another person, 'How do I treat this?' Or, 'Where do I find something that can treat this?' You don't trust or confide in anybody! It's better to find [your own] solutions and not talk about it."

Although the majority of Latina women were described as utilizing birth control from local free clinics and health departments, participants reported that some recently arrived and less-acculturated Latinas utilize nonmedical sources for birth control because they are embarrassed to talk about sex and sexuality. As a participant remarked, "I know they're getting it here [at a *tienda*]... they have the 1-month injections, like the Depo-shot, and they have their friends give it to them."

Furthermore, among transgender Latinos seeking to initiate or maintain gender transition, and Latino men experiencing erectile dysfunction or seeking sexual enhancement, nonmedical sources were described as the "only" way to receive medical treatments (eg, hormones and Viagra). Hormones and Viagra were described as available from nonmedical sources but less consistently than antibiotics and at variable prices, usually several times their price in Mexico. However, these prices were considered by participants to be less than the costs of visiting providers and purchasing the drugs in a US pharmacy, particularly for those who are uninsured. As a transgender participant remarked,

> It's very sensitive... selling hormones like that [at *tiendas*]. It's very difficult, because they are not sold everywhere, and those who sell them, sell them at a high price, but not to just anybody. It has to be to someone they know very well.

Discussion

Our study identified 7 themes related to access to, and use of, nonmedical sources of prescription drugs. These themes identified sources of prescription drugs, including *tiendas* and family and social networks, and contingencies for accessing prescription drugs. Our findings parallel the work of Mainous and colleagues,[32] the only other published study that we are aware of to explore nonmedical sources of prescription drugs within a community-based sample of immigrant Latinos. However, our study utilized CBO staff to identify community "insiders" and included rural health service providers, religious leaders, and other opinion leaders from the community. This study also indentified a wide variety of prescription drugs in addition to antibiotics that are available from nonmedical sources, including contraceptives, psychotropics, and hormones for gender transitioning and maintenance.

Pentrexyl was the most commonly specified medicine. Pentrexyl, an approved brand-name drug in Mexico, is a semi-synthetic derivative of ampicillin. It is approved for use in the US under the name Principen as a generic. Terramycin (generic name: oxytetracycline) is a broad-spectrum antibiotic approved for use in the US as an injection; however, this particular orally administered form of tetracycline is approved in the US for use in animals only. Chloromycetin (generic name: chloramphenicol) is an antibiotic recommended for serious infections secondary to organisms that are resistant to less toxic antibiotics. A US boxed warning states that serious and fatal blood dyscrasias such as aplastic anemia are outcomes that have been noted with both short-term and prolonged use of this medication. Chloramphenicol and tetracyclines are both contraindicated during pregnancy.

In otherwise healthy individuals, side effects of the drugs specified in this study are usually mild; however, each drug poses increased health risk and potentially hazardous side effects when unmonitored, particularly for persons with contraindications. Moreover, sales of prescription medicines by-the-pill without product packaging and trained instruction (as was commonly reported in this study) raise the likelihood of suboptimal treatment and increased drug resistance.

Most participants had not heard of adverse outcomes or reactions and reported no negative personal experiences from using prescription drugs from nonmedical sources. Only 1 participant, who was a provider, identified drugs from nonmedical sources as contributing to antibiotic resistance; however, this contribution may be negligible in the face of worldwide misuse of prescription antibiotics. Future research should examine the prevalence of unmonitored prescription drug use among immigrant Latinos and strategies for risk reduction.

To reduce the risk of using prescription drugs from nonmedical sources, there are at least 3 intervention approaches that may be successful. First, because our data identified *tienda* staff, family members, and other individuals as sources of prescription drugs and other informal health advice within immigrant Latino communities, these trusted individuals could be trained as natural helpers or promoters to facilitate access to formalized health care. They could also help increase the community's understanding of the importance of obtaining their prescription drugs from providers (eg, drug samples) or a regulated pharmacy to ensure pharmaceutical integrity, and third, they could further support the proper use of and adherence to prescription drugs among immigrant Latino communities.

Second, although social marketing strategies focused on decreasing self-medication with antibiotics among immigrant Latinos have been found ineffective,[33] social

marketing that focuses on accessing formalized health care may have potential. Rather than using social marketing messages to teach community members about drug resistance, which may be a complex message, using simpler, culturally congruent messages to facilitate Latinos getting into care may be more effective. These messages may focus on the type of services available and eligibility. For example, many immigrant Latino men, in particular, are unaware of available health services, their eligibility for utilizing services, and the process for accessing services.[9,12,21] After immigrant Latinos are in care, providers can help patients get the prescriptions that they need.

Finally, training may be warranted to increase provider understanding of sociocultural expectations of Latino patients. Providers may need to move beyond simply explaining treatment plans and see themselves as partners with patients who may have a high sense of self-efficacy in self-diagnosis and informal networks that can be utilized to meet health needs.

It is important to note that the use of prescription drugs obtained from nonmedical sources is not unique to the immigrant Latino community. It is well documented that the Internet has facilitated access to medications through online prescription writing and/or filling without an in-person provider visit for those with Internet access.[34] Even online no-prescription websites have proven difficult to control. Furthermore, some individuals may travel to countries outside the US to get access to many medications that require a prescription in the US. Even individuals with insurance find medications less expensive in other countries.[35]

Limitations

Participant selection was based on a nonprobabilistic purposive sample and, therefore, the findings cannot be generalized to all immigrant Latinos. However, for the purposes of formative research, which followed the CBPR approach, the findings from this study identify relevant factors potentially missing in other studies and contextualize environment-behavior interactions. Furthermore, bilingual and multicultural CBO staff may have introduced selection and response biases due to their existing roles in the community. However, these relationships may have facilitated easier access into the community, promoted recruitment and participation, and ensured more candid responses from participants about a highly sensitive health issue.

Conclusions

This study provides insight on access to, and use of, prescription drugs obtained from nonmedical sources among recently arrived, Spanish-speaking immigrant Latinos in rural North Carolina. Clearly, further research is needed to more fully understand the scope of the phenomenon and identify effective intervention approaches that (1) harness community assets (eg, existing social networks and referral patterns) to increase access to formalized health care and adherence to treatment and (2) increase provider capacity to offer culturally congruent services.

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