

Pharmacists' Experiences in and Perceptions Toward Serving the Needs of Spanish-Speaking Patients in North Carolina Community Pharmacies

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ABSTRACT. The objective of this study was to examine pharmacists' experiences in and perceptions toward providing care to Spanish-speaking patients. A survey was sent to 300 randomly selected North Carolina community pharmacists in March of 1998. Pharmacists were asked to provide information on the percentage of their patient population that speaks only Spanish, the services offered to Spanish-speaking patients, their perceptions of the appropriateness of counseling being provided to Spanish-speaking patients, and their interest in learning Spanish. The survey response rate was 48%.

Eighty-three percent of pharmacists reported that 1% or more of the patients they served spoke only Spanish. Fifty-four percent of pharmacists stated their stores provided prescription labels in Spanish, 34% provided written drug information sheets in Spanish, 6% offered over-the-counter products with Spanish labels, and 15% provided auxiliary labels in Spanish. The majority of pharmacists believed that English-speaking patients receive better oral (92%) and written (74%) prescription medication information than Spanish-speaking patients. Multivariate linear regression revealed that white pharmacists, pharmacists who served patient populations with more Spanish-speaking patients, and pharmacists whose stores

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do not provide written medication information in Spanish were significantly more likely to believe that Spanish-speaking patients receive worse written medication information than English-speaking patients. Forty-eight percent of pharmacists stated that Spanish was needed in their practice, and 22% were extremely interested in improving their knowledge of Spanish. Multivariate logistic regression revealed that pharmacist-perceived need for Spanish significantly predicted pharmacist interest in learning Spanish.

Efforts are needed to develop mechanisms to improve care for Spanish-speaking patients in community pharmacies so patients can receive adequate information about their medications. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2003 by The Haworth Press, Inc. All rights reserved.]*

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BACKGROUND

The United States has tremendous ethnic and linguistic diversity which causes difficulties for health care practitioners who are trying to provide adequate health care to the millions of Americans who have limited English proficiency (1, 2). Providing health care to Spanish-speaking Hispanic patients in the United States has become an increasingly important issue because Hispanics will become the largest minority group in the United States early in the twenty-first century (3). It is projected that by the year 2050 Hispanics will comprise 22.5% of the United States population (88.1 million) (4). This is an important area of concern for all of the health professions because it is estimated that 97% of Hispanics speak Spanish with 51% of Hispanics speaking only Spanish (5).

For more than 31 million residents of the United States, the inability to speak the same language as their physicians or other health professionals carries the potential of compromising their access to care and the quality of care that they receive (2). Schur and Albers found that Spanish-speaking Hispanics were less likely to have a usual source of care than English-speaking Hispanics (6). An even more alarming finding is that between 1977 and 1996 the proportion of Hispanic Americans lacking a usual source of health care rose substantially from 19.7%

to 29.6%, whereas whites and African-Americans did not experience significant changes in the probability of having a usual source of care (7). Compared with other Americans, non-English-speaking Americans have fewer primary care visits and receive fewer preventive services (8, 9). Manson found that Spanish-speaking patients cared for by a language discordant physician were more likely to omit medication, more likely to miss office appointments, and slightly more likely to make an emergency room visit (10). This suggests that patient compliance and more cost-effective use of ambulatory services may be associated with the ability of physicians to speak the same language as their patients.

Oral communication is an essential component of effective clinical encounters (8). Language barriers impair the exchange of information between patients and their health care providers (2). More specifically, pharmacist-patient relationships can be dysfunctional when pharmacists and patients do not speak the same language. There are already millions of Spanish-speaking patients patronizing community pharmacies, and very few pharmacists can communicate with them in their own language (11). With the development and marketing of potent prescription medications and increased consumer access to a wide variety of over-the-counter products, the language barrier between pharmacists and Spanish-speaking patients is increasingly more difficult to overcome (12).

When pharmacists and patients do not speak the same language, patients may not be able to tell their pharmacists about drug allergies and/or other health conditions and pharmacists may not be able to adequately educate patients about their medications, which can lead to errors in patient's medication use. For example, in North Carolina, a pharmacist attempted to mix Spanish and English on one label. The pharmacist wrote "Aplicarse once cada dia til rash is clear" (13). "Once" means one time in English and eleven times in Spanish. The patient applied the cream eleven times per day, and the product aggravated the patient's condition (13). In California, a four-month-old child contracted Reye's syndrome and suffered severe neurological damage after his mother, who was literate only in Spanish, gave him aspirin for cold symptoms (14). The over-the-counter product's label was only in English, not English and Spanish.

Even if prescription and over-the-counter medication labels are made available in Spanish, patients may not be able to read them. Results of the 1993 National Adult Literacy Survey found that about one-fourth of the adult population in the United States cannot understand written ma-

terials that require only very basic proficiency in reading (15). Studies have found that Spanish-speaking patients have even higher rates of inadequate or marginal functional health literacy than English-speaking patients (16, 17). In the year 2000, more than one-fourth of Hispanics had less than a ninth-grade education compared with only 4.2% of non-Hispanic whites (18). These statistics illustrate the importance of verbal communication with Hispanics.

Very little research and planning has been conducted to assure that health care professionals are being trained to serve the needs of Hispanic patients. The health professions have tracked and improved the recruitment of minorities, but available data clearly point to an underrepresentation of Hispanics in most of the health professions (19). Hispanic enrollment in pharmacy schools only increased from 3.4% in 1976 to 3.9% in 1997 (20).

Little is known about how pharmacists are providing care to Spanish-speaking patients and whether pharmacists perceive a need for Spanish in their practice. Therefore, the following research questions were addressed:

1. What percentage of patients being served by community pharmacists speak only Spanish?
2. What types of services do community pharmacies provide to Spanish-speaking patients?
3. What factors influence how pharmacists rate the appropriateness of counseling being provided to Spanish-speaking versus English-speaking patients?
4. What factors influence whether pharmacists are extremely interested in improving their knowledge of Spanish?

METHODS

A three-page mail survey was developed by the investigator and pretested on six pharmacists with a community pharmacy background. The results of the pretest were used to revise the survey. The 3-page survey contained 23 questions and asked community pharmacists about the following:

1. The percentage of their patient population that was Spanish-speaking

2. The services that their pharmacies provided for Spanish-speaking patients
3. Their perceptions of the appropriateness of counseling being provided to Spanish-speaking versus English-speaking patients
4. Their perceived need for Spanish in their practice
5. Their interest in learning Spanish
6. Their beliefs about whether pharmacy students should be encouraged to learn Spanish
7. Their demographic characteristics.

The survey was mailed in March of 1998 to 300 randomly selected community pharmacists who were actively practicing in North Carolina. The names and home addresses were provided to the investigator by the North Carolina Board of Pharmacy. Those pharmacists who responded could not be identified in any way. A reminder postcard was sent to all pharmacists two weeks after the original survey was mailed to them. The reminder postcard told the pharmacists whom to contact to receive another copy of the survey if they needed one.

Basic descriptive statistics were calculated using the Statistical Package for the Social Sciences (SPSS/PC+, Version 8.0, SPSS Inc., Chicago, IL). Bivariate statistics were calculated using Pearson correlation coefficients for two continuous variables, *t* tests for a continuous and dichotomous variable, and chi-square statistics for two dichotomous or categorical variables. Next, a multivariate linear regression was conducted to predict what factors influenced pharmacists' perceptions of whether Spanish-speaking patients received better written prescription information than English-speaking patients. A multivariate linear regression that examined what influenced pharmacists' perceptions of whether they believed English-speaking patients received better oral counseling than Spanish-speaking patients was planned, but there was a lack of variation in pharmacists' responses (only two pharmacists disagreed or strongly disagreed with the statement), and the analysis was not performed.

Finally, a multivariate logistic regression was conducted to examine how pharmacist age, gender, ethnicity, rural or urban practice setting, percentage of patients served who speak only Spanish, whether the pharmacist had ever learned any Spanish, and a pharmacist's perceived need for Spanish in his or her practice influenced whether pharmacists were extremely interested in improving their knowledge of Spanish.

RESULTS

Out of the 300 surveys sent, one pharmacist returned the survey and stated that he was no longer practicing pharmacy. A total of 144 surveys were returned out of 299 potential respondents for a response rate of 48%. Table 1 presents the pharmacists' characteristics. Forty-five percent of the responding pharmacists were female, and approximately 90% of the pharmacist sample was white. Pharmacists ranged in age from 24 years to 79 years (mean age = 42.66, standard deviation =

TABLE 1. Pharmacists' Characteristics (N = 144).

Variable	Percent (N)
Gender	
male	50.3 (72)
female	45.5 (65)
missing	4.2 (6)
Race	
White	89.5 (128)
Asian-American	2.8 (4)
African-American	1.4 (2)
Native American	0.7 (1)
Arab American	0.7 (1)
missing	2.1 (3)
Age	
24-40	39.6 (57)
41-50	31.3 (45)
51-64	17.4 (25)
65 or older	5.6 (8)
missing	6.3 (9)
Location of practice	
rural	40.6 (58)
urban	56.6 (81)
missing	2.8 (4)
Ever take any Spanish courses	
yes	54.9 (79)
no	43.1 (62)
missing	2.1 (30)

Variable	Percent (N)
Extent of Spanish knowledge	
don't know any	44.8 (64)
know a few words	49.7 (71)
fairly fluent	4.2 (6)
missing	1.4 (2)
Spanish needed in practice	
yes	47.6 (68)
no	50.3 (72)
missing	2.1 (3)
Percentage of patients served who speak only Spanish	
0	16.0 (23)
1-2	59.7 (86)
3-4	16.7 (24)
greater than 5	6.9 (10)
missing	0.7 (1)
Percentage of Spanish-speaking patients who bring an interpreter	
don't bring interpreters	41.0 (59)
bring interpreters	55.6 (80)
missing	3.5 (5)

12.62). Fifty-five percent of the pharmacists classified themselves as working in urban areas.

Approximately 60% of pharmacists reported that 1% to 2% of the patients they served spoke only Spanish. The pharmacists also stated that approximately 55% of the Spanish-speaking patients bring interpreters with them to the pharmacy. Over 50% of the time, the interpreters the patients bring with them are children.

Forty-three percent of pharmacists had never learned any Spanish. Of those pharmacists who had previously learned Spanish, 77% had taken Spanish in high school, 24% had learned from family, and 24% used self-study books, tapes, and/or computer courses to learn Spanish. The methods of learning Spanish categories were not mutually exclusive because pharmacists could have reported learning Spanish from a variety of sources. Four percent of the pharmacists stated that they were fairly fluent in Spanish, 49.7% stated that they knew a few words, and 44.8% stated that they knew no Spanish. Close to 48% of pharmacists perceived a need for Spanish in their practice setting. Twenty-two per-

cent stated that they were extremely interested in improving their Spanish, 52% were somewhat interested, and 23% were not interested.

When asked how they interact with Spanish-speaking patients, 66% of pharmacists stated that they communicate nonverbally, 11.1% stated that they speak Spanish with the patient, 16.7% refer the patient to a Spanish-speaking employee, and 30.5% write directions in Spanish.

Table 2 presents the types of services that the community pharmacies in which the responding pharmacists work offer to Spanish-speaking patients. The service most frequently offered by the pharmacies is providing prescription labels in Spanish, and the service least frequently offered is providing over-the-counter products with Spanish labels.

Table 3 displays pharmacist perceptions of the appropriateness of counseling being provided to Spanish-speaking patients in North Carolina. The majority of pharmacists perceived that English-speaking patients received better oral medication counseling, better written prescription information, and better advice on over-the-counter medications than Spanish-speaking patients. Approximately half of the responding pharmacists believed that pharmacists need better training on how to provide care to Hispanic patients. When asked whether they believed that Hispanics would be the largest minority group in the United States by

TABLE 2. Services Offered to Spanish-Speaking Patients ($N = 144$).

Variable	Percent (N)
Provide prescription labels in Spanish	
yes	54.2 (78)
no	45.1 (65)
missing	0.7 (1)
Provide written drug information leaflets in Spanish	
yes	34.7 (50)
no	64.6 (93)
missing	0.7 (1)
Provide over-the-counter products with Spanish labels	
yes	6.3 (9)
no	93.1 (134)
missing	0.7 (1)
Provide auxiliary labels in Spanish	
yes	15.3 (22)
no	84.0 (121)
missing	0.7 (1)

TABLE 3. Pharmacists' Perceptions of the Appropriateness of Counseling Being Provided to Spanish-Speaking Patients in North Carolina Community Pharmacies ($N = 144$).

Variable	Percent (N)
English-speaking patients receive better oral prescription medication counseling than Spanish-speaking patients	
strongly agree	43.8 (63)
agree	47.9 (69)
unsure	5.6 (8)
disagree	0.7 (1)
strongly disagree	0.7 (1)
English-speaking patients receive better written prescription medication information than Spanish-speaking patients	
strongly agree	29.9 (43)
agree	44.4 (64)
unsure	12.5 (18)
disagree	9.0 (13)
strongly disagree	2.8 (4)
English-speaking patients receive better advice on over-the-counter medications than Spanish-speaking patients	
strongly agree	14.6 (21)
agree	38.9 (56)
unsure	41.7 (60)
disagree	0.0
strongly disagree	2.8 (4)
Pharmacists need to be trained on how to provide care to Spanish-speaking patients	
strongly agree	14.6 (21)
agree	38.9 (56)
unsure	41.7 (60)
disagree	0.0
strongly disagree	2.8 (4)

the year 2030, 53.5% of the pharmacists agreed, 41.7% were unsure, and 2.8% disagreed.

Table 4 presents the regression equation predicting whether pharmacists believe that English-speaking patients receive better written prescription information than Spanish-speaking patients. White pharmacists and pharmacists who served patient populations with more Spanish-speakers were more likely to believe that English-speaking patients received better written information than Spanish-speaking patients. Pharmacists who worked in settings that provided written drug information sheets in Spanish were less likely to believe that English-speaking patients received better written drug information than Spanish-speaking patients.

Table 5 presents the regression predicting whether pharmacists were extremely interested in improving their knowledge of Spanish. It is interesting that a pharmacist's perceived need for Spanish in his or her practice setting was a predictor of whether a pharmacist was extremely interested in learning Spanish while the percentage of Spanish-speaking patients served was not.

TABLE 4. Final Regression Equation Predicting Whether Pharmacists Perceive That English-Speaking Patients Receive Better Written Prescription Information Than Spanish-Speaking Patients ($N = 127$).

Variable	Beta
Age—older	0.10
Non-white ethnicity	-0.278**
Female gender	0.065
Percentage of patients who speak only Spanish	0.245**
Never taken Spanish courses	0.005
Practice in an urban area	0.10
Provide auxiliary labels in Spanish	-0.032
Provide prescription labels in Spanish	-0.074
Provide written prescription information leaflets in Spanish	-0.422***

R^2 0.279

Adj. R^2 0.224

** $p < 0.01$, *** $p < 0.001$

TABLE 5. Final Multivariate Logistic Regression Predicting Whether Pharmacists Were Extremely Interested in Improving Their Knowledge of Spanish ($N = 124$).

Variable	Odds Ratio	95% Confidence Interval
Age—older	0.99	(0.94, 1.05)
Gender—female	1.71	(0.41, 7.22)
Never learned any Spanish	0.74	(0.26, 2.12)
Ethnicity—non-white	2.58	(0.36, 18.73)
Rural or urban practice setting	1.90	(0.63, 5.74)
Percentage of patients who speak only Spanish		
reference group = 0		
1-2	3.2	(0.22, 46.6)
3-5	1.27	(0.20, 8.13)
> % 5	1.68	(0.22, 12.72)
Need Spanish in practice	18.31***	(3.63, 92.39)

Cox and Snell $R^2 = 0.20$

*** $p < .001$

Sixty-seven percent of pharmacists stated that schools of pharmacy could offer telelecture courses so that pharmacists could improve their knowledge of Spanish, 65% felt that self-study courses could be offered, 34% stated that Internet courses could be offered, 19% believed that courses could be offered on campus, and 6% felt that information on study abroad programs could be provided to pharmacists. Twenty-eight percent of pharmacists felt that Spanish should be part of the curriculum of pharmacy schools, and 75% of pharmacists believed that pharmacy students should be encouraged to take Spanish as an elective.

DISCUSSION

Eighty-four percent of the responding pharmacists served at least some Spanish-speaking patients in their community pharmacies. However, only one-third of pharmacists stated that their pharmacies provide written drug information in Spanish, slightly more than one-half pro-

vide prescription labels in Spanish, 15.3% provide auxiliary labels in Spanish, and 6.3% provide over-the-counter products with Spanish labels. One of the first steps that could be taken to improve care for Spanish-speaking patients would be for more community pharmacies to provide prescription labels, auxiliary labels, and drug information leaflets in Spanish. If pharmacies provided these services, Spanish-speaking patients could at least receive some written medication information in Spanish if no pharmacy employee could orally communicate with them in Spanish. However, many Hispanic individuals may be unable to read and comprehend written medication information because of inadequate or marginal functional health literacy (16, 17). This illustrates the need for verbal communication between pharmacists and Spanish-speaking patients.

Pharmacists reported that a large percentage of Spanish-speaking patients bring interpreters with them to the community pharmacies. Over half of the time the interpreters are children. The use of Spanish-speaking interpreters is positive because they relay/translate some educational information, but it is also negative because pharmacists cannot be sure that the interpreters relay the appropriate educational information to patients, especially if the interpreter is a child. Ad hoc interpreters, particularly family or friends, can undermine patient confidentiality (2). Several studies have also shown that ad hoc interpretation results in frequent errors in interpretation (1). Also, using children can expose them to sensitive information and invert traditional family dynamics (2, 21).

An alternative to using ad hoc interpreters is the 24-hour telephone language interpreter service, the ATT Language Line, which is available in all major languages. This service might be especially useful to pharmacists practicing in areas where there are no bilingual health care providers. However, a major drawback of this service is that it is expensive (2).

Another alternative to using ad hoc interpreters is training pharmacists to speak Spanish. Twenty-two percent of pharmacists were extremely interested in improving their knowledge of Spanish, and another 52% were somewhat interested. The majority of pharmacists believed that the best ways that schools of pharmacy could offer Spanish for pharmacists would be through telelecture, self-study, and Internet courses. Schools of pharmacy could work with Spanish departments to make pharmacists aware of available courses.

Another important finding was that 28% of pharmacists felt that Spanish should be part of the curriculum of pharmacy schools and 75% of pharmacists believed that pharmacy students should be encouraged

to take Spanish as an elective. In addition to encouraging students to take Spanish, schools of pharmacy could also attempt to actively recruit more Hispanic and/or Spanish-speaking individuals into their programs.

Although this study was conducted in North Carolina, where in 1997, 2% of the population was Hispanic, just 14 other states in the United States had a smaller percentage of Hispanics in 1997 (22). Therefore, the issue of providing better care to Spanish-speaking patients is an important one in many states. Community pharmacies need to devise better systems of providing care to Spanish-speaking patients. Chain and managed care pharmacies, especially, may have the resources to coordinate pharmaceutical care services for Hispanic patients because they have corporate structures that could facilitate services across stores. Also, the profession of pharmacy needs to better educate pharmacists about how to meet the needs of Spanish-speaking patients. Courses in pharmacy schools need to emphasize the importance of understanding the cultural and social background of Hispanic patients in addition to their language. The Hispanic culture has many unique values such as *familialism*, *simpatia*, and *respeto* that pharmacists need to be aware of when interacting with Hispanic patients (23).

One limitation of the study is that we surveyed 300 pharmacists and only 144 responded. However, the findings from this study provide new information that can be used to develop larger studies in this area. Another limitation is that we did not send a second mailing of the questionnaire to pharmacists. However, we did send a reminder postcard to pharmacists that told them how to contact us if they wanted another copy of the survey. A third limitation is that we did not know whether pharmacists practiced in chain or independent pharmacies, which could possibly influence the extent to which pharmacists' practice settings provided care to Spanish-speaking patients. A fourth limitation of the study is that the pharmacists' perceptions and experiences with Spanish-speaking patients are based upon their memories and are therefore subject to recall bias. Future research should examine Spanish-speaking patients' perceptions and experiences in receiving care in community pharmacies.

The study was also limited in that it was carried out only in North Carolina, where Hispanics make up less than 2% of the population. However, the results are important because they demonstrate that even in a state with a small Hispanic population, many pharmacists believe that they need to better serve Spanish-speaking patients in their practices. Future research is needed to examine the influences of culture,

ethnicity, and language on Hispanic patients' receipt of pharmaceutical services in community pharmacies.

CONCLUSION

The majority of pharmacists responding to the survey indicated that they wanted to improve their knowledge of Spanish, and nearly half indicated that there was a need to know Spanish in their practice settings. Efforts are needed to develop mechanisms to improve care for Spanish-speaking patients in community pharmacies so that patients can receive adequate information about their medications.

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