

Original Research

Patient experience with clinical pharmacist services in Travis County Federally Qualified Health Centers

Jennifer SHIN , Leticia R. MOCZYGEMBA , Jamie C. BARNER , Aida GARZA ,

Sara LINEDECKER-SMITH , Maaya SRINIVASA .

Received (first version): 23-Nov-2019

Accepted: 13-Apr-2020

Published online: 23-Apr-2020

Abstract

Background: Positive patient experiences with care have been linked to improved health outcomes. Patient experience surveys can provide feedback about the level of patient-centered care provided by clinical pharmacists and information about how to improve services.

Objectives: Study objectives are: 1) To describe patient experience with clinical pharmacist services in a federally qualified health center (FQHC). 2) To determine if demographic or health-related factors were associated with patient experience.

Methods: This cross-sectional survey included adult patients who were English or Spanish speaking, and completed a clinical pharmacist visit in March or April 2018. Patient experience was evaluated, on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), with 10 items using four domains: pharmacist-patient interaction information provision, support for self-care, and involvement in decision making. In addition, one item was used to rate the overall experience. Demographic and health-related variables were also collected. Eligible patients completed the survey after their clinical pharmacist visit. Descriptive and inferential statistics, as well as Cronbach's alpha for scale reliability, were employed.

Results: Respondents (N=99) were 55.4 (SD=12.1) years and 53.1% were women. Overall, patients rated their experiences very high with the 10-item scale score of 4.8 (SD=0.4) out of 5 points and the overall experience rating of 4.9 (SD=0.4) out of 5 points. With the exception of race, there were no differences between patient experience and demographic and health-related variables. African Americans had significantly ($p=0.0466$) higher patient experience scores compared to Hispanics.

Conclusions: Patients receiving care in a FQHC highly rated their experience with clinical pharmacists. This indicates that clinical pharmacists provided a high level of patient-centered care to a diverse group.

Keywords

Attitude to Health; Patient Satisfaction; Self Care; Pharmacists; Patient-Centered Care; Ethnic Groups; Cross-Sectional Studies; Texas

INTRODUCTION

Although patient satisfaction has been evaluated and studied for some time, it was not linked to quality measures until the 2000s. In 2001, patient-centered care was considered when assessing the quality of the patient's experience with health care services.¹ According to the Agency for Healthcare Research and Quality, "patient experience includes several aspects of health care delivery that patients value highly when they seek and receive care, such as getting timely appointments, easy access to information, and good communication with health care providers".² Patient satisfaction and patient experience differ in that satisfaction measures a patient's expectations, whereas experience measures whether or not care

processes that were supposed to happen occurred.^{2,3} Considering these definitions, this means that patient experience is more objective (i.e., did something happen or not) than patient satisfaction which can be subjective and vary according to patient expectations for a particular service.^{2,3} In prior pharmacy literature, most patient satisfaction studies examined elements of patient experience, although this was not differentiated from satisfaction.⁴⁻⁹ This is not surprising since the terms satisfaction and experience are commonly interchanged.^{2,3} For descriptive studies, satisfaction with pharmacist care tends to be high with ratings near the high end of a scale across care settings, including inpatient and community pharmacist services as well as pharmacist services delivered via the telephone.^{5,6,10,11} A systematic review of pharmacist services included 41 studies that measured patient satisfaction and found that satisfaction with care was higher when pharmacists were involved compared to when they were not in half of the studies.⁴

Clinical pharmacists in ambulatory care settings specialize in chronic disease management and when collaborative practice agreements are in place, clinical pharmacists' roles typically allow for initiating new prescriptions, changing or discontinuing medications, and providing comprehensive medication reviews. Studies have shown positive clinical outcomes for chronic diseases when ambulatory care pharmacist-led management is involved.^{4,6,11} Less has been reported about patient experience with clinical pharmacist services in an ambulatory care setting. However, there have been reports of satisfaction with pharmacist

Jennifer SHIN. PharmD. Clinical Pharmacist Specialist. Memorial Hermann-Texas Medical Center. Houston, TX (United States). jennifer.shin@memorialhermann.org

Leticia R. MOCZYGEMBA. PharmD, PhD. Associate Professor. Health Outcomes Division, College of Pharmacy, University of Texas. Austin, TX (United States). lrmozzygamba@austin.utexas.edu

Jamie C. BARNER. PhD. Professor and Division Head. Health Outcomes Division, College of Pharmacy, University of Texas. Austin, TX (United States). jbarnera@austin.utexas.edu

Aida GARZA. PharmD, CDE, BCACP. Associate Pharmacy Director, Pharmacy Residency Program Director. CommUnityCare Health Centers. Austin, TX (United States). Aida.Garza@communitycaretx.org

Sara LINEDECKER-SMITH. PharmD, BCACP. Clinical Pharmacist. CommUnityCare Health Centers. Austin, TX (United States). Sara.Linedecker-Smith@communitycaretx.org

Maaya SRINIVASA. PharmD, BCACP, CDE. Clinical Pharmacist. CommUnityCare Health Centers. Austin, TX (United States). Maaya.Srinivasa@communitycaretx.org

management of specific conditions such as hepatitis C virus (HCV) treatment and rheumatoid conditions.^{7,9} In a US urban academic medical center hepatology outpatient clinic, 24 participants indicated the highest possible level of overall satisfaction (i.e., great) and similar ratings occurred for questions related to pharmacist education about the HCV infection, medication administration and storage, and medication adherence.⁷ In an outpatient rheumatology clinic in Canada, overall scores across six care dimensions were significantly higher with a pharmacist-physician team vs. physician alone (4.6, SD=0.4 vs. 4.3, SD=0.4 on a 5-point scale).⁹

Despite the fact that pharmacists have a track record of being a member of care teams at federally-qualified health centers (FQHCs), little is known about patients' perceptions of clinical pharmacist care in this setting.¹²⁻¹⁵ Patients served by a FQHC tend to be complex, often have multiple uncontrolled chronic conditions and are uninsured or underinsured, which means that tailoring care experiences is important for achieving optimal outcomes. At CommUnityCare Health Centers, which are FQHCs in Central Texas, clinical pharmacist appointment-based visits are focused on ensuring medication regimens are individualized to meet the patient's needs. In addition to medication reviews, patients receive medication and adherence counseling, as well as disease state education. Collaborative practice agreements guide medication management for the following conditions: diabetes, hypertension, hyperlipidemia, anticoagulation, heart failure, chronic obstructive asthma, pulmonary disease, primary hypothyroidism, gout, obesity, smoking cessation, depression, osteoporosis, and rheumatoid arthritis. CommUnityCare administrators were interested in assessing patient experience with clinical pharmacists to assess quality of care and identify opportunities to improve clinical pharmacist services as part of ongoing quality improvement monitoring. This study adds to the literature by assessing 4 components of patient experience (pharmacist-patient interactions, information provision, support for self-care, and involvement in decisions) with clinical pharmacist care in an ambulatory care setting in a diverse patient group. The study's objectives were to describe patient experience with clinical pharmacist services in a FQHC setting and to determine if demographic or health-related factors were related to patient experience.

METHODS

Study design and sample

A cross-sectional design was used to address the study objectives. The study sites included ten FQHCs in Travis County, Texas. FQHCs are funded by the United States Health Resources and Services Administration Health Center Program and provide health care for medically underserved areas using a sliding scale fee based on income levels.¹⁶ Patients were included if they were >18 years old, completed a clinical pharmacist appointment in March or April 2018, and were English or Spanish speaking. To avoid confounding of the results, patients were excluded if they were seen during a co-visit, which included both the clinical pharmacist and physician.

Survey instrument

The primary outcome was patient experience and survey questions were developed utilizing previously validated surveys and adapted to align with the clinical pharmacist services provided at CommUnityCare Health Centers.^{3,17-19} The Oxford Patient Involvement and Experience Scale was used as a guide for determining relevant patient experience domains, which included pharmacist-patient interactions (3 questions), information provision (5 questions), support for self-care (1 question) and involvement in decisions (1 question).¹⁸ These 10 items were measured using a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Domain mean scores and an overall mean score comprised of all 10 items were calculated. One additional item, measured on a 5-point scale anchored by 1=very poor to 5=excellent, was used to rate the overall patient experience. In addition to patient experience, demographic (age, gender and race) and health-related variables were measured (number of clinical pharmacist visits in last six months, self-reported health status, and type of health conditions). Prior to survey administration, survey items were assessed for content validity by clinical

Variables	Mean, SD N (%) ^b
Demographics	
Age in years (n = 92)	55.4, SD=12.1
Gender	
Women	52 (53.1)
Men	46 (46.9)
Total	98 (100.0)
Race/Ethnicity	
Asian	1 (1.0)
Black	13 (13.3)
Hispanic	62 (63.3)
White	22 (22.5)
Total	98 (100.1)
Health-Related Information	
Number of clinical pharmacist visits	
1-2 visits	32 (33.0)
3-5 visits	41 (42.3)
6 or more	24 (24.7)
Total	97 (100.0)
Self-rated health	
1 = Poor	2 (2.1)
2 = Fair	37 (38.1)
3 = Good	33 (34.0)
4 = Very Good	16 (16.5)
5 = Excellent	9 (9.3)
Total	97 (100.0)
Presence of chronic diseases ^b	
Diabetes mellitus	76 (77.6)
Depression	11 (11.2)
Hypertension	56 (57.1)
Hypercholesterolemia	41 (41.8)
Hypothyroidism	7 (7.1)
Other ^c	16 (16.3)

^aNot all respondents answered each question
^bMay not total to 100.0 due to rounding or if multiple responses were allowed
^cOther reported health conditions where N≤3: Atrial fibrillation, arthritis, asthma, coronary artery disease, congestive heart failure, cancer, end stage renal disease, Factor 5 Leiden thrombophilia, human immunodeficiency virus, herniated disc, obstructive sleep apnea, venous thromboembolism
SD = standard deviation

Table 2. Means of Patient Experience Scale Items (N=99)

Items	Mean, SD
Pharmacist-patient interactions ^a	
My clinical pharmacist listens to my health concerns.	4.8, SD=0.4
My clinical pharmacist adequately answers my questions.	4.8, SD=0.4
My clinical pharmacist explains things in a way that I am able to understand.	4.8, SD=0.4
Domain Mean	4.8, SD=0.4
Information provision ^a	
Appointments with my clinical pharmacist have increased my understanding of what my medications are used for.	4.7, SD=0.5
My clinical pharmacist is able to help me understand how to take my medications.	4.8, SD=0.5
My clinical pharmacist makes sure my medication list is up-to-date.	4.8, SD=0.4
My clinical pharmacist provides useful information on helping me improve my health condition(s).	4.8, SD=0.4
My clinical pharmacist is able to provide explanations of my health condition(s) in a way that I am able to understand.	4.8, SD=0.5
Domain Mean	4.8, SD=0.4
Support for self-care ^a	
At the end of my appointment my clinical pharmacist reviews what we talked about and tells me what is important.	4.8, SD=0.4
Involvement in decisions ^a	
My clinical pharmacy appointments have positively affected my decision to remain a patient at CommUnityCare.	4.8, SD=0.4
Overall Total Scale	4.8, SD=0.4
Cronbach's Alpha	0.96
Overall rating of clinical pharmacist services ^b	4.9, SD=0.3
^a 1=strongly disagree, 2= disagree, 3 = neutral, 4 = agree, 5=strongly agree	
^b 1=very poor, 2= poor, 3 = good, 4 = very good, 5=excellent	
SD = standard deviation	

pharmacists at each site. Pharmacist researchers with expertise in pharmacist services and survey design also assessed face and content validity of the survey. The survey was translated to Spanish by trained translators, back translated to English and re-reviewed for consistency. See Appendix A for the survey instrument.

Data collection and analysis

Upon completion of the clinical pharmacist visit, eligible patients were asked if they were interested in completing an anonymous patient experience survey. If they agreed, patients were handed a cover letter and survey in their preferred language (Spanish or English). Clinical pharmacists read out loud a script which described the survey purpose (i.e., to get feedback about and improve pharmacist services), directions, and privacy procedures. The patients then completed surveys in a designated area in the clinic, but away from their clinical pharmacist, and surveys were inserted into a sealed box. Data were collected from March to April 2018. Descriptive (means, standard deviations, frequencies, and percentages) and inferential statistics (analysis of variance (ANOVA)) were used to address the study objectives. Cronbach's alpha was utilized to measure scale reliability. The study was approved by the University of Texas at Austin Institutional Review Board.

RESULTS

From the convenience sample, a total of 99 patients completed the surveys. About half of the participants were women (53.1%), and the majority were Hispanic (63.3%). The mean age was 55.4 (SD=12.1) years. One-third of participants had 1 – 2 clinical pharmacist visits in the last 6 months, 42.3% had 3 – 5 clinical pharmacist visits, and 24.7% had 6 or more visits. Thirty-eight percent self-rated their health as fair and 34.0% rated their health as good. Diabetes, hypertension, and hypercholesterolemia were the most common chronic conditions with 77.6%, 57.1%, and 41.8% of participants reporting the presence of these

conditions, respectively. Table 1 provides more detail regarding demographic and health-related information.

The overall 10-item scale score was 4.8, SD=0.4 (1 = strongly disagree to 5 = strongly agree) and the 1-item overall rating score was 4.9, SD=0.3 (1 = very poor to 5 = excellent). The 4 domains (pharmacist-patient interactions, information provision, support for self-care, and involvement in decisions) each had a mean score of 4.8, SD=0.4. These results show that patients were highly satisfied with their patient experience related to the clinical pharmacist visit. Reliability for the 10-item scale resulted in a Cronbach's alpha score of 0.96, which is deemed excellent. Table 2 summarizes the mean for each item and provides summary data and Figure 1 shows frequencies of responses for each item. None of the respondents selected "strongly disagree" or "disagree" for any of the items and the majority of responses were either "agree" or "strongly agree".

When examining the relationship between patient experience and demographic and health-related variables, ANOVA showed a significant difference in patient experience (mean, SD) and race/ethnicity (F=3.17, p=0.0466). Duncan's post-hoc test revealed that African Americans (5.0, SD=0.1) had significantly higher patient experience scores compared to Hispanics (4.7, SD=0.4); while there was no difference between whites (4.9, SD=0.3) and Hispanics nor whites and African Americans. No other demographic or health-related factors were significantly different.

DISCUSSION

Patients receiving care in a FQHC highly rated their experience with the clinical pharmacist visit, with high individual domain and overall scores. The lack of significant findings for the relationship between patient experience and most demographic and health-related factors indicates that clinical pharmacists consistently provided a positive care experience, regardless of demographic or health-related characteristics. Although, African Americans had a

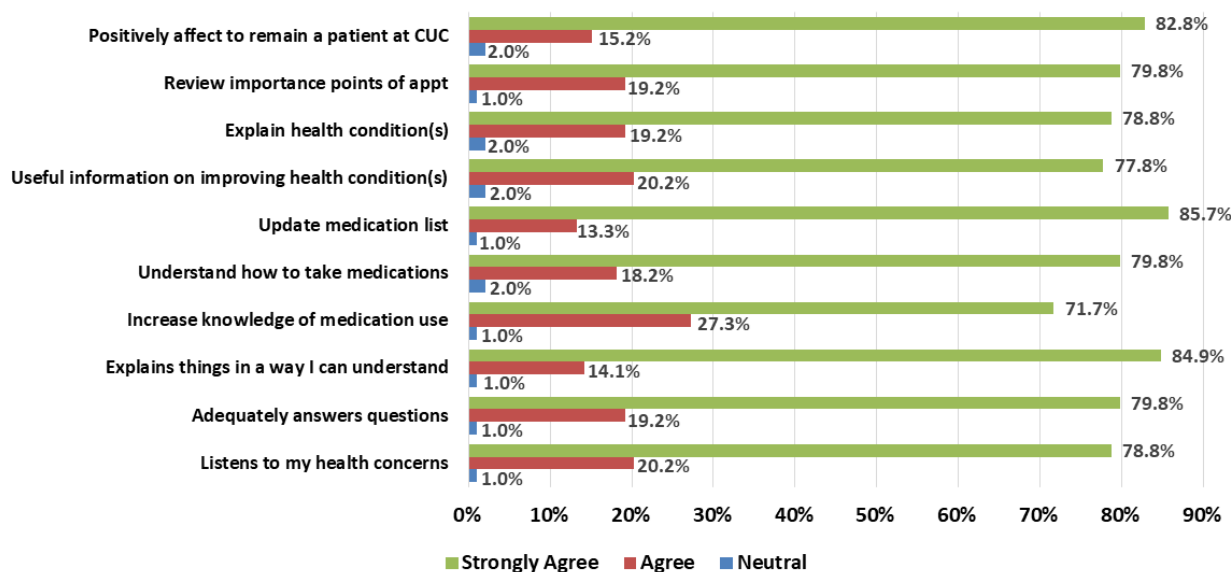


Figure 1. Frequency responses for 10-item patient experience scale (N=99)

significantly higher overall patient experience score when compared to Hispanics (5.0, SD=0.1 vs. 4.7, SD=0.1). The reason for this is not known but it may be due to language or cultural barriers that are not fully addressed in the clinical pharmacist visit. A previous study at CommUnityCare found that Spanish-speaking patients (n=101) reported a relatively high mean score of 3.6, SD=0.5 out of 4 points for their satisfaction with pharmacist communication and 3.6, SD=0.5 out of 4 points for their demonstration of cultural sensitivity.¹⁷ Spanish-speaking clinical pharmacists are available at CommUnityCare, but it is possible that not all patients in the current study had access to one at their visit and had to use an interpreter instead, which may have impacted their experience. The Spanish speaking ability of clinical pharmacists was not collected on this survey, and is therefore unknown.

This study is one of the first to collect information on patient experience with clinical pharmacist services in a FQHC. Additionally, the participants were comprised primarily (63%) of Hispanic patients, which provides unique insight into this group. Patients in other studies in outpatient settings such as HCV, rheumatology, and Medicare annual wellness visit clinics also highly rated elements of patient experience and overall satisfaction with pharmacist services.⁷⁻⁹ This study focused on patients that can be complex to manage and often require tailoring services to help patients meet treatment goals. The fact experience scores were so high indicates that clinical pharmacists were addressing important aspects of patient-centered care such as clear communication, provision of information for shared-decision making, and support for self-management of medications.^{18,20} This is important because patient experience is now being used by health care payers as a quality measure and linked with payment for patient outcomes. While patient experience is commonly measured for physicians in outpatient settings, pharmacists in outpatient settings may not be routinely evaluated. Thus, pharmacists in these settings should be proactive in requesting patient experience surveys at least annually to obtain objective feedback from patients.

At CommUnityCare Health Centers, the standard of care for clinical pharmacist appointments aligns with the domains contributing to patient experience. The pharmacist-patient interaction encompasses listening and answering questions and addressing health concerns adequately for the patient. The information provisions domain primarily relates to the patient's understanding of their medications and disease state. For a condition such as diabetes, clinical pharmacists assess patient knowledge about diabetes and will then provide handouts about diabetes, hypoglycemia, and adherence to medications based upon the level of understanding of the patient. Involvement in decisions and support ensures patients understand the important discussions during the appointment so patients return to follow-up appointments ready to progress forward in the health condition(s). To reinforce key discussion points, appointments are concluded with a patient plan for patients to take home with them. Therefore, it is not a surprise that the results were positive, considering the current clinical pharmacist practice model has been developed to focus on patient experience. The study findings validate that an intentional approach to patient-centered care can result in a quality patient experience. The information provisions domain had a mean rating that was similar to the other domains. However, when examining individual questions, an opportunity to improve patient understanding about what medications are used for was evident given this item had the lowest percentage of "strongly agree" responses (see Figure 1). One strategy to address this is to include the purpose of each medication in the care plan that is given to each patient at the end of the visit.

Limitations

This study had several limitations that require consideration. First, a convenience sample was used, which means that only patients who had visits during the study period were invited to participate. Also, some patients were not able to participate due to transportation issues, inability to read, or having another doctor's appointment

after the clinical pharmacist visit. Finally, no information was collected about patients who chose not to participate, so we do not know if they differed from those who participated. All of these issues likely resulted in selection bias. Also, surveys were completed at ten clinics and multiple clinical pharmacists provided care which had the potential to bias findings based upon clinic characteristics or variations in clinical pharmacist delivered care. However, the impact on survey results was considered to be negligible based upon the upper range of responses (mostly 4s and 5s) for each question. One reason for this may be because CommUnityCare clinical pharmacists use the same care process in each clinic and practice using collaborative practice agreements. Generalizability of study findings may also be limited to other FQHCs or safety-net settings that have an embedded pharmacist model.

CONCLUSIONS

Patients indicated that care from clinical pharmacists in a FQHC resulted in a positive patient experience across four domains. An opportunity to improve patient understanding of what medications are used for exists in the information provisions domain. Patient experience should be regularly assessed, at a minimum annually, to ensure patients are having positive care experiences and to identify opportunities for improvement.

CONFLICT OF INTEREST

None declared.

FUNDING

None.

References

1. Cleary PD. Evolving Concepts of Patient-Centered Care and the Assessment of Patient Care Experiences: Optimism and Opposition. *J Health Polit Policy Law*. 2016;41(4):675-696. <https://doi.org/10.1215/03616878-3620881>
2. Agency for Healthcare Research and Quality. What Is Patient Experience?. Available at: <http://www.ahrq.gov/cahps/about-cahps/patient-experience/index.html> (accessed June 30, 2019).
3. Heath S. What is different between patient experience, satisfaction? Patient Satisfaction News. July 2017. Available at: <https://patientengagementhit.com/news/what-is-different-between-patient-experience-satisfaction> (accessed June 30, 2019).
4. Chisholm-Burns MA, Lee JK, Spivey CA, Slack M, Herrier RN, Hall-Lipsy E, Graff Zivin J, Abraham I, Palmer J, Martin JR, Kramer SS, Wunz T. US pharmacists' effect as team members on patient care: Systematic review and meta-analyses. *Med Care*. 2010;48(10):923-933. <https://doi.org/10.1097/MLR.0b013e3181e57962>
5. Moczygamba LR, Barner JC, Brown CM, Lawson KA, Gabrillo ER, Godley P, Johnsrud M. Patient satisfaction with a pharmacist-provided telephone medication therapy management program. *Res Social Adm Pharm*. 2010;6(2):143-154. <https://doi.org/10.1016/j.sapharm.2010.03.005>
6. Tsuyuki RT, House LKD, Charrois TL, Kolber MR, Rosenthal MM, Lewanczuk R, Campbell NR, Cooney D, McAlister FA, RxACTION Investigators. Randomized trial of the effect of pharmacist prescribing on improving blood pressure in the community. *Circulation*. 2015;132(2):93-100. <https://doi.org/10.1161/CIRCULATIONAHA.115.015464>
7. Martin MT, Faber DM. Patient satisfaction with the clinical pharmacist and prescribers during hepatitis c virus management. *J Clin Pharm Ther*. 2016;41(6):645-649. <https://doi.org/10.1111/jcpt.12436>
8. Sherrill CH, Cavanaugh J, Shilliday BB. Patient satisfaction with Medicare annual wellness visits administered by a clinical pharmacist practitioner. *J Manag Care Spec Pharm*. 2017;23(11):1125-1129. <https://doi.org/10.18553/jmcp.2017.23.11.1125>
9. Hall JJ, Katz SJ, Cor MK. Patient satisfaction with pharmacist-led collaborative follow-up care in an ambulatory rheumatology clinic. *Musculoskeletal Care*. 2017;15(3):186-195. <https://doi.org/10.1002/msc.1160>
10. Makowski CT, Jennings DL, Nemerovski CW, Szandzik EG, Kalus JS. The impact of pharmacist-directed patient education and anticoagulant care coordination on patient satisfaction. *Ann Pharmacother*. 2013;47(6):805-810. <https://doi.org/10.1345/aph.1R686>
11. Giberson S, Yoder S, Lee MP. Improving Patient and Health System Outcomes through Advanced Pharmacy Practice. A Report to the U.S. Surgeon General. Washington: Office of the Chief Pharmacist. U.S. Public Health Service; 2011.
12. Peterson J, Hinds A, Garza A, Barner J, Hill L, Nguyen M, Lai P, Gums T. Impact of physician-pharmacist covisits at a primary care clinic in patients with uncontrolled diabetes. *J Pharm Pract*. 2018; [Epub ahead of print]. <https://doi.org/10.1177/0897190018807374>
13. Chavez B, Kosirow E, Brunner JM. Impact of a bilingual pharmacy diabetes service in a federally qualified health center. *Ann Pharmacother*. 2018;52(12):1218-1223. <https://doi.org/10.1177/1060028018781852>
14. Rodis JL, Sevin A, Awad MH, Porter B, Glasgow K, Hornbeck Fox C, Pryor B. Improving chronic disease outcomes through medication therapy management in federally qualified health centers. *J Prim Care Community Health*. 2017;8(4):324-331. <https://doi.org/10.1177/2150131917701797>
15. Moczygamba LR, Goode JV, Gatewood SB, Osborn RD, Alexander AJ, Kennedy AK, Stevens LP, Matzke GR. Integration of collaborative medication therapy management in a safety net patient-centered medical home. *J Am Pharm Assoc*. 2011;51(2):167-172. <https://doi.org/10.1331/JAPhA.2011.10191>
16. Health Resources & Services Administration HRSA Health Center Program. What is a Health Center?. Available at: <https://bphc.hrsa.gov/about/what-is-a-health-center/index.html> (accessed March 24, 2020).
17. Kim-Romo D, Barner JC, Brown CM, Rivera JO, Garza AA, Klein-Bradham K, Jokerst JR, Janiga X, Brown B. Spanish-speaking patients' satisfaction with clinical pharmacists' communication skills and demonstration of cultural sensitivity. *J Am Pharm Assoc*. 2014;54(2):121-129. <https://doi.org/10.1331/JAPhA.2014.13090>

18. Hewitson P, Skew A, Graham C, Jenkinson C, Coulter A. People with limiting long-term conditions report poorer experiences and more problems with hospital care. *BMC Health Serv Res*. 2014;14(1):33. <https://doi.org/10.1186/1472-6963-14-33>
19. Moon J, Kolar C, Brummel A, Ekstrand M, Holtan H, Rehrauer D. Development and Validation of a Patient Satisfaction Survey for Comprehensive Medication Management. *J Manag Care Spec Pharm*. 2016;22(1):81-86. <https://doi.org/10.18553/jmcp.2016.22.1.81>
20. Wolf JA, Niederhauser V, Marshburn D, LaVela SL. Defining Patient Experience. *Patient Exp J*. 2014;1(1):3. <https://doi.org/10.35680/2372-0247.1004>