Title: Assessment of Internet and Social Network Use for Professional Purposes by Texas Independent Community Pharmacists

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Abstract

Objectives: 1) Determine the extent Texas community pharmacists use text messaging, email, Facebook, Twitter and/or other social networks for professional communication (patients, pharmacists, other healthcare professionals); 2) Identify the perceptions of Texas independent community pharmacists towards using social media for patient-pharmacist communication; 3) Determine the extent Texas independent community pharmacists have developed and employed their pharmacy websites for the provision of drug information and patient care services

Methods: We created a 25-item survey instrument with items addressing the objectives of the study as well as basic demographic questions (gender, age, type of pharmacy degree). The 12-item likert-type (from 1 (disagree) to 5 (agree)) scale was developed to measure perceptions. The survey questionnaire and the scale were pilot tested among eight practicing community pharmacists for content and clarity. Survey questionnaires were mailed out to a random sample of 1,196 Texas independent community pharmacists.

Results: The study response rate was 23.7 percent with 284 usable questionnaires returned. The majority of respondents reported internet access available at their pharmacies (98% (278)) with 91 percent (258) being familiar with the term 'social media'. Average respondent age was 54.4 (11.4) years, and the majority was male (70% (n=200)). To communicate with another healthcare professional 56 percent (n=160) of respondents used email, 34 percent (n=97) used text message and 5 percent (n=14) used Facebook. To communicate with a patient 36 percent (n=102) used email, 30 percent (n=86) used text message and 7 percent (n=19) used Facebook. The scale assessing pharmacists' perceptions towards use of social media for patient communication was reliable (Cronbach's alpha (12 items) =0.89). Pharmacists who reported using electronic tools (email, text, social media) to communicate with patients regarding their drug information showed more positive perceptions towards the opportunities associated with the use of social media for patient-pharmacist communication ($p<0.05$). Regarding independent pharmacy websites, about 50 percent of respondents maintained pharmacy websites with the following resources most frequently available: links to other health resources (60%), tips on how to use medicines (42%) and tips on being compliant (36%).

Conclusions: This study is the first statewide assessment of the use of electronic communication and social media for professional communication and perceptions towards use social media in patient-pharmacist communication among independent community pharmacists in Texas. More studies in other states as well as nationwide are warranted to better understand the patterns of electronic communication, internet and social media use in daily professional activities of community pharmacists.

Introduction

Healthcare communication through electronic channels, including social media, has gained popularity both among patients and providers for the past several years.[1-6] However, information on electronic communication and social media use among pharmacists in the U.S. has been limited to two studies examining either general use of social media by pharmacists or use of social media for professional activities other than patient-pharmacist communication.[7, 8] Alkhateeb et al. surveyed 50 attendees of West Virginia Pharmacy Association Convention in 2009 and found that the majority of pharmacists used social media primarily for personal purposes.[7] Kukreja et al. surveyed a convenience sample of pharmacists registered as preceptors for Purdue University College of Pharmacy and also found that respondents used Facebook primarily for social purposes.[8] Lupianez-Villanueva et al. conducted a web-based survey to assess internet use patterns by physicians, nurses and pharmacists in the Catalonia region of Spain.[9] The main reasons to use internet for professional purposes by pharmacists were reported as follows: 46.7 percent of pharmacists shared information with citizens, 38 percent shared information with friends and relatives, 9.2 percent spread their own scientific papers to the scientific community, 7.4 percent promoted debate on their medical specialty, and 18.8 percent shared information with their patients. In the Catalonian study email was used by 73.3 percent of pharmacists to communicate with other healthcare professionals, while only 38 percent of pharmacists reported using email to communicate with patients. To the best of our knowledge, no studies in the U.S. assessed pharmacists' use and perceptions towards use of electronic communication and social media for professional purposes including patient-pharmacist communication. The primary objective of this study was to examine pharmacists' use and perceptions towards use of social media for professional, including patient-pharmacist,

communication. The secondary objective was to assess the degree to which independent pharmacists developed their pharmacy websites for provision of drug information and patient care services.

Methods

The study was a cross-sectional survey of independent community pharmacists practicing in Texas. We obtained IRB approval from the University of Texas at Austin IRB Board to conduct the study.

Survey

We developed a 25-item survey instrument with questions addressing the objectives of the study as well as basic demographic questions (gender, age, type of pharmacy degree, graduation year with a pharmacy degree, professional affiliations, type of community pharmacy, pharmacy location and position at the pharmacy of primary employment). The 12-item scale assessing perceptions towards use of social media in patient-pharmacist communication was developed in part based on previous research by Lupianez-Villanueva et al. among physicians, pharmacists and nurses in Catalonia, Spain.[9] We pilot tested the questionnaire and the scale among eight practicing community pharmacists and revised based on suggestions to improve clarity.

Study sample

A random sample of 1,196 pharmacists practicing at an independent community pharmacy setting in Texas was drawn from the roster maintained by the Texas Board of Pharmacy. We used the mail postal survey to distribute questionnaires rather than an electronic web-link sent via email as at the time of the study Texas Board of Pharmacy did not have a complete record of pharmacists' electronic mailing addresses. Previous response rate to recent mail surveys of pharmacists in Florida and Texas ranged between 18 and 26 percent.[10, 11] At a projected response rate of 20 percent, we believed to obtain sufficient data to estimate proportions.

Data collection

The cover letter, survey questionnaire and an addressed stamped return envelope were mailed in early January 2012. The data collection continued through February and March 2012. The cover letter also stated that pharmacists who were interested to complete the survey online may do so by typing a web-link printed in the letter in their internet browser. The web-version of the questionnaire was set on Qualtrics® survey platform. Returned surveys did not contain any identifiable information and no incentive for completion was offered.

Statistical Analyses

Descriptive statistics was used for all demographic variables and social media use variables. Comparisons across groups (pharmacists-users and pharmacists-non-users of electronic communication and social media for patient communication, pharmacists with positive versus negative perceptions towards social media use for patient-pharmacist communication) were performed using t-test for continuous and chi-square test for categorical variables.

Results

Demographics

A total of 16 surveys were completed online and 297 questionnaires were returned by mail. A total of 284 questionnaires were suitable for analyses with the final response rate of 23.7 percent. To assess non-response bias, we compared key demographic characteristics of survey respondents (gender, age, type of pharmacy degree and years since graduation) to the overall sample. The results of the comparison are presented in Table 1. There were no significant differences between the two groups in relation to age, gender, type of pharmacy degree and years since graduation.

Table 1- Comparison between study sample of Texas independent pharmacists and respondents

	Sample (n=1196)	Respondents (n=284)
% (n) male	70 (844)	70 (200)
Age (SD)	54.5 (12.2)	54.4 (11.4)
Years since graduation (SD)	28.5 (13.3)	28.2 (12.6)
% (n) BS Pharm	85 (1016)	83 (235)

The majority of pharmacists reported availability of internet access at their pharmacies (n=278, 98%). The demographics, practice setting and educational characteristics of respondents are presented in Table 2. We stratified the pharmacists according to their responses on the item "Communicating with patients about information related to their drug therapy via text, email or social media" (item 8(1); response options ranged from 'several times a day' to 'never or hardly ever') into two groups: pharmacists who communicated with patients via text, email or social media regarding drug therapy once a month or more frequently and those who never communicated with patients via the listed tools (Table 2). Analyses revealed that pharmacists who used electronic tools including social media for patient communication were slightly younger (52 vs 56 years old, p=0.013), completed their pharmacy education more recently (26 vs 29 years

ago, p=0.0702), resided in metropolitan or small urban areas as compared to small community or rural (33% and 38% vs 23% and 14%, p=0.021), were more likely to hold membership in one or more professional pharmacist association (31% vs 18% , p=0.025), and were more likely to provide medication therapy management services in their pharmacies (47% vs 22%, p=0.000).

Table 2 - Demographic, educational and practice setting characteristics of respondents controlling for whether or not independent community pharmacists communicated with patients via social media

Demographic Characteristic	All respondents (n=284)	Communicated with patients via text, email or social media regarding drug therapy once a month or more frequently (n=81)	Never communicated with a patient regarding drug therapy via text, email or social media (n=203)	T- or χ^2 tests P value*
Age (M (SD))[a]	54.4 (11.4)	52.1 (10.6)	55.3 (11.6)	0.013
Gender, %				
Male (n=200)	70	28	72	0.305
Female (n=84)	30	32	68	
Number of years since graduation (M (SD))[a]	28.2 (12.6)	26.1 (12.4)	29.0 (12.6)	0.072
Degree, %				
BS (n=235)	83	29	71	0.434
PharmD (n=49)	17	27	73	
Completion of CE[b] online, %				
≥50% online (n=218)	77	27	73	0.213
<50% or none online (n=66)	23	33	67	
Professional association membership,[c] %				
Belong to ≥1(n=227)	80	31	69	0.025
Do not belong (n=57)	20	18	82	
Geographic location of practice setting , %				
Metropolitan (n=128)	45	33	67	0.021
Small urban (n=52)	18	38	62	
Small community (n=54)	19	23	77	
Rural (n=50)	18	14	86	
Store owners %				
Yes (n=167)	60	30	70	0.342
No (n=117)	40	27	73	
Provision of MTM Services,[c] %				
Yes (n=72)	25	47	53	0.000
No (n=212)	75	22	78	

[a]M±SD= Mean ± standard deviation.
[b]CE=continuing education
[c]Includes membership in state (Texas Pharmacists Association) and national (NCPA, APhA, ASHP, IACP) professional associations
[d]MTM=Medication Therapy Management
*P-values associated with chi-square tests for categorical variables and t-tests for continuous variables for pharmacists who communicated with a patient via text, email or social media regarding drug therapy once a month or more frequently vs those who never did

General use of electronic communication for professional purposes

Table 3 presents the electronic tools independent pharmacists used to communicate with other healthcare professionals and patients. Slightly over a half (56 percent) used email to communicate with other healthcare professionals while 36 percent used email to communicate with patients. Text messaging was used by 34 and 30 percent of respondents to communicate with other healthcare professionals and patients, respectively. Facebook was used by 5 and 7 percent of respondents to communicate with healthcare professionals and patients, respectively. In the 'other' category offering pharmacists to write in a medium for communicating with healthcare professionals, the majority of respondents (n=106) listed fax and/or phone followed by escribe or escript software (n=13), googletalk (n=1), LinkedIn (n=1) and sidenotes (n=1). In the 'other' category for communicating with patients, the majority of respondents (n=129) listed phone, followed by 'none' (n=16), postal mail (n=1) and escript/surescript (n=1).

Table 3 – Frequency of social media use for communicating with health care professionals and patients by independent community pharmacists*

Communication with	Email n (%)	Text n (%)	Facebook n (%)	Twitter n (%)	Other n (%)
Healthcare professionals	160 (56)	97 (34)	14 (5)	1 (0.4)	129 (45)
Patients	102 (36)	86 (30)	19 (7)	2 (0.7)	147(52)

*Numbers and percentages do not add up to total (100%) due to multiple selections

General use of internet for professional purposes

We were also interested to examine types of professional activities pharmacists may be performing using internet as well as typical frequency associated with each activity of interest. Table 4 summarizes our findings. The findings showed that pharmacists most frequently ('several times a day') go on the internet to search products' availably (53 percent of respondents), followed by search of drug prices (39 percent of respondents), drug and disease-related information (36 and 28 percent of respondents, respectively). On the other hand, respondents selected that they 'never or hardly ever' went on the internet for the following activities: patient communication regarding drug therapy (71 percent), searching wholesale deals (45 percent), formulary status of patients' drugs (42 percent), drug recall information (37 percent), drug shortage information (33 percent) and information related to managed care policies (30 percent).

Table 4 – Proportion of professional activity for internet use by independent community pharmacists (n=284)*

Type of activity	Several times a day	Once a day	3-4 times a week	1-2 times a week	Less than 1-2 times a week	Never or hardly ever
Patient-related use						
Communicating with patients about information related to their drug therapy via text, email or social media, %	6	3	6	4	10	71
Administrative use						
Searching information related to managed-care policies and procedures, %	14	4	10	11	31	30
Searching formulary status of patients' drugs (tier 1, 2, 3, etc), %	8	3	9	10	28	42
Searching drug recall information, %	3	5	5	11	39	37
Searching drug shortage information, %	8	9	7	16	28	33
Searching drug prices, %	38	7	9	8	9	29
Searching wholesale deals, %	17	7	7	7	14	45
Searching availability of products at wholesalers, %	53	11	9	4	8	15
Drug/disease-related use						
Searching for drug-related information, %	36	13	19	12	14	6
Searching for disease-related information, %	28	12	17	14	19	10

*Row percentages may not add up to 100 percent due to rounding

Independent pharmacies presence on the internet and social media

We also examined presence of independent pharmacies on the internet and social media channels. Table 5 summarizes our findings. About half of respondents reported that their pharmacy has a website (55 percent) with about 40 percent maintaining email addresses of some of their patients. Among social media channels, Facebook was the most popular, with 29 percent of respondents reporting maintaining a Facebook account for their pharmacies, while only 4 percent maintained a Twitter account. The most popular content items on pharmacy websites were links to other healthcare resources (60 percent), tips on how to use drug products (42 percent) and tips on being compliant (36 percent).

Table 5- Frequency and proportion of social media accounts used/offered by independent community pharmacies

Internet/social media account	n (% of total respondents (n=284))
Pharmacy website	154 (54)
Email addresses of all patients	16 (6)
Email addresses of patient who agree to provide their addresses	113 (40)
Facebook account	80 (29)
Electronic newsletter	25 (9)
Blog	6 (2)
Twitter account	10 (4)

Table 6- Information offered on independent community pharmacy websites (n=154)*	
Resource	**n (% of respondents reporting having a pharmacy website (n=154))**
Tips on how to use medicines	65 (42)
Tips on being compliant	56 (36)
Drug coverage information (copayments, deductibles)	17 (11)
Links to other health resources	92 (60)
OTC sales announcements	47 (30)
Medical device sales announcements	29 (19)
Other items sales announcements	48 (31)
Opportunity to schedule an appointment with a pharmacist	32 (21)

*****Column does not add to total (100 percent) due to multiple selections

Perceptions towards social media use in patient-pharmacist communication

The internal consistency of the 12-item scale to measure pharmacist perceptions towards use of social media in patient-pharmacist communication after recoding negatively-worded items (items 4, 5 and 10) was 0.89 (Cronbach's alpha). The descriptive summary of responses is presented in Table 7. The perceptions of pharmacists who communicated with patients using electronic tools about information related to drug therapy once a month or more were higher (higher score=more positive perception) than those of pharmacists who never or hardly ever communicated with patients via electronic tools about drug therapy (mean (SD) score on 12-item perceptions scale 45.6 (7.9) vs 39.0 (8.9), p=0.000).

Table 7 – Pharmacist perceptions towards use of social media in patient-pharmacist communication		
Statement	Mean Score*(SD) n=284	Answered 'somewhat agree' or 'agree' n (%)
Social media can be effectively used by pharmacists to improve patient communication	3.8 (±1.1)	199 (71)
Social media needs to be used more at my workplace in communicating with patients	3.2 (±1.3)	125 (45)
Social media needs to be used more at my workplace in communicating with other healthcare professionals	3.1 (±1.3)	122 (43)
Social media is not useful for patient-pharmacist communication	2.7 (±1.3)	66 (24)
Social media takes too much time to communicate with patients.	3.1 (±1.2)	111 (40)
Social media has a potential to become an established channel for patient-pharmacist communication	3.5 (±1.2)	169 (60)
Social media may improve patients' quality of life	3.4 (±1.1)	148 (53)
Social media may improve patients' knowledge	3.9 (±1.1)	210 (75)
Social media may facilitate drug therapy	3.5 (±1.2)	168 (60)
Social media may cause patients to challenge pharmacists' knowledge	3.1 (±1.3)	120 (43)
Social media may enhance pharmacist/patient relationships	3.6 (±1.2)	178 (63)
Social media changes the way patients and pharmacists interact	3.8 (±1.1)	182 (65)

*Likert scale: 1 –'disagree', 2-'somewhat disagree', 3-'neither agree nor disagree', 4 – 'somewhat agree', 5 – 'agree.' Cronbach's alpha (12 items)= 0.89.

Limitations

Although the study's response rate may raise concerns of a non-response bias, we believe our findings are fairly representative of the internet and social media use patters for professional communication among Texas independent pharmacists based on the lack of significant differences on key demographic characteristics (age, gender, degree type, and years since graduation) between the respondents and the overall sample. On the other hand, caution should be taken when generalizing the results to patterns of use among independent pharmacists across the U.S. due to possible differences in legal, demographic and practice characteristics.

Discussion

Our findings on the pharmacists' use of email for patient communication were similar to those reported by Lupianez-Villanueva et al.: 36 percent of pharmacists communicated with patients via email in Texas versus 38 percent in Catalonia, Spain. On the other hand, the proportion of pharmacists using email to communicate with other healthcare professionals was lower in our study (56 percent) than in the study in Catalonia (73.3 percent). This difference may likely be attributed to differences in healthcare systems between Spain and the U.S. Spain offers universal healthcare coverage through its national system and communication between healthcare professionals may likely be more streamlined and centralized.[12]

Lupianez-Villanueva et al. focused on the impact of health information found on the internet on pharmacist-patient communication, while our study assessed the impact of information found on social media on pharmacist-patient communication (a more recent phenomenon which may not have been as widespread at the time of the study in Spain). The comparison of the findings

shows that 43 percent of pharmacists in Texas are concerned that information found on social media may challenge pharmacists' knowledge as compared to 35 percent of pharmacists in Spain expressing a similar concern in relation to health information found on the internet. On the other hand, 53 and 75 percent of pharmacists in Texas considered that social media may improve patients' quality of life and patients' knowledge while 40 and 37.9 percent of pharmacists in Catalonia, respectively, considered so in relation to health information found on the internet. Perhaps, these differences may be explained by the fact that peer-to-peer communication via social media differs significantly from health information gathering through a static webpage. Experience sharing between patients with similar conditions on social media sites such as PatientsLikeMe may create higher patient engagement and as a consequence improve quality of life through the sense of belonging and knowledge exchange which even most trustworthy and reliable but static web-page-based health information may not provide .[13-16]

Independent pharmacies presence on social media and internet was limited with slightly over a half of pharmacies maintaining a website and about 30 percent a social media account (Facebook), respectively. Meanwhile, recent study in Canada examined perceptions of customers towards the brand and personality of pharmacies and found that independent pharmacies were perceived more trustworthy than national and multinational chains with sincerity and competence being the key predictors of trust.[17] In our opinion, expanding independent pharmacies competencies through digital presence and engagement may increase current patients' loyalty as well as attract new patients.

Dissemination plan

We intend to submit the manuscript based on the presented findings to the International Journal of Medical Informatics.

Summary

This study was the first statewide assessment of internet and social media use for professional activities of independent pharmacists. The findings presented in this report may be useful to a wide audience of practitioners, educators, pharmacy boards and policy makers. Pharmacists are healthcare professionals that are well-positioned and accessible to provide drug-related information to the public not only via traditional face-to-face mode but also via electronic channels. Recent reports in the news have already started to show that independent pharmacies are proactively embracing opportunities of mobile applications in drug and disease patient education.[18]

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Appendix A: Cover Letter

January 9, 2012

Dear <personal salutation >

You have been randomly selected to participate in a statewide research study, entitled **"Assessment of Internet and Social Networks Use by Texas Independent Community Pharmacists."**

The goal of this study is to understand the extent of social media and internet use by independent pharmacists for professional purposes. The specific objectives are as follows: 1) to assess if independent pharmacists use Facebook, Twitter and other social networks to provide professional care services; 2) to assess the extent independent pharmacists have developed and employed their website for the provision of drug information and patient care services.

Social media is comprised primarily of web-based tools (Facebook, Twitter, LinkedIn , Youtube, Flickr, Delicious etc), but some other platforms such as text messaging via regular cell phone or special cell phone platforms (applications) are included under social media umbrella as well.

This questionnaire is part of a research project being conducted by the Center for Pharmacoeconomic Studies, College of Pharmacy, University of Texas at Austin. Your response to the survey will also help us better understand the perceptions towards the use of social media in an independent community pharmacy.

Because you represent an integral part of the Texas independent pharmacy community, we hope that you will participate so our results will be a good representation of the views of Texas independent pharmacists. Your decision to participate or not participate will not affect your present or future relationship with the University of Texas at Austin. Participation is voluntary, and we feel that it is important you make yourself heard on an issue that might positively affect your practice.

The survey takes approximately 10 minutes to complete. You can either complete the included questionnaire or you can go online and complete the questionnaire at the following website: www.utexas.edu/pharmacy/survey . All responses are anonymous and the study records will be stored securely. Responses will only be reported in an aggregated format, and your response cannot be linked back to you because no personal identifying data will be collected in the questionnaire. After completing the survey, please fold it, place it in the included business reply envelope and drop in any mailbox by **February 20, 2012**. No postage is necessary.

If you have any questions, please do not hesitate to contact us by phone at (512) 471- 4809 and (512) 471-5607 or email nshcherbakova@utexas.edu and marvshepherd@mail.utexas.edu . If you have questions about your rights as a research participant or any complaints or concerns, please contact James Wilson, Ph.D., Chair, The University of Texas at Austin Institutional Review Board (IRB) for the protection of Human Subjects at (512) 471-6978, or the Office of Research Support at (512) 471-8871, or email: orsc@uts.cc.utexas.edu.

Thank you in advance for your time and cooperation in participating in this important study.

Sincerely,

N. Shcherbakova

Natalia Shcherbakova, M.S.Pharm.
Ph.D. Candidate
Division of Health Outcomes and Pharmacy Practice

Marv Shepherd

Marvin Shepherd, Ph.D.
Professor and Research Advisor
Division of Health Outcomes and Pharmacy Practice

Appendix B: Survey Instrument

Assessment of Internet and Social Network Use by Texas Independent Community Pharmacists

We are interested in the extent to which independent pharmacists in Texas have embraced social media to improve the provision of pharmacy services and professional communication. Examples of social media include pharmacy Facebook pages, Twitter accounts, websites /blogs, etc.

Please answer the following questions to the best of your knowledge, based on your experience as a practitioner at an independent pharmacy setting. Please check the item(s) that correspond to your response or write in your response as appropriate.

1. Does the pharmacy where you are employed have internet access? (Please check one)

    - ❒ yes
    - ❒ no
    - ❒ restricted access
    - ❒ do not know

2. Does the pharmacy where you are employed provide an email account for you? (Please check one)

    - ❒ yes
    - ❒ no
    - ❒ do not know

3. Do you contact any of the following via your pharmacy email account? (Please check all that apply)

    - ❒ Fellow pharmacists
    - ❒ Physicians
    - ❒ Nurses
    - ❒ Other health professionals
    - ❒ Patients
    - ❒ Others (please specify):_____
    - ❒ Not applicable

4. To reach other healthcare professionals while at work, which of the following have you ever used? (Please check all that apply)

    - ❒ Email
    - ❒ Text message
    - ❒ Facebook
    - ❒ Twitter
    - ❒ Other (please specify):_____

5. To reach a patient, which of the following have you ever used? (Please check all that apply)

    - ❒ Email
    - ❒ Text message
    - ❒ Facebook
    - ❒ Twitter
    - ❒ Other (please specify):_____

6. Do you take your continuing education (CE) courses online? (Please check one)

    - ❒ I take all of my CE courses online
    - ❒ I take more than 50% of my CE courses online
    - ❒ I take about 50% of my CE courses online
    - ❒ I take less than 50% of my CE courses online
    - ❒ I do not take my CE courses online

7. Were you familiar with the term 'social media' before starting this survey? (Please check one)

    - ❒ yes
    - ❒ no
    - ❒ cannot recall

8. How often have you used the internet in the past month for the following activities? (Please check the appropriate box on each line)

Statement	Several times a day	Once a day	3-4 times a week	1-2 times a week	Less than 1-2 times a week	Never or hardly ever
Patient-related Use						
(1) Communicating with patients about information related to their drug therapy via text, email or social media						
Administrative Use						
(2) Searching information related to managed-care policies and procedures						
(3) Searching formulary status of patients' drugs (tier 1, 2, 3, etc)						
(4) Searching drug recall information						
(5) Searching drug shortage information						
(6) Searching drug prices						
(7) Searching wholesale deals						
(8) Searching availability of products at wholesalers						
Drug/disease related Use						
(9) Searching for drug-related information						
(10) Searching for disease-related information						

9. If you answered 'never or hardly ever' on three or more items in the 'administrative use' section of question 8, do you have a dedicated employee in your pharmacy who performs those duties? (Please check one)

❒ Yes , a pharmacy technician
❒ Other (please specify):_____
❒ I do not know
❒ Not applicable

10. How often (if at all) do you advise patients to go online for health-related information? (Please check one)

❒ Several times a day
❒ Once a day
❒ 2-4 times a week
❒ Less than 1-2 times a week
❒ Never or hardly ever

11. Does the pharmacy where you are employed maintain any of the following? (Please check the appropriate box on each line)

Statement	YES	NO	DO NOT KNOW
Pharmacy web site			
Email addresses of all patients			
Email addresses of patients who agree to provide their addresses			
Facebook account			
Electronic newsletter			
Blog			
Twitter account			

12. Please indicate, in the table below, how frequently you or someone in your pharmacy updates each of the social media? (Please check the appropriate box on each line)

Statement	Several times a day	Once a day	3-4 times a week	1-2 times a week	Once a month	I do not know	Not applicable
Pharmacy website							
Pharmacy Facebook account							
Pharmacy Electronic newsletter							
Pharmacy Blog							
Pharmacy Twitter account							

13. If your pharmacy has a website, does it contain any of the following information? (Please complete if your pharmacy has a website; check the appropriate box on each line)

Statement	YES	NO	I DO NOT KNOW
Tips on how to use medicines			
Tips on being compliant			
Drug coverage information (copayments, deductibles)			
Links to other health resources			
OTC sales announcements			
Medical device sales announcements			
Other items sales announcements			
Opportunity to schedule an appointment with a pharmacist			

14. For each of the following statements, please indicate how much you agree or disagree with each. (Please check the appropriate box on each line)

Statement	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree
Social media can be effectively used by pharmacists to improve patient communication					
Social media needs to be used more at my workplace in communicating with patients					
Social media needs to be used more at my workplace in communicating with other healthcare professionals					
Social media is not useful for patient-pharmacist communication					
Social media takes too much time to communicate with patients.					
Social media has a potential to become an established channel for patient-pharmacist communication					
Social media may improve patients' quality of life					
Social media may improve patients' knowledge					
Social media may facilitate drug therapy					
Social media may cause patients to challenge pharmacists' knowledge					
Social media may enhance pharmacist/patient relationships					
Social media changes the way patients and pharmacists interact					

15. Which of the following types of online accounts do you personally use? (Please check the appropriate box on each line)

Online Account	I do not have this account	Several times a day	Once a day	1-2 times a week	About once a month	Never or hardly ever
Facebook						
Twitter						
LinkedIn						
YouTube (personal account where you upload your own videos)						
PharmQD						
Personal website						
Personal blog						
Other (please specify)_____						
Other (please specify)_____						

16. Please indicate your level of education achieved to date. (Please check all that apply)

- ❒ BS Pharm
- ❒ PharmD
- ❒ MBA
- ❒ MS
- ❒ PhD
- ❒ Other, please specify_____

17. When did you earn your pharmacy degree?

_____

18. Please indicate which professional organization(s) you belong to. (Please check all that apply)

- ❒ American Pharmacists Association (APhA)
- ❒ American Society of Health-System Pharmacists (ASHP)
- ❒ American College of Clinical Pharmacy (ACCP)
- ❒ American Society of Consultant Pharmacists (ASCP)
- ❒ National Community Pharmacists Association (NCPA)
- ❒ Texas Pharmacists Association (TPA)
- ❒ Other (please specify):_____
- ❒ None

19. What year were you born?

19….

20. Please indicate your gender.

- ❒ Female
- ❒ Male

21. Which community size best describes the location of the primary pharmacy where you work? (Please check one)

- ❒ Rural (population less than 5,000)
- ❒ Small community (5,000-10,000)
- ❒ Small urban (10,000-50,000)
- ❒ Small metropolitan (50,000-250,000)
- ❒ Large Metropolitan (greater than 250,000)

22. Texas Board of Pharmacy records list that you are practicing in an independent pharmacy setting. (Please indicate if that is correct)

- ❒ Yes, I practice in an independent pharmacy setting (1-4 stores)
- ❒ No (please specify your practice setting):_____

23. Does your pharmacy provide disease management services? (Please check one)

❒ Yes
❒ No (go to question 25)

24. Please list the disease(s) that your pharmacy provides medication management for:

_____

25. Please indicate your primary role within the pharmacy where you are employed. (Please check one)

❒ Store owner/partner
❒ Pharmacist in-charge
❒ Pharmacist Manager
❒ Staff Pharmacist
❒ Relief Pharmacist
❒ Other, please specify_____

Please share with us any additional comments or suggestions you may have regarding the use of social media by independent pharmacists.

_____
_____
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If you would like to receive an aggregate summary of the results, please email Natalia Shcherbakova at nshcherbakova@utexas.edu.
Thank you for taking the time to help us understand how social media is used by independent community pharmacists in their professional activities.

Please place the questionnaire in the included business reply envelope and drop in any mailbox. No postage is necessary.

Thank you very much for your participation!