

Advancing the Utility of Community Pharmacy Quality Measures: Patient Perceptions

COMMUNITY PHARMACY FOUNDATION

Final Grant Report

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Introduction

According to the Institute of Medicine, public reports of provider performance will increase the transparency, accountability, and quality of healthcare.¹ Consumers' use of public reports may influence their selection of health providers but only if they are aware of the availability of report cards, understand them, believe them and are willing and able to use this information in their provider selection process.² In a 2004 Kaiser/Agency for Healthcare Research and Quality survey, consumers were confused about quality reports and only 35% of them had seen one. Most consumers have difficulty understanding quality indicators and data in public reports² and less than half of consumers find these reports helpful.³

If quality measures are to be utilized by consumers in the selection of providers, the data has to be comprehensible, and consumers should be willing and able to use the information presented in the report.^{4,5} It is important for the information disseminated in a report card be understandable, contain an easy to understand approach to interpreting the data and include relevant items and useful educational information.⁶ The public reporting of quality information is significant in the improvement of the quality of healthcare provided to patients, especially since consumers are empowered to make a choice, hence, encouraging provider competition.⁷

The use of quality measures in healthcare settings is not new. The Center for Medicare and Medicaid Services (CMS) has developed quality measures for use by consumers in the nursing home and hospital settings and this information is publicly available via websites such as Nursing Homes and Hospital Compare.^{8,9} The possibility of public reported community pharmacy quality information emerged with the development of measures by a consensus-based non-profit organization called the Pharmacy Quality Alliance (PQA).¹⁰ Initially, seven quality performance measures were proposed and these included proportion of days covered, gap in medication therapy, diabetes medication dosing, suboptimal treatment of hypertension in patients with diabetes, use of high risk medications in the elderly, drug-drug interactions and medication therapy for persons with asthma. However, several issues need to be considered if this approach of utilizing performance measures by consumers is to be successful in the pharmacy setting. First, it is critical to determine if consumers know how to use and/or interpret the information in a pharmacy quality report. Second, it is important to investigate whether proposed quality measures are useful to patients when choosing a community pharmacy. Finally, research needs to examine patient perceptions of the value of each proposed quality measure. Few studies have examined which factors or measures are important to the consumer in a quality report.^{6,7} Until now, researchers had not considered this in a pharmacy setting.

This project examined patient perceptions of pharmacy quality measures. The results of this research will inform the process of providing consumers with community pharmacy quality information, contribute towards advancing the utility of pharmacy quality measures, empower consumers in their healthcare choice and ultimately, improve the quality of care provided to patients. When patients receive quality care, there is improved health status and reduced healthcare costs. This project was built upon a previous pilot study by examining patients' perceptions and use of pharmacy quality measures in more detail. This study was designed and developed with input and collaborations with Pharmacy Quality Alliance.

Need

While there had been considerable work by the PQA to develop pharmacy quality measures, identify ways of improving quality reports and make them usable by pharmacies, few studies examined the consumers' perceptions of these pharmacy quality measures and how to enhance utilization of the measures for pharmacy choice. The provision of publicly reported quality information without focusing on the actual use of the information by consumers limits the utility of this approach to improve care. An understanding of consumers' ability to use community pharmacy quality measures and perceptions as to the usefulness of these measures will improve pharmacy report cards, allow consumers to make informed community pharmacy choices and consequently improve the quality of care provided by community pharmacists. This work is one of the initial steps in ensuring that the consumer is considered in the advancement of using pharmacy quality measures.

A study by the University of Mississippi investigators examined consumer attitudes towards pharmacy report cards and showed that consumers based their community pharmacy choice on convenience factors and had a fairly favorable attitude towards pharmacy report cards (55.2%).¹¹ Though 54.1% of the survey participants reported they were likely to recommend pharmacy report cards, and 69.5% reported that they would likely use them to switch pharmacies, it is not known if these individuals have certain patient characteristics that may increase their likelihood of using pharmacy quality information and/or if these characteristics influenced their perceptions. Also, the sample population was a consumer panel of individuals who completed the study online and are most likely web-savvy and accustomed to using the web for health information.¹¹

In a previous pilot study, we examined consumers' ability to interpret pharmacy quality measures data, investigated the tools required to interpret the information available on a pharmacy report card and determined if quality measures influence consumers' choice of a pharmacy.¹² Semi-structured focus groups were done among 29 lay people within a town in South Dakota. Results from the pilot study showed that consumers' knowledge of proposed quality measures is limited, simplicity of quality measures is needed for the interpretation of the measures and consumers don't understand the drug names and terminologies on the proposed quality performance website. Interestingly, consumer opinions on whether pharmacies should be compared based on certain proposed quality measures were mixed. Consumers thought that pharmacies should be compared on quality measures related to patients' medication safety, but not on measures related to patients' medication adherence. In addition, consumers revealed that quality measures would influence their choice of a pharmacy, only if they were shopping for a new pharmacy.¹² The present study advances this previous research by exploring consumer perceptions and perceived value of quality performance measures in contrasting settings among patients with chronic illnesses. The pilot study was conducted among lay people and these patients' perceptions of quality measures may have been influenced by their infrequent or constant use of community pharmacies and/or likelihood of seeking medical care. It is possible that patients who rarely use community pharmacies to fill prescriptions think of the quality of pharmacies differently compared to patients who frequently fill prescriptions.

The need for community pharmacy quality has been recognized and includes a demand for high quality pharmaceutical care, controlled drug utilization costs, improved medication adherence,

and optimized patient-pharmacist communication. This project benefits patient care and community pharmacy practice and its long term goal is to champion excellence by community pharmacies in providing care to patients.

Purpose

This project examined the usefulness of pharmacy quality measures in helping consumers choose a community pharmacy. Based on preliminary data, factors influencing the utility of these measures include patients' ability to interpret the information in pharmacy report cards and relevance of the measures to choice of pharmacy. This study improves the application of pharmacy quality measures in advancing community pharmacy quality. The project findings will impact policy makers' decisions regarding public reporting of quality-of-care information.

This research assesses the potential use of pharmacy report cards by consumers and describes whether consumers who have a higher probability of using community pharmacies might utilize quality measures when deciding which pharmacy to use. It was our hypothesis that patient perceptions concerning pharmacy quality measures would differ by patient characteristics including the number of medications used, chronic condition and/or if they are constantly seeking medical care. Also, it was hypothesized that each specific quality measure would be valued differently and certain pharmacy quality measures would influence specific patients' community pharmacy choice.

The objectives of the study were to:

1. Examine consumers' interpretation of pharmacy quality measures data
2. Determine if pharmacy quality measures influence consumers' choice of community pharmacy in various settings.
3. Identify and evaluate consumers' perceived value of pharmacy quality measures (including its specific measures).
4. Determine the characteristics of people who:
 - a. Can interpret pharmacy quality measures
 - b. Would use pharmacy quality measures in their decision making of a pharmacy choice
 - c. Highly value the pharmacy quality measures
 - d. Value specific community pharmacy quality indicators

Methods

Design: The project design was semi-structured focus groups combined with the use of survey methodology. The sample population included men and women 18 years and older from diverse ethnic and racial backgrounds who could speak and understand English. The inclusion criteria for being in the study were participants had to be diagnosed with a chronic illness, currently using a community pharmacy to fill prescriptions, and currently taking a prescription medication. Fliers at pharmacies, community centers, senior citizen center, and public buildings and radio advertisements were used for recruitment. The study was approved by the Institutional Review Board of South Dakota State University.

Eight focus groups lasting about 90 to 120 minutes were designed to assess participant's ability to interpret and use pharmacy quality measures. Focus group participants were asked to discuss their interpretation of each measure and their understanding of the meaning. Suggestions were elicited for changes to the wording of measures that were unclear to participants. Also, participants were asked questions that examined their rating preference for quality information (e.g. stars versus percentages), the desired data display of ratings (e.g. the use of bar graphs), the format of a quality information source, and if they would use the quality information presented to them in choosing or switching their pharmacy. In addition, participants were given mock report cards and asked to discuss their understanding and preference of the pharmacy report cards. Snapshots of the Medicare Part D comparison quality information available on the internet was shown to participants as an example of a performance rating system. Participant reactions to the format and display of the quality information were documented. Also, participants' assessment of the value of each specific pharmacy quality measures and all quality measures were examined. The focus groups were conducted in an urban (Sioux Falls) and a rural (Milbank) area of South Dakota. Sioux Falls is the largest city in South Dakota with a population of about 150,000 people while Milbank is a small rural town with about 3,000 people. The questions used in the focus group were developed by the research team with feedback, input, and recommendations from a collaborator at PQA. The focus group script had been used and tested in our previous pilot study and was modified to fit the objectives of this study (See Appendix A). The PQA project collaborator provided the consumer-friendly phrasings and definitions of the community pharmacy quality measures. The pharmacy quality measures that were presented to the participants in this study included:

1. Helping Patients Get Needed Medications (Pharmacy ensured that patients received the medicines for their chronic conditions and continued to receive them on a regular basis.
2. Diabetes Medication Dosing (Pharmacy ensured patients were not dispensed a dose higher than the recommended dose for diabetes medications)
3. Use of High-Risk Medications in the Elderly (Pharmacy ensured the elderly did not receive a medication that can put them at high risk for developing a severe health problem)
4. Drug-Drug Interactions (Pharmacy ensured there were no patients who were dispensed two medications that can cause harm when taken together).
5. Suboptimal Treatment of Hypertension in Patients with Diabetes (In a pharmacy, people who have diabetes and high blood pressure were not getting the best medications to treat blood pressure in people with diabetes)
6. Absence of Controller Therapy for Persons with Asthma (In a pharmacy, patients with asthma were using many "rescue" inhalers to treat their asthma attacks when they occur but were not getting medications to prevent asthma attacks).

During the focus groups, participants were given questionnaires/worksheets to complete (See Appendix B). Using Yes/No and rankings from 1-5 as response options, the questionnaire focused on the interpretation of each pharmacy quality measure, the value of each measure, the use of each quality measure in choosing a pharmacy and overall perceptions of the measures. Specifically, using yes and no responses, participants indicated if they understood the meaning of each specific measure, if they would use quality measures including each specific measure to choose a pharmacy, if they would switch their pharmacy if the pharmacy had a lower rating, and whether each specific quality measure would make them switch your pharmacy. Also, participants rated on a scale of 1 to 5 (1 being low and 5 being high) how much they valued each specific quality measure in evaluating a pharmacy.

The principal investigator or research assistant moderated at least one of the sessions. All discussions were audio and video recorded after receiving consent from participants and a research assistant took field notes and/or documented any observations. A brief survey was administered to participants. The questionnaire collected information on participants' socio-demographic and clinical characteristics, including age, gender, race/ethnicity, education completed, self-rated health, current use of prescription medications, number of prescription medications, number of pharmacies used in the previous 6 months, and type of health insurance plan. Information on participants' use and access to the web/internet were obtained (See Appendix C). All data was collected anonymously and individuals were identified using identifier numbers. Each participant received a gift card as compensation for their participation in the study.

For data analysis, all focus group discussions were transcribed verbatim by a certified transcriber. Thematic analysis of all open ended questions was used to examine consumers' interpretation of pharmacy quality measures data, determine whether quality measures would influence patient pharmacy choice and examine patients' perceived value of pharmacy quality measures. The texts from the transcribed notes were broken into units of statements and sentences and categorized into themes and subthemes. To ensure the validity of the results, each researcher coded the transcripts separately, which then were collated into potential themes using the questions developed. Additional themes that emerged from the discussions were also noted. The results from each coder was then compared to assure consistency.

Descriptive statistics examined the frequencies and means of all patient characteristics and survey questions on the interpretation, value and use of quality measures. Non-parametric Fishers' Exact tests and Mann Whitney tests were used to examine the association of patient characteristics to the value of quality measures including each specific quality measure, the ability to interpret quality measures, and to the use of quality measures in pharmacy choice. All quantitative data were analyzed using SPSS version 21.0.

Results

Overall, there were 34 patients in this study. The participants' mean age was 62.85 (SD=16.05), number of pharmacies used was 1.44 (SD=0.71), number of daily medications was 4.18 (SD=3.53), and number of chronic illnesses was 3.09 (SD=2.09). Most participants were female

(n=26, 76.5%) and white (n=31, 91.2%). Additional features included having a college degree (n=12, 35.3%), using one pharmacy to fill prescriptions in the past six months (n=20, 58.8%), having a Medicare insurance plan (n=10, 29.4%), reporting fair health (n=12, 35.3%), using their home as the primary internet site (n=16, 48.5%), having internet at home (n=17, 51.5%), using the internet daily (n=14, 42.4%), and using a chain pharmacy to fill prescriptions (n=15, 44.1%). (Table 1)

There were 12 patients in the rural area. The participants mean age was 62.17 (SD=16.03), number of chronic illnesses was 3.25 (SD=2.22), number of daily medications was 4.42 (SD=3.09) and number of pharmacies used was 1.25 (SD=0.62). Most participants were female (n=10, 83.3%) and had a college degree (n=5, 41.7%). Other characteristics included using one pharmacy to fill prescriptions (n=10, 83.3%), having an employer based or Medicare insurance plan, using their home as the primary internet site (n=7, 58.3%), having access to the internet at home (n=8, 66.7%), and using an independent pharmacy to fill their prescriptions (n=11, 91.7%).

There were 22 patients in the urban area with a participant mean age of 63.23 (SD=17.12). The mean number of chronic illness was 3.0 (SD=2.07), number of daily medications was 4.05 (SD=3.81) and number of pharmacies used was 1.55 (SD=0.739). Most participants were white (n=19, 86.4%), female (n=16, 72.7%) and had a college degree (n=7, 31.8%). Other participant features included using one pharmacy (n=10, 45.5%), having a Medicare plan (n=6, 27.3%), not having internet at home (n=12, 54.5%), and using a chain pharmacy to fill their prescriptions (n=15, 68.2%).

Based on the first three objectives of the study, five major themes were identified from the focus groups. First, patients' understanding of pharmacy quality measures differed by the type of measure. Second, patients had specific preferences for the display of pharmacy quality information. Third, most patients would hesitate to use quality information to choose their pharmacies, but would consider the information if moving to a new area. Fourth, patients' opinion on whether they would use quality information to switch their pharmacy differed by their place of residence (urban vs. rural). Fifth, most patients thought all the measures were important. However, patients seemed to value certain measures more than others depending on whether or not the participant had the chronic condition addressed in the quality measure (e.g., diabetes). Additional themes related to each objective were also identified.

In regards to objective 4, this study showed no association between patient demographic or clinical characteristics and their interpretation of community pharmacy quality measures, use of the measures in their decision making of a pharmacy and the perceived value of the measures.

Objective 1: The first objective was to examine consumers' interpretation of pharmacy quality measures information. Also, we examined patient preferences for pharmacy quality information.

The focus groups showed that patient understanding of pharmacy quality measures differed by the type of measure. Measures such as Helping Patients Get Needed Medications, Use of High Risk Medications in the Elderly, and Drug-Drug Interactions were understood while measures such as Diabetes Medication Dosing, Suboptimal Treatment of Hypertension in Patients with Diabetes, and Absence of Controller Therapy for persons with Asthma were not clear.

Patients thought the explanation of each measure in parenthesis helped them to understand the measure. Verbatim statements included the following:

“—some of these I didn’t understand very well until I read the little parenthesis part. It would be nice to have a place to click so that I did understand all that”

“Controller therapy might be the biggest one where if I looked at it and I just read it, I’m not sure I would have any idea. I can go read the parenthesis, but if you’re not reading the parenthesis, I’m not sure I would know what that means as a general person”

Patients explained that some of the measures were hard to understand because of complex wordings (due to high grade reading level).

“I work in the credit card business. I’ve always been told you have to write things at an eighth grade level. Would a sixth grader know that, probably not unless they were very intelligent?”

“My husband is Hispanic and speaks English and Spanish. I’m sure if I asked my husband about sub-optimal, he would have no idea what that means. He graduated from high school. He has asthma. I don’t think he would understand.”

Some of the measures were hard to understand because of patients’ non-familiarity with the type of information presented.

“...I wouldn’t word it this way, I don’t think the wording is understandable...It’s hard to understand this stuff when you don’t use it”

“For the most part, people don’t have a very good idea on most of this stuff (quality measures)”

Patients want plain language in the communication of quality information.

“I don’t think anybody should have a problem as long as it’s not, you know, complicated language... it should be written in a normal, you know, everyday language so everybody could understand it. Language that is pretty plain”

Data display of report cards

Patient had specific preferences for the display of pharmacy quality information including data display, data formatting and important pharmacy quality information.

When patients were presented with different types of mock report cards:

Patients understood the Medicare Part D star rating format better than the use of a bar graph system.

“The nice part about it (the Medicare Part D star rating) is that it’s similar to what older people are using. It would help prevent some confusion. The more similar to that, the better off.”

“Bar graphs are a problem especially if you try to rate something as far as lower. When people see bar graphs, the higher the better. Between this (bar graphs) and the previous screen (Medicare Part D star rating), I’d rather have the previous screen; the stars versus that”

“The bar graph is okay, but it should be the opposite direction. I liked the other one (Medicare Part D star rating) better. It’s just easier to understand.”

“I kind of like that layout (Medicare Part D star ratings). I’m a visual person”

A mock report card that showed a specific pharmacy rating with a ‘higher is better’ and ‘lower is better’ grade interspersed within the report. (See Appendix A)

Patients disliked the ‘lower is better’ format in comparing pharmacies. Verbatim statements included:

“If you can word all the questions so that you say that the higher is better, that would work. If you word the questions both directions, it’s going to be as confusing as can be”

“they’ve gotta reverse it back that higher is better...—because reading that, it’s even confusing for me. You’ve gotta stop and double think. If somebody is a little older or somebody doesn’t always retain information, are they going to be able to comprehend how that is set up and be able to choose a pharmacy from there?”

“You’re used to looking that the higher, the better. It’s just the way your mind works from school. The bars like that could get very confusing.”

“I don’t necessarily mind the format, I just want it switched so the higher percentage would be better”

Patients did not like the inclusion of a state average in the mock reports nor the comparison of the pharmacy rating to the state average. Example statements included:

“I think there’s a whole lot of too much information (in reference to state data)... Well, I think you have to realize most of us elderly now just have high school and very little college We get too much information thrown at us. We don’t want all of that. You know what KISS is; right?... Keep It Simple, Stupid”

“What if I don’t know what the state average is necessarily? How do you know what a good number is?...How do I know the state average is a good average? What if the whole state is doing poorly? “

Patients favored a comparison of their pharmacy to city data instead of state data.

“I’m just curious why they want to have it (state average). I live in a big city. I don’t really care what the state average is. I care about in town. I grew up in a really small town. My choices of where I want to go—am I going to chase around to find a pharmacy that has a highest rating? Why don’t I just look for a pharmacy that has a high rating in (Urban Place) or wherever I live? If I lived in (other places), I would want to know where in that city the best pharmacy was”

“If I live in (Urban Place), I probably don’t care about the state average. I probably care about comparisons to other (Urban Place) pharmacies”

“If you list all the pharmacies in the United States—you wouldn’t have enough paper for that, or enough computer room. Maybe if you did just the ones in (the State) or by city—“

There were mixed feelings about the use of stars versus other ways of displaying pharmacy quality information (percentages, grade systems, and numerical values).

Stars

“I don’t know if it (the type of rating system) would matter to me. I’m a little uncomfortable, I think, with the A to F because I’m a teacher. That has such negative connotations I think. I think I’d rather see a star system or a one through ten”

“I think stars might confuse. Especially when you're dealing with the elderly and that because they aren't always aware, you know, of—they might think they're looking at something else when they're actually looking at their pharmacy. It needs to be something that's not used by restaurants or hotels and those type of things. It needs to be something that sticks out”

Percentages

“The stars are overused, I think. You know—when you get on the Internet, there's always a five-star rating. Percentages, I think, would be more accurate”

“Percentages would be a good thing. Yeah, it's a number and, you know, it's very clear. They lower you go, you know, the worse it is. If you get 100 percent, that means you're good, and I think the elderly would have a lot easier time. Even foreign people that don't speak English, they would know that”

“Well, the star deal goes with restaurants and movies. I don’t think that’s good. A, B, C is like you’re in school. Percentage I suppose would be good”

Grade Letters

“Well, you probably understood the ABCs better than the star system. Because we’ve all gone through school systems”

Numerical values

“I understand one to ten better. When you go to the doctor, they say, “How bad is your condition (on a scale of one to ten)?”

In general, most patients liked the star system better than percentages, grade letter or numerical ways of rating.

“I’m used to stars. That’s what you read in magazines and television”

“The star system is more visual. It’s faster especially if you’re looking at the computer. I used to program computers. You don’t have to do a lot of thinking. You just simply glance down especially if there are a lot of different columns. You may or may not be looking for a certain thing. You may just be looking overall. The A, B, C, D was the way everything was for many years, but I think I see the stars used for everything now. I think that’s a lot better”

“I like the one through five with the stars. Because of the older generation—we’re so used to looking at that information— A lot of older people are the ones that are taking the medications. And they’re going to be looking for stars”

“Stars will be easier than trying to put one through ten up there”

Some patients did not care what grade system was used as long as the criteria was understood and the measures were clear.

“A lot of times those ratings systems are like a five star or something like that. You don’t always know what the criteria are. So, I think it would be important to know—for people to understand what they were measured on, rather than just be five stars or whatever”

“It wouldn’t make any difference. If they got a C, I would want to know what the C was on, or—if it pertained to me, then I’d really want to know”

“It doesn’t matter if it’s for a five star or it’s a hundred percent... They will all have the same rating scale, right?”

“I agree with her. It doesn’t make that much difference. As long as it’s a standard system like, “Okay, (Urban Place) is rated this way, but over in (Other Urban Place) they are rated this way.”

Data formatting

In general, patients would like to see a pharmacy score with an overall pharmacy rating displayed for quick access and use.

“I would want to see overall. That’s kind of specializing a pharmacy to where they’re dealing with just one condition, and I wouldn’t go to that pharmacy if they’re not there to help me as well as that diabetic. Then there’s no sense of me going there.”

“Both scores would be optimal. The overall and then the detail because if you give them both immediately, it will be too much. If you get an overall, then pull out detail”

Patients also wanted to see quality measures information displayed by certain health conditions.

“Yes, I would want to know what the categories are because they may or may not affect me”

“No, I’d want it broken down. I would not just say, “Well, this pharmacy got a ten.” I’d say, “A ten on what?”

“I think that you need an overall, but then I think that it needs to be broken down after that by the conditions.”

“I think by condition would be good. I’m not as concerned with high blood pressure or diabetes, and I might want to just focus on what’s right for me. It would probably also shorten the process and make it quicker for people”

“I guess I would still want an overall picture, but I would want to see more specifics for myself and my family. Overall is important, too”

“I feel like something like this (data broken down by health condition) would be a good secondary supplemental information to a broader visual rating. Or let's say you had just like an overall like composite general thing for people who want just a general knowledge and for people who want, "All right. What condition (specifically) are they good at?" Kinda click away from that and go to that sheet because if I'm just looking for a general overall thing, this doesn't do much for me. So, something like this (condition-specific ratings) if you were more interested in reading more”

“Sometimes overall means that they're 80 percent on hypertension, and they're 100 percent on diabetes, but they're not on the same level. So, I want to know (the ratings by conditions) because I have thyroid and hypertension. I don't care about diabetes. If they said, “Overall,” maybe they're very good in diabetes, and they're not so good in hypertension, and that's what I'm interested in. So, I need a breakdown”

Similar to the focus groups, the survey responses showed that most patients were able to understand the interpretation of the measures. Suboptimal Treatment of Hypertension in Patients with Diabetes and Absence of Controller Therapy in Persons with Asthma had the lowest percentages for number of participants who could understand the measure, 76.5% and 79.4% respectively. (Table 2)

Objective 2: The second objective was to determine if pharmacy quality measures could influence consumers' choice of community pharmacy in various settings.

In general, there were certain situations that patients thought would allow them to use quality information. For example, patients reported that they may use the information if they had a bad experience with their present pharmacy, if they were aware of available pharmacy quality information, or if they were moving to a new area.

Use of quality measures if a negative experience is encountered

“—I can see where people would use something like this if all of a sudden they (the pharmacy) had mistakes”

“So, if you got disgusted or you have an allergic reaction that they didn't catch, if you knew this was available, you're going to go and click on and see how people have reviewed this one. I can see where you'd go on and see, for example, you have diabetes. There have been mistakes. What is the quality? You're going to go use this kind of information either because you need it or because you've had a negative reaction.”

Use of quality measures if there is knowledge of such information

“If you knew it was out there and your pharmacy was actually being rated”

“I don’t know that I’d use it because I’m very satisfied with them (the pharmacy). On the other hand, sometimes if you would happen to run into some kind of a snag, you’d want to look and have a place where you could go and check up on it”

Use of quality information if new to an area

“I suppose if I had never been to a pharmacy before, you know..., let’s say I moved to another city or state... And I don’t know nobody there. If I don’t know anybody there, then how am I going to know what pharmacy’s good”

“That would be something I would do—moving out of state or to another town. That would be most helpful. At least to get you started...”

“Well, if I was moving to a new area, I probably would use the information. You want the best available”

Though patients are likely to consider using pharmacy quality measures to choose their pharmacies, there was still some hesitation regarding how to utilize the information. Verbatim statements included:

“I don’t know if I would use it or not. I’ve never had to use anything like that before.”

In terms of using quality information to switch pharmacies, most patients agreed that they would switch their pharmacies based on these quality measures but some patients were hesitant to change. These patients noted that they would stay with their pharmacies as long as they still had a positive experience and ask the pharmacist about the poor score.

“I think I would look into it before I would change”

“I’d probably consider it. I don’t know if it’d be yes or no for sure. But I would consider it”

“If I had a good experience at my pharmacy, I would keep using it. However, if it had a bad score, I would inquire. I would ask them why they were getting these bad scores because my personal experience has been good”

Conditions for switching pharmacies included pharmacy prescription errors, negative encounters, and if the quality measures information validated their experiences. Verbatim statements included:

Pharmacy prescription errors

“Well, if it was real disastrous, I probably would switch”

“I don’t have any problem with my pharmacy. So, I’d have to have some really negative information before I’d switch”

Negative encounters

“If you’re not looking to change, and the pharmacy is doing very poorly, that could trigger the change”

“if (Pharmacy name) all of a sudden got a bad rating, I’d change pharmacies”

To validate patient personal experience

“The only reason I’d change is if they do something to me personally or someone I know. I can validate that error, then I would change”

“If they are giving the wrong prescriptions, I don’t want to take that chance with me”

Patients thought some measures might be more helpful than others in deciding whether to switch pharmacies. Example statements included:

“If it’s something kind of serious like they’ve been dispensing the wrong drugs or something, then I definitely would go to a different one”

“Yeah, I would switch.—they don’t have my health in mind. Especially the drug-to-drug interactions. They’re dispensing something that they know would react to something else, and they’re not doing anything about it, I’d be gone in a heartbeat.”

Patients were concerned about the credibility of rating systems and would be sure of the source of the ratings before using the information to make a decision.

Source of the rating

“...And it all goes back to who is rating them and where the information is coming from”

“ I don’t know if I would. I don’t always trust the rating and who is rating it—and how much I know about the board that happens to be rating and how they’re rating it...How they’re saying, “Well, this is a good pharmacy, and this is a little lower on the totem pole,” and that. I guess I would rather go to them and find out myself”

Patients’ opinion on whether they switch their pharmacy based on quality information seemed to differ by their place of residence. In the urban setting, most patients agreed that they would consider using pharmacy quality measures to switch their community pharmacies.

Use of quality measures to switch pharmacies (Urban Area)

“To be a good pharmacy, I think it all should be up there. If they’re lacking in something down here, well then do you really wanna go, “How important is it to me”? You know, “Is there a chance I could develop it?” I have been with (Pharmacy Name) for years. I don’t wanna change pharmacies. I know everybody in there. I like everybody. I know what their medication cost. They’re always very good to me. They’re always very respectful. To me, if they weren’t the way they are by watching the medication I take and being on top of what I need, you know, making sure it gets faxed, and if they don’t get it back the next day, they automatically refax. I don’t have to call them and remind them. They do it on their own. To me, if they didn’t have all those qualities, I would find someplace else to go”

“I’d switch in a heartbeat. I would. See, it would be for anything. You know, people with diabetes should have the same quality of care coming out of their pharmacy, and I would look at

that. If they're rated low, what else are they rated low at? Maybe down the road, I could develop it, and then I would have to change pharmacies because their rating was low, and I wouldn't trust them to monitor my medication, and they do that. I mean, if they can't watch the elderly, and the elderly you know, have times where they don't always remember, and they need that pharmacy to help them keep on track of what they're taking and what they're not. It's all important to me”

“Yeah, no matter how well I like it there or like who is there, my health is way more important than any of them! It takes one time and you're dead!”

“Well, I suppose if it was real serious, if another pharmacy had a higher rating, I probably would switch. Like I say, it's your health you're dealing with. You want the best”

In the rural area, most patients agreed that they would not/were not sure of whether they would use the quality information in their pharmacy decision making. Example statements included the following:

Use of quality measures to switch pharmacies (Rural Area)

“Oh, where I'm living right now to switch to a different pharmacy—no, I don't think so. I can see that making a difference more like in a bigger town. (Urban Town name) versus in (Small town name)...because in (Small town name), it's a smaller community, and you know the people in the pharmacy better. You know the pharmacy better”

“In a (Urban town name) pharmacy, there's more people going into the pharmacy every day. And the people in the pharmacy are seeing more people. To me, you know more about what's going on in a pharmacy in a small town than what you would in (Urban town name)”

The reasons for patient hesitation to switch pharmacies based on quality information were limited pharmacy choices in town, good credibility of available pharmacies, and personal relationships with the owners of the pharmacies they used.

Number of Pharmacies available may influence use of quality information

“To me, the most use I would ever get out of the data was—say I'm retired and move into a new place where I have no idea what any of the pharmacies are. I would definitely use the data. Here it's not such a big deal 'cause there's only two options really unless you're going mail-order. ...”

“There's not much choice here. Also, I think we're just spoiled. We have two wonderful pharmacies and have no problem with any of them. We have nothing to complain about”

“I can see where, yes, I need to go to (another small town) to get my medications. You have six different pharmacies, and you want to know if (pharmacy name) is better at doing well than what (Pharmacy name) or (Pharmacy name) does”

“You know, even going to (Pharmacy name) in (another small town)—or in (Town name), I know there's at least three (Pharmacy name) Pharmacies. It was like, you know, which one do I call? I don't know”

Credibility of pharmacies may influence the probability of switching

“Bottom line is I probably wouldn’t switch here. Guess I’ve always been happy with the cares that I have received. But it would be nice to be able to look if you are someplace else (besides home), you know, like your statewide thing”

“It’s hard to say here (whether you would switch or not) when we do have two good pharmacies. I think they are pretty even”

Personal relationships influence pharmacy choice and may hinder the possibility of switching pharmacies

“...And most of where you get it (prescriptions) from is probably based on some kind of personal relationship here in town because you know everyone. The people that get their stuff down there are friends with the owner or know them from church or something like that.”

“I feel like my answers for whether I would change pharmacies would be different if I lived in (Urban town name) than if I lived in (Small town name). I feel like your selection of pharmacy here (Small town) is based almost solely around personal relationship”

Using the questionnaires, most patients agreed that they would use quality scores to choose (n=32, 94.1%) their pharmacies (n=28, 84.8%). When patients were asked if they would use each specific measure to choose their pharmacy, most patients agreed that they would use each measure. Absence of Controller Therapy for Persons with Asthma (Yes responses, n=19, 55.9%) and Suboptimal Treatment of Hypertension in Patients with Diabetes (Yes responses, n=22, 64.7%) had the lowest number of participants who would use the measures to choose a pharmacy. (Table 3)

Most patients would switch their pharmacies based on quality scores (n=28, 84.8%). All patients agreed that they would use Drug-Drug Interactions as a measure in evaluating whether to switch their pharmacy but a large number of patients would not use Suboptimal Treatment of Hypertension in Patients with Diabetes (No responses, n=15, 44.1%) nor Absence of Controller Therapy for Persons with Asthma (No responses, n=13, 38.2%). (Table 4)

Objective 3: The third objective was to identify and evaluate consumers’ perceived value of pharmacy quality measures (including its specific measures).

Based on the focus groups, most patients thought all the measures were important in evaluating a pharmacy. Verbatim statements included:

“To me, everything on here is important. They shouldn’t drop anything because they deal with so many types of patients, and they should be well-versed in diabetes and asthma and making sure there’s not drugs being given to people that would interact with the drugs they’re taking”

“That’s like discrimination if you only help certain ones”

“You don’t know when you’re going to get the condition or when it might change. So, I would think all the measures would be important all the time”

“But they’re all health conditions that anyone could get. So, they should all be important”

Some patients valued certain measures in evaluating a pharmacy more highly than others. For example, the measure Helping Patients Get Needed Medication, Drug-Drug Interactions, Use of High Risk Medication in the Elderly, and Absence of Controller Therapy for Persons with Asthma were highly valued.

Helping Patients Get Needed Medication:

“Well, I think it’s pretty important because I have a friend who has the start of Alzheimer’s. When she saw on her prescription bottle that no refills, she thought that meant that she wasn’t supposed to take it. If she didn’t get it refilled and the pharmacy followed up on it, when she hadn’t had it refilled—that would be pretty important because it’s critical medicine”

“Yes, I think that (ensuring patients got their needed medication) would be good because I think people sometimes have a lapse in their medications, and it hurts them a lot like for depression or something like that.”

“I sometimes don’t watch how low I get on my medication. And then all of a sudden, I’m like, “Whoa. And I do need it. I have to call, and it needs to be faxed. It would be nice for a little reminder”

“... to me, they’re kind of making sure that doctor—and the patient as well, are following through. Especially, something as serious as diabetes. Or there’s other things out there that are just as serious that, you know, you don’t want to go without medication”

Some patients were concerned as to whether the pharmacist would have time to ensure they were getting their needed medications and refills if time was taken to perform these activities. Verbatim statements included:

“How could they call everybody? It’s not possible, I wouldn’t think. They’d have to have a large staff.”

“When are they going to do all this stuff? They are busy. I’m not kidding you. People are lining up in front to put in their order”

“But—have you guys looked at the work load on the pharmacy?”

There was some uncertainty as to the role of the pharmacist in ensuring adherence to medicines and there were mixed feelings about receiving pharmacy calls concerning prescription refills.

“how are pharmacies are going to ensure that patients received their medications. The pharmacies are not responsible for calling up the patients. I don’t think it’s their responsibility. I think that goes beyond. I think it’s a doctor/patient responsibility and not a pharmacy/patient.

“I think it could be valuable if the pharmacist called up to remind the patient that they were due to have their prescription filled or that it was overdue. But I don’t think to ensure”

“I can see the need for it, but then I can also see that—hopefully, it’s not going to be harassing either, you know. ...Sometimes I don’t get my medicines all the time. A lot of times I can’t afford

to get it refilled right away. So, I might go a week without my medicine. But I don't want the pharmacy to be harassing me because I am between my pay period"

Some patients questioned using the medication adherence measure to evaluate a pharmacy. For example:

"If they didn't follow-up and call a patient that it was time for their medication, that wouldn't make any difference to me"

Drug-Drug Interactions

"Pharmacists see interactions with drugs and everything else. That's part of their responsibility. ...I have a friend whose doctor prescribed her something that she was actually allergic to. The pharmacist knew all her drugs and drug interactions and actually caught it. I think that's one of the purposes of being a pharmacist like a second check with the doctor. That's very important. She could have died!"

"I mean, I count on my pharmacy to make sure that what I'm being prescribed doesn't interact. It's not higher, you know, than what I can really take. Because I don't think doctors always think sometimes when they're writing out those scripts what other medication you're on."

"I count on my pharmacy to make sure that neither one are prescribing something—that is higher or is going to react with something because I went through reactions already. It put me in the hospital for over a week. That's not going to happen! I really count on my pharmacy to make sure. They are very good about doing that."

Use of High Risk Medication in the Elderly

"It's (High risk medication in the elderly) extremely important because they (the elderly) don't understand. A lot of times they're lost. My mother-in-law wasn't getting medication she was supposed to be getting. She was getting stuff that was making her worse. They had not caught that. That's very important. Basically she had some serious memory problems and living in the past"

"Elderly persons, they don't understand things, and they don't read as good as the younger people do. They need to be told and things explained"

"Well, we're older now. We're going to get older. So, we will be in that category."

Diabetes Medication Dosing and Suboptimal Treatment of Hypertension in patients with Diabetes seemed to be of medium value. In some instances, patients noted that the value of the measure might change if they developed the condition later.

Diabetes Medication Dosing

"I put medium for it (Diabetes Medication Dosing). I'm not saying it's not important. It's just not personal. If two years down the road, I develop diabetes, then that would change"

“I would hope that they give me accurate medications; not too much or not enough... Theoretically they have to be accurate. If they’re not, then they better not be in pharmacy”

“Well, my in-laws are both diabetic, so I think that’s very important. I don’t think that the patients understand dosing...proper dosage is very important”

Suboptimal Treatment of Hypertension in Patients with Diabetes

“It’s extremely important, but it’s not nearly as important as doses (Accurate Diabetes Medication Dosing) and everything. The doctor should be catching your blood pressure. With diabetes, it will kill you a whole lot faster if you’re not getting the right dose”

Patients were not sure if it was the role of the pharmacist to ensure patients with diabetes were receiving an antihypertensive or the role of the physician.

“so why is this (treatment of hypertension in patients with diabetes) the pharmacist responsibility instead of the doctor’s responsibility? That’s what their doctor should know to start with...”

Absence of Controller Therapy for Patients with Asthma

“I’m on medication—you know. I would like my pharmacy to say, “You’re getting your rescue inhalers filled this many times, and I think you need to talk to your doctor about—” or him give the doctor a call! And he could say, “This patient of yours has filled their medication or inhalers this many times this month.” So, we need to do something to prevent that. Yeah, we need to do something to prevent it instead of waiting ‘til they’ve already got a full-blown asthma attack going on”

Patients value specific measures differently (e.g. depending on the condition associated with the measure and/or if the condition is personal to them).

Patient decision to use quality information in pharmacy selection is based on the specific measure and individual preference.

“Well, I hate to be biased, but with my conditions, I would rate this stuff (quality measures) that pertained to me higher and then... just because it pertains more to me, so I guess I’m biased”

“I would say it certainly depending upon what the star was for (the quality measure) and how much that affected me.”

“What would make me switch? Well, it depends on what put them at 80. You know, which one of these measures”

Patients value certain measures if they had the condition.

“I don’t know that one would be more important than the other. They all seem important, depending on the person’s needs”

“These measures are personal. Some of these measures depends on whether you have this (the condition) I suppose to a degree on whether you care so much. I have asthma, so I do care

about asthma. I feel like you would probably only use (specific measures) to evaluate a pharmacy if those apply to you.”

“I don’t have diabetes, and I’m not asthmatic, so I don’t see why that would pertain to me”

“I don’t have diabetes but I said yes (it is important) because my girlfriend is diabetic”

“It’s (Absence of Controller Therapy for Patients with Asthma) the same thing with diabetes because it doesn’t affect us.”

Based on the results of the questionnaires, when patients were asked to rank the value of the measures in evaluating a pharmacy, most patients ranked each measure a value of 5 with the mean for Drug-Drug Interactions being the highest (mean=4.88 (SD=0.33)). The lowest means were reported for Suboptimal Treatment of Hypertension in Patients with Diabetes (4.00 (SD=1.23)), and Absence of Controller Therapy for Persons with Asthma (mean=4.03 (SD=1.26)). (Table 5)

Additional focus group themes

Interest in publicly available pharmacy quality information

In general, patients are interested in publicly available pharmacy quality information and would access quality information if available.

“It (pharmacy quality information) should be displayed publicly! I think they should have to display that right there at their counter”

Patients think public reporting of pharmacy quality information will improve care.

“I think that (public reporting of quality information) would make them more aware, and they're gonna try harder 'cause no one wants something bad about 'em sticking out there, whether you do percentages or you use the alphabet or whatever, you know, everybody is seeing it. That's gonna make them want to improve I would hope.”

“The good thing about that (public reporting of pharmacy quality information) is if you do that, it will make them work harder to do a better job if you have those facts out there”

“It sounds like it (quality information) would improve it (patient care) for all of us. I can’t see where it would hurt anything. There is a pharmacy in just about every store in town. We got a ton of them”

“...if the pharmacy had to post it, then they would probably make a better effort to be a better pharmacy.”

Patients would ask their pharmacist about the quality ratings.

“It would be nice to know if my pharmacy rates low. I would want to know why. I would ask them what they have done to better themselves”

Patients indicated that they would ask for pharmacy quality information if they were educated on the content.

“I would think once you’re educated, if you know what’s out there, you’re going to ask for it”

“A lot of times those ratings systems are like a five star or something like that. You don’t always know what the criteria are. So, I think it would be important to know—for people to understand what they were measured on”

Patients want their pharmacies to be rated.

“You would want a pharmacy that’s going to do your best interest. You certainly don’t want to go to somebody that doesn’t care about that”

“Would you ever find anybody that doesn’t want to have their pharmacy rated? I can’t imagine anybody not wanting to know whether their pharmacy was doing what they’re supposed to be doing”

Differential in quality measures before making a switch

Patients were asked how big of a difference they would need to see before they made a switch in their pharmacy. Most patients wanted to see a big difference before they would switch pharmacies depending on the rating system.

“I’d like to see a big difference before I would consider”

“it would have to be a huge difference before I would switch”

“I suppose if it was 30 and 90 I would switch, but 70 and 80—I don’t know. That’s too close”

“It would have to be at ten percent or twenty percent for me to switch”

“let’s say twenty percent difference (would make me switch). If it’s stars. I’ll go two stars”

“Well, if there was a four star limit, and they only had one, I’d want to change. If they had three out of the four, I’m not so sure I would change”

“A two star difference would maybe cause me to change”

Other patients stated that it depended on the specific measure they were using to evaluate the pharmacy and the consideration of other convenience and cost factors. Verbatim statements included:

“Well, on certain ones, I would imagine like even just a one or a two percent difference with the drug-to-drug interactions would probably sell me. You know, just because it’s such an important one.”

“It all depends on which one of these categories! If it is overall categories, 20 percent is huge on overall! If I don’t have diabetes, and they’re getting nicked on diabetes stuff, then I probably don’t care so much. If it is drug-to-drug interaction, the gap is probably narrower. It’s probably more like ten percent. So, it would depend on the measure”

“If I don't have any affiliation to a pharmacy..., it probably wouldn't make that much difference (for me to switch) assuming a couple of things. It's not much less inconvenient to go there. It's not much more expensive or some of those types of things. There's other factors that are gonna factor in when you're picking a pharmacy other than how good they are. These (quality measures) are super helpful if I have (Pharmacy name) on one corner and (Pharmacy name) across the street and I live a mile away and I can drive and it's the same drive. If they're comparable or marginally worse, let's say, on healthcare ratings or their report card, I could probably live with that because it's more convenient”

Inclusion of other pharmacy information in quality reporting systems

In addition to pharmacy quality measures information, patients would like to see other pharmacy information including their service, patient satisfactions and cost of medications.

“I think service would be important. I think going to some place where you know they're going to take the time to answer your questions if you have questions—I think that's important”

“I think customer service is such an important thing. People should feel comfortable and feel like they can ask questions, especially the elderly. You don't get that information at the doctor's office...it is good to have someone that will take the time to explain things to you”

Inclusion of consumer information

“Add the consumer reviews in there because even like we said earlier, quality of service, a person's interaction with me does matter.”

“I think it's important how you get treated when you walk in the pharmacy. My husband had a prescription through the (Name of Organization), and he has to pick it up in (Place)—at a larger chain. I went in there to pick it up for him one day, and I've never received such poor service in all my life. I came back and told my pharmacy how I appreciated the service I receive from them. It was just awful. I told my husband I'll never pick up another prescription for him. So, I think the way they treat the customers. Oh, yes. That's important. It makes a big difference, too”

“Consumer ratings would be important. This should all be a balance on other non-health related factors, customer service and pricing to a degree especially if you're not insured”

Few patients were hesitant about including consumer satisfaction information in pharmacy quality reports. Verbatim statements included:

“The science part would be objective if they were making mistakes or something like that. Consumers are just personal opinions”

“... there are so many variations when you look at those reports. If somebody treats me bad, it doesn't mean that they are going to treat her bad.”

Patients may pay more for the price of quality.

“Cost is important. I think that (this information) should be there. Things could be a lot cheaper but the quality isn't there. I want to make sure the quality is there if I'm going to pay.

For more money, if the quality is better, I would pay the difference. Your life is worth more than money”

Access to pharmacy quality information

Patients mostly wanted to use the internet to access quality information but also wanted the information available to individuals who had no access to the internet.

Want the internet

“Have them online”

“I would like to get the information from the internet. A lot of elderly don’t have it, so it wouldn’t be fair but it would be okay for me. ”

“My opinion for myself is the internet, but there are people I know who don’t have internet, so it needs to be published someplace”

“I think the Internet would be the easiest for people I just think it is accessible to everybody. For the older people, Well, I guess that’s something to consider. Someone my age or younger, I think, is pretty comfortable with Internet. Maybe someone a bit older might not be. So, maybe it shouldn’t be the only place. It definitely should be one of the places”

“You could look at it (on the internet) before you went to a drugstore. You would have some idea of what drugstore you wanted to go to and check out before you went there. Or are you going to just drive around and go to every pharmacy (in response to placing quality information at the pharmacies)”

“With Medicare and the different pharmacies, you’re on the internet anyway. If you put it in print, nobody’s going to look at it. That’s an expensive way to do it”

Don’t want the internet

“A lot of older people in my age group are afraid of the internet”

“I think the majority of the elderly don’t do the computer. I’ve got a computer, but I ain’t got Internet. I don’t go on the Internet. I don’t pay my bills on the Internet. I don’t do that kind of stuff.”

“I think about the patient population here, I would say at least half are probably not technologically literate enough to access information. Even people with computers, I’m not sure. My grandma, for example, can use a computer. She can check her email, but I’m not sure she could figure out how to get to a website if her life depended on it”

“the technology might be a barrier to trying to use this. Well, I think it is for our generation”

“I think we should have choices, you know, for those who want to go on the Internet. The world is automatically thinking everybody’s got a computer. But not everybody does”

“There’s nothing more aggravating if you see something, and you’d like more information on it, and it says, “For more information, go to .com and it makes me so mad because I don’t have a computer”

Patients wanted quality information placed at the pharmacy and wanted to be able to inquire about pharmacy quality information from their doctor’s office.

Quality information placed in the pharmacy

“I have a brother who doesn’t have it (the internet), and he’s on medication. So, it has to be exposed some place like the store”

“They should have ‘em at the pharmacies...Display it or something. Maybe some printed out like a report card. I don’t have a computer. There’s a lot of people that don’t. A lot of people wouldn’t bother to look, but if it’s sitting there in a little thing in their pharmacy, they’re gonna pull it out, and they may read it. Also, I think it needs to be all over. The accessibility has gotta be widespread, not just on the Internet— There would be too many people not getting the information”

“At the cashier’s window where you pay for your medicine or where you give them the prescription”

“Maybe put it where the pharmacy license is displayed. You want it there in the public’s eye. You don’t want it hidden somewhere. There’s no use to have it if it’s hidden. Put a basic score up front. Again, you can go to the internet and search and find out.”

Quality information available at the doctor’s office

“Well, I think it should be on the Internet, but for the people that don’t use the Internet or have Internet. I think it should be in the clinic or the doctor’s office because that’s where you go to get your prescription. So, you’re there, and you can look at the information before you decide what drug store to go to. It should be someplace else, too (other than the internet)”

“Would it be possible that, at your doctor’s office or at the clinic, they would have a print out. I mean, you’ve got to go to your doctor to get the prescription. They should have a print out for the people to pick up if they needed it.”

“I think that would be something to have like at a doctor’s office if they have computers that the patient can look at. If you’re in a strange town or something, the patient could go on the computer at the doctor’s office.”

“You’re not going to go home on your computer and look it up, and then go find the pharmacy. You’re leaving the clinic.”

“It might be at my doctor’s office. I totally trust him. If it’s something that he has—or the nurse has the information that would make a difference to me. When they ask what pharmacy I want them to send that to, I would say, “Do you have a sheet on the pharmacies? What would you recommend?” I’d like to get a copy of that or something”

Patient ideas on a quality pharmacy and criteria for rating pharmacies

“Oh, I could give you criteria to rate a pharmacy. I know. But I don’t think these—I wouldn’t use these criteria”

“Well, the thing is, that I wouldn’t use these as quality measures”

“I would use—when you pick them up (the prescription), are they ready? Are they the appropriate medication that you’re supposed to get? Well, are the pharmacists knowledgeable? Can you talk to a pharmacist versus a pharm tech?”

Cost of medications is still important to patients

“If there was another pharmacy in town that did good with their patients—their people—and were cheaper, I would go there.”

Objective 4: Using the questionnaires distributed during the focus groups, this objective aimed to determine the characteristics of people who can interpret pharmacy quality measures, would use pharmacy quality measures in their decision making of a pharmacy choice, and value the community pharmacy quality measures.

There was no association between patient socio-demographic or clinical characteristics and their interpretation of community pharmacy quality measures, use of the measures in the decision making of a pharmacy, and the perceived value of the measures.

Additional survey results

We examined if there were rural/urban differences by participants’ understanding, value and use of the pharmacy quality measures to choose/switch a pharmacy.

Most patients in the rural area understood the measures except with the measure Diabetes Medication Dosing (one individual did not understand), Suboptimal Treatment of Hypertension in Patients with Diabetes (one individual said No) and Absence of Controller Therapy in Persons with Asthma (one person did not understand).

When patients were asked to rank the value of the measures in evaluating a pharmacy, most patients ranked each measure a value of 5 with the mean of Drug-Drug Interactions and Helping Patients Get Needed Medications both ranked the highest (mean = 4.91 (SD=0.30)). All patients said they would use the quality scores to choose a pharmacy but only 9 participants, 75% said they would use it to switch their pharmacies.

When patients were asked if they would use each specific measure to choose their pharmacy, all patients said they would use Drug-Drug Interactions as a measure to choose their pharmacy with variations in responses for the other measures. Similarly, all patients said they would use Drug-Drug Interactions as a measure to switch their pharmacy with variations in their responses for the other measures.

Most patients in the urban area understood the measures. The lowest percentages of patients understanding the measures were recorded for Suboptimal Treatment of Hypertension in Patients with Diabetes (68.2%), and Absence of Controller Therapy in Persons with Asthma (72.7%).

When patients were asked to rank the value of the measures in evaluating a pharmacy, most patients ranked each measure a value of 5 with the mean of Drug-Drug Interactions being the highest (mean is 4.86 (SD=0.35)). The lowest means were recorded for Suboptimal Treatment of Hypertension in Patients with Diabetes (3.68 (SD=1.32)) and Absence of Controller Therapy in Persons with Asthma (mean=3.68 (SD=1.39)).

Among the patients in the urban area, the majority stated that they would use quality scores to choose and switch their pharmacies. When patients were asked if they would use each specific measure to choose their pharmacy, most patients indicated they would use the measures. A small percentage of patients indicated that they would use Absence of Controller Therapy for Persons with Asthma (No responses, n=13, 59.1%) and Suboptimal Treatment of Hypertension in Patients with Diabetes (No responses, n=10, 45.5%) to choose or switch their pharmacy.

Discussion

Patient understanding of community pharmacy quality measures differed by the type of measure being examined. Suboptimal Treatment of Hypertension in Patients with Diabetes, Diabetes Medication Dosing, and Absence of Controller Therapy in Persons with Asthma were understood by the smallest percentage of patients while other measures including Helping Patients Get Needed Medication, Use of High Risk Medication in the Elderly and Drug-Drug Interactions were understood by a larger portion of the patients. Patients noted that some of the measures were difficult to understand because of the complexity of wording (written at a higher grade reading level). Patient understanding of the measures might be based on the plain language of the measures versus the focus of the measure. Previous research suggests that using simple language as an approach to communicating quality information is the most effective way of sharing such information with consumers.¹²⁻¹⁴ Though the participants in this study were individuals with a chronic illness who may have been accustomed to medical terminologies, patients still preferred the use of plain language. A barrier to the use of quality information by consumers is a lack of understanding of the information.¹⁵⁻¹⁶ Before pharmacy quality measures can be used in provider selection, the information has to be understandable, and consumers should be able to use the information presented in quality reports.^{4,5}

In this study, patients explained that some of the measures were hard to understand because of their non-familiarity with the type of information presented. Shiyanbola et al noted that participants report difficulty understanding pharmacy quality measures because of knowledge deficits. If patients are not accustomed to using quality information or knowledgeable of the meaning of quality reports, they might not be able to use such information. Quality reports should include useful educational information⁶ and be widely disseminated to all patient groups. Also, appropriate educational interventions on quality indicators may be designed for consumers. If quality measure information is comprehensible, decision making processes will be easier and more effective for patients.

Patients had particular preferences for the display and formats of pharmacy quality information. Patients' wanted pharmacy reports formatted to display an overall pharmacy rating for quick access and then condition-specific ratings for detail. Similar comparative data on the performance of physician groups in Massachusetts showed that the presentation of summary measures of provider quality and the ability to assess further details if needed was important to patients.^{13, 17} In our study, patients also did not favor the 'lower is better' format for presenting quality ratings due to previous experiences with higher numbers meaning better performance. Similarly, primary care physician groups in Massachusetts also structured their measures with a framework of higher being better.¹⁶ Peters et al stated that using a 'higher is better' frame to present quality information is consistent with how individuals think about and process numbers.¹³ Simple changes in information presentation that meets the cognitive expectations of consumers is key to comprehension of comparative quality information.

Patients favored the publicly available Medicare Part D star rating compared to the use of a bar graph system to evaluate pharmacies. In addition, patients' preferred the use of a star rating system compared to the use of other methods for displaying quality ratings including percentages, grade letters, and numerical values due to the visual nature of the latter. It is possible that familiarity with previous approaches of rating other performance information (using stars) made patients more comfortable with the star rating system. Previous research has shown that consumers rarely use public reports of healthcare quality due to their poor design and formats, rather than a lack of interest in the information.^{4-6, 17-18} Consumer-friendly quality report designs will facilitate comprehension of quality information and may help consumers make better provider choices. To achieve optimal use of report cards, desired formats and designs of pharmacy quality reports which will meet the needs of community pharmacy-users' should be further explored.

In this study, patients were concerned about the credibility of public reported quality information and the rating systems that guided them. Past research has shown that consumers do not use quality measures information because of a lack of trust in the data.⁷ In addition, patients were likely to use quality information to choose a pharmacy based on certain conditions including being knowledgeable of such information. Werner and Asch concluded that public reporting had a limited ability to influence patients' choice.¹⁹ However, consumers' use of public reports may influence their selection of health providers if they are aware of the availability of report cards, understand them, believe them and are willing and able to use this information in their provider selection process.²

Consumers were likely to use pharmacy quality information if they were relocating to a new area or had a negative experience with their present pharmacies. Results from a previous study of lay people interpreting pharmacy quality information showed that patient thought quality information was informative but would only use it upon relocation.¹² It is possible that patients' use emotional prompts in their selection of providers. In addition, consumers have been found to be more sensitive to quality information if they are disappointed with their current provider.²² Though patients are likely to consider using pharmacy quality measures to choose their pharmacies, there was still some hesitation regarding how to utilize the information. Hibbard et

al proposed that certain actions need to take place for quality-of-care information to be utilized by consumers. This includes an awareness of the information, understanding the information and viewing the information as useful.¹⁸ This reinforces the need for consumer education on quality reporting and the importance of the data in provider choice. Future research should examine the domains of quality that motivate consumers to use pharmacy quality information.

Though some patients were hesitant to switch their pharmacies based on quality information, most patients would switch if it validated their personal experiences or they had a negative encounter with their pharmacies. During a focus group discussion among patients in the United Kingdom, it was shown that provider quality information was only trusted when it confirmed patients' expectations.²³ Though patients' own physicians were rated low, patients still would not change their physician if they had good experiences. On the other hand, a Taiwanese survey showed that 75% of their respondents would change their own physician if he/she performed badly on a quality report.²⁴ Patients have been noted to use quality information to avoid bad providers rather than choose good providers. Hence, patients appear to use quality reports to evade poor quality providers rather than seek providers with the best quality.²⁵

Patients' opinion on whether they would use quality information to switch their pharmacy also seemed to differ by the geographical location they lived. Compared to patients living in the urban setting, patients living in the rural setting were less likely to indicate their potential use of community pharmacy quality measures to switch their pharmacy. Reasons for patients' hesitation included established personal relationships with their pharmacists, caliber of the two pharmacies in the town, and the low number of pharmacies available in the area which limited their choice. In a review by Faber et al, it was discussed that restricted health care provider access clearly influences the weight given to using quality information in provider choice.⁷ Xu et al proposed that the use of a single community pharmacy by patients is likely to improve the quality of services received by a patient. With only two community pharmacies in the town, it is possible that patients only use a single pharmacy to fill their prescriptions, thus, increasing the quality of services they receive and the merit of the pharmacies to patients. On the other hand, rural communities are typically served by independent community pharmacies which have to deal with lower prescription volumes compared to urban pharmacies. Dispensing lower numbers of prescriptions may have created more opportunities for personalized patient care services, hence, increasing patient satisfaction and limiting the possibility of a pharmacy switch.²⁶

Patients thought certain quality measures might be more useful than others in choosing a pharmacy. A previous study that examined which quality indicators were relevant or useful to consumers when choosing a health plan showed a large amount of variation in the salience of different indicators.²⁷ In this present study, patients were not likely to use Suboptimal Treatment of Hypertension in Patients with Diabetes and Absence of Controller Therapy in Persons with Asthma as quality measures to choose/switch their pharmacies. The survey results in this study also showed that these two measures were the least understood by patients. It is possible that the hesitation to use these measures to choose or switch their pharmacies is due to insufficient knowledge of the measure and an understanding of how to utilize the measure in their decision making. Similarly, Hibbard and colleagues showed in their study that poorly understood quality

indicators were viewed as not important when choosing a health plan. In the Hibbard et al study, patient comprehension of measures was related to the perceived salience of the measure. If patients do not understand pharmacy quality measures, they are likely to dismiss them as unimportant.⁶

The focus group and survey results from this study showed that the quality measure, Drug-Drug Interactions would be used by patients to choose or switch a pharmacy. In addition, Drug-Drug Interactions was ranked the highest in value among all the specific measures that would be used in evaluating a pharmacy. Previous studies have shown that safety measures are important to consumers when choosing a physician.^{14, 28} Similarly, Shiyanbola et al showed that among lay people who discussed community pharmacy quality measures, these individuals valued Drug-Drug Interaction more highly compared to other quality measures.¹² Medication safety seems to be a major concern for patients and pharmacists are positioned to be handle this task. This study shows that patients rely on their pharmacists to ensure their medicines are not harming them and would use pharmacy quality information that reflects patient safety standards to select pharmacies. Quality reports may be of greatest utility to patients if they only show quality measures that are of significance to patients or at least highlight such measures.¹³

Patients seemed to value specific measures depending on whether the condition associated with the measure was personal to them. However, patients thought their preference in using certain measures to evaluate their pharmacy could change if they developed the condition later. Newly diagnosed patients have been reported to have increased sensitivity to quality of care information when choosing a health provider.²² It is possible that quality information only become relevant to users when a need is identified.

This study showed that patients are interested in public reports of pharmacy quality information, would inquire about quality ratings from their pharmacies, and would seek quality information if educated on the content. Previous studies confirm that consumers are highly interested in quality-of-care information.²⁹⁻³¹ In two studies, almost half of the consumers stated that having high quality care was the most important concern they face when choosing a health provider.³¹⁻³² Publicly reported quality information is intended to stimulate active consumer participation in provider selection and increase transparency.⁷ Patient interest in pharmacy quality information is a positive motivation towards developing publicly available quality reports.

This study also showed that patients were interested in additional information on their pharmacies including service information, patient satisfaction results and cost of medications, and patients would like to see such information in quality reports. This finding was expected based on our previous pilot work that showed cost of medications and the relationship with the pharmacist were factors consumers favored over quality measure data in choosing a pharmacy.¹² In other studies, service-based factors, price and the type of services being offered at a pharmacy have been shown to be important in pharmacy choice. Patients use satisfaction measures, especially if the responses are from people like themselves who are making similar choices.²⁵ It is therefore not surprising that satisfaction may play a significant role in the choice of providers.

Patients wanted access to pharmacy quality information through various dissemination avenues, including the internet, doctors' offices and pharmacies. The wide dissemination of public reported pharmacy quality information is important in the education of consumers about pharmacy quality. Hence, the availability of choices for sharing quality information is useful. The findings from this study provide some direction to the appropriate placement of pharmacy quality information for consumers, when available.

Some patients in this study were not convinced that the quality measures presented to them were most appropriate for rating pharmacies. Previous research has shown that consumers rarely use public reports of healthcare quality due to the irrelevant content contained within the report cards.^{4-6,17} For public reporting of pharmacy quality information to be effective, reports need to provide patients with consumer-relevant information that can help inform their conversations with their pharmacists and help guide their health care decisions. Future studies need to examine what dimensions of quality (structure, processes or outcomes) are important to consumers, describe consumers definition of pharmacy quality and determine what type of quality information consumers want in a pharmacy quality report.

In this study, there was no association between patient socio-demographic or clinical characteristics and their interpretation of community pharmacy quality measures, use of the measures in the decision making of a pharmacy and the perceived value of the measures. Socio-economic factors such as age, gender, health status, education level, and income of the consumer/patient are assumed to be important factors that may impact the effectiveness of public reporting.⁷ In particular, participants with higher incomes have been noted to be more likely to notice and read quality information²⁰ and have an increased willingness to make a decision in favor of better quality.²¹ Another study confirms that patient demographic and socioeconomic characteristics may influence the provider selection process, determine how quality information is used and ultimately influence the choice of a provider.²⁵ The small sample size of this present study might have hindered the detection of a significant relationship effect. A future study with a larger sample size should examine similar associations of these characteristics to the use and value of pharmacy quality measures.

Study limitations include the small sample size and predominantly white sample population which limits the ability to generalize the study findings to other racial/ethnic groups. Future research should consider if the use and preferences for pharmacy quality measures might vary with patient characteristics such as race/ethnicity, health literacy level, language proficiency and education level, and if pharmacy measures that reflect these preferences can be developed and tested. In addition, it will be important to determine what dimensions of public reports are important to consumers, especially considering the Consumer Assessment of Health Providers & Systems (CAHPS) pharmacy survey. Also, more studies should assess the use and preferences of minority patient populations for pharmacy quality report content, design, and dissemination, and explore the best methods for refining pharmacy public reports to reflect those preferences.

Conclusion

This research shows that consumers want clear, easy-to-understand, readily accessible information that allows them to compare pharmacies based on quality and value. Patients with chronic illnesses are interested in community pharmacy quality measures but need simple easy to

understand formats. Community pharmacy quality measures, when publicly available, may influence patients' choice of community pharmacies and their likelihood of switching their pharmacies, depending on individual preferences, patient geographical location and the availability of pharmacies in the area. The results of this project showed that patients value all pharmacy quality measures but perceive medication safety measures to be more important.

The themes in this study follows similar themes from a consumer choice model proposed in a previous review of quality information. These themes are 1.) Awareness of information (seeing and receiving quality information), 2.) Knowledge (the ability to interpret the information correctly, resulting in comprehension of information and knowledge about the quality scoring system), 3.) Attitude (beliefs regarding quality information including trust, appreciation, value, and use of information), and 4.) Behavior (selecting, switching or visiting a healthcare provider).

7

Dissemination Plan

The results from this study has been submitted as abstracts to the American Pharmacist Association Meeting, the National Association for Healthcare Quality Meeting, and the International Forum for Quality and Safety in Healthcare. We intend to submit one paper on patient understanding and preferences for pharmacy quality information to the Journal of American Pharmacist Association or Research in Social and Administrative Pharmacy and another paper on patients' perceived value of pharmacy quality measures to the Journal for Healthcare Quality.

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Table 1: Descriptive statistics of the study population (N=34)

Variable	Number (%)	Mean ± SD
Socio-demographics		
<i>Age</i>		62.85 ±16.05
<i>Gender</i>		
Male	8 (23.5)	
Female	26 (76.5)	
<i>Geographical Location</i>		
Rural	12 (35.2)	
Urban	22 (64.7)	
<i>Racial background</i>		
Caucasian	31 (91.2)	
American Indian	3 (8.8)	
Black or African American	0	
Hispanic	0	
Asian or Pacific Islander	0	
Arabic	0	
<i>Years of school completed</i>		
8 grades or less	2 (5.9)	
Some high school	2 (5.9)	
High school graduate or GED	5 (14.7)	
Some College	10 (29.4)	
College graduate	12 (35.3)	
Graduate degree	3 (8.8)	
<i>Health Insurance plan in the past six months</i>		
An individual plan	3 (8.8)	
A plan through your employer	6 (17.6)	
Military or VA Health Plan	2 (5.9)	
Medicaid	3 (8.8)	
Medicare	10 (29.4)	
Other	7 (20.6)	
I have not had an insurance plan in the past 6 months.	3 (8.8)	
Clinical characteristics		
<i>Self-rated health</i>		
Excellent	1 (2.9)	

Variable	Number (%)	Mean ± SD
Very good	11 (32.4)	
Good	10 (29.4)	
Fair	12 (35.3)	
Poor	0	
<i>Number of prescription medications taken daily</i>		4.18 ± 3.53
1	7 (20.5)	
≥ 2	27 (79.5)	
<i>Number of pharmacies used in the past six months</i>		1.44 ± 0.71
1	21 (61.8)	
≥ 2	13 (38.2)	
<i>Pharmacy Type</i>		
Chain	15 (44.1)	
Independent	13 (38.2)	
Other	6 (29.3)	
<i>Number of chronic illnesses</i>		3.09 ± 2.09
1	11 (32.4)	
≥ 2	23 (67.6)	
Other characteristics		
<i>Primary internet site</i>		
Home	16 (48.5)	
Office	1 (3.0)	
Community center	6 (18.2)	
Other	10 (30.3)	
<i>Had internet at home</i>		
Yes	17 (51.5)	
No	16 (48.5)	
<i>Frequency of Internet Use</i>		
Daily	14 (42.4)	
1-3 times weekly	4 (12.1)	
Weekly	2 (6.1)	
Monthly	2 (6.1)	
Others	11 (32.4)	

SD= Standard deviation units

GED= General Educational Development

VA= Department of Veteran Affairs

Table 2: Survey results on patient understanding of specific pharmacy quality measures (n=34) ^a

Quality Measure	Patient response (Number, %)
Drug-Drug Interactions (Pharmacy ensured there were no patients who were dispensed two medications that can cause harm when taken together).	Yes (32, 94.1)
Helping Patients Get Needed Medications (Pharmacy ensured that patients received the medicines for their chronic conditions and continued to receive them on a regular basis).	Yes (32, 94.1)
Use of High-Risk Medications in the Elderly (Pharmacy ensured the elderly did not receive a Medication that can put them at high risk for developing a severe health problem)	Yes (30, 88.2)
Diabetes Medication Dosing (Pharmacy ensured patients were not dispensed a dose higher than the recommended dose for diabetes medications)	Yes (29, 85.3)
Absence of Controller Therapy for Persons with Asthma (In a pharmacy, patients with asthma were using many “rescue” inhalers to treat their asthma attacks when they occur but were not getting medications to prevent asthma attacks).	Yes (27, 79.4)
Suboptimal Treatment of Hypertension in Patients with Diabetes (In a pharmacy, people who have diabetes and high blood pressure were not getting the best medications to treat blood pressure in people with diabetes)	Yes (26, 76.5)

a. Survey results were collected during the focus group discussions

Table 3: Survey results on the use of quality measures (and specific pharmacy quality measures) to choose pharmacies (n=34) ^a

Quality Measure	Patient response (Number, %)
Drug-Drug Interactions	Yes (33, 97.1)
Helping Patients Get Needed Medications	Yes (32, 94.1)
Use of High-Risk Medications in the Elderly	Yes (27, 79.4)
Diabetes Medication Dosing	Yes (25, 73.5)
Suboptimal Treatment of Hypertension in Patients with Diabetes	Yes (22, 64.7)
Absence of Controller Therapy for Persons with Asthma	Yes (19, 55.9)
All quality measures	Yes (32, 94.1)

a. Survey results were collected during the focus group discussions

Table 4: Survey results on the use of quality measures (and specific pharmacy quality measures) to switch pharmacies (n=34) ^a

Quality Measure	Patient response (Number, %)
Drug-Drug Interactions	Yes (34, 100)
Helping Patients Get Needed Medications	Yes (30, 90.9)
Diabetes Medication Dosing	Yes (25, 73.5)
Use of High-Risk Medications in the Elderly	Yes (24, 70.6)
Absence of Controller Therapy for Persons with Asthma	Yes (21, 61.8)
Suboptimal Treatment of Hypertension in Patients with Diabetes	Yes (19, 55.9)
All quality measures	Yes (28, 84.8)

a. Survey results were collected during the focus group discussions

Table 5: Patients value of quality measures in evaluating a community pharmacy (n=34) ^{a, b}

Quality Measure	Perceived value (Number, %)	Mean (Standard Deviation)
Drug-Drug Interactions	4 (4, 12.1)	4.88 (0.331)
	5 (29, 87.9)	
Helping Patients Get Needed Medications	3 (3, 9.1)	4.61 (0.659)
	4 (7, 21.2)	
	5 (23, 69.7)	
Use of High-Risk Medications in the Elderly	1 (1, 3.0)	4.36 (0.962)
	3 (5, 15.2)	
	4 (7, 21.2)	
	5 (20, 60.6)	
Diabetes Medication Dosing	1 (2, 6.1)	4.18 (1.211)
	2 (2, 5.9)	
	3 (3, 9.1)	
	4 (7, 21.2)	
	5 (19, 57.6)	
Absence of Controller Therapy for Persons with Asthma	1 (3, 9.1)	4.03 (1.262)
	2 (1, 3.0)	
	3 (4, 12.1)	
	4 (9, 27.3)	
	5 (16, 48.5)	
Suboptimal Treatment of Hypertension in Patients with Diabetes	1 (2, 6.1)	4.00 (1.225)
	2 (2, 6.1)	
	3 (6, 18.2)	
	4 (7, 21.2)	
	5 (16, 48.5)	

- a. Survey results were collected during the focus group discussions.
- b. Patients ranked from 1 to 5 (1 being low and 5 being high) the value of the specific quality measure in evaluating a pharmacy.

Appendix A

Focus Group Transcript

First, distribute worksheets/questionnaires

How many of you use community pharmacies to purchase prescription drugs? Over the counter medications?

How do you choose the pharmacy you go to?

How would you define/assess the quality of a pharmacy?

If you could find information that rated the quality of pharmacies, do you think you might use the quality scores to choose a pharmacy?

Framework Introduction

It is now possible to measure the quality of Pharmacies. You can compare pharmacies on how good a job they do in delivering high quality care.

Comprehension and Understanding of Measures

Study Objective 1: Examine consumers' interpretation of pharmacy quality measures data.

Study Objective 3: Determine the characteristics of people who can interpret pharmacy quality measures.

Here are some measures used in evaluating the quality of a pharmacy, do you understand what each one means? **(Use Worksheet 1)**

How should they be worded so that you can understand it?

I. LANGUAGE

7. Helping Patients get needed Medications. Definition: Pharmacy ensured that patients received the medicines for their chronic conditions and continued to receive them on a regular basis.

a. **Now this measure has a rate for 3 types of medications separately: diabetes, high blood pressure and high cholesterol.**

Do you have one of these conditions?

Assuming you had one of these conditions; would you prefer a rating for each type of medication or an overall rating? Why?

- 8. Diabetes medication dosing (Pharmacy ensured patients were not dispensed a dose higher than the recommended dose for diabetes medications)**
- 9. Use of High-risk medications in the elderly (Pharmacy ensured the elderly did not receive a Medication that can put them at high risk for developing a severe health problem)**
- 10. Drug-Drug Interactions (Pharmacy ensured there were no patients who were dispensed two medications that can cause harm when taken together).**
- 11. Suboptimal treatment of hypertension in patients with diabetes (In a pharmacy, people who have diabetes and high blood pressure were not getting the best medications to treat blood pressure in people with diabetes)**
- 12. Absence of controller therapy for persons with asthma (In a pharmacy, patients with asthma were using many “rescue” inhalers to treat their asthma attacks when they occur but were not getting medications to prevent asthma attacks).**

II. ACCESS AND RATING OF QUALITY INFORMATION

Study Objective 1: Examine consumers' interpretation of pharmacy quality measures data

The next questions examine how it would make most sense for you to access this information?

Would you look to see how the pharmacy helped patients with one specific condition/specific measure? For example, would you like to see ratings specific to a chronic condition like asthma and/or diabetes or would you rather like to see the overall rating of a pharmacy? Why?

Would you want to see how the pharmacy did OVERALL (in other words...across ALL quality measures)? Why?

- 1. Helping patients get needed medications. Definition: pharmacy ensured that patients received their medicines for their chronic conditions and continued to receive them on a regular basis.**
- 2. Diabetes medication dosing (patients were not dispensed a dose higher than the recommended dose for diabetes medications)**
- 3. Use of high-risk medications in the elderly (elderly did not receive a medication that can put them at high risk for developing a severe health problem)**

- 4. Drug-drug interactions (patients who were dispensed two medications that can cause harm when taken together).**
- 5. Suboptimal treatment of hypertension in patients with diabetes (People who have diabetes and high blood pressure were not getting the best medications to treat blood pressure in people with diabetes)**
- 6. Absence of controller therapy for persons with asthma (Patients with asthma who using many “rescue” inhalers to treat their asthma attacks when they occur but were not getting medications to prevent asthma attacks).**

If you could see an overall rating for a pharmacy, how would you like it to be displayed?

Stars (1 to 5 stars)

Score on a scale of 0 to 100%

Score on a scale of 0 to 100, 0 to 10, Grade A to F

Some other scale???

What other grading/type of information would you like to see?

III. DATA DISPLAY AND INTERPRETATION of report cards

Study Objective 1: Examine consumers' interpretation of pharmacy quality measures data

Let us look at an example of how this information may be presented to you using something that is already available on the internet.

[Show them a comparison that is based on stars (1-5 stars) to be similar to Medicare plan ratings]
<http://www.medicaredrugplans.com/PlansRatings.aspx?StateId=45&State=South+Dakota>

Do you understand this information? What would make the information more understandable?

Now, let us look other examples.

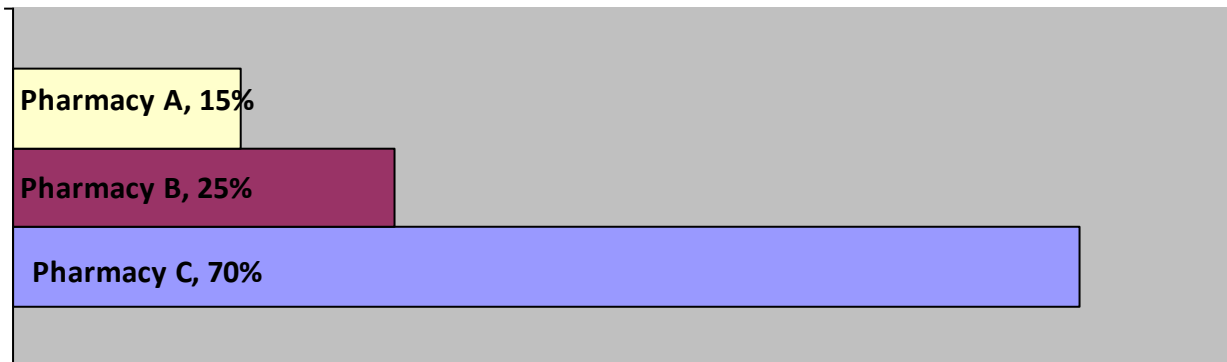
Below are some examples of report cards...

Mock report card 1

Do you understand this information? Which pharmacy is best? What would make the information more understandable?

Measure: Use of high risk medications in the elderly. This is the percentage of elderly who did not receive a medication that can put them at high risk for developing a severe health problem

LOWER % is better



Now that you have viewed the comparable information for the three pharmacies, let us look at a specific example of a report for one of the pharmacies.

Mock report for Pharmacy A

Quality Measure	Results	State Average	
-Asthma			
Percent of Patients with asthma who were using many “rescue” inhalers to treat their asthma attacks when they occur but were not getting medications to prevent asthma attacks	27%	22%	Lower % is better
-Cardiovascular Disease			
Percent of patients with Diabetes who pharmacy helped get needed Medications	15%	21%	Higher % is better
Percent of patients with High blood pressure who pharmacy helped get needed Medications	87%	81%	Higher % is better
Percent of patients with High cholesterol who pharmacy helped get needed Medications	20%	24%	Higher % is better
-Diabetes Care			
Percent of patients dispensed a dose higher than the recommended dose for diabetes medications	5%	9%	Lower % is better
Percent of people who have diabetes and high blood pressure and were not getting the best medications to treat blood pressure in people with diabetes	10%	15%	Lower% is better
-Medication Safety			
Percent of elderly who did not receive a Medication that can put them at high risk for developing a severe health problem	15%	20%	Lower % is better

Percent of patients who were dispensed TWO medications that can cause harm when taken together	7%	12%	Lower % is better
Overall score for Pharmacy A	80%	85%	Higher% is better

How would you interpret the information on the mock report for Pharmacy A?

What do you like/don't like about the way the data on these pharmacies is displayed?

What should be done differently to make this information simpler to understand?

What would be the best way to present this information on the quality of a pharmacy?

IV. VALUE

Study Objective 2: Determine if pharmacy quality measures influence consumers' choice of community pharmacy in various settings.

Study Objective 3: Identify and evaluate consumers' perceived value of pharmacy quality measures (including its specific measures).

Would you use any of the items covered in the language session to pick a pharmacy and Why? How much do you value each quality measure in evaluating a pharmacy? **(Use Worksheet 2)**

If there were quality measures that were interpretable and available for use, would you use them and why would you use/not use them?

Would you switch your pharmacy based on these quality measures? **(Use Worksheet 3)**

How big a difference in the rating of a pharmacy would you like to see before you make a switch in your pharmacy?

Would you want to know how other consumers have rated a pharmacy versus these clinical measures? Why or Why not?

OTHER QUESTIONS

Would you prefer a simple "star rating" of the pharmacy in addition to the specific rates on each measure?

Would you prefer “consumer ratings” instead of these “clinical” measures? We have some health plans that are most interested in using consumer surveys to gather feedback from the patrons of each pharmacy and to then publicize the consumer ratings.

We are interested in knowing what types of ratings are most desired by patients.

How would you want to find the information on the quality of a pharmacy?

How would you like to access this information?

Where would you want this type of information on quality measures to come from?

Appendix B

Advancing the Utility of Community Pharmacy Quality Measures study Focus group Questionnaires

Please do not place your name on the questionnaires. Fill in the blanks where appropriate. ID _____

Worksheet 1

Interpretation of specific pharmacy quality measures

Do you understand the meaning of the following measures? Please indicate either Yes or No.

1. Helping Patients get needed Medications (Pharmacy ensured that patients received their medicines for their chronic conditions and continued to receive them on a regular basis).
Yes_____ No_____

2. Diabetes medication dosing (Patients were not dispensed a dose higher than the recommended dose for diabetes medications)
Yes_____ No_____

3. Use of High-risk medications in the elderly (Elderly did not receive a Medication that can put them at high risk for developing a severe health problem)
Yes_____ No_____

4. Drug-Drug Interactions (Patients who were dispensed two medications that can cause harm when taken together).
Yes_____ No_____

5. Suboptimal treatment of hypertension in patients with diabetes (People who have diabetes and high blood pressure were not getting the best medications to treat blood pressure in people with diabetes)
Yes_____ No_____

6. Absence of controller therapy for persons with asthma (Patients with asthma who using many "rescue" inhalers to treat their asthma attacks when they occur but were not getting medications to prevent asthma attacks).
Yes_____ No_____

Worksheet 2

Value of pharmacy quality measures (Overall and Specific measures)

Please rate on a scale of 1 to 5 (1 being low and 5 being high) how much you value specific quality measure in evaluating a pharmacy. Check only one column.

Quality measure	Of low value in evaluating a pharmacy (1)	2	3	4	Of high value in evaluating a pharmacy (5)
Helping Patients get needed Medications (Pharmacy ensured that patients received their medicines for their chronic conditions and continued to receive them on a regular basis)					
Diabetes medication dosing (Patients were not dispensed a dose higher than the recommended dose for diabetes medications)					
Use of High-risk medications in the elderly (Elderly did not receive a Medication that can put them at high risk for developing a severe health problem)					
Drug-Drug Interactions (Patients who were dispensed two medications that can cause harm when taken together)					
Suboptimal treatment of hypertension in patients with diabetes (People who have diabetes and high blood pressure were not getting the best medications to treat blood pressure in people with diabetes)					
Absence of controller therapy for persons with asthma (Patients with asthma who using many “rescue” inhalers to treat their asthma attacks when they occur but were not getting medications to prevent asthma attacks).					
All quality measures					

Worksheet 3

Use of quality measures in pharmacy choice.

If you could find information that rated the quality of pharmacies, do you think you might use the quality scores to choose a pharmacy?

Yes_____ No_____

If your community pharmacy had low quality ratings overall, would you switch your pharmacy based on these measures?

Yes_____ No_____

Indicate whether each specific quality measure would make you choose your pharmacy.

Quality Measure	Yes	No
Helping Patients get needed Medications (Pharmacy ensured that patients received their medicines for their chronic conditions and continued to receive them on a regular basis)		
Diabetes medication dosing (Patients were not dispensed a dose higher than the recommended dose for diabetes medications)		
Use of High-risk medications in the elderly (Elderly did not receive a Medication that can put them at high risk for developing a severe health problem)		
Drug-Drug Interactions (Patients who were dispensed two medications that can cause harm when taken together)		
Suboptimal treatment of hypertension in patients with diabetes (People who have diabetes and high blood pressure were not getting the best medications to treat blood pressure in people with diabetes)		
Absence of controller therapy for persons with asthma (Patients with asthma who using many "rescue" inhalers to treat their asthma attacks when they occur but were not getting medications to prevent asthma attacks).		

Indicate whether each specific quality measure would make you switch your pharmacy.

Quality Measure	Yes	No
Helping Patients get needed Medications (Pharmacy ensured that patients received their medicines for their chronic conditions and continued to receive them on a regular basis)		
Diabetes medication dosing (Patients were not dispensed a dose higher than the recommended dose for diabetes medications)		
Use of High-risk medications in the elderly (Elderly did not receive a Medication that can put them at high risk for developing a severe health problem)		
Drug-Drug Interactions (Patients who were dispensed two medications that can cause harm when taken together)		
Suboptimal treatment of hypertension in patients with diabetes (People who have diabetes and high blood pressure were not getting the best medications to treat blood pressure in people with diabetes)		
Absence of controller therapy for persons with asthma (Patients with asthma who using many “rescue” inhalers to treat their asthma attacks when they occur but were not getting medications to prevent asthma attacks).		

Appendix C

Focus Group Participant Questionnaire

Please do not place your name on the form. Fill in the blanks or check a category where appropriate. We appreciate your time in completing this form.

Demographics

1. What is your age? _____
2. Gender Male Female
3. What is your ethnic origin/race?
 - White, not Hispanic
 - Black or African American
 - Hispanic
 - American Indian/Alaskan Native
 - Asian or Pacific Islander
 - Arabic
 - Other _____
4. How many years of school have you completed? (Check one box)
 - 8 grades or less
 - Some high school
 - High school graduate or GED
 - Some College or technical school
 - College graduate
 - Graduate degree
5. How many pharmacies have you used to fill your prescriptions in the last 6 months? _____
6. How would you describe the insurance plan(s) you have had in the last 6 months?
 - An individual plan
 - A plan through your employer
 - Military or VA Health Plan
 - Medicaid
 - Medicare
 - I have not had an insurance plan in the past 12 months.
 - Other _____

Clinical characteristics

7. In general, would you say your health is? Excellent Very good Good Fair Poor
8. Are you currently taking prescription medications? _____ Yes _____ No
 - 8a. If yes, how many prescription medications do you use daily? _____

9. How many chronic illness (es) do you have? _____

9a. Please indicate which chronic condition (s) you have?

- a. ___ Headache or Migraine
- b. ___ Mental Health Issues (Example: Anxiety, Depression, Bipolar disorder, Schizophrenia)
- c. ___ Joint pain (Example: Osteoarthritis, Rheumatoid arthritis)
- d. ___ Back problems
- e. ___ Paralysis (Loss of Voluntary Movements)
- f. ___ Epilepsy or Convulsions (Seizures)
- g. ___ Neurologic diseases (Parkinson's, Alzheimer's disease, Stroke)
- h. ___ Hypertension (High Blood Pressure)
- i. ___ Heart failure
- j. ___ Heart Attack, Myocardial infarction (MI), Plaque Buildup in the Arteries
- k. ___ Peripheral artery disease
- l. ___ Arrhythmias (Atrial Fibrillation, Atrial Flutter, Ventricular Fibrillation)
- m. ___ Asthma
- n. ___ Chronic obstructive pulmonary disease (COPD)
- o. ___ Cancer
- p. ___ Diabetes
- q. ___ Esophageal disease (Chronic Heartburn, Reflux)
- r. ___ Gastrointestinal ulcer
- s. ___ Liver diseases (Cirrhosis)
- t. ___ Hepatitis
- u. ___ Systemic lupus erythematosus
- v. ___ Thyroid disorders (Hypothyroidism, Hyperthyroidism)
- w. ___ Ophthalmic problems (Cataracts, Glaucoma)
- x. ___ HIV infection
- y. Other chronic condition _____

Web-access questions

10. What is the primary site for your use of the internet/web?

_____ Home

_____ Office

_____ Community center/area e.g. Public library

_____ Business location e.g. Coffee shop

Other _____

11. Do you have internet access at home?

_____ Yes _____ No

12. What type of internet connection do you have?

_____ Dial-up

_____ High-speed

_____ Wi-Fi

_____ I don't know

Other _____

Frequency of use of the internet/web

13. I use the internet/web

_____ Daily

_____ 1-3 times a week

_____ Weekly

_____ Monthly

Other _____

14. In the last month, what type of information have you accessed from the internet/web? Please check all that applies.

_____ News

_____ Health

_____ Finance

_____ Entertainment

- _____ Email
- _____ Games
- _____ Chat
- _____ Travel
- _____ TV programs
- _____ Weather
- _____ Sports
- _____ Shopping
- _____ Maps
- _____ Music
- _____ Jobs
- Other _____

Other characteristics

15. Do you live within 20 miles of Milbank?

- _____ Yes
- _____ No

16. Is your physical address or location in an urban/rural area?

- _____ Yes
- _____ No

Urban location is defined as an area with a population of 50,000 or more.

Rural location is defined as an area with a population of 50,000 or less.

17. What type of Pharmacy do you typically use to fill your prescriptions? Please circle your response.

- a. Chain Pharmacy
- b. Independent Pharmacy
- c. Mail order pharmacy
- d. Internet Pharmacy
- e. Other _____

Chain Pharmacy is defined as a pharmacy affiliated with a publicly traded company. For example: Wal-Mart, Lewis, Walgreens, Target, Hy-Vee

Independent Pharmacy is defined as a pharmacy that is not affiliated with a publicly traded company. For example: HealthMart, Liebe, Medicap, Medicine Shoppe

Mail Order pharmacy is a pharmacy that mails out prescriptions to patients but doesn't physically have a location for patients to go see their pharmacist.