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Evaluating A Patient-Centered Medical Home From the Patient's Perspective

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ABSTRACT

Background: The medical home is an organizational approach for improving care, improving patient experience, and reducing costs. The purpose of this qualitative project was to obtain input from patients that could be used to improve their experiences in the medical home for ongoing disease management and health improvement and to obtain their recommendations for the most effective methods to involve patients in shaping system policies, procedures, and practices consistent with patient- and family-centered care principles.

Methods: We conducted cognitive interviews to complete patient experience surveys, structured focus groups, and exit surveys. A sample of 32 adults participated in cognitive interviews (n=15) and structured focus groups (n=17) using the nominal group technique (NGT). Exit surveys collected demographic information and input from patients about opportunities for their involvement in shaping medical homes.

Results: Cognitive interviews, NGT sessions, and exit surveys revealed patient-perceived strengths and inadequacies within the medical home. Better access to care, including more efficient appointment scheduling and reduced wait times to see a physician once patients arrived for scheduled appointments, was identified as a necessary improvement. Patients' positive perceptions included how the medical home helps them reach their health goals and their overall satisfaction with the quality of care received.

Conclusion: The input received from patients through the methods used in this project was useful in revealing needed improvements within a medical home and, if resolved, will ensure that all patients have access to the kind of care that works for them.

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INTRODUCTION

The medical home represents a dynamic organizational model designed to improve care, improve patient experience, and reduce medical costs. The patient-centered medical home (PCMH) seeks to address some of the widely recognized inadequacies of primary care delivery by facilitating partnerships among the patient, physician, and healthcare team.[1,2] Typically, patient-centered care is based on the belief that patients and their families desire increased involvement in and greater access to care, as well as improved communication with their providers.[3,4] Accessible services, one of the domains of the PCMH, can influence patient satisfaction, symptom burden, and sense of enablement.[5]

Staff of the Louisiana State University (LSU) Health Care Services Division (HCSD) developed and conducted a pilot test of a patient experience survey for the LSU medical homes. Preliminary analysis of the results from these surveys identified patient-perceived deficiencies in the area of access to care: scheduling appointments and wait time to see a physician. The purpose of this qualitative project was to obtain further input from patients to improve their experiences within the medical home for ongoing disease management and health improvement and to obtain their recommendations for the most effective methods

to involve patients in shaping system policies, procedures, and practices consistent with patient- and family-centered care principles.

METHODS

Cognitive interviews, structured focus groups using the nominal group technique (NGT), and exit surveys were conducted to obtain input for improving the patient experience and accessibility to healthcare at 1 LSU medical home site.

Patients

All adult patients within the targeted LSU medical home site aged 18 years or older were eligible to participate in either a cognitive interview or in 1 of 2 NGT sessions. Patients were recruited from the clinic waiting area as they arrived for their scheduled clinic appointments. Flyers in the waiting area provided information about how to participate in the program and the telephone number to call to enroll. Patients gave written informed consent when they arrived at the interview or NGT meeting prior to the start of each session. Patients unwilling or unable to provide informed consent were ineligible to participate in the program. All received a $30 stipend for their time upon completion of the interview or NGT session. The institutional review boards at Pennington Biomedical Research Center and the LSU Health Sciences Center-New Orleans reviewed and approved the study protocol, procedures, and consent form.

Design and Procedures

Cognitive Interviews. Cognitive interviewing is a diagnostic tool for testing survey instruments that focuses mainly on the questionnaire rather than the survey process, paying explicit attention to the mental processes respondents use to answer survey questions and thus allowing the identification of covert as well as overt problems.[6-10] To determine if the wording of survey questions needed to be changed and to identify needed areas of improvement in patient care delivery, 15 patients from 1 LSU medical home participated in cognitive interviewing using a patient experience survey. A maximum of 3 patients per day were interviewed one on one at the community center where the medical home site is located. Each interview was scheduled for 60 minutes but lasted 30-45 minutes. The final 15-30 minutes allowed time for patients to complete an exit survey following the interview.

Interviews were conducted using think-aloud and concurrent probing techniques. Although the interviewer (BMK) recorded each response verbatim, all interviews were tape recorded with each patient's permission in case a response was not clear. The interviewer read the ground rules prior to interviewing each patient. Patients were instructed to read each question on the survey aloud and use a Likert-type scale of 1 (poor) to 5 (excellent) to rate each question based on their experience in this medical home. Patients were further instructed that choosing 2 meant fair, 3 meant average, and 4 was very good. Prior to the interviews, individuals demographically similar to patients in the medical home pilot tested the survey questions to ensure clarity and understanding of procedures based on responses obtained.

Analysis from the first medical home patient interviews will be used to modify ongoing patient experience surveys, and this modified version of the survey will be used in future phases of cognitive interviews. Final modifications to the patient experience survey will be made after completion and analysis of this repeated process across all LSU medical home sites until a general consensus of patient satisfaction with accessible services is improved.

Focus Groups. In addition to cognitive interviews, structured focus groups were conducted with patients in this medical home. The NGT is a qualitative method of data collection that we used to engage patients and obtain their detailed input to improve patient experiences in the medical home for ongoing disease management and health improvement. NGT is a brainstorming tool for quality improvement, and highly structured small group discussions are used to elicit and prioritize answers to a specific question.[11-15] As with focus groups, the ideal number of 4-12 participants per group is considered appropriate for NGT sessions.

The multistep NGT design is useful for systematically stimulating meaningful interpersonal affirmations among patients by gathering equally weighted responses to a specific question, and the method tends to offer valid representation of group views.[16-19] With the NGT method, audio recording and transcription are not needed because a facilitator writes verbatim responses on a flipchart, thereby providing a concise summary of the session that is readily available for dissemination. Prior to conducting NGT sessions, the investigative team articulated the specific question and then pilot tested it as was similarly done with the patient experience surveys to ensure that the question would capture the responses intended.

Seventeen patients participated in 1 of 2 NGT sessions. Each group consisted of 7-10 patients and both groups included a male. The first session was conducted on Monday and the second session on Saturday at the community center where the medical home site is located. Each group session lasted

approximately 90 minutes. During the first 60 minutes, after welcomes, a discussion of purpose and ground rules, and brief introductions, the facilitator (BMK), accompanied by the cofacilitator (WPG), posed the following question: "What are some things the LSU hospital system could do to help improve availability and access to the overall health of its patients within this medical home?" Second, we asked patients to work silently and to independently write down as many responses to the question as possible in short phrases that represented their individual views. Third, in a round-robin manner, we asked patients to share their answers (1 response at a time), and the cofacilitator wrote each response verbatim onto a flipchart without discussion. Fourth, we then discussed each recorded response for the sole purpose of clarification and not for evaluation or debate as to the relative importance. During this step, we prompted patients to combine responses that they perceived to be significantly similar. Finally, during the voting phase, patients privately selected what they considered to be the top 3 items from the list of responses that were likely to have the greatest impact and also identified the items that would be the easiest to implement within this medical home. Patients prioritized their choices on their own and without discussion with other patients, giving a rank of 3 to the most important and 1 to the least important idea. They used the same scale to rank the ease of implementation. The facilitator recorded the votes on the flipchart in front of all patients and then tallied the votes for each response. A small number of idiosyncratic ideas were discarded, which is a standard procedure in the NGT. The main results were the top 3 ideas identified within each group; the secondary results were all other ideas. Through an iterative process, the facilitators categorized responses into common themes until consensus was obtained. The final 15-30 minutes allowed time for patients to complete an exit survey.

Exit Survey. Patients who participated in both the individual cognitive interviews and in the focus groups completed exit surveys. The exit survey was designed to elicit patients' recommendations for the best way to include them in shaping policies, procedures, and practices to improve the quality of care they receive within the medical home. The survey consisted of 4 questions applicable to patient- and family-centered care and 8 demographic questions. In order, the patient- and family-centered care questions on the survey were as follows:

1. What opportunities are there for patients and families to give input on how care is provided at this medical home?
2. Are you willing to participate to help shape policies and practices?
3. Would you be willing to serve on committees/advisory boards?
4. How often would you be willing to attend a committee/advisory board meeting?

The 8 demographic questions asked for age range, ethnicity, gender, educational background, employment, annual household income, marital status, and health status. Patients in both groups were allowed 15-30 minutes to complete the exit survey.

RESULTS

Selected demographic characteristics of 32 patients receiving primary care in 1 local LSU medical home site are shown in Table 1. Of the 32 patients, 15 completed individual cognitive interviews and 17 participated in 1 of 2 NGT sessions. Overall, 63% of patients were in the 40-59 age range and 91% were African-Americans. The percentage of men and women completing cognitive interviews was comparable (47% and 53%, respectively). Education varied widely, with 47% of patients interviewed having some high school and 53% of NGT patients having high school diplomas. Overall, 31% of patients receiving primary care from this medical home were unemployed while 22% were employed full time. Both the cognitive interview and the NGT participants were comparable in terms of being unemployed or medically disabled. More than half (53%) of all patients had incomes less than $10,000 annually, and 34% had incomes ranging from $10,000-19,999 per year. The incidence of patients never married and those married was similar in both groups and overall. Overall, 53% of the participants reported being in good health and 22% reported their health as fair.

Cognitive Interviews

A total of 15 patients completed the individual cognitive interviews using a validated patient experience survey. Table 2 shows the mean average responses from the patient experience surveys. The lowest mean average scores (3.5-4.3) resulted from 8 of the 15 questions on the survey instrument. Specifically, the following 3 questions each had mean average scores of 3.5, suggesting possible patient-perceived inadequacies in access to healthcare:

2. How easy it is to get an appointment at this clinic in the near future when you need one?
3. How quickly this clinic gets you in to see the doctor after you arrive for your appointment?
12. How easy it is to get care from this clinic when you need it?

The remaining mean average scores resulting from 7 of the 15 questions ranged from 4.5-4.7. The following 3 questions each had mean averages of 4.7,

equating to very good and almost excellent ratings, suggesting patient-perceived satisfaction in these areas:

4. How well this clinic helps you reach your health goals?
6. How concerned the physicians and nurses at this clinic are with providing you high quality health care?
14. How satisfied are you with the care you receive from this clinic?

Although interviewed patients stated that each question on the survey instrument was acceptable as written, when they read questions with the words it is, they reverse ordered the words and read is it instead. In the second phase of cognitive interviews with patients at the next targeted LSU medical home site, questions on the survey instrument will reflect this change.

In addition, patients were asked to write additional comments about how to improve their healthcare on the back of the survey form. Many patients expressed verbally the same sentiments captured by 1 patient in writing: "*There is a problem getting your prescriptions filled. You have to go to the drop off window to get your prescription filled, and when you come back to get your prescription that has already been filled, you have to get back in the line where you drop off your prescription to sign up to get your medicine. I believe there can be a better system.*"

NGT Sessions

In the first NGT session, 10 patients generated 26 responses to the question of how to improve patient experiences at this medical home for ongoing disease management and health improvement. However, during the clarification discussion, this group indicated many of the responses overlapped and combined them. The final list for the prioritization exercise consisted of 12 responses that were organized under the 5 themes identified during the iterative process. In Table 3, the themes are listed in bold print and the actual patient responses are listed under each theme. The relative importance of each patient idea for improvement is reflected by the total number of votes and the sum of the ranks. The specific patient responses with the most votes—"*Get more frequent appointments,*" "*Cut time down for being here,*" and "*I need my doctor to listen to my concerns about my health*"—were categorized under 3 themes: decrease wait time for scheduling appointments, reduce wait time in the clinic, and improve communication with patients, respectively. Consequently, these 3 areas were identified as the participants' most important ideas for improving patient experiences.

Table 1. Demographic Characteristics of Louisiana State University Medical Home Program Participants

Variable	Cognitive Interview Participants n=15 %	NGT Session Participants n=17 %	Total n=32 %
Age			
18-39 years	13	17	16
40-59 years	67	59	63
60+ years	20	24	21
Ethnicity			
African-American	93	88	91
Caucasian	7	12	9
Gender			
Men	47	12	28
Women	53	88	72
Education			
0-8 grade	0	6	3
Some high school	47	6	25
High school	33	53	44
1-3 years college	20	35	28
Employment			
Full time	27	18	22
Part time	20	12	16
Medical disability	20	18	18
Unemployed	33	29	31
Retired	0	23	13
Annual Income[a]			
<$10,000	60	47	53
$10-19,999	20	47	34
$20-29,999	0	6	3
$30-39,999	13	0	7
$60-69,999	7	0	3
Marital Status			
Never	33	29	31
Married	13	12	13
Divorced	47	23	34
Widowed	0	18	9
Separated	7	18	13
Health Status			
Excellent	20	0	9
Very good	7	12	9
Good	40	64	53
Fair	26	18	22
Poor	7	6	7

[a]Household income.
NGT, nominal group technique.

Patients also responded "*Hire more staff*" and "*Vision and dental*" as secondary ideas categorized under the themes increase staff and improve service delivery as ideas for further improving patient experiences within this medical home.

Table 2. Cognitive Interview Results From the Patient Experience Survey

Questions	M[a]
1. How well this clinic communicates with the patients?	4.3
2. How easy it is to get an appointment at this clinic in the near future when you need one?	3.5
3. How quickly this clinic gets you in to see the doctor after you arrive for your appointment?	3.5
4. How well this clinic helps you reach your health goals?	4.7
5. How well this clinic follows up with me to give me test results?	4.1
6. How concerned the physicians and nurses at this clinic are with providing you high quality health care?	4.7
7. How well this clinic teaches patients about how to improve their health?	4.3
8. How well this clinic educates patients about how to properly take medications?	4.3
9. How well this clinic assesses your ability to afford medications, treatments, and procedures?	4.5
10. How well this clinic makes sure I get screening tests and procedures I need?	4.3
11. The friendliness and helpfulness of the clinic staff.	4.6
12. How easy it is to get care from this clinic when you need it?	3.5
13. The quality of health care you receive from this clinic.	4.6
14. How satisfied are you with the care you receive from this clinic?	4.7
15. How likely are you to recommend that other people use this clinic for healthcare?	4.6

[a]M=Average response from 15 patients, based on a scale of 1 (poor) to 5 (excellent).

In the second NGT session, 7 patients generated 22 responses to the question of how to improve patient experiences at this medical home. Similar to those in the first session, this group also indicated many responses overlapped and merged them. As a result, 10 responses remained for the prioritization exercise (Table 4). Patients in the second session identified the following as areas needing improvement: "*Dental,*" "*Limit the amount of waiting time for appointments,*" "*Wait so long in the 2 rooms to see doctor.*" These statements were categorized under the 3 themes improve service delivery, decrease wait

Table 3. Responses From Patients in NGT Session 1 (n=10)

What are some things the LSU hospital system could do to help improve availability and access to the overall health of its patients within this medical home?	Total Votes	Sum of Ranks[a]
Decrease wait time for scheduling appointments		
"Get more frequent appointments."	7	21
"If after calling on the phone for an appointment three or four times; take the time and go into the office with your concerns at the clinic for appointments."	1	3
Reduce wait time in the clinic		
"Cut time down for being here."	4	12
Improve communication with patients		
"I need for my doctor to listen to my concerns about my health."	3	9
"Elaborate on why you need certain meds and blood work."	2	5
"Better attitudes."	1	3
Increase staff		
"Hire more staff."	2	6
"Maybe get more doctors on staff to treat more patients."	1	3
Improve service delivery		
"Vision and dental."	2	5
"Help with cheaper meds."	1	2
"Medical prescription refills."	1	2
"Speed up process when reassessment time comes around."	2	2

[a]Calculated by summing the ranks of responses (3=most important, 2=second most important, and 1=least important). A higher score equals greater perceived importance.
LSU, Louisiana State University; NGT, nominal group technique.

Table 4. Responses From Patients in NGT Session 2 (n=7)

What are some things the LSU hospital system could do to help improve availability and access to the overall health of its patients within this medical home?	Total Votes	Sum of Ranks[a]
Improve service delivery		
"Dental."	4	12
"Pharmacy at this clinic."	3	4
"All care should be provided at this medical home."	2	4
"Eye, ear, nose."	2	3
"Pain management."	1	2
"Van for transportation for patients to travel."	1	1
Decrease wait time for scheduling appointments		
"Limit the amount of waiting time for appointments."	3	9
Reduce wait time in the clinic		
"Wait so long in the 2 rooms to see doctor."	2	6
Increase staff		
"More than 1 doctor."	2	5
Improve communication with patients		
"Have a better communication of doctors, nurses."	1	3

[a]Calculated by summing the ranks of responses (3=most important, 2=second most important, and 1=least important). A higher score equals greater perceived importance.
LSU, Louisiana State University; NGT, nominal group technique.

time for scheduling appointments, and reduce wait time in the clinic, respectively, and were also identified as the top 3 most important areas for improving patient experiences. Patients also responded "*More than 1 doctor*" and "*Have a better communication of doctors, nurses*" as secondary ideas—categorized under the themes increase staff and improve communication with patients—for improving patient experiences within the medical home.

Patients in group 1 suggested decreasing time for scheduling appointments, reducing wait time in the clinic, and improving communication with patients as the top 3 ideas, while group 2 suggested improving service delivery, decreasing wait time for scheduling appointments, and reducing wait time in the clinic as likely to have the greatest impact on improving services within this medical home. Both groups unanimously perceived that improving appointment scheduling would likely be the easiest to implement.

Exit Surveys

Following each cognitive interview and NGT session, all 32 patients were asked to complete an exit survey to obtain their recommendations for the most effective methods to involve patients in shaping system policies, procedures, and practices consistent with patient- and family-centered care principles. To the first question on the exit survey, 100% of patients responded that no opportunities are available to give input on how care is provided at this medical home. The follow-up questions revealed that 97% are willing to participate to help shape policies and practices, 84% are willing to serve on committees/advisory boards with 66% of those willing to address patient experiences and concerns, and more than half (59%) are willing to attend a committee/advisory board meeting on a monthly basis.

DISCUSSION

This project identified areas of perceived strength and areas for improvement within the medical home. Nearly two-thirds of participants from this medical home were in the age range of 40-59 years, the majority were African-American, and 69% had some high school or high school diplomas. More than half of all patients reported incomes less than $10,000 with another 34% reporting less than $20,000 a year. These incomes fall within Louisiana's poverty rate of 19.2%, the second highest rate in the nation and the highest in the South.[20] Irrespective of educational attainment or income status, patients were eager to share their concerns and experiences within this medical home and to suggest ways to improve access to care and service delivery. Previous research has shown the importance of eliciting information from patients rather than making assumptions about their health beliefs, education, or income levels.[21]

Cognitive interviews were conducted to determine if this method can be used as a routine way to improve patient experience surveys. The cognitive interviews were also used as a mechanism to obtain patient input about how to improve patient care.

Patient responses suggested that minor rewording of some of the questions is desirable. For example, in the second phase of cognitive interviews, the patient experience survey instrument will be modified by reversing the wording from it is to is it to clarify and improve the applicable questions.

Because only 1 medical home was tested in this first phase, it may be too early to determine if cognitive interviewing will prove beneficial in refining the patient experience survey for future use in other medical homes and if it will be a valuable tool for improving the quality of data subsequently obtained.[22] The use of cognitive techniques has been reported in cancer care[23] and in care of the elderly,[24] mainly in instrument development, which adds value specific to the needs of this qualitative project. Cognitive interviewing techniques have also been used in a laboratory setting to understand responses to questions about daily living activities and to social support questionnaires in the elderly[25] and have been more extensively used in larger surveys in a variety of settings.[26-28]

Cognitive interviewing has some limitations. For example, patient burden may increase for those interviewed because cognitive interviews take a maximum of approximately 45 minutes to complete, while actual completion of the survey without cognitive interviewing takes a maximum of approximately 20 minutes.[22] Nevertheless, the application of cognitive interviewing techniques in refining patient experience surveys to obtain continuous input from patients that can improve access and service delivery within medical homes may substantially benefit quality improvement projects.[22]

As a result of cognitive interviewing, responses to 3 of the current survey questions (2, 3, and 12) suggest patient-perceived inadequacies in the area of wait time in scheduling appointments as evidenced by a 3.5 mean average score. This score equates to less than very good but above average, thus suggesting some improvements are warranted in obtaining better access to scheduling appointments. Although inadequacies were observed, patients perceived several areas as satisfactory. For example, questions 4, 6, and 14 had mean average scores of 4.7. This score indicates very good to almost excellent ratings and implies patient-perceived satisfaction specifically with how this medical home helps them reach their health goals, how concerned physicians and nurses are about providing them with high-quality healthcare, and their overall satisfaction with the care they receive at this clinic.

Additionally, with the use of a quality improvement brainstorming tool for idea generation (NGT) to obtain detailed input from patients about how to improve their experiences at this medical home, almost 50 responses were identified for ongoing disease management and health improvements. Five themes were derived as a result of both NGT sessions. Three of the 5 themes (decrease wait time for scheduling appointments, reduce wait time in the clinic, and improve service delivery) were selected by patients as the top 3 ideas likely to have the greatest impact on improving services within this medical home. Both the NGT sessions and the cognitive interviewing revealed inadequacies in scheduling appointments at this medical home. Patients participating in both NGT sessions and responses from cognitive interviews suggest that an improvement in scheduling appointments is likely the easiest to implement.

Advantages of NGT sessions are that the weight of each patient's opinion is the same, and process loss appears less likely to occur.[29] The highly structured format of NGT provides an opportunity for group participants to achieve a substantial amount of work in a relatively short period of time. Another advantage of NGT is the deliberate avoidance of interpretation from a facilitator who has the responsibility to explore but not to interfere with or influence patients in the group.[11]

NGT does have some limitations. The composition and representativeness of patients may limit the generalizability of the results. Also, training and preparation of facilitators are required, the discussion is restricted to a single question, and NGT does not allow further elaboration of other ideas.[30] A more important limitation is that our project design only involved patients and did not involve healthcare providers or physicians. Regardless, NGT may be a good method for identifying local solutions to local problems.[11]

Another limitation of our project is that only 1 LSU medical home and 32 patients have participated thus far. Additionally, the list of potential ideas for improvement generated from this medical home requires further confirmation and validation at other LSU medical home sites through continuous input from patients served at these facilities.

CONCLUSIONS

True improvements in healthcare include easy access to care, patient-centered care, and information-driven care based on scientific evidence and supported by clinical information systems.[31,32] Patient-centered care is a key component of a health system that ensures that all patients have access to the kind of care that works for them. Both cognitive interviews and NGT sessions revealed patient-perceived inadequacies and improvements that are warranted in the area of access to care, including better and more efficient times for patients to

schedule appointments and a reduction in wait time to see a physician once patients arrive for scheduled appointments at this medical home. Despite these inadequacies, equally as important were positive perceptions patients noted about how this medical home helps them reach their health goals, how concerned physicians and nurses are about providing them with high-quality healthcare, and their overall satisfaction with the care they receive at this clinic. More important, exit surveys demonstrated patients' willingness to work towards a solution in sustaining these positive perceptions by participating on advisory and committee boards to further address their concerns and the concerns of other patients.

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