Identifying Service Gaps Between Patients and Providers in a Native American Outpatient Clinic

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Abstract

Background: Native American communities in Montana reservations have reported low-level satisfaction in health services. This research explored if the services provided at a Blackfeet Indian Reservation outpatient clinic were designed to meet patient expectations.

Methods: Staff and patient interviews and surveys allowed service expectations to be assessed according to the clinic's ability to meet those expectations. A total of 48 patients and ten staff members (83% of the staff at this clinic) participated in the study voluntarily.

Results: We found a disconnect between what patients anticipate for care and what staff think they are anticipating. We also found a discontent between what staff believes patients need versus what the patients feel is needed.

Conclusions: These gaps combine to increase the breach between patient expectations and perceptions of their healthcare services. With better insight that captures what patients are looking for from a service, the potential to meet those needs increases and patients feel that their voice is respected and that they are valued.

1. Background

The ability to receive critical healthcare for rural areas is crucial because people live in isolated regions (Thompson et al., 2019; Ruiz-Pérez et al., 2019). What can be even more challenging is when much of the population suffers from economic poverty (Palozzi, Schettini, and Chirico, 2020). This reduces an individual's ability to receive the valued healthcare that they need promptly.

Native American communities found in Montana reservations with the federally funded Indian Health Service (IHS) fall within the category of rural healthcare systems (Estradé et al., 2020). In many cases, low-level satisfaction results from a disconnect in what patients look for in the service compared to what a clinic has determined to be the appropriate service.

Since 2008, the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) has offered a valid standard comparison tool for satisfaction criteria collection and reporting (Giordano et al., 2010; Dorothea et al., 2011). Figure 1 presents a CMS report comparing patient satisfactionwith their healthcare on the Blackfeet Indian Reservation with the state of Montana and nationally (Medicare, 2020).

The report shows lower levels of satisfaction in the Blackfeet Nation than state and national averages. Communities such as the one on the Blackfeet Reservation can benefit from changes that could improve patient satisfaction and increase their health services' quality.

Patient satisfaction or dissatisfaction is associated with the Service Quality Gap (SQG), which is the difference between what patients expect from a service and their perception of the service they received (Oliver, 1980; Oliver, 1993). Figure 2 depicts the patient-provider interaction that could lead to SQG. The figure is based on the Service Quality Gap Model (Parasuraman et al., 1985; Seth et al., 2005).

The SQG starts with a patient having a concern or a need. The patient then chooses a healthcare provider according to past experiences, word of mouth, or simply because that is the only provider available (Fitzsimmons and Fitzsimmons, 2011; Hageman et al., 2015, Ungureanu and Mocean; 2015, Roe, 2013). According to the SQG Model (Fig. 2), there are many opportunities in which gaps or divergences could occur. For instance, Gap 1 focuses on a misalignment between patients' expectations from the service and what the provider thinks the patient expects. Gap 2 identifies what healthcare providers think patients expect versus what they think patients need (which could differ in their expert opinion).

The Design Gap (Gap 3) focuses on how staffing, operations, processes, layout, and patient and information flow are designed to provide the best healthcare service possible. It also includes the physical surroundings, ambient, decorations, and cleanliness of the location. The Service Delivery Gap or Service Encounter Gap (Gap 4) is related to the human resources aspect, such as friendliness, responsiveness, empathy, inclusivity, and employee thoughtfulness.

These four gaps combine to influence patients' service experiences and their perception of the quality of a service (Parasuraman, Zeithaml, V., and Berry, 1988; Mohebifar et al., 2016; Mehrotra and Bhartiya, 2020). The difference between expected service and the perception of the service received creates the Service Quality Gap. Therefore, minimizing the first four gaps can increase patients' satisfaction levels at a facility while still allowing the healthcare staff to provide the needed services (Mohebifar et al., 2016). By doing so, there is potential for improvement of the patient's experience in their local clinics. This, in turn, could improve the satisfaction rating of the facility, which is standardized and reported not only for public use but for accreditation and reimbursement purposes (Shaffer and Tuttas, 2008).

The literature shows evidence of healthcare providers using HCAHPS or other types of surveys to improve their customer service (Otani et al., 2009; Smith et al., 2014; Al-Abri and Al-Balushi, 2014; Thiels et al., 2016; Levin et al., 2017; Wallace et al., 2018; Findlay et al., 2019; Lynch et al., 2020). However, many of the reported cases appear to react to survey results as improvements are made only after services have been provided and measured.

In retrospect, this approach can still leave a SQG that needs to be addressed and service design can take a long time to align with patient expectations. With the ability to bring forward what each party values in their services, the ability to meet needs and expectations satisfactorily becomes more viable prior to the visit and leads to a proactive approach.

On the other hand, relying too heavily on satisfaction surveys could lead to poor healthcare practices since providers would be focusing too much on what patients want to achieve higher scores (Junewicz and Youngner, 2015). This implies that "patient wants" need to be considered but only concerning what the healthcare staff can do to treat patients effectively (patient wants vs. patient needs; Gap 2). This balance between designing for patients' expectations versus effective care can be difficult to assess through post-service surveys such as HCAHPS. It is important to include patient feedback when designing or re-

designing a process. Baker (2001) maintains that patients want to be part of the healthcare process; listening to their voice before they receive service is an important dimension of a Patient-and Family-Centered Care (PFCC) approach to healthcare design and improvement (Stichler, 2012; Berghout, van Exel, Leensvaart, and Cramm, 2015). In fact, it is one of the eight dimensions of PFCC (Berghout, van Exel, Leensvaart, & Cramm, 2015) which is essential to any health provider, but in particular, for those in isolated regions (Thompson et al., 2019) like the one on the Blackfeet Indian Reservation. From the results presented in Fig. 1, it was important to investigate why the Native American community in Browning, Montana has lower HCAHPS overall scores than state and nation averages.

Weidmer-Ocampo et al. (2009) adapted CAHPS and surveyed a Native American population in Oklahoma. Interviews were conducted with a small group of patients to ensure the survey's cognitive understanding was developed. Afterward, the survey was distributed via mail one week after their visit to assess their satisfaction with the healthcare facility. Their results were successful in providing meaningful direction to improve patient satisfaction of the service. While Weidmer-Ocampo et al. (2009) assessed a Native American population, service expectations were not assessed prior to the visit to allow patients to have a voice in the re-design or improvement process. It was assumed that the CAHPS assessed patient expectations.

This research study explored if the services provided at a Blackfeet outpatient clinic are designed to care for the patient and meet the expectations patients anticipate. The research focused on the first two gaps of the SQG model to uncover potential misalignments between patient and healthcare provider service expectations in the Blackfeet Indian Reservation clinic. Staff and patients interviews and surveys allowed service expectations to be assessed according to the clinic's ability to meet those expectations.

2. Methods

Institutional Review Board approvals from Montana State University, Indian Health Service (IHS), and the Blackfeet Tribal Council were obtained before starting the research. The study worked with a single clinic within one hospital. This was to reduce the number of variables associated with using various clinics throughout the healthcare facility. Targeting research to a single clinic, the Outpatient clinic, within the hospital still allowed the study to access a number of providers and a high volume of patients that were willing to participate in the study. It also allowed for obtaining a greater amount of information about the population through the sample to have a better representation of the findings.

A total of 48 patients and ten staff members for the designated clinic participated in the study voluntarily. Survey administration occurred during regular operating hours over a week in November of 2019 (pre-COVID-19). Of both groups of participants, most were female (70.83%). Age had a normal distribution between ages 21 to 72. Most of the patient participants were employed full time at 60.42%. The staff response rate was strictly from staff that were working on the same days data was collected. Pediatric staff members were excluded due to the scope of the research. The total response rate accounted for 83% of the staff in this specific clinic.

Interviews were conducted by an Industrial and Management Systems Engineering M.S. student who is also part of the Blackfeet Nation. This allowed insight that brings together technical and personable aspects for the entire process for patient satisfaction improvement. The interviews were done with staff and a random selection of patients that volunteered to participate. Through collection on both sides of the process, separation between the two groups was maintained and identified ideals of different individuals within those groups.

Surveys were conducted using a standard process and set of questions based on a 4-point Likert scale and open-ended questions. The Likert scale questions were adopted from a previously published article from Weidmer-Ocampo et al. (2009) with established validity. They were then placed into Qualtrics survey software for faster analytics on patients' view of the clinic's performance. A copy of the survey extracted from Weidmer-Ocampo et al. (2009) can be found in the Appendix. The additional open-ended questions were:

1. *What do you look for in your healthcare service?*

2. *What do you expect from your healthcare provider?*

3. *What didn't you like from previous visits to this facility?*
4. *What is not important to you during your service visit?*

3. Results

Patients that want to be seen for a same-day consult must go through the same process to obtain an appointment for a future day. Individuals who want an appointment for the day start by either making a call or being at the clinic at 6 a.m. When the call is made, the patient waits for the secretary or nursing assistant on shift to answer the call. The patient is asked if he/she would prefer to see a specific physician or if they had a preference on time of day to be seen. This is all dependent on patients being able to call or present themselves early enough to obtain an appointment, which has been an issue in all departments within this facility. Once a patient obtains an appointment, he/she is asked about symptoms and then assigned a time to check-in for the appointment.

Arriving at the facility, the patient checks in, during which time is spent updating contact information. After this process, the patient sits in the waiting area near the clinic. The patient waits there until a nursing assistant calls the patient into the clinic. The nursing assistant collects the patient's vitals and reconfirms the health complaint. From here, the patient is brought to an exam room where he/she waits for the physician to arrive and see the patient for any health issues.

In both the waiting area and in the exam room, the waiting time that occurs from entering the facility to be seen by the physician is approximately one hour. During the visit, the physician can have additional lab work or x-rays ordered to investigate the health issues or patient complaints further. Once the visit with the provider has been completed, the patient can leave or wait for medications that may have been prescribed. Some issues that patients voiced but were not recorded during the survey include an unprofessional demeanor, feeling as if they are "a burden to the staff," and lack of available appointments.

All responses to open-ended questions were all entered with those words entered most frequently appearing largest in the word cloud. The following were responses from the open-ended questions for patients and providers. Note that the open-ended question *"What is not important to you during your service visit?"* (Question #4) had a vast majority answered in the opposite, stating items that they found important or that everything is important. That information was then unusable due to the type of responses.

Responses for question 1 of the patient survey, *"What do you look for in your healthcare service?"* had three responses at the top that included *quality or good visit*, *respect*, and *on-time*. The frequency of word responses is shown in Fig. 3. Other responses included *thorough diagnosis*, *availability of appointments*, and *set protocol*. The other responses showing that patients feel they want a *comprehensive visit for their ailments*, want to be able *to get an appointment as needed*, and *follow steps consistently throughout the process*.

For question 2 of the patient survey, *"What do you expect from your healthcare provider?"* the top three, in order, were *customer service*, *thorough diagnosis*, and *professionalism*. Other responses also included a *clean facility*, *prompt service*, and *clear communication*. The frequency of word responses is shown in Fig. 4.

Question 3 of the patient survey explored what the patients did not like about the service (*"What didn't you like from previous visits to this facility?"*). The top three responses were *wait time*, *lack of regular appointments*, and *poor customer service*. Wait time includes the time in the waiting area and time waiting in the exam room to be seen by the provider. Poor customer service includes rude behavior and feeling like a burden to staff. Other responses included *cleanliness* and *lack of explanation*. The frequency of word responses is shown in Fig. 5.

Question 1 for the healthcare staff, *"What do you think patients want from their healthcare service?"* had the following top responses: *medication refill* and *good doctor*. Other responses also include *information to improve health*, *thorough visit*, and *time (in system, or with doctor)*. The frequency of word responses is shown in Fig. 6.

Question 2 for the healthcare staff, *"What do you think patients need from their healthcare provider?"* had the top two responses of *communication (information and tools to improve health)* and *participation during visit*. Other responses included a *thorough examination* and *health education*. The frequency of word responses is shown in Fig. 7.

Question 3 for the healthcare staff was, *"What do you think patients did not like from their visit?"*. The top two responses for this were *long wait*s and *short time with provider*. Other responses included *rudeness* and *rushed*. The frequency of word responses is shown in Fig. 8.

Additional information included how patients perceived the clinic performs. Questions were extracted from Weidmer-Ocampo et al. (2009). These items were collected in the multiple-choice question portion of the survey. The items were scored with 4-point Likert Scale reasoning for each question's performance, 1 being best and 4 worst.

The set-up of questions in the Qualtrics program resulted in lower scores represented better satisfaction which means that having a score closer to 1 is better performing than a score closer to 4. For example, for question 10, a mean score of 2.74 is more on the scale's negative side. A score of 1 would represent that all patients felt they got appointments as soon as they needed them. Question 15 had a yes or no response, which is the cause of a max number of 2. Question 11 has a maximum value of 6 due to the number of potential responses, with a higher value still meaning worse performance. Additionally, questions 17, 18, and 19 have a max of 3 due to no one answering the "Never" response. Table 1 presents the aggregated results from the patient questionnaire.

Questions that showed lower ratings, meaning poor performance, were related to getting an appointment to be seen. Patients that were surveyed responded that they did not obtain an appointment as soon as they felt they needed one.

Table 1
Patient Multiple-Choice Statistics

Patient questions	Min Score	Max Score	Mean Score (Performance %)	Std. Deviation
Q10- When you called or went to your clinic to get an appointment for care you needed right away, how often did you get an appointment as soon as you thought you needed it?	1.00	4.00	2.74 (73.27%)	0.87
Q11- When you called or went to your clinic to get an appointment for care you needed right away, how long did you usually have to wait between trying to get an appointment and actually seeing a doctor or other health professional?	1.00	6.00	3.33 (53.40%)	1.48
Q12- Not counting the times you needed care right away, how often did you get an appointment for your health care at your clinic as soon as you thought you needed it?	1.00	4.00	2.43 (52.81%)	0.82
Q13- After you checked in for your appointment at your clinic, were you kept informed about how long you would need to wait for the person you went to see?	1.00	4.00	2.75 (42.25%)	0.90
Q14- How often was it easy to get the care, tests or treatment you thought you needed?	1.00	4.00	2.38 (54.46%)	0.93
Q15- Did your Primary Doctor or Nurse (PDN) encourage you to talk about your health concerns, including those that might be embarrassing?	1.00	2.00	1.29 (71.00%)	0.45
Q16- How often did your PDN explain things in a way that was easy to understand?	1.00	4.00	2.21 (60.67%)	0.96
Q17- How often did your PDN listen carefully to you?	1.00	4.00	1.92 (69.64%)	0.73
Q18- How often did your PDN show respect for what you had to say?	1.00	4.00	1.81 (73.27%)	0.75
Q19- How often did your PDN spend enough time with you?	1.00	4.00	2.17 (61.39%)	0.75
Q20- How often did your PDN explain the purpose of these medicines in a way that was easy to understand?	1.00	4.00	2.21 (60.07%)	1.04
Q21- How often did a PDN explain what to do if your illness or health condition got worse or came back, in a way that was easy to understand?	1.00	4.00	2.13 (62.17%)	0.99
Q22- When a health professional sent you for a blood test, x-ray or other test, how often did someone from the health professional's office follow up to give you the test results?	1.00	4.00	2.73 (42.91%)	1.15
Q23- How often did doctors or other health professionals explain test results in a way that was easy to understand?	1.00	4.00	2.26 (58.42%)	0.98
Q24- How often were clerks and receptionists at your clinic as helpful as you thought they should be?	1.00	4.00	2.19 (60.73%)	0.99
Q25- How often did clerks and receptionists at your clinic treat you with courtesy and respect?	1.00	4.00	1.92 (69.64%)	0.89
Q26- Did a doctor or other health professional talk with you about the pros and cons of each choice for your treatment or health care?	1.00	4.00	2.24 (59.08%)	0.81
Q27- When there was more than one choice for your treatment or health care, did a doctor or other health professional ask which choice you thought was best for you?	1.00	4.00	2.20 (60.40%)	0.85

Another area was being informed on possible wait times to be seen by a provider and receiving follow-up from x-ray/labs. This is determined from the higher mean score of these multiple-choice items. The questions' set-up was identical to the Weidmer-Ocampo et al. (2009) survey and CAHPS questions, but the score is reversed here due to the software where the information was placed, and thus, lower scores represent better its performance.

4. Discussion

What patients look for vs. what staff think patients want (Gap 1)

Comparing what patients look for in their healthcare and what staff thinks patients want in their healthcare (Q1 patients vs. staff) identifies shortcomings in Gap 1 of the SQG. From the information collected, patients look for quality care, being respected, and timely care. The staff's top two responses were patients who wanted medication refills and a quality physician. In this simple side-by-side comparison, differences or gaps are already identified.

The biggest difference is that patients expect to be respected and receive timely care, whereas staff thinks patients are there merely for medication refills. The second difference is a little more subtle; while patients want quality care, the staff thinks that they only care about the quality of the physician. The difference here is that staff do not consider their interaction with patients as part of the patient's healthcare experience. In contrast, patients look for an overall quality experience from the moment they enter the clinic. We believe that, at this clinic, staff might not be fully aware of the importance and magnitude their attitudes and behaviors have on the overall patient experience. Results show a disconnect between what patients are looking for in their service and what staff thinks patients want.

Our results are consistent with Ostrov, Reynolds, and Scalzi (2014), who assessed patient satisfaction between two healthcare units. Like our study, the questionnaire for the patients to answer included what the physicians and nurses believed patients wanted. The survey found that the service the patients preferred was not the same service staff had thought would be preferred.

What staff thinks patients want vs. what they think they need (Gap 2)

Comparing what staff thinks patients want from their healthcare service and what staff thinks patients need from their healthcare provider (Q1 vs. Q2 for staff) aims to identify shortcomings in Gap 2 of the SQG model.

The staff thinks what patients want from their healthcare are medication refills and a quality physician from the information collected. The staff's top two responses for patient needs were information communication and acknowledgment during the visit. In this side-by-side comparison, we can again identify the difference between what staff thinks patients look for in their service and what they think patients need. In this case, staff believes patients need to "hear and be heard," as one of the staff members stated.

The answers from staff about patient needs are not surprising as "information and education" and participation are two core principles of PFCC (Hyde et al., 2020). Acknowledgment or participation might still be related to quality physician, but it goes beyond the patient-physician interaction. Responses indicate that at this particular facility, the staff is still missing awareness of "Collaboration" and "Dignity and Respect," which are also core principles of PFCC (Hyde et al., 2020).

What patients look for vs. what staff thinks patients need (Gap 1 + Gap 2)

A third comparison is between what patients look for and what the staff thinks patients need from the healthcare visit (Q1 patients vs. Q2 staff). This comparison aims to identify any shortcomings in Gaps 1 and 2 in the SQG. Once again, from the information collected, patients look for quality care, being respected, and having timely care provided. The staff's top responses for what they think the patient needs were the communication of information and acknowledged participation of the patient during their visit.

Results indicate a disconnect between what patients look for and what staff think they are looking for (Gap 1) and what staff believes patients look for versus what they need (Gap 2). If services are designed according to what providers believe patients need, there is still a disconnect from patient expectations. The Collaboration aspect of PFCC suggests patients, families, and healthcare providers "*collaborate in policy and program development, implementation, and assessment; in health care facility design; and in professional education, and in the delivery of care.*" (Hyde et al., 2020). The disconnect shown in Gaps 1 and 2 can lead to Gap 3 when healthcare providers design their services without patient input. All these gaps combine to increase the breach between patient expectations and perceptions of the healthcare services.

What patients expect vs. what staff thinks patients need (Gap 1 + 2)

The comparison between what patients expect from their healthcare provider and what staff thinks patients need from their healthcare provider (Q2 patients vs. staff) aims to identify, once again, shortcomings in Gap 1 and 2 of the SQG. From the information collected, the patient's expectations from their healthcare include good customer service, a thorough diagnosis, and professionalism. The staff's top responses for what they think patient needs were communication of information and acknowledged patient participation during their visit. Communication and acknowledgment are key components of good customer service, but other aspects, such as respect and empathy, make the "customer service" a broader category. The expectation of a thorough analysis and professionalism were not considered by the staff. Ungureanu and Mocean (2015) found that recommendations (education), patience, and respect constitute a significant portion of what patients look for in their health service. Similarly, we find that patients look for respect and patience. Staff at this location agree on the importance of communication and information dissemination.

What patients look for vs. what they expect (Expected Service)

Comparisons of what patients look for in the healthcare service versus what they expect from the provider (Q1 vs. Q2 patients) was done to study any potential conditioning or bias from patients. We were interested in uncovering if patients were setting their expectations differently from what they were

anticipating. From the information collected, patients look for quality care, being respected, and timely care. Additional expectations were good customer service, a thorough diagnosis, and professionalism. Good customer service and thorough diagnosis are related to quality care, and being respected is related to professionalism. Interestingly, even though patients look for timely care, they did not expect it. This was consistent with the results from question 3.

What patients didn't like vs. what staff thinks patients did not like (Gap1)

Comparing what patients did not like and what staff thinks patients did not like (Q3 patients vs. staff) returns to further explore Gap 1. From the information collected, the staff thinks patients do not like short visits with the provider and or wait to get an appointment. Other responses included not getting medications refilled, answering *Government Performance and Results Act* questions, and lack of explanation in medication, health education, and steps to improve health. Patients responded to this question with many stating the wait to get an appointment was a major dislike. The next two items that presented themselves were feeling mistreated, and the wait to be seen. The two wait items differentiate because one is an attempt to get an appointment and get in the system, and the other is related to having obtained an appointment but waiting within the system to be seen by the provider. Both groups show that waiting to get an appointment is a dislike for people attempting to be seen. The staff's first response of a short time with the provider did show up in one patient's response. With many other items appearing more frequently than that of the staff's top response, this appears not to be as important to the patient. A more significant item is the social treatment the patient receives.

Multiple-Choice questionnaire

The multiple-choice section shows that there is room for improvement, particularly the appointment process which is an issue for patients; however, many items came back rating slightly higher than average. This indicates there is room to improve as many areas were not close to the exceptional level. A majority of items fell between a rating of 50 and 75%.

Patients responded that they did not get an appointment as soon as they felt they needed to be seen. Another area was being informed on possible wait times to be seen by a provider and receiving follow-up from x-ray/labs. This is determined from the higher mean scores of these multiple-choice items as the higher the mean score, the lower that item was rated on its performance. A score of 1.75 is related to a performance score of 75%, a score of 2.50 is related to a performance of 50%, and a score of 3.25 is related to a performance of 25%. Results were consistent with the Weidmer-Ocampo et al. (2009), which showed that getting care quickly, and the Clerks/Receptionists interactions were rated higher than other constructs. In both the Weidmer-Ocampo et al. (2009) study and this study, individuals valued a high level of care and respect while being seen in their healthcare facility. In both studies, we can see a difference in what patients expect from their healthcare than those of the entire healthcare staff.

We also found that the HCAHPS constructs used from Weidmer-Ocampo et al. (2009) aligned with the open question concerning patient expectations. The HCAHPS constructs, which assess service delivery against patients' perceptions of the received services, align with the service expectations. In that case, it can then be implied that low HCAHPS scores are due to one or more of the four gaps previously discussed. This study showed the existence of gaps 1 and 2 in the SQG model at a Native American healthcare clinic. However, low HCAPHS scores at the Blackfeet reservation result from a compounding effect of the two gaps discussed and the design gap (Gap 3) and delivery gap (Gap 4). Hyde and Hardy (2020) argue that there is a lack of shared understanding and communication regarding what PFCC means and how it is experienced from the patient perspective. Interestingly, the staff at this particular clinic believe communication is one of the essential needs for patients; yet also seems to be an essential need for staff.

5. Conclusions

This study explored potential reasons why a clinic in a Native American reservation is receiving lower patient satisfaction scores in comparison to state and nation averages. Identifying specific reasons for lower performance will understandably be different for different clinics and facilities therefore these results are not generalizable but still allows for the basic structure to ascertain similar issues elsewhere. The study explored if the services provided are designed to care for the patient and meet the expectations patients anticipate.

Addressing findings from the open-ended questions, there existed a clear distinction between what the patient had looked for in their healthcare service versus what the staff had thought the patient was anticipating. There had been a clear distinction that patients wanted or valued items that involved their treatment and care in the system. The staff response was directed more towards a result, such as the medication item. This has the possibility of bridging an area of difference in expectations. With this disconnect in expectations, the service provided might influence higher ratings in patient satisfaction. The ability to explore and assess any service value gaps further could bring to light the root issue. In doing so, effective corrective actions can be taken to address these differences.

With better insight that captures what patients are looking for from a service, as with any service industry, the potential to meet those needs better increases. Instead of being reactive in the improvement process, the aim will be proactive to enhance the patient experience and meet their needs. Understanding that some items may be of more value than others, contradicting previous thought and training, professionals can focus their critical time on what is valued by their customers, particularly the patient.

In the case of healthcare facilities such as the clinic in this study, improved patient satisfaction with the service will support patient retention for providers employed in the clinic and not seek services elsewhere, resulting in increased reimbursement from CMS accreditation. It also creates an environment where patients feel that their voice is more valued, enhancing the feeling that the patient is respected. Additional depth can be added by utilizing Quality Function

Deployment tools to assess in detail service design and delivery. Other statistical analyses can be utilized to predict the patient's responses potentially but would require additional information to be collected.

Abbreviations

CAHPS: Consumer Assessment of Healthcare Providers and Systems

CMS: Centers for Medicare & Medicaid Services

HCAHPS: Hospital Consumer Assessment of Healthcare Providers and Systems

IHS: Indian Health Service

PFCC: Patient-and Family-Centered Care

SQG: Service Quality Gap

Declarations

Ethics approval and consent to participate:

The study procedures were approved by the Institutional Review Boards at Montana State University (FWA 00000165) under IRB #RD120318-EX, and the Blackfeet Tribal Council (FWA 14131) under IRB #5802. Written consent was collected prior to data collection.

Consent for publication:

Not applicable.

Availability of data and material :

All data generated or analysed during this study are included in this published article.

Competing interests:

The authors declare that they have no competing interests.

Authors' contributions:

RD designed the survey, conducted the interviews, conducted data analysis and wrote the manuscript. DC co-designed the survey, conducted data analysis and co-wrote the manuscript. MV co-designed the survey, conducted data analysis and was a major contributor in writing the manuscript. PP co-designed the survey and was a major contributor in interpreting results and writing the manuscript. All authors read and approved the final manuscript.

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Figures

	P H S INDIAN HOSPITAL AT BROWNING - BLACKFEET	MONTANA AVERAGE	NATIONAL AVERAGE
Patient survey summary star rating. More stars are better. Learn more	Not Available[15]		
Patients who reported that their nurses "Always" communicated well	72%[10]	81%	81%
Patients who reported that their doctors "Always" communicated well	79%[10]	83%	82%
Patients who reported that they "Always" received help as soon as they wanted	72%[10]	75%	70%
Patients who reported that staff "Always" explained about medicines before giving it to them	54%[10]	69%	66%
Patients who reported that their room and bathroom were "Always" clean	58%[10]	73%	76%
Patients who reported that the area around their room was "Always" quiet at night	75%[10]	64%	62%
Patients who reported that YES, they were given information about what to do during their recovery at home	70%[10]	86%	87%
Patients who "Strongly Agree" they understood their care when they left the hospital	42%[10]	52%	54%
Patients who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest)	52%[10]	70%	73%
Patients who reported YES, they would definitely recommend the hospital	44%[10]	71%	72%

Figure 1

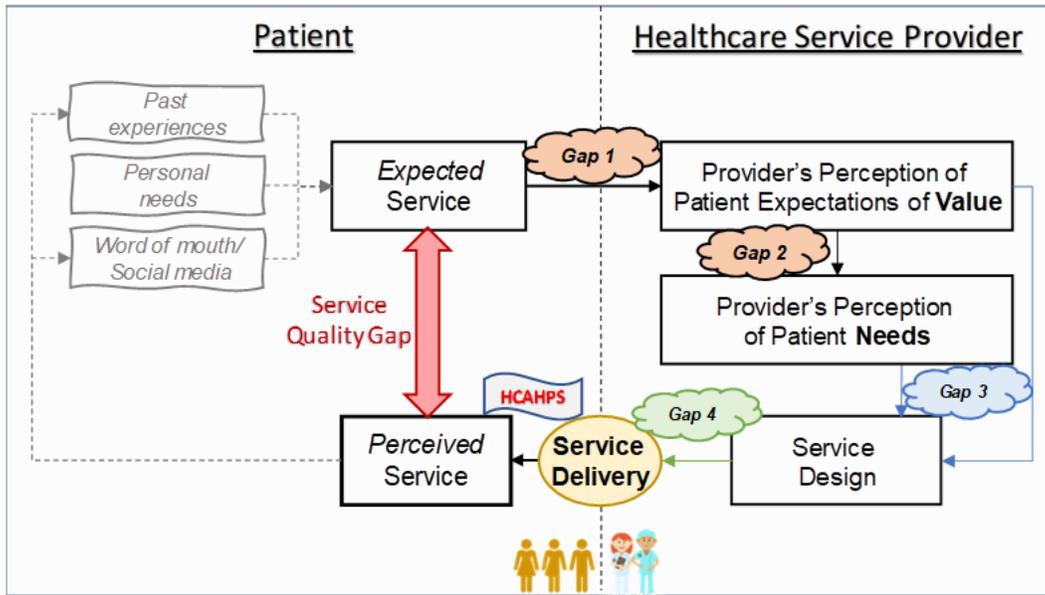CMS Report - Blackfeet Healthcare (Medicare, 2020)

Figure 2

Conceptualization of the healthcare Service Quality Gap Model

Figure 3

Patient Word Cloud for "What do you look for in your healthcare service?"

Figure 4

Patient Word Cloud for "What do you expect from your healthcare provider?"

Figure 5

Patient Word Cloud for "What didn't you like from previous visits to this facility?"

Figure 6

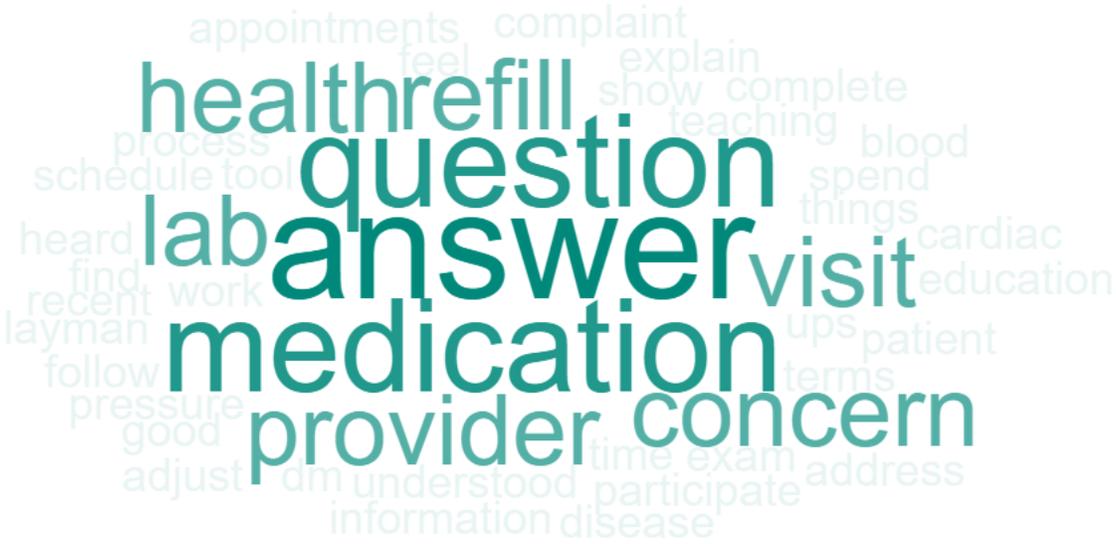Staff Word Cloud "What do you think patients want from their healthcare service?"

Figure 7

Staff Word Cloud "What do you think patients need from their healthcare provider?"

Figure 8

Staff Word Cloud "What do you think patients did not like from their visit?"

Supplementary Files

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- Appendix.docx