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Measuring and improving the patient experience in radiology

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Abstract

Recently enacted healthcare legislation and the associated payment reforms have shifted the focus from traditional fee for service models to adding measurable and appreciable value to the patient experience. The value equation links quality to costs, and quality metrics are now directly related to patient outcomes and the patient experience. To participate effectively in this new paradigm requires not only that we provide excellent, timely and appropriate patient-centric care at all times, but that we are able to measure and manage the feedback we obtain from our patients. Of course, in order to provide value-added care, we must know not only who our customers are, but what they value. In this review, we explore factors that impact patient perception and experience with imaging services. We further illustrate different ways that patient feedback can be elicited and provide pros and cons of each approach. Collecting appropriate data is insufficient by itself; such data must be carefully analyzed, and opportunities for improvement must be identified, introduced, and monitored ahead of future surveys.

Key words: Patient satisfaction—Radiology management—Survey

Why should we evaluate patient satisfaction?

The Centers for Medicare and Medicaid Services (CMS) [1] along with the recently enacted Medicare Access & CHIP Reauthorization Act (MACRA) of 2015 [2] links payments to the implementation of quality measures and patient outcomes. One of the quality domains included in MACRA is patient and caregiver experience. This trend is supported by a number of studies showing an association between quality of care, improved surgical outcomes and patient satisfaction [3–6].

The patient is now frequently referred to as "medicine's ultimate customer" [7], consistent with the current trend toward patients actively participating in their care, including participating in shared decision-making with their care providers. To participate effectively in the new value paradigm, radiologists must broaden their perceptions of what quality service entails, beyond providing excellent diagnostic interpretations. What value are we providing when we have little to no interaction with the patient, and the referring provider accesses your report via an electronic record? The current concept of value links outcomes to appropriateness and the patient experience, and is inversely related to the costs of the service. Each of these terms is broad and can be measured using various metrics. Irrespective of the metrics used, they must relate to and measure the patient experience and when analyzed properly should be used to identify and implement improvements.

The patient's perspective of their care does not necessarily correlate with surgical morbidity and mortality [8, 9]. Not surprisingly, significant criticism has recently been voiced about overly relying on patient satisfaction data rather than the actual outcomes of care [10]. Furthermore and as might be expected, overemphasizing the customer-centric model may contribute to an unnecessarily high cost of healthcare [11]. However, other specialties have shown that quality improvement can be achieved by targeting improvement efforts based on patient feedback [12]. This should stimulate similar efforts in abdominal radiology. As radiologists, we must focus on the different patient-centered domains of care and ensure that these are optimized for both diagnostic studies and image-guided procedures. While a diagnostic interpretation of an imaging study must be accurate and an image-guided biopsy must be render sufficient tissue to make a diagnosis for treatment planning, we must additionally provide compassionate and sensitive care to make the entire patient experience in our department as positive as the circumstances permit. Abdominal radi-

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ology includes a diverse set of procedures, many of which may incur unpleasant provisions (i.e., rectal contrast, rectal tube/insufflation, CT colonoscopy prep, glucagon administration, oral contrast). In order to prevent patient dissatisfaction, we found it is of outmost importance to set up appropriate patients' expectations with providing detailed instructions and explanations of expected interventions, preferably at the time of scheduling.

As abdominal radiologists, we like to think that we are adding value and providing top quality care to our patients, a perception that may be reinforced by the lack of patient complaints. However, unless we actually ask our patients about their experience in our departments, and learn from them what they value and how we can serve them better, we will never actually know what the patient experience is or how we can improve it.

What constitutes and encompasses the patient's experience?

Factors influencing the overall patient experience in a radiology department are listed in Fig. 1 and consist of patient factors, environment, costs, convenience, communication, and human factors of radiology staff.

Factors related to the patient her- or himself may be out of the radiologist's control: a sick or depressed patient may be less tolerant of prolonged studies, IV needle insertion, the overall contrast experience, and complicated preparations including fasting for many hours. Withholding medications can also influence how a patient feels, further impacting the imaging experience. A hospitalized patient who has already had a bad experience may be disenchanted or uncomfortable while undergoing an imaging study. Often the referring service have not explained to the patient what study they are getting and why, and in some cases, the patients are not even told they are going to have an imaging study.

Patients may be concerned about the results of a study or the impact of radiation exposure. Poor pain management, miscommunication, hunger, dehydration, comorbidities, delayed transport, and cultural factors may degrade the patient experience even further. Similarly, costs of an examination and additional expenses of commuting, parking, and child care can be aggravating for outpatients. Factors such as these related to communication can be easily addressed: Providing an itinerary of information regarding the visit structure, expected expenses, and estimated waiting time is a simple and cost-effective way to improve patient satisfaction [13]. Coupled with what to expect after the study, when to return to a regular diet, resume medications and activities, when the results will be available, how to get the results, and who to discuss them with will go a long way to improve the experience. We cannot overemphasize the value of timely and effective direct communication with your patients. This is especially important in teaching hospitals where role clarification is essential. We have found that patients are accepting trainees and often facilitate the trainees experience when they know they are interacting with a trainee. However, specifically for image-guided procedures, they do need to know that an attending physician is actively involved during all critical stages of the procedure. It certainly helps if the attending meets the patient ahead of commencing the procedure,

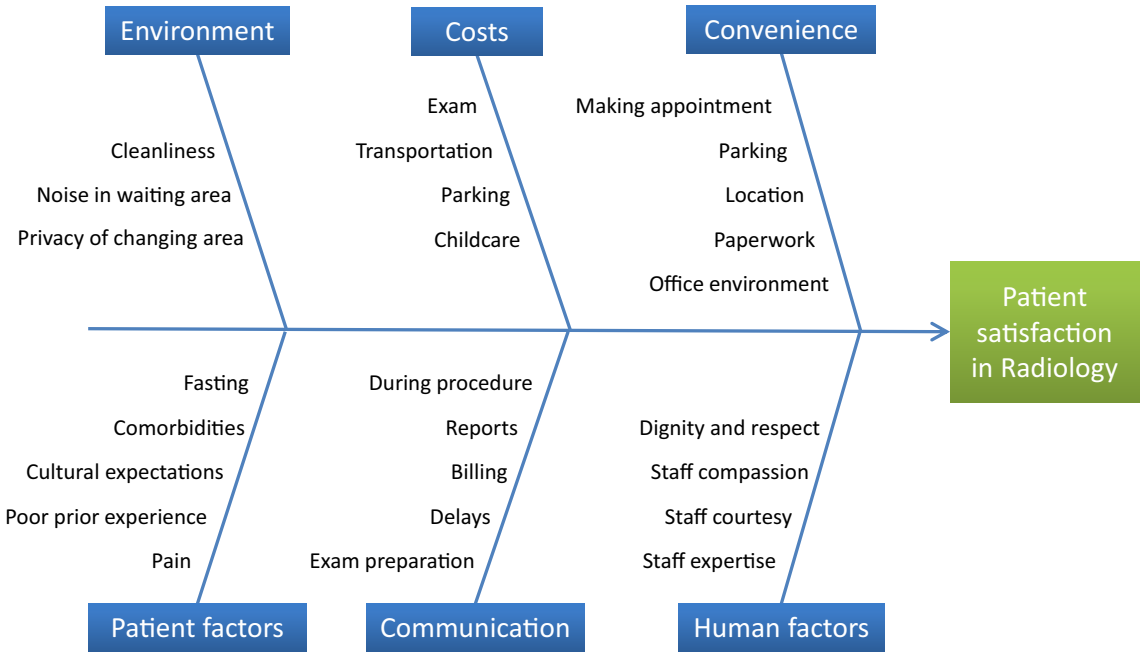

Fig. 1. Fishbone/Ishikawa diagram, which is performance improvement tool, used to identify causative problems showing the broad spectrum of categories that may contribute to a patient's experience.

introduced her- or himself and the trainee, and clearly explains the events that will follow and who will be participating in what phases. In fact, there is literature to suggest that a clinic visit prior to a routine procedure such as chest port insertion has significantly improved patient satisfaction. This has been further supported by a prospective study of patients having a clinic visit prior to elective radiologic procedures having greater patient satisfaction and greater patient safety [41, 42].

Human factors regarding radiology staff are important to consider: a number of studies have shown that in radiology human factors such as personal interactions, respect, compassion, and dignity have the greatest impact on patient experience [14–18]. The patient experience in radiology is largely shaped by their interactions with technologists, nurses and front desk staff, and rarely radiologists [16, 19, 20]. The rules of superior customer service are ubiquitous and similar to other industries and include showing the patient courtesy and respect, etiquette, and good communication [14, 21]. Therefore, it is incumbent on radiologists to provide as a role model of patient-centered care [22], take accountability for their staffs' professionalism, and ensure that every patient interaction is optimized. Treating your own radiology staff with respect, compassion, and dignity is a perfect way to establish a role-mode behavior. Training providers to make simple modifications in their language and behavior can significantly improve patient satisfaction [23, 24]. Learning to listen is important, as is being available to answer questions, knowing how to answer questions, and providing the patient with appropriately confidential environment to have discussions. Ideally, even the radiologist would engage the patient, answer questions, discuss results, and follow up recommendations, where appropriate.

When do patients share negative feedback?

Little data exist describing what specific factors contribute to patients lodging complaints. Understandably few practices are likely to share reasons that cause their patients to complain. There is an enormous difference between a patient having a suboptimal experience, and elevating this experience up to lodging a complaint. Patients complain for a variety of reasons [25, 26], and complaints likely represent the tip of an iceberg of overall negative experiences. Here are a few things to keep in mind when patients complain. Patients choose to share their dissatisfaction when

- they have a poor experience;
- they are anxious, frightened, coping with an awful disease, seeking closer personal attention, or because they legitimately want to provide constructive feedback that will result in an improvement for others;
- they are of a certain personality structure; some will stoically endure far more than others and will never complain outwardly, whilst others may develop the reputation for being "frequent flyers in the complaints department";
- they are of a cultural background, where feedback and criticism are considered socially acceptable;
- there is no language barrier. Language barriers may make complaining more challenging, and these should be addressed when developing patient satisfaction surveys. The style of survey should take cultural norms and means of communication into consideration; and
- they are specifically asked to provide feedback. In all likelihood, surveys solicit feedback that may have remained dormant had the opportunity not be provided. However, the benefit of surveys is that they can elevate problems that can be targeted for improvement. Furthermore, studies have shown that two thirds of patients are likely to come back to the facility if they see that their concerns were adequately addressed [27].

What are the topics that patients and their referring physicians share negative feedback about?

In Table 1, we list our own data (large tertiary academic hospital with mix of inpatient and outpatient practice) showing major categories of patient complaints. These data were collected over a twelve-year period from multiple different sources, including paper and electronic surveys, kiosks, telephone interviews, and includes input from mystery shoppers and patient focus groups. By categorizing this feedback, we have identified five areas that we now monitor prospectively in order to improve the patient experience.

Oftentimes, patients do not share their feedback with us directly, but report it instead to their referring physician. The referring physician may have their own perception on processes in our departments that negatively impact patient care. Table 2 summarizes negative feedback we received from our referring physicians.

Lack of ownership as a physician is especially frequent issue for radiology. The radiologists are used to be consultants and not primary patients' caregivers without direct patient contact. We have worked extensively to improve that. We have instituted better patient information on discharge (i.e., who to contact after hours for procedure-related issues, replaced earlier iterations of post procedure instructions that sent patients to the referring physicians who had no knowledge of the procedure), instituted routine follow-up calls for certain cases, and assumed ownership of pre-procedure direct contact/scheduling with patients rather than going to the physicians office (has been much appreciated by the

Table 1. Major categories of patient complaints

Human interactions
Front desk staff
Sick patients coughing in waiting room
Dignity and respect
Lack of confidential space when checking in
Exposed during a procedure / exam
Wearing open gowns in public space
Not introduced to people performing study (tech or nurse or student or doc)
Not told whether staff is trainee or attending
Environment
Access, parking and signage
Cleanliness
Waiting rooms: artwork on walls, privacy, old or inappropriate magazines
Imaging rooms: cleanliness, smell
Imaging experience
Wait times
Uncomfortable scanner table
Duration of study
Painful IV line insertion and contrast injection
Oral contrast material taste
Communication
Not informed about NPO or when to stop medications
Long unexplained wait after study seemed complete
Unable to speak with radiologist
Unable to get result immediately
Not told about follow up plans
Not told when results would be available
Not told how to get results

physicians offices—who now select this option in almost all cases) and introduced 'nurse navigators' who help answer pre-procedure questions, provide pre-procedure instructions, and call patients post-procedure.

Another way to improve patient communication and identification of the radiologist as a separate clinical provider is the utilization of outpatient clinic. Many interventional radiology practices have developed the ability to see patients independently ahead of radiology procedures to evaluate their suitability for the procedure, explain the procedure and answer questions, and review imaging. Several practices have incorporated this for even biopsies for patients who would like a visit before the procedure [28, 29]. The outpatient clinic is currently limited to interventional radiology practice; however, in the future it can be expanded to radiology consultation service where patient will be evaluated by the radiologist with recommendations provided for next management steps.

The impact of a poor patient experience

The inability to capture a patient's dissatisfaction can have a negative impact on a practice. Such experiences are likely to be shared with family and friends, or even social media or on online sites [18]. It may require considerable resources and effort to improve negative perceptions and a bad reputation. It is far better to receive complaints and to have an opportunity to address them. People are less likely to complain externally if they have an opportunity to express their concerns directly to the service provider and know that their concerns are addressed. Therefore, we have to be proactive in managing and measuring the patient experience rather learning about our services indirectly through unregulated media.

When do patients provide positive feedback?

Patients provide positive feedback because of a good human interaction they have experienced. Analyzing our own data, we typically find that a patient experiences a positive interaction with a technologist or nurse, and on complimenting them, they ask whom they can tell about this, which facilitates the compliment being communicated to the appropriate supervisor (Aideen Snell, *personal communication*). Also, when a patient or patient's family does have a good experience, it often revolves around a team of individuals, and we receive many letters

Table 2. Major categories of referring physicians' complaints

Access	Location of radiology services
	Availability (patient cannot get study scheduled in time)
Prior studies	Responsibility for obtaining prior studies
	Timely addenda to the reports with comparison information
Report timeliness	Prolonged turnaround time in ED
	Report not available at the time of next outpatient visit
Changed reports	Physician not notified about changes in reports
Results notification	Physician not called about important findings
	Physician being disturbed about being called with abnormal findings
Confusion about ordering study options	Various protocols
	Nobody to talk to
Radiologist availability	After hours
	Difficulty finding a specific radiologist
	Difficulty finding the right subspecialist radiologist
Report contents, recommendations	Obligating referring physician with recommendation that he is not agreeing to "Suggest clinical correlation"
Not taking ownership as a physician	Of complications, of follow up, of prior studies, of allergies, of extravasations, of unhappy patients, of medical imaging information
Patient interaction	Inadequate or lack of response to patient questions and concerns

of appreciation that list each individual and their role played during a particular hospital experience.

It is extremely rare to be complimented about facilities, cleanliness, the imaging acquisition, or the contents of a radiology report. For example, despite our expectations, providing music for patients undergoing MRI studies received little positive feedback and instead yielded complaints when asked about the available music choices. Many of the seemingly superficial improvements that we have introduced with the intention of improving the customer experience, such as more contemporary gowns or even the appearance of disposable shoes, resulted in no compliments but a few complaints about colors and texture.

Lastly, communicating appreciation to healthcare providers does provide some closure to individuals. It is not uncommon for us to receive letters of appreciation for care that is provided over longer periods of time during the terminal stages of an illness. Such letters may acknowledge the frequent performance of procedures (such as paracenteses or thoracenteses) during end of life phases of a family member, or the role that a nurse plays in providing care during frequent repeat visits to an imaging department. It is important to realize just how much patients and their families appreciate the direct contact with individuals when visiting a radiology department. We cannot overemphasize the importance of effective human interactions when dealing with our patients and their families. In interventional radiology in particular, it is not uncommon to perform regular, repeated procedures on the same patient, and the patient and their family members are part of the radiology team all providing compassionate, tailored care.

How to measure patient experience and satisfaction

Most patient satisfaction surveys seek to analyze feedback to identify opportunities for improving services. Feedback can be actively solicited from patients via a variety of internal and external surveys means. External surveys consist of large outsourced public and private surveys, such as Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) [30] and Press Ganey surveys [31]. HCAHPS is a government-sponsored patient experience survey regarding their inpatient stay. HCAHPS results are available to the public; therefore, improving scores has becoming a priority for many hospitals. In addition to impacting an institution's reputation, CAHPS hospital survey scores directly impact the payments a hospital can receive from Medicare under CMS pay for performance measures. However, external surveys are more likely to be focused on larger health care agenda issues and not always on issues that matter to our patients. For example, "keeping patient informed" was rated as being very important to patients on the Consumer Health Insights Survey, while it is not a part of HCAHPS survey [32] used nationwide.

Internally designed surveys can be tailored to the specific needs of the practice and to previously identified areas of improvement. Data analysis is easier as the practice understands the survey process better and may have better knowledge about the data and its usefulness, potential flaws, and limitations [18, 33]. There is a definite preference to perform surveys internally rather than to outsource them to external companies, especially since internal surveys are more likely to keep unwelcome feedback secure.

Not all patient experiences are captured through surveys. Patients may provide feedback without being asked, most commonly via email in the current era (Jonathan Kruskal, *personal communication*), over the phone and through their primary health care providers. In our experience, when patients do go this extra distance and provide unsolicited and often constructive feedback, there is often the genuine desire to help improve the service.

Survey methods

In-office surveys provide the highest yield of return rate and can be obtained on paper, or via electronic media such as computer tablets or survey kiosks or in person (mystery shopper).

Paper surveys

Paper surveys are easy to implement but tend to require significant amount of work. Apart from constructing the survey questions, someone needs to hand out the survey, make sure that there is a convenient environment for patients to fill out the survey, collect the survey, and submit the input into the database. This all takes place ahead of the data being analyzed. The survey can be performed by dedicated trained personnel via telephone; however, response rate is relatively limited and biased, as many people would prefer not to provide information over the phone about their healthcare encounters.

A specific paper survey is the 360 evaluation of trainees required by the ACGME. The ACGME requires feedback be solicited from patients regarding their interactions with radiology trainees, as it has been shown that feedback from multisource surveys combined with coaching (the so-called 360-degree survey) can improve physician team performance and quality of patient care [34]. The surveys can also be valuable as a part of evaluation of attendings' performance, as well as residents. However, obtaining targeted or constructive patient feedback after a procedure can indeed be a challenge. Such surveys lack anonymity; after a procedure, patients are sedated or at times experience a difficult recovery and therefore are not always willing to provide feedback,

could be confused, anxious about procedure results, or provide exaggerated or misdirected negative feedback. Furthermore, in patients undergoing moderate sedation or even anesthesia, their only memory may be from their interaction with a nurse or technologist ahead of the procedure. Nonetheless, we must continue to strive to identify more effective means for soliciting patient feedback after procedures.

Electronic surveys

Online or email surveys are the most efficient and economic version for survey administration; however, they suffer from relatively low rate of return due to concerns about anonymity and lack of motivation due to delay between the event being surveyed and the survey itself. Electronic survey kiosks placed in the waiting area and next to elevators have the benefit of timely electronic data collection and do not suffer from lack of anonymity concerns and recall bias. We have found electronic kiosks to be very effective in eliciting feedback in regards to specific issues as well as general issues related to the practice. Interestingly, we have found that placing kiosks next to elevators elicits a higher rate of completed surveys than ones placed in the changing areas [35].

Mystery shoppers

Another way to estimate patient experience is to employ mystery shoppers. They are usually employed by the hospital, and they explore patient experience without undergoing the actual study or procedure while their specific identity and purpose are unknown to the service being evaluated. Depending on how their task is defined, mystery shoppers may focus on the scheduling process, the waiting room and check-in experience, the facility and environmental cleanliness, interpersonal communications of the front desk or telephone personnel, and ways that patients' questions are answered by healthcare personnel [36].

Feedback from other health care personnel

Invaluable information is obtained from non-radiologist colleagues about our services. As our customers, referring physicians, nurses, trainees, technologists, and our own peers interact with patients and indirectly receive feedback about our services. We must provide a venue for them to share this feedback with us. We have found that the ability to provide such feedback is facilitated by easily accessible online tools.

Information about radiologists can be elicited via structured multisource feedback surveys. With this process, any peers or co-workers including technical staff, nurses, trainees, peers, and even the patient can provide feedback about the physician. Depending on the purpose of such surveys, these multisource surveys can be designed to explore clinical, communication, interpersonal, teaching, and even leadership skills. They can be even more effective if responders are encouraged to provide positive feedback and constructive suggestions.

Timing of surveys

The timing of a survey is critical. Ideally, feedback is solicited shortly after the interaction, as delayed surveying results in a diminished response rate, and fading or even compromised memories of the experience. A survey solicited just after an outrageous bill is received may indeed retroactively sour the initial experience. However, soliciting immediate feedback from an angry patient is problematic as well. In this situation, it may be most helpful to wait a day before initiating a survey, but this should not in any way detract from listening to the patient at the time and trying to understand what took place. Bad experiences must be managed entirely separately from surveying a patient, and require sensitive and effective analysis and management of each situation. In this situation, online surveys may reduce the emotional component of providing poor feedback, but may still solicit helpful and constructive feedback.

What questions to ask?

Planning the survey questions is one of the most important parts of the process, and much thought should be given to constructing questions that will provide actionable data. Studies on the impact and utility of surveys indicate that two types of answers are most helpful [14, 33]: Firstly, direct feedback about specific opportunities for improving services is very helpful if effectively responded to. Questions should specifically be directed at areas of frequent patient complaints (such as those listed in Fig. 1) in order to identify improvement opportunities. The patient as a customer knows best and experienced those services. Ask what you can do to improve on what they experienced, but also try to understand what factors the patient values and appreciates [37]. Secondly, the question that correlates best with overall patient experience is whether the patient would refer their friends or family members to your facility, the so-called "likelihood to recommend" question [38]. This is particularly important for academic institutions: In general, academic institutions have overall lower patient satisfaction scores than non-teaching institutions due to issues with access to care and visit specific processes, such as double evaluation by trainees and attendings. However, these lower overall satisfaction scores do not impede loyalty to a site or practice, and the "likelihood to recommend" is generally not affected [39, 40].

If patients state they are unlikely to recommend your services, try to ascertain why and what you can do to improve this for others in the future. Always provide the

opportunity for patients to speak with you if they choose. We allow patients to request direct face-to-face meetings to show just how seriously we take their feedback.

What determines an effective survey?

Simply collecting data without effectively analyzing and responding to the information will not result in any service improvement. Similarly, participating in national registries or benchmarking data will also not enable any improvement, unless a deeper analysis is undertaken on a regular basis to identify problems and implement solutions that will improve patient satisfaction [23]. Osborne et al [41] showed that enrollment in a national quality reporting program alone was not associated with the improved outcomes among surgical patients, implying that simply receiving feedback is not going to improve outcomes. In fact, resting on one's performance laurel's because data falls within national benchmarks in the existing survey is one disadvantage of national registries that are not tailored to local practice. In this situation seek to collect different data so that opportunities can be identified and improvements can be made. The culture of improvement is characterized by the continuous desire to seek improvement opportunities.

In order for a survey to be most effective, a representative number and spectrum of patients have to be surveyed, and the questions selected should address relevant aspects of the patient experience, resulting in actionable conclusions. The effectiveness of a survey can then be measured in terms of outcomes – did analysis of the responses and the implemented improvement measures result in any meaningful and sustained improvement in services offered and customer satisfaction?

To increase participation, patients should be assured that the data will be collected anonymously and treated securely. Effectiveness and impact of a survey can be further improved by providing feedback to respondents by showing them how their responses resulted in implementation of improvements.

This review focuses primarily on processes for surveying our patients to identify and implement improvements that will enhance their experience. Suffice to say, in addition to responding to survey data as outlined above, we must embrace best practices at all times without waiting for responses from surveys. Consider how you or a family member would experience the imaging services that you provide. If you were a patient undergoing imaging in your practice, what would you like to see to make this a positive experience? What would it take to transform your practice into Hotel Radiology?

How to manage the negative patient experience

When a patient reports a negative experience, this must be taken very seriously, and managed appropriately and in a timely manner. The patient needs to know that the feedback has been received, that it will be taken seriously, and that it will be investigated and managed. Patients should be provided with feedback once the analysis has been completed and be given the opportunity to provide additional information if they feel that their concerns are not sufficiently addressed. They should be provided an option of speaking directly with a customer service representative or radiologist.

Patient relations and risk management should be involved in any case where a patient experienced harm, but can also be helpful in cases where a patient merely had an unsatisfactory experience in radiology. Oftentimes patients are looking for an opportunity to be heard, share their experiences, and give health care providers the opportunity to make improvements. Fortunately, the overwhelming number of complaints can be managed via a phone call or email, and typically include thanking the patient for the feedback and explaining what the next steps might be. In case the patient has experienced harm, the case should be reviewed by the quality assurance committee to establish whether standard of care has been met. If the standard of care has not been met, a financial offer should be considered.

In an effort to restore trust, any error in patient care should be acknowledged and disclosed to the patient. The patient should receive a verbal apology by a health care provider, and everything should be done to make things right for the patient again. There should be no charge for a return visit because of an error made in the radiology department itself. This should be done proactively and one should not wait for the patient to ask. An example might be an ultrasound requested of the left lower extremity when the right lower extremity was supposed to be imaged. Apologizing and offering to perform the right lower extremity ultrasound at no additional cost, including parking and transport, creates trust in the radiology department by the demonstration of taking ownership and responsibility and expressing the desire to do what is best for the patient.

Our own analysis of complaints agrees with many prior studies showing that the majority of bad patient experiences could have been avoided by improved communication [16, 19, 20], whether it includes specific instructions given at the time of scheduling, email reminders, or through availability of the instructions through patients' portal. Errors in communication are very common in medicine and similarly in radiology [42]. Patients are understandably sensitive to communication errors and experience these on a much more severe and personal level. In general, it is not the fault of a patient when the wrong study is ordered, if the wrong protocol is applied, or if nobody informed a patient to stop eating or to stop taking medication. We must be cognizant of the fact that many patients now have access to their radiology reports, and these reports should be tailored and constructed in a manner that is sensitive to this fact.

Marketing and branding

Traditionally, radiology practices in teaching hospitals have not put much effort into branding their services, nor into marketing their outcomes and patient satisfaction. The growing shift toward value-based payments coupled with an increasingly competitive environment presents a timely opportunity for radiologists to brand their services, patient experience, and outcomes. In the same way that a customer is likely to read reviews when seeking to purchase an item online, the opportunity now exists for radiologists to brand their outcomes and patient satisfaction and to target those areas that they know their patients value.

In summary, soliciting feedback from our patients is no longer an optional exercise and is now inextricably tied to reimbursement. Human factors such as personal interactions, respect, compassion, and dignity are major components in achieving patient satisfaction in radiology. Internally designed surveys are key to obtain relevant information to our services. Customer-oriented training utilizing AIDET technique (Acknowledge, Introduce, Duration, Explanation, and Thank You) is likely to yield significant improvements in patient satisfaction.

Compliance with ethical standards

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Conflict of interest Jonathan Kruskal is an author of materials that appeared on UptoDate website for which he was compensated. The other authors declare that they have no conflict of interest.

Ethical approval This article does not contain any studies with human participants performed by any of the authors.

Informed consent Statement of informed consent was not applicable since the manuscript does not contain any patient data.

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