Pathologists' Perspectives on Disclosing Harmful Pathology Error

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• ***Context.***—**Medical errors are unfortunately common. The US Institute of Medicine proposed guidelines for mitigating and disclosing errors. Implementing these recommendations in pathology will require a better understanding of how errors occur in pathology, the relationship between pathologists and treating clinicians in reducing error, and pathologists' experiences with and attitudes toward disclosure of medical error.**

Objective.—**To understand pathologists' attitudes toward disclosing pathology error to treating clinicians and patients.**

Design.—**We conducted 5 structured focus groups in Washington State and Missouri with 45 pathologists in academic and community practice. Participants were questioned about pathology errors, how clinicians respond to pathology errors, and what roles pathologists should play in error disclosure to patients.**

Results.—**These pathologists believe that neither treating physicians nor patients understand the subtleties and limitations of pathologic diagnoses, which complicates discussions about pathology errors. Pathologists' lack of confidence in communication skills and fear of being misrepresented or misunderstood are major barriers to their participation in disclosure discussions. Pathologists see potential for their future involvement in disclosing error to patients, but at present advocate reliance on treating clinicians to disclose pathology errors to patients. Most group members believed that going forward pathologists should offer to participate more actively in error disclosure to patients.**

Conclusions.—**Pathologists lack confidence in error disclosure communication skills with both treating physicians and patients. Improved communication between pathologists and treating physicians could enhance transparency and promote disclosure of pathology errors. Consensus guidelines for best practices in pathology error disclosure may be useful.**

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Communicating to patients that a harmful error has occurred in their care is a daunting task for any physician.[1] The recent Institute of Medicine (IOM) report on diagnostic error emphasized the importance of communication and error disclosure in medicine. The report details tactics for effective communication of error.[2] Despite widespread recognition of the ethical mandate for complete disclosure of medical errors, recent studies indicate that error disclosure happens less frequently than it should and patients often report dissatisfaction with the information, apology, and resolution provided.[3–9] Failure to completely disclose medical errors can lead to emotional distress for patients and physicians, patient feelings of vulnerability and abandonment, and increased likelihood of malpractice litigation.[10]

When harmful error involves pathology, the disclosure situation becomes more complex than when error involves only the patient's direct care team. Pathologists do not have established relationships with patients, and patients are usually unaware of the role of pathologists in their care. Our previous survey of pathologists and laboratory directors confirmed that few pathologists report personally disclosing pathology or laboratory error to patients.[11] Survey results uncovered multiple barriers that inhibit pathologists' involvement in disclosure to patients, including lack of clarity and consensus regarding their perceived role in disclosure and lack of confidence in communication skills. These barriers reduce the probability that pathology error will be clearly and fully communicated to patients.

While our prior survey data highlighted pathologists' basic attitudes about error disclosure, surveys provide only limited insight into how pathologists experience the challenges of error disclosure and their suggestions for solutions. A formal focus group methodology can supplement and expand previous findings of pathologists' attitudes regarding error disclosure and barriers to communication with treating clinicians and patients. To elucidate these critical perspectives and facilitate pathologist discussion of solutions, we carried out a series of structured focus groups with pathologists on what constitutes a pathology error, how disclosure conversations with both treating physicians and

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Table 1. Demographics of Study Participants	
Variable	**N (%), N = 45**
Sex	
Male	22 (49)
Female	23 (51)
State of practice	
Washington	25 (56)
Oregon	1 (2)
Idaho	1 (2)
Missouri	16 (36)
Other	2 (4)
Years of practice	
0–10	12 (27)
11–20	19 (42)
21–30	10 (22)
31–40	4 (9)
Practice setting	
University medical school	18 (40)
Hospital pathology group	20 (44)
Independent laboratory	9 (20)
Other	2 (4)
Race	
White	40 (89)
Black/African American	0 (0)
Hispanic/Latino	1 (2)
Asian	4 (9)
American Indian/Alaska Native	0 (0)
Other	0 (0)
	Mean (SD)
Age, y	50.4 (8.93)

Abbreviation: SD, standard deviation.

patients usually proceed, and what roles pathologists should play in error disclosure.

MATERIALS AND METHODS

We conducted 5 focus groups in Seattle, Washington, and St Louis, Missouri, between May 2010 and March 2011 to explore pathologists' experiences with disclosure of pathology error to treating clinicians and patients. Participants were recruited via email at 5 health care organizations in Washington and Missouri and through the Pacific Northwest Society of Pathology and the Washington State Society of Pathologists.

Two experienced physician facilitators led each structured focus group by using detailed guides developed by the research team (available from the authors upon request). All group encounters lasted 60 minutes and were audiotaped. The focus groups began by defining "medical error" and "adverse event" before defining a serious pathology error. A hypothetical situation involving a pathology error was then presented to the group as follows:

"*A 72-year-old man with mildly elevated prostate-specific antigen levels undergoes prostate needle core biopsy, performed at your institution, that demonstrates multiple foci of prostatic adenocarcinoma, Gleason grade 3+3=6. You receive the patient's subsequent radical prostatectomy specimen, which upon initial sectioning reveals no adenocarcinoma. You submit the entire prostate for histologic evaluation. In addition, you review all reports and slides of prostate needle core biopsies performed on the day your patient underwent biopsy. You determine that the pathologist reading prostate needle core biopsies on that day inadvertently switched 2 patient cases. Your patient's actual biopsy specimens show no evidence of adenocarcinoma. The additional sections of prostate submitted from your patient demonstrate a microscopic focus of adenocarcinoma, Gleason grade 3+3=6.*" As a result of this error, a patient without demonstrated carcinoma proceeded to radical prostatectomy.

Participants were asked to volunteer personal examples of pathology errors and the resultant disclosures. Participants were asked about ambiguities in pathologic diagnosis, how they might go about disclosing harmful pathology error to treating clinicians, and the role of the pathologist in disclosure to the patient. Changes in pathology practice to enhance team collaboration, improve communication, and promote disclosure of pathology error were considered.

Focus group audiotapes were transcribed verbatim and identifying information was removed. Directed content analysis, a standard qualitative research technique, was used to ensure key themes were identified objectively, accurately, and reliably. Three team members reviewed each transcript. Two investigators created a unique coding scheme developed from the focus group questions and transcripts.[12,13] These codes represent categories that allow researchers to identify similar comments made by focus group participants. A third investigator reviewed a subset of data to modify, clarify, and refine code definitions as needed. Two of the investigators then separately coded all data before the 3-team members met to discuss and resolve coding differences to achieve 100% consensus. Using an objective coding scheme and having multiple investigators independently read and code each transcript minimize subjectivity and bias that any individual reader might bring to the analysis. The sampling plan was successful in achieving thematic saturation, and only major themes that recurred in each of the focus groups and exemplary quotations are presented.

The University of Washington Institutional Review Board approved the study protocol and focus group guides. All participants provided written, informed consent.

RESULTS

Study Participation

A total of 45 pathologists participated, with an average of 9 per group (range 8–11). Forty participants were white (89%) and participants were split evenly by sex. Of the 45 participants, 19 (42%) had been in practice between 11 and 20 years. Eighteen (40%) practiced within a university medical school and 20 within a hospital pathology group (Table 1). Four recurring themes emerged in all 5 of the focus groups:

1. Ambiguity of Pathologic Diagnoses. Pathologists, like most physicians, worry about medical errors. In addition to the obvious concern over patient harm, participants also described fear that harmful pathology error could lead to loss of respect from medical colleagues, loss of self-confidence, and lawsuits. Compounding these potential issues was concern about the inherent ambiguity of interpretive (analytic) pathologic diagnoses. Interobserver variability seriously complicated the definition of "error." One pathologist expressed this concern as follows: "*I think there are a lot of errors that are differences in interpretation. And so whether it's an error or not, I know it's hard to define an error if 2 people dealing with the same information could arrive at different conclusions.*"

Types of interpretative errors discussed in focus groups included cervical intraepithelial neoplasia (CIN) 1 versus CIN 2 in cervical biopsies, rejection in transplanted organs, and usual versus atypical ductal hyperplasia in the breast. Opinions varied regarding whether changes between these diagnostic thresholds should be categorized as error and disclosed. One pathologist reflected a commonly voiced opinion when he stated: "*To me, the threshold's benign to malignant, malignant to benign.*"

Focus group pathologists believe the ambiguous nature of most pathology diagnoses is neither fully understood nor appreciated by clinicians. Group members struggled with some treating physicians' belief that pathology diagnosis should be obvious. Pathologists also expressed

concern that patients have an even weaker understanding of the subjective nature of pathology interpretation, often believing that all tests are automated rather than interpreted. One pathologist described a common question: "*So, what's the truth? . . .they may not know that there is no truth.*"

The risks associated with equivocal diagnoses are exacerbated by the profound implications pathology diagnoses can have on treatment and prognosis. Pathologists described patients who received a diagnosis of cancer years after films showed abnormal growth and others who were subjected to unnecessary chemotherapy treatments. One pathologist described his impression that pathology error is perceived differently from other medical error as follows: "*Patholog(y) is where the buck stops. The pathologist is the physician's consultant. That's probably the reason we're all pathologists because we love that, and it's as black and white as you can get in a gray zone, but it comes with its price. There is zero tolerance [for error].*"

Another pathologist conveyed the relative importance of their work by stating, "*[W]e're supposed to be the gold standard.*" Focus group participants suggested that clinicians and patients rely on pathologists for critical information about care and have difficulty understanding and accepting ambiguity when so much is at stake.

Communicating error is difficult in the most straightforward circumstances because of the technicalities of laboratory function and the subjective and abstract nature of interpretive diagnoses.

2. Disclosure of Pathology Error to the Treating Clinician. Pathologists, both in our previous survey and in focus groups, were unanimous in their agreement that serious errors must be communicated rapidly to the treating physician, and that the pathologist of record should assume responsibility for these errors. In general, pathologists believed that near misses (situations where a mistake was caught before affecting care) should be discussed among pathologists and laboratory staff to improve systems and increase patient safety. However, they considered disclosure of near misses an impractical policy. Discussions of when to disclose pathology error focused on whether the error would have treatment or prognostic implications for the patient. Majority opinion was that errors with the potential to affect patient management should be disclosed to both treating clinician and patient.

Though pathologists see their primary role as reporting results and errors to treating clinicians, they feel that such a relationship can preclude open communication. The main barriers to disclosing error to treating clinicians were the relationship (or lack thereof) between the pathologist and the treating clinician and the clinician's attitude toward pathology error.

> "*The level of comfort depends entirely on the physician you're talking with, because there are some physicians who understand the nature of what we do and have a level of tolerance, and I would have to say are gracious in their receipt of the information. And there are others who are more bellicose in their attitude and typically will be demeaning.*"

Pathologists regarded successful collaboration with the treating clinician as imperative for improving error disclosure. Several group members considered the College of American Pathologists' stated agenda to better integrate the pathologist into the clinical care team an official recognition of the need for progress in this area.

3. Disclosure of Pathology Error to the Patient. Most focus group participants described having little or no personal experience disclosing pathology error directly to patients. The discussion regarding whether and when pathologists should be involved in communicating with patients was the most contentious and demonstrated the most variability in response. Pathologists weighed their desire to ensure the complete and accurate disclosure of the pathology error against their concern about interfering with the clinician-patient relationship. Focus group pathologists generally trusted treating physicians to disclose error to patients. However, they were concerned clinicians would not understand the intricacies of the laboratory process or the subtleties of differential diagnosis to the extent needed for a complete and accurate disclosure. They worried the error might be misrepresented, intentionally or unintentionally, and possibly to their detriment.

However, most agreed that any direct contact with patients needs to be mediated by the treating clinician. Pathologists generally do not have personal relationships with patients, and patients are often unaware of pathologists' role in their care. In addition to a lack of personal relationship, pathologists recognized that they rarely hold a broad understanding of the treatment options and the ramifications of their diagnosis within the larger context of patient care.

> "*[O]ur whatever, customer, our patient, is really the clinician. And most of the time we don't have the ability to really go into what treatment differences there would be, etcetera, with our patients. So if we were to call [patients] and say, 'Well we made this mistake and I'm really sorry,' and they were to say, 'Okay, well what am I going to do now,' our response might be, 'Well I don't know . . . I don't know.'*"

Several pathologists also admitted to avoiding conversations with patients because they felt inadequately prepared for direct patient contact. Most pathologists have limited to no direct contact with patients in their daily practice, making them uncomfortable with the delicate and emotionally charged conversations surrounding medical error.

> "*I'll tell you, my social skills are not such that I would ever, ever, ever want to do that [speak directly with a patient]... I'm not in pathology because I like meeting people. [Laughter].*"

Participants emphasized that pathologists' primary responsibility is to the treating physician and agreed they would only want to be involved in error disclosure if the treating physician thought their presence would be beneficial. Many groups concluded that a reasonable course of action was for the pathologist of record to offer to be present at the time of error disclosure to the patient. This offer would allow treating clinicians to feel supported if they are uncomfortable discussing pathology details. It would also leave the ultimate decision regarding pathologist involvement in the hands of the physician who best knows the patient and the patient's potential reaction to an unknown team member.

Focus group members who had been present during disclosure of serious pathology error to a patient reported

Table 2. Critical Findings Identified and Their Implications for Future Work in Disclosure of Pathology Error	
Critical Findings	**Implications**
Pathologists believe the ambiguous nature of most pathology diagnoses is neither fully understood nor appreciated by clinicians or patients. Pathologists see their primary role as reporting results and errors to treating clinicians but feel open communication is difficult to foster in those relationships. Pathologists believe it is sometimes appropriate for them to be involved in error disclosure to patients but feel unprepared for this responsibility.	It is important to improve communication channels between pathologists and clinicians by using pathology report standardization, surveys of clinicians to ensure comprehension of pathology reports, and use of clinical tumor boards to cultivate understanding and collaboration among the care team. Training during medical education and continuing medical education opportunities are called for to address pathologists' unique challenges in disclosing errors to treating physicians and contributing to disclosure discussion with patients.

satisfaction with their own personal experience. Most found such disclosures difficult but expressed relief in being allowed the opportunity to provide the patient a better understanding of the circumstances surrounding the error and the opportunity to apologize for the error. A pathologist who had the chance to speak with the patient regarding a pathology error described his experience:

> *"I think it also was comforting to me to know that what I wanted to communicate to the family was communicated the way I meant it. And that I knew exactly what was said. Now you could argue that afterwards something else could have been said in my absence; that's true. But at least I felt like I was able to give them whatever explanation I could for what happened, and didn't have to rely on somebody else translating it. And many of the things we do our clinicians don't understand well enough to translate the subtleties of, or the feeling of guilt or remorse or sorry that we have for them. So I think there can be a role for directly speaking to them [the patients]."*

4. Pathologists Should Participate More Actively in Error Disclosure in the Future. In discussing the future of pathology error disclosure, most focus group members wanted to be trained in this topic and participate more actively in error disclosure. However, several focus group members did not endorse changing the role of the pathologist from its current state. Some described the changes in pathology practice they believe may be necessary to maintain effective and compensated practices in the new accountable care environment. Several pathologists anticipated more directive action from the College of American Pathologists regarding care team collaboration. Others pointed out that, in the digital age, patients have access to their own records, including the pathology reports, and will seek out information regarding their care. One pathologist said:

> *"You are a physician of record regardless of what your role is, you are a physician of record...and clearly the wave is, is more rather than less light in what we do. They can find out what you charge, they can find out everything. And I think that we're dealing with a very different kind of society today than 25 years ago. And the society today and going forward is the society that can get access to information and acquire that information."*

DISCUSSION

There is increasing recognition of the importance of error disclosure in the medical community.[14–16] Thus far, pathology error disclosure has garnered little attention in the growing literature.[11,17] Our study explored pathologists' attitudes toward pathology error disclosure and investigated the nature of their involvement in the disclosure process, traditionally between only treating clinician and patient. Our results highlight the lack of integration first noted in our previous survey, which indicated only 16% (27 of 167) of pathologists had personally disclosed a serious pathology error to a patient. These focus groups extend and deepen this prior work, and reveal that the disclosure process is complicated by the ambiguous nature of pathology errors, challenges in communication between treating physicians and pathologists, and lack of established rapport between pathologist and patient.

Pathologists conceptualize their role as consultants to physicians rather than caregivers to patients. Thus, most pathology error disclosures by pathologists end with the treating physician. However, many pathologists worry that treating physicians do not adequately understand pathology errors to accurately convey them to patients or families. Pathologists also feel the interpretive nature of pathologic diagnosis is underappreciated by physicians and patients, increasing the risk of misunderstanding and damage to pathologists' reputations. The failure to integrate pathologists into harmful error disclosure planning and execution creates considerable stress for the pathologist, diminishing the quality of information communicated to the patient.

A logical first step in facilitating full disclosure is improving communication between pathologists and treating clinicians (Table 2). Both the IOM and the College of American Pathologists have identified care team coordination as a point of emphasis moving forward into the era of accountable care organizations. The pathologists in our focus groups, however, lacked confidence that treating clinicians understand the nature of pathology diagnosis. This lack of understanding between pathologist and treating clinician complicates routine discussions and makes discussions around error very difficult. Pathologists can promote understanding of their work among treating clinicians by starting dialogue in low-stakes situations, such as routine tumor boards, about the nature and limitations of pathologic diagnoses. These forums allow pathologists to determine whether clinicians have the succinct and complete pathology information required for treatment decisions and help prevent potentially damaging misunderstandings. Coupled with continuous report improvement, open dialog maintains understanding, trust, and confidence between the pathologists and the clinical care team while clarifying respective roles.

As in our previous survey of pathologists and laboratory medical directors, participants commented frequently that

they were uncomfortable with their communication skills regarding error disclosure, especially to patients.[11] Pathologists relayed that this discomfort is compounded by concern that patients are unfamiliar with the role of pathologists in their care and even less familiar with the nature and limitations of pathologic and laboratory testing and diagnosis. Effectively communicating with patients about the role of pathologists in their treatment and the nature of pathology practice could help patients and their families cope with errors. Both in the current study and in our previous survey-based study, pathologists indicated their interest in receiving education in communication and error disclosure skills. Most pathologists had not received any training in error communication, were unfamiliar with supportive resources available at their institutions, and believed coaching from an error disclosure expert would be helpful. In organizations moving toward a full disclosure model, pathologists should be provided training in effective communication and error disclosure.[10]

Many of the focus group participants endorsed pathologists taking initiative both in contacting the treating physician and offering to join discussions related to pathology issues with patients. Although most believed that direct pathologist-patient contact without prior treating clinician approval was intrusive and potentially disruptive of the patient-clinician relationship, most also agreed pathologist input regarding patient disclosure was desired. These findings support the IOM's and College of American Pathologists' call for greater care team integration. Pathologists would be well served to extend themselves beyond their traditional boundaries and offer themselves to the care team when disclosure of error to patients occurs. Especially in this era of accountable care organizations, pathologists must adopt a broader perspective about their contributions, achieve greater collaboration with other clinicians, and share in accountability for patient outcomes.

Our study has a number of limitations, including its focus on small, self-selected groups of pathologists in 2 geographic areas, which may limit the generalizability of our findings. Unlike most studies, which may be biased by including only academicians, most of our focus group participants were nonacademicians. Although the themes we report occurred in each of the focus groups, our qualitative analysis of the transcripts does not allow us to determine the proportion of pathologists who hold particular attitudes toward the specifics of error disclosure. However, the recurrence of themes independently in each of the focus groups suggests they reflect prevalent attitudes of practicing pathologists toward error disclosure.

The rise of integrated care models and direct patient access to full pathology reports[18] is forcing the field of pathology to change. As part of this change, pathologists are being called upon to take a more active role in the care team. However, if pathologists are to be included in conversations between treating clinicians and patients, communication challenges between these parties—particularly those that arise when something goes wrong—must be addressed. Our study has shown that pathologists are dissatisfied with the current standards of care team communication and call for expanded error disclosure training and relationship-building opportunities. The 2015 IOM report encourages the adoption of formal institutional communication and resolution programs with legal protections for disclosures and apologies under state laws. These programs should promote a legal environment facilitating timely identification, disclosure, and learning from diagnostic errors. Health care institutions and professional societies can support this effort by developing new educational programs and facilitating greater understanding and transparency throughout care delivery. These advances could result in more satisfying resolution for all involved following a harmful pathology error.

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