Strategies to Enhance Boards of Medicine Responses to Medical Error

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ABSTRACT: Current models governing how boards of medicine regulate the practice of medicine rely heavily on concepts from the past. Changes in our understanding of how medical errors occur, as well as in the organization and delivery of health care, have created challenges for boards when addressing medical errors. We conducted a qualitative study to explore the principles that boards use to respond to medical errors and to identify opportunities for improvement. Twenty key informant interviews were conducted with board members and staff, followed by two focus group discussions with 16 participants who actively participate in the process of medical regulation. Our results show that the major principles guiding boards of medicine in regulation around medical errors include fairness, consistency, efficiency and transparency. Implementation of these principles proved difficult, partly because of boards' lack of authority over health care institutions. We recommend the development of a broader array of tools for boards to use in response to medical errors. Increased efforts are also needed to strengthen communication and collaboration among boards, physicians and health care organizations. Additionally, we suggest that boards implement and report performance metrics to promote public engagement and enhance trust in them.

Introduction

The models governing how boards of medicine regulate the practice of medicine were designed at a time that bears little resemblance to today's organization and delivery of health care. Medicine was historically a cottage industry, with small groups of independent physicians practicing in private offices and functioning autonomously within hospitals where they had admitting privileges.[1] Today, nearly half of the physicians in the United States are employed by hospitals or health care systems[2,3] and care is mostly delivered by complex interprofessional teams of providers rather than individual physicians acting unilaterally.[4]

The development and evolution of boards of medicine also occurred at a time when our understanding of what causes breakdowns in the quality of care was significantly different than it is now. Historically, adverse events and errors were viewed through the "bad apple" model of health care quality, where errors were largely attributed to individual providers who were either incompetent, lazy or both.[5] Boards thus deployed disciplinary tools aimed at identifying unsafe doctors and preventing them from harming more patients. However, a more modern understanding of adverse events and medical errors emphasizes the role of defective systems of care and human error among competent providers.[6-8] As a result, the "Just Culture" framework was developed, transforming a culture of blame to one of trust and ongoing quality improvement in responding to medical errors in the health care setting. Under Just Culture, organizations respond differently depending on the situation in which a health care worker has harmed a patient: if because of human error, the provider should be consoled; if caused by "at risk behavior," the provider should be educated; and if a result of recklessness, punishment of the provider is warranted.[9,10] The field of safety science has also evolved significantly in response to the slow progress in the discipline of patient safety. Safety science encompasses a set of systematic and rigorous tools and methodologies that can be used in health care settings in an effort to minimize adverse events in medicine.[11,12]

UNDER JUST CULTURE, ORGANIZATIONS RESPOND DIFFERENTLY DEPENDING ON THE SITUATION IN WHICH A HEALTH CARE WORKER HAS HARMED A PATIENT.

Nonetheless, boards of medicine continue to play a critical role in the regulation of medical care. They provide an avenue whereby complaints against providers can be objectively reviewed, investigated and adjudicated by a neutral group that is less

affected by the political challenges and other pressures that may constrain institutional quality and peer review. Boards also typically include several public members, providing an additional buffer against the biases that can hamper professional self-regulation. In addition, boards can take decisive disciplinary action to protect the public in situations where physicians are unable to practice safely.

Maximizing the ability of boards of medicine to protect the public requires the consideration of how they can optimally align their activities with these new approaches to medical errors, team-based care, employed physicians and Just Culture.[13] We conducted a qualitative research project using key informant interviews (KIIs) and focus group discussions (FGDs) with a variety of stakeholders in medical regulation to explore how boards currently respond to cases of medical errors and to identify potential opportunities for improvement.

Methods

Study Design

We conducted a qualitative study using: 1) semi-structured KIIs; and 2) semi-structured stakeholder FGDs with the goal of exploring how boards currently respond to cases of medical errors and ways to improve these responses. Participants of the KIIs were clinical board-of-medicine members and staff, while participants in the FGDs also included other active members in the medical regulation context (described in detail below). Data were collected between September 26, 2014 and May 12, 2015. The University of Washington Institutional Review Board approved this study (IRB # 47736-EB).

Data Collection

All subjects met the inclusion criteria, namely having experience or currently working in the field of medical licensing and regulation or other expertise in this area. Potential KII and FGD participants were recruited via purposive sampling methodology followed by snow-ball sampling.[14] Purposive sampling is a widely used strategy in qualitative research used to yield information-rich cases or subjects.[15] Initially, we contacted the executive directors at each of the participating boards of medicine (Washington, Colorado, Iowa and Wyoming) to have them reach out to their respective board members and staff for our study. One of the researchers then recruited those individuals who expressed interest in participating via email or phone call. All participants signed written informed consent forms prior to the start of data collection.

Key Informant Interviews

Twenty KII participants, which included current board members (physicians and public members) and board staff (commissioner, directors, program and enforcement managers and attorneys), were interviewed in order to elicit issues of interest and potential questions for further exploration. Interviewers used structured questions, which focused on the considerations and conflicting values that experienced regulators weigh when responding to medical errors. Researchers conducted 45- to 60-minute phone or in-person interviews, which were audio-recorded, transcribed verbatim and de-identified. The KII guide is available upon request from the authors.

Stakeholder Focus Group Discussions

After all KIIs were completed, researchers conducted a directed content analysis of the interview transcripts to identify key issues and themes and develop a discussion guide to facilitate the FGDs. We conducted two FGDs, each with eight participants, which were facilitated by one of the researchers. FGD participants were individuals who were active in any component of medical regulation, including board physicians, staff and public members, institutional quality and safety leaders and both plaintiff and defense attorneys. Given the diversity of the participants, special emphasis was placed on creating a safe discussion environment where all participants felt comfortable sharing their opinions and experiences. FGDs were 90 minutes long, audio-recorded, transcribed verbatim and de-identified. The FGD guide is available upon request from the authors.

Data Analysis

An experienced qualitative researcher led the data acquisition and analyzed interview transcripts through a thematic content analysis framework.[16] Using analytic induction, the researcher compiled the responses and coded them by theme. Next, the researcher refined the code definitions and coding scheme using an iterative process, and new codes were added where necessary. Finally, the codes were entered into Atlas.ti for Windows (ATLAS.ti Scientific Software Development GmbH; Berlin, Germany), a qualitative data analysis software. Two additional researchers reviewed all transcripts, compared and reconciled the application of thematic codes and confirmed the coding analysis.[17,18]

Results

A total of 36 individuals participated in the KIIs (n=20) and FGDs (n=16). The demographics of the participants are presented in Table 1.

Throughout this article we have provided excerpts of comments, shown in quotation marks, from some of the individuals we interviewed. We have included them in order to provide context and a fuller

Table 1
Demographics of 36 Participants of Key Informant Interviews and Focus Group Discussions

Overall Demographics		Percentage	Number
Age Range	30–49	22.2%	8
	50–69	47.2%	17
	Over 70	11.1%	4
	Declined to answer	19.4%	7
Sex	Female	41.7%	15
	Male	58.3%	21
Credentials	JD	33.3%	12
	BSN	2.8%	1
	MD / DO	30.6%	11
	PA	5.6%	2
	PhD	2.8%	1
	Other	8.3%	3
	Declined to answer	16.7%	6
Responsibilities unrelated to the board in the past 12 months	Practicing* physician	13.9%	5
	Practicing* attorney	19.4%	7
	Retired clinician	11.1%	4
	Retired attorney	8.3%	3
	Other	22.2%	8
	Declined to answer	25.0%	9
Key Informant Interview Demographics			
Professional role in relation to the licensing board	**Board member**	33.3%	12
	Physician	27.8%	10
	Non-Physician	5.6%	2
	Board staff	22.2%	8
	Staff attorney	11.1%	4
	Other staff	11.1%	4
Focus Group Discussion Demographics			
Professional role in relation to the licensing board	**Board member**	16.7%	6
	Physician	11.1%	4
	Non-Physician	5.6%	2
	Board staff	8.3%	3
	Staff Attorney	5.6%	2
	Other Staff	2.8%	1
	Non-Board	19.4%	7
	Peer Review Physician	5.6%	2
	Claims	5.6%	2
	Non-staff attorney	8.3%	3

*"Practicing" is defined as >50% of their work hours being devoted to clinical work (for a physician) or legal practice (for an attorney).

understanding of our findings. Their names have been withheld, to protect their privacy.

Principles Guiding How Boards of Medicine Respond to Potential Quality Problems

The initial line of inquiry concerned the principles that guide board-of-medicine response to breakdowns in the quality of care. Uniformly, participants asserted that the number one priority of boards is to protect the public, with assessment of standard of care as the criterion for determining whether a medical error warranted further board action:

> "My job as a board member is to make sure that every patient got a fair assessment from that doctor and that in general that I'm making sure that nobody is out there practicing negligently or recklessly and a direct threat to their safety."*

Other major principles that guide the board-of-medicine process when handling cases of medical errors include fairness, consistency and efficiency. While many participants recognized the importance of boards' transparency with the public regarding their actions, they also struggled with the challenges of balancing the rights of the public with fairness for physicians:

> "… the problem is, with the system the way it now works, if you have transparency… if the board takes action based on the way it can take action now, basically a physician will end up not practicing. If a physician is put on probation, that physician will be dropped from all third-party insurance. He or she will not be able to find a job. Their practice will be ruined."

How Boards of Medicine Respond to Medical Error

Overwhelmingly, participants reported that board activities reflected a complaint-driven process, suggesting that the approach was necessarily reactive and dependent on a complaint being submitted before the need for an investigation could be determined. Respondents explained that once a complaint was submitted, the next steps when assessing a case hinged on the norms of that board and past experiences with similar situations, rather than being based on rigid algorithms or guidelines:

> "Well, it's like with medicine or anything, you have your operating procedure, you have interpretations about and applications of laws, you have internal and external procedures. And you're going to have objective information to work off of, but then you're going to use judgment as well, just like you do in medicine. It's a combination."

A hypothetical case, below, was then presented to participants to dissect and discuss the challenges of turning these principles into practice:

> *Consider a highly skilled, well-respected neurosurgeon. The neurosurgeon recently carried out a wrong site surgery, leaving the patient with persistent right arm and hand weakness. Root-cause analysis suggests the event resulted from multiple factors at the system and the individual level. However, among the root causes was the fact that the surgeon rushed through the mandatory pre-procedure time-out because he was behind schedule. His department has been carefully tracking the percentage of operations that start on time, and allocates desirable operating room space and time slots partially based on surgeons' on-time start performance.*

There was strong consensus that the case would be opened for investigation by boards on the basis that all wrong-site operations are considered "never events," which are almost always investigated. Never events encompass serious reportable events (SREs) that occur in the health care setting that are

OVERWHELMINGLY, PARTICIPANTS REPORTED THAT BOARD ACTIVITIES REFLECTED A COMPLAINT-DRIVEN PROCESS, SUGGESTING THAT THE APPROACH WAS NECESSARILY REACTIVE…

largely preventable.[19] The National Quality Forum endorsed a list of SREs in 2002 as part of its ongoing patient safety efforts.[20] Furthermore, while many participants acknowledged the systemic factors that may have contributed to the error, most believed that the surgeon, given their role and title, would be ultimately responsible for the outcome of this case:

> "It clearly involves the physician doing a less than stellar job and giving in to the outside pressures… We know that it was not really

*Note: This quotation, and the other indented quotations that follow it, are anonymized excerpts from individuals interviewed in this study.

fair to the doc to give him the entire blame, but our only tool would be to offer… an informal decision, where we would focus on, in spite of the outside pressures, you cannot shortchange the time-out process, the evaluation process, the whatever it is that needs to be done to do the job right for the safety of the patient."

Many board members believed that the provider's prior disciplinary record was influential when considering what, if any, formal action the boards should take against the surgeon:

"Somebody with prior discipline for the same thing, for instance, wrong site or something like this [hypothetical case], we would certainly land a lot harder in terms of duration of supervision, primarily. You didn't get the message last time."

A subset of board leaders reported that the physician's response would also influence their judgment about whether the boards should take any formal action:

"… their response matters a lot to me as far as if I feel like they're being true to the public or not. And so, if I have somebody who's a little more callous or doesn't really show a lot of empathy for the person that he hurt, then I think that's… a person that I would be more interested in getting an evaluation on and possibly putting in some sort of monitoring program where he was forced to account to somebody else with choices, because I would question his judgment more."

Responses differed regarding how, or whether, the degree of patient harm should influence the boards' response. The majority of participants agreed that a case would be investigated based on the events that occurred rather than on the outcome. However, opinions differed regarding whether the level of harm ought to correlate with harsher disciplinary actions, with several board members emphasizing that level of harm is not necessarily an indicator of an error's severity:

"We typically try very hard not to focus on harm because a patient can be harmed when the standard of care is actually met. And a physician can *not* meet the standard of care that results in no harm but could in the future result in harm."

Despite differing views on how harm should be factored into the boards' process, there still was overall agreement that the boards' goals of being consistent and fair should be considered when handling cases with different levels of harm.

Disconnects Among Stakeholders

The discussions about how boards respond to medical errors highlighted tensions between their role relative to health care institutions and the expectations of the general public. One example of this tension was the recognition by board participants that, while most medical error cases reflected at least some degree of system failure, boards only have authority over the physician:

"…our role and responsibility with the medical board is strictly upon the provider. And so, we can only give suggestions and discipline related to that person and then hope that they'll take some of that back to their own facility to implement changes systemwide."

In situations where the case under review involved significant system flaws, boards felt frustrated that their only option was to take action against the physician and hope this somehow would translate into system change at the health care organization:

"And our hugely unfortunate situation is that from the boards' perspective we don't have any way to beat on the hospital; we have to beat on the doctor."

The relationship between boards and the public was also described as challenging, with the majority highlighting a fundamental disconnect. One respondent was unsure if even physicians in training understood the roles and responsibilities of boards:

"I think people understand that doctors are a profession that's regulated at different levels… But I don't think they have a specific awareness of the [boards]. I think there are a lot of medical students that don't have a very good awareness of what the [board] is or does."

Participants believed that that the public's understanding of what boards do is quite limited, but that generally the public strongly expects disciplinary actions from the boards when a complaint is filed:

"Most of the time I don't think the public has an expectation of the board, other than that they are going to police the physician, which is I think what the public thinks the board does.

It's not just licensing and discipline, but I think that's what the public thinks is that's all we do."

Often, the public's unrealistic expectations result in frustration when the actions of the boards are viewed as insufficient:

"I have been in touch with lots of patients' advocates, from their experience that is the overall reaction from the public is that the board had been too lenient towards the physician. And so, when you say most of it is a system problem, the public may not accept it very well."

Overall, participants agreed that important opportunities existed to improve communication among boards, health care institutions and the public.

Recommendations for Regulatory Bodies

We concluded the interviews and focus groups by asking for recommendations that could help boards respond more effectively to medical errors. Only a few participants believed that boards have all the tools they need to operate in the current state. Many supported developing additional tools and guidelines to address systematic failures that accompany many of the complaints without provoking fear from stakeholders:

"Sentinel events and adverse events to patients don't happen…because one person made an error… The problems tend to be systemic…almost always at the very root of the problem is … a profound lack of communication. And that is not something that you can regulate… it's so much more complex than that… it feels incredibly unfair to the provider who ends up having the finger pointed at them for the error that occurred. I understand that's how our legal system works, but it doesn't translate well in the trenches when you're really trying to figure out what went wrong, to make sure it doesn't happen again."

Many participants also supported the utilization of more non-disciplinary tools when dealing with cases that are less severe but still warrant professional acknowledgement and changes:

"We need a model that allows us to provide education or guidance without it becoming formal discipline that is so violently resisted by the docs."

MANY PARTICIPANTS ALSO SUPPORTED THE UTILIZATION OF MORE NON-DISCIPLINARY TOOLS WHEN DEALING WITH CASES THAT ARE LESS SEVERE BUT STILL WARRANT PROFESSIONAL ACKNOWLEDGEMENT AND CHANGES.

Overwhelmingly, participants advocated for the implementation of performance metrics as a tool to hold the boards' process more accountable and promote trust. Having consistent metrics for boards would allow board members from each state a chance to compare their processes side-by-side:

"… I think if [the board] is able to show that their recidivism rate is very low when they are in a confidential environment and they deal with these physicians and they have some kind of a confidential, protected process, if they can do those two things, show this in confidence and show the recidivism rate is low, then I think people would trust them."

Several participants mentioned the need for frank conversations to take place with the provider during or before the investigation process. Participants also believed that having conversations involving all parties helps move the process along:

"… board members would love to just talk with providers in person. They would love to have a counseling session. They would love to have so many other options that are more compassionate… because sometimes just mistakes are made… We think that what we have is woefully inadequate."

In some states, participants advocated for legislative changes to allow boards to have direct communication with physicians without subjecting the conversations to disclosure in response to public record requests.

To address the system failures that accompany many cases of medical errors, most respondents wanted greater involvement from institutions. Some believed that having institutions in charge of addressing their own quality and safety issues would allow institutions to be more effective at fixing system errors, resulting in reduced tension around the fear of being investigated by boards:

"I think as an institution the medical staff has a responsibility to be self-governing. The institution has a responsibility to have an adequate review

process in place, and we want to make sure that we maintain the integrity of that because at the ground level there's just a very small number of things that go wrong that make their way to the Department of Health."

Furthermore, they reasoned that closer connections between boards and health care institutions could address a current loophole in reporting requirements to the National Practitioner Data Bank (NPDB) that allows institutions and liability insurers to avoid reporting liability payments that are not made on a physician's behalf, but for which a physician may have been responsible or negligent. As a result, regulators may be unaware of a provider who is having trouble providing safe care:

"What happens in the hospital environment, particularly now that we have more and more physicians that are employed by hospitals, is that they have a negotiated settlement whereby the physician basically goes away. And so, then he goes across town and he gets privileges because there's nothing on the public database that said, hey, he got let go at his hospital for cause. And so, it perpetuates itself."

Remaining recommendations focused on addressing some of the disconnects between boards and the public. To increase transparency and foster greater communication, participants recommended that the boards' websites become more user friendly for all involved stakeholders—public, complainants and respondents—and board processes prioritize customer service. Some respondents also suggested educating the public on the boards' process and organizing principles, while others found this to be a lofty but unrealistic goal.

Discussion

The regulator's role is by nature fraught with challenges. Health care regulators, such as boards of medicine, face unique challenges as they seek to protect the health of the public while interfacing with diverse and powerful stakeholders such as health care organizations, state medical and hospital associations and consumer advocacy groups, all under intense media gaze. One especially challenging issue for boards is how to incorporate new concepts from safety science and Just Culture into their current regulatory process. Our study highlights the complexities of medical regulation and provides recommendations for boards to respond to medical errors more effectively (Table 2).

Our results highlight two significant gaps that, at present, pose challenges when boards are faced with cases involving medical errors. While safety science emphasizes the critical role that systems of care and teams play in most medical errors,[6-8] the responsibilities of boards are limited to oversight of individual physicians. Furthermore, the Just Culture model, an essential element of safety science, highlights that discipline should have an extremely limited role in response to most medical errors and be reserved for cases in which providers recklessly disregarded known best practices for patient-care safety.[9] However, boards have very few non-disciplinary tools they can use to change provider behaviors. Non-disciplinary

Table 2
Summary of Recommendations

1. Create a broader array of tools that boards of medicine can use in response to medical error
• Non-disciplinary tools to warn, educate and support physicians
• Protocols to directly communicate with physicians regarding complaints and gather preliminary information informally
2. Enhance communication/collaboration with physicians and health care organizations about preventing and responding to medical error
• Encourage use of Just Culture framework within health care organizations and integrate framework into board-of-medicine processes[22]
• Support use of Communication and Resolution Programs to prevent and respond to medical errors
• More regular engagement to communicate expectations and build trust
3. Deepen engagement between boards of medicine and the public
• Create regular forums and vehicles for greater communication between boards of medicine, legislators and the public. This will create greater trust of boards of medicine from the public viewpoint and allow for the public voice to actively participate in designing effective processes for responding to medical errors
4. Enhance trust in boards of medicine through measuring and reporting boards performance
• Partner with broad array of stakeholders to develop and implement process and outcome measures to assess board-of-medicine effectiveness

tools, such as letters of concern and statements of charge, would aid boards in providing proper warning and available resources to physicians. Overall, state legislators and other policymakers should support the development of a broader array of tools that boards can use to promote high-quality medical care in this new landscape of health care delivery.

Our research revealed that disconnects among the perspectives of key stakeholders have developed over time and are impairing trust between boards and physicians along with the health care organizations where many physicians work. Addressing this trust deficit is a likely precondition to developing new tools for boards around medical error. To some extent, an arms-length relationship between health care regulators and the clinicians they oversee is important to preserve the ability of boards to provide independent and objective oversight on behalf of the public. It is also natural for physicians and health care organizations to want to minimize any potential interaction with boards —for example, sharing only the essential information they are legally required to provide. These tensions, while understandable, may be impairing the ability of boards and physicians to collaborate most productively on reducing medical errors.

Boards embracing new concepts in safety science could provide a framework for partnering with providers and health care institutions to improve the safety and quality of health care. Boards could begin by formally endorsing the Just Culture model, and encouraging its use both within health care organizations and committing to incorporating these principles into the work of the board itself, much as the Washington Medical Commission has done.[21,22] Boards could also become more familiar with and supportive of Communication and Resolution Programs (CRPs), which are initiatives at health care institutions and liability insurers that seek to prevent adverse events from occurring and promote transparency, accountability and learning when patients are harmed by health care.[13] Finally, more concerted efforts to create regular engagement among boards, physicians and health care organizations will be an important next step in enhancing trust in boards and developing a common understanding of the respective roles of each party in responding to medical errors.

To some extent, the greatest disconnect our research revealed concerns the public's understanding of the roles of boards as they relate to medical errors. If boards embrace safety science and Just Culture concepts without sufficient public engagement and education, it may be harder for consumer groups and the public to understand why boards of medicine have chosen not to discipline a competent provider following a serious medical error. It will be critical for the public to be represented and engaged in the process as boards, physicians and health care organizations work more closely together on developing new board tools and approaches. Creating a process whereby key stakeholders regularly interact could help close educational gaps around the process of medical regulation. Regular engagement with the public will also help design new tools for boards that are practical and acceptable to all parties and build trust. Such a forum could also be an opportunity to develop performance metrics that would increase accountability and transparency of board actions to the public and the health care community.

Limitations

As with all qualitative studies, the generalizability of our findings is limited. While the interviews were conducted with boards members and staff from several states, the FGDs participants were only from Washington state, potentially reducing the applicability of our findings beyond the states in which the data was collected. Social desirability and other biases may have prevented participants from sharing the entire range of their opinions on these complex questions. However, the study was conducted by experienced qualitative researchers using standard techniques for minimizing bias. In addition, qualitative research does not allow one to determine the proportion of participants who held any given attitude. Nonetheless, the consistency with which key themes arose across the KIIs and FGDs supports the validity of our findings.

Conclusion

The goal of protecting the health of the public and improving the quality and safety of health care is one that is widely shared. Our study highlights the factors that currently hinder boards of medicine in addressing medical errors, including the lack of non-disciplinary tools at boards' disposal, the absence of authority that boards have over institutions and the trust deficit between boards and physicians and health care organizations. More consistent opportunities for collaboration between boards and institutions could help align expectations between these stakeholders. In addition, more attention is required to promote public engagement with boards. Creating closer relationships, built on trust and collaboration, among boards, physicians, health care institutions and the public will be key in helping boards of medicine achieve their mission in this new environment. ■

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