

# “I made a mistake!”: a narrative analysis of experienced physicians’ stories of preventable error

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## Abstract

**Rationale, aims, and objectives:** The complexity of healthcare systems makes errors unavoidable. To strengthen the dialogue around how physicians experience and share medical errors, the objective of this study was to understand how experienced generalist physicians make meaning of and grow from their medical errors. **Methods:** This study used a narrative inquiry approach to conduct and analyze in-depth interviews from 26 physicians from the generalist specialties of emergency, internal, and family medicine. We gathered stories via individual interview, analyzed them for key components, and rewrote a ‘meta-story’ in a chronological sequence. We conceptualized the findings into a metaphor to draw similarities, learn from, and apply new principles from other fields of practice. **Results:** Through analysis we interpreted the story of an elite athlete (physician) who is required to make numerous decisions in a short period of time within the construct of a chaotic sports field (clinical environment) among spectators (the patient’s family) whilst abiding by existing rules and regulations. Through sharing stories of success and failure, the team coach (clinical mentor) helps optimize the players’ professional and psychological development. Similarly, through sharing and learning from stories, team members (colleagues) and junior team members (trainees) also contribute to the growth of the protagonist’s character and the development of the overall team (clinic/hospital) and sport (healthcare system). **Conclusion:** We draw parallels between the clinical setting and a generalist physician’s experiences of a medical error with the environment and practices within professional sports. Using this comparison, we discuss the potential for meaningful coaching in medical education.

## Introduction

Healthcare is complex and patient care can often involve unpredictable factors<sup>1-3</sup>. Whether due to this complexity or the limits of human cognition and physical endurance, errors can be expected<sup>4,5</sup>. These errors, formally referred to as ‘medical error’ within the literature, are estimated to be the third leading cause of morbidity and mortality in North American countries<sup>6,7</sup>. The medical error literature identifies common preventable human errors such as improper medication administration, iatrogenic injury from surgical procedures, and mistaken patient identity<sup>8</sup>. Several studies have described that the highest proportion of preventable medical errors happen in the emergency department with the most common type of error being diagnostic errors that lead to disability or death 9-14. Herein lies a potential problem: if the error is classified as preventable, with whom does the responsibility lie? Is it fair to individual physicians to classify the rate of preventable errors as part of safety and quality improvement initiatives? How might the perception that their error was preventable affect their perception of their own competence? Perhaps more critically, how might this perception impact their sense of responsibility? Pertaining to these questions, there is a highly focused literature on how diagnostic errors promote a rhetoric of individual clinician vigilance, through de-biasing, cautiousness, and personal reflection<sup>15-22</sup>. On one hand, theories on how cognitive biases

impact diagnostic error offer a sensitive approach: physicians make errors because of cognitive limitations and innate tendencies. On the other hand, this focus is paired with strategies to correct for these tendencies, thereby increasing the pressure on the individual clinician to ‘correct or prevent’ their own errors. Another perspective points to knowledge and experience gaps as the main factor in diagnostic error<sup>23</sup>. While this may imply a need for a more effective medical residency curriculum, there is still pressure on the individual clinician to self-assess and address gaps.

The exact rate of diagnostic errors is debated<sup>24</sup>, however, the impact of these errors on patients is only one focus of a growing literature<sup>6,25-28</sup>. Recently the impact that these errors have on the well-being of first responders and physicians has also been explored<sup>29-37</sup>. Among physicians, emotional responses to medical errors can last from days to years, and may include feelings of underperformance or failure, shame, self-doubt, fear, guilt, embarrassment, anger, depression, posttraumatic stress injury, and suicide<sup>29-36</sup>. Research demonstrates that medical errors can have long-term impacts relating to lack of confidence, concentration, memory, and impaired work performance<sup>37-40</sup>. Other studies report anxiety about future errors, difficulties sleeping<sup>41</sup>, or prematurely leaving the medical profession<sup>42-43</sup>. Due to the impacts of unanticipated adverse patient events, injuries, and errors, the physician has been referred to as the “second victim” in a seemingly vicious cycle<sup>33,44-50</sup>. The “second victim” often loses confidence in themselves, takes on a level of responsibility for the patient outcome, and begins to undervalue their clinical skills<sup>44-50</sup>. Historically, postulated reasons for this include cultures of blame, shaming from colleagues, and the degree of perfectionism that exists within clinical medicine<sup>51-52</sup>.

Despite the growing attention on the physician as “second victim,” how physicians recover from errors and how or if they learn to move forward is a space that is underexplored. Shepherd et al. (2019) identified several dimensions that influence how physicians learn from errors<sup>34</sup>. We explore one of those dimensions more closely: understanding the emotional response. In particular, we wanted to better understand the process by which physicians shared experiences of error with supervisors, colleagues, and/or trainees, and if there are common patterns among their post-error recovery and growth.

## Methods

This study, with an overall goal of illuminating lived experiences, is based on the underpinnings of a qualitative narrative approach and interpretive orientation. This approach is founded on the idea that humans individually and collectively construct meaning from their relationships with one another<sup>53</sup>. Thus, narrative methodology allowed us to interpret stories in terms of how they are structured, told, and valued by those who share them, revealing underlying ideologies<sup>54</sup>. As a concept, narrative inquiry draws parallels with the field of narrative medicine—which illuminates one’s ability to acknowledge, absorb, interpret, and act on the stories of others. Like narrative medicine, narrative inquiry reiterates the importance of a rich resonant comprehension of individuals’ experiences<sup>55</sup>. Because narratives have the power to improve the care of patients, renew physicians’ commitments to their own health/fulfillment, support the care of their colleagues, and reiterate the fidelity to medicine’s ideals, these contexts would serve as important cornerstones for a study focusing on medical errors. Additionally, narrative inquiry 1) accommodates inconsistencies in an individual’s perception of their experiences, motivating the exploration of these inconsistencies; 2) aligns with a natural tendency to share harrowing experiences in the form of stories, allowing for purposeful data collection; and 3) values the temporal context of people’s experiences, which allows for a deeper exploration of the sequence of events. In narrative inquiry, meaning is derived through the multiple perspectives that are contributed across stories. Rather than just telling a story (e.g., of how physicians experience their medical errors), narrative inquiry aims to organize, explore, and make meaning from multiple perspectives by piecing together a meta-narrative that is constructed from the data<sup>56</sup>. The meta-narrative is a story with an accompanying metaphor that is compiled through forming linkages and identifying patterns within and between each individual story told by a single participant. The creation of this meta-narrative is a helpful way to understand this data because it illuminates the voices of participants, while simultaneously applying new concepts and principles from a metaphor (i.e., a parallel field).

### *Sampling and protocol*

In line with this method, we conducted in-depth individual interviews with purposively sampled experienced generalist physicians who practice in diverse clinic settings and were willing to tell stories about memorable personal errors. We defined “experienced” as being in post-training practice for at least five years. We created this criterion to ensure that our sample of physicians had a depth of clinical experiences by which to contextualize their errors; although, we did not specifically limit the timeframe from which participants would select their stories. Furthermore, all physicians were based in Canada or the United States. We involved a wide range of physicians in order to speak with those who were willing to share rich and detailed stories. Physicians from Canada and the United States were included due to an assumed similarity in culture around medical errors that may arise due to the influence of organizations or projects like the Associated Medical Services Phoenix Project, which has members from across North America<sup>57</sup>.

Given these stories may be seen by some as reflecting poorly on their professional competence or ability, we identified confidentiality to be of utmost importance to eliciting rich data. We restricted our data collection to generalist physicians in the hopes that the commonalities among their practices and treating and diagnosing patients with a wide variety of complaints would facilitate comparison of stories across the whole dataset. We chose not to focus on a single location or specialty in an effort to look for transferable ideas that are consistent across a variety of clinical contexts. See Table 1 for detailed inclusion and exclusion criteria.

(INSERT TABLE 1 AROUND HERE)

After identifying and recruiting participants, we conducted in-depth interviews either in-person or over the telephone, based on participant preference. Telephone interviews can drive the gathering of sensitive information when anonymity is preferred<sup>59</sup> and facilitate the inclusion of participants who were both socially and geographically distant from our own networks. All interviews were conducted by non-clinicians with experience conducting qualitative interviews (MV, EC, SK).

The interviewees were asked to share two memorable stories of personal errors—one which they chose to share with others and another which they kept more private. The interviewer elicited the entire story of the error and asked follow-up questions about how the physician dealt with the error with a focus on how it affected their practice over time. All interviews were audio-recorded and transcribed verbatim. See Appendix 1.0 for the detailed interview guide.

We used the theory of information power to establish data sufficiency. We judged the information from 26 participants to be sufficient due to the narrow scope of our project, strong dialogue from participants that produced rich data, and the use of established theory. The research aim, specificity, dialogue, and analysis drive us toward higher information power and smaller sample size<sup>58</sup>.

#### *Team:*

The analytic team consisted of the non-clinician qualitative experts (MV, EC, SK) who conducted the interviews, two clinician-researchers within the field of emergency medicine (JS, TMC) who provided contextual support, and the senior author (SM) with expertise in psychology and medical education oversaw all aspects of the study.

*Analysis:* Through the application of a narrative analysis, stories were analyzed for key components, rewritten within a chronological sequence (i.e., ordering the key events in time), and developed within an emergent metaphor<sup>56, 60-61</sup>. This “re-storying” process emphasizes meaning-making from the shared stories. Through many discussions, the multi-disciplinary team worked together to develop and refine the characters, setting, and plot. The final version then becomes a meta-narrative that is shaped by present context and past retellings<sup>60</sup>. Data analysis using a narrative approach that emphasizes chronology was important because we are most interested in the order that events are happening so that we may further establish temporal relationships between these occurrences. NVIVO 12 (QSR International) and manual hand coding were used in tandem to manage the data. The primary author (SK) coded all interviews with direct consultation and direction from MV and SM; EC, JS, and TMC provided ample feedback and helped to re-define and solidify the analysis. Consistent with a narrative analysis approach, the coding emphasized an evaluation

of the actual temporal sequence of events, which may have been different than the sequence in which the story was shared during the interview. The analysis process included: (a) initial coding; (b) focused coding; (c) creating the meta-narrative and accompanying metaphor. Initial codes are the basic analytic units that capture relevant aspects of data. By using labels to categorize each action element and character/setting descriptions within a story, a series of steps and characteristics began to emerge. This process was replicated across all stories. Next, focused coding led to the development of broader themes. This approach was used to collapse similar labels through comparing and contrasting. Finally, these broader themes were organized into a coherent picture to illustrate the order of key events and the detailed descriptions of each character within a common setting. Through detailed discussions amongst the research team members, this trajectory was developed into a preliminary graphical representation of the narrative data and then in parallel, formulated into a metaphor. All authors agreed on the final version of the meta-narrative, schematic, and metaphor.

This study received approval from the Hamilton Integrated Research Ethics Board (HIREB) on August 16, 2017 (Project #2553).

## Results

A total of 26 physicians who have been in licensed practice for a median of 13 years were interviewed. Physicians were comparably distributed between the three fields of practice: emergency medicine (42%), general internal medicine (27%), and family medicine (31%) with the majority practicing in Canada (65%). Most participants were academic physicians with research, leadership, or administrative roles in addition to their clinical practice. See Table 2 for a detailed demographic profile of the included participants.

(INSERT TABLE 2 AROUND HERE).

### Sharing stories of medical error

We asked physicians to tell us two stories of their own medical error, one which they chose to share with others and one which they chose to keep private. They told stories that took place in the very distant to the quite recent past. The stories included many types of error: diagnostic errors (e.g., missing low-flow ischemia, failing to diagnose an embolic clot, failing to recognize tamponade physiology, missing an aortic dissection on a Pulmonary Embolism scan); management errors (e.g., failure to note medication interactions, failing to order a test, reassess the patient, read a test in its entirety, or to redo gasses; inability to secure the airway; and discharging a patient too soon). Across a variety of clinical environments, dialogue around medical errors happens in an unstructured, informal way. The decisions to share with supervisors, colleagues, or trainees are determined by varying motivations. Stories of errors are shared with supervisors or colleagues for emotional support, reassurance, and/or for guidance on a course of action; they are shared with colleagues for affirmation and with trainees for teaching purposes. Some physicians chose to anonymize their personal involvement when sharing the story one-on-one with trainees or shared a stylized, anonymized version of their experience with the intent to teach general principles with trainees. For example, one physician said he took it upon themselves to prepare a lecture on the topic of his medical error as he wanted his trainees to have the opportunity to learn from it before they themselves faced a similar situation: “the mistake I made was a mistake anyone can make, but the fact that I made it wasn’t as important as making sure nobody makes it again” (Participant 012).

The typology of stories that are shared willingly compared to those that were kept hidden hinged on the following key factors (i.e., reasons for sharing): 1) whether trainees are able to learn a valuable lesson from hearing the stories (regardless of whether they are general or specific cases); 2) the level of torment it causes the individual who is sharing the story; 3) whether they have an open relationship with their supervisors and/or work in an environment that is open to dialogue around error. These three factors work together to incentivize or disincentivize the sharing experience and are valued in varying weights by the individual. Those themes were rarely present when the stories were kept private. For example, one participant said the following about an error that he chose not to share with colleagues or trainees, “Well, I mean at the time it was very difficult. I had to stop work for a few days. I think it actually triggered a depression. It was also around the time that my son was born and he’s now 21 and clearly, I could not connect as a father for the

first few months of his life because of what happened. I think I had some counselling at the time but I don't talk about it much since then (Participant 002)."

Many participants approached the topic of preventable errors with an understanding that errors, which can happen to anyone, are indeed vital to the learning, growth, and development of practitioners. From the perspective of the physician, the efforts of supervisors who co-developed good communication standards and processes for initiating dialogue around errors while emphasizing ethics and professional values amid the affirmation of good clinical decision-making skills are highly valued and appreciated. Essentially, this includes an effort between the supervisor and learner to pre-establish how errors should be discussed and a course of action for how different types of errors should be handled (e.g., growth points are discussed and feedback around what was done well is highlighted). Similarly, after an error is made, colleagues who made an effort to empathize and re-affirm the good decision-making of the physician are valued. By sharing related stories of past errors, both colleagues and supervisors are important in helping physicians who had recently made an error by helping them understand the big picture around the error, offering action-oriented growth points, and communicating hope and optimism in a non-judgmental way.

The meta-narrative (metaphor, characters, setting, and plot)

Our analysis illustrates that generalist physicians can make sense of their errors in a way that encourages growth within the profession, but only after the experience of an emotional trough, acknowledgement of the error, and taking ownership of their role in the error (Figure 1).

(INSERT FIGURE 1 HERE).

Applying this trajectory, we developed a metaphor comparing the experiences of the physician to those of an athlete who plays a professional team sport. The following meta-narrative will help contextualize the characters, setting, and main features of the plot.

**Characters and setting:** The characters of this meta-narrative include: 1) the elite athlete (the physician who displays confidence, competence, care, empathy, honesty, and a sense of humour); 2) spectators (family members observing the physician and his/her interactions with patients); 3) team coach (typically a trusted senior clinical colleague or supervisor who is supportive, gives honest feedback for growth, and provides guidance for emotional development and improvement to professional practice); 4) veteran teammates (clinical peers who may be relied on to provide affirmations on the course of actions or expected to lie to make the protagonist feel better about the outcome of error); 5) rookie teammates (trainees who are junior to the physician, who may be able to learn from the story of errors); 6) and overall team (clinic or hospital). It is important to note that although the patient is highly regarded, valued, and remembered with great detail, within this meta-story, they are embedded within the physician's experience of their error. This became apparent as physicians often remembered the event, day, and patient in great detail, frequently intertwining such details within the context of the clinical situation.

The playing field (clinical setting) is a decision-dense, chaotic space where frequent, brief, and hurried interactions occur. All of these interactions exist within rules and regulations that need to be followed and respected.

**The Emergent Meta-narrative:** The story plot is based around the emotional and skills-based maturation of a soccer team composed of a diversely skilled group of elite players, both veterans and rookies. This metaphor stems from the growth of the protagonist athlete who embarks on an emotional and difficult journey to improve their skills and perception after an error costs the team a significant loss (e.g., championship game). The coach, veteran team members, and rookies play important roles in supporting the maturation process. Furthermore, although a single player is not solely responsible for the error at hand, the protagonist, through reflexivity, taking some level of personal responsibility, serves as the steppingstone to engaging in strategies that have the potential to support the recovery process.

**The plot:** Primarily, the plot consists of 5 main components: 1) the pre-error state; 2) occurrence of the error (which is unknown in the moment); 3) realization of the outcome; 4) acknowledgement of the error

(reflexivity); 5) post-error maturation and growth within the profession (Figure 1).

The pre-error state is one where the protagonist has not yet experienced a self-labelled unforgettable or memorable error in their professional career. Likened to a decorated athlete committed to perfecting their skill, this phase was often defined by participants using words such as ‘overconfident’ or ‘not diligent enough.’ For example, one physician said the following about his pre-error state, “I think that’s a very common thing as we go through residency. I think you kind of go through stages, but there is a point somewhere at that transition where you probably get overconfident” (Participant 001).

Analogized to a set play defined for the protagonist athlete, but an unexpected change of events prevents them from delivering on the original plan, these errors often leave a long-lasting imprint on the athlete. The unexpected change of events could be due to something that occurs within their own team or due to the actions of the opposing team. Similarly within a clinical setting, these errors have an unforgettable nature to them, where it is often burned into one’s memory in a way where minute details can be recalled about the day of the event (e.g., what the patient was wearing, what the weather was like outside, etc.). Furthermore, they often occur when there is an unexpected change in the originally defined course of action; the error is also unknown to the physician in the moment but leads quickly to an unfavorable patient outcome.

Likened to the point where the protagonist athlete realizes the team has experienced a critical loss, the realization of this unanticipated outcome often leads to an emotional trough (dip in self-perception) due to one of or a combination of the following sentiments: depression, confusion, shame, embarrassment, and sadness. When reflecting on the moment where the error is realized, many participants describe it as shocking, “you think you’re doing something right and then the rug is pulled out from underneath you and you quickly realize, ‘oh god, this is all wrong’” (Participant 005).

Through the support of others, the protagonist is better able to acknowledge the error and through reflexivity, take ownership/responsibility for the outcome. This phase relates to the athlete’s ability to be reflexive about the error that was made; and the level of support and collegiality they receive from their team and coach after the error is made are crucial components that contribute to this realization. Having a supportive coach and team would help catalyze the athlete’s growth from the error, whereas a blame culture would regress their potential for improvement and reinstatement of their confidence in future games. Likened to the clinical environment, this phase is described by participants as “I felt responsible...”, “Looking back, I knew I should have done x” or “I had failed to consider that diagnosis.” The realization sparks the recovery process to emotional growth and positive changes made to professional practice (e.g., building resilience, big picture thinking, newfound diligence, newfound humility, etc.). Such adaptations were described as “instilling a sense of humility...”, “I became more thorough...”, and “I’ve kind of cognitively put a strategy in place to avoid this in the future.” Participants also highlighted the importance of mentors and colleagues, a supportive work environment, and the value in sharing such stories with others. For example, one participant said, “you have something that ends up in an outcome like that, and you tend to internalize it and feel like you’re the only person this has happened to and your decisions were to blame for this. I think, talking with other people about it, it was pretty clear that lots of other people had stories like this. There were lots of other things that contributed to this bad outcome. So, you know, it helps just kind of knowing you’re not alone, and that other people have been through this” (Participant 001). In most of the instances, taking the initiative to be reflexive and having a supervisor or colleague who offered support and reassurance catalyzed the growth process. In contrast, the absence of these approaches toward optimal growth, slowed or halted the recovery process. This could include supervisors not taking the time, effort, or diligence to handle errors in a constructive way or the culture of the clinic/hospital being unsupportive or blaming physicians when errors are made.

The protagonist athlete may also choose to use their error as an example to teach junior teammates about their recovery journey, advocate for regulation changes in the sport, and/or help encourage positive collegiality through workshops, seminars, or team-building activities. Likewise within the clinical environment, additional approaches toward optimal growth include using components of previous errors as teaching points (e.g., writing and presenting an in-depth lecture on the content area to junior learners), sharing the emotions

of the story with trainees, supporting avenues for policy change, and contributing to a medical culture that is eager to empathize with medical error dialogues.

Due to the growth and change associated with the error, the protagonist will be inclined to view their identity as who they were before the error and who they have become after the error. It is important to acknowledge that there are many opportunities that must align for an error to occur and the course often involves the actions of several players, although it is the protagonist who takes on the responsibility of the error. This is represented by the various positions that exist within a team sport and on a medical team. In line with these major phases, it is important to consider the typology of each character and how they can all play a role in the post-error growth of the protagonist's career. In sports, if there is meaningful coaching, strong team spirit, and continuous review of practice, athletes are able to seek out the necessary supports to improve their game. Likewise, if the clinical supervisor is able to contribute to a medical culture where work spaces can be used to share and grow from stories of medical errors, physicians can feel more encouraged to discuss their strengths with humility, celebrate accomplishments, be open and honest by asking what knowledge/skills/expertise they need to develop further, accept criticism, and continually reassess their own performance. Developing this culture can also contribute toward easing the implementation of strategies and practices to improve patient safety.

In the cases where personal responsibility is attributed but support is not provided by either team coaches, medical supervisors, or colleagues, there is a deeper emotional trough and delayed progression. This may include the protagonist being much less enthusiastic about their career or wanting to leave the profession prematurely. Above all, similar to how meaningful coaching can help athletes grow from errors by unlocking further potential, clinical supervisors serve as vital catalysts in advocating for post-error growth within the profession.

## Discussion

The complex and chaotic nature of healthcare suggests that errors are unavoidable<sup>6</sup>. In this context, we studied how generalist physicians make sense of and grow from medical errors. Shepherd et al. (2019) describe 4 dimensions of medical education that can impact what is learned from error: the learning culture, acknowledging the negative emotions, the tension between individual and systems responsibilities for error and the saliency of errors from medical residency training<sup>34</sup>. In contrast to their findings, participants in our study shared stories from the distant and near past and the saliency of errors from residency only was not as pronounced.

In sports and medicine, no matter how proficient, poised, or skilled the individual may be, there is still a possibility that an error in judgement is made or a previously unknown gap in knowledge affects a decision; either of these which can lead to a near-miss or catastrophic ending<sup>62</sup>. When errors happen within a medical culture and they are not accepted or discussed, physicians become the "second victim"<sup>37</sup>. Thus, to complement the steps taken to minimize errors, there needs to be a continued effort to sustain a non-threatening medical environment where errors can be discussed openly and for the overall purpose of learning and improving one's practice (e.g., through modelling from healthcare leadership, supportive and candid coaching from senior physicians, programs that involve patient perspectives, etc.). This supportive environment can serve as a vehicle for physicians in their quest to face the outcome of the error and embark on an emotional, logistical, and interpersonal journey to learn from the process. Although there are some major differences in the cultural and social components of the post-error debriefing process between medicine and sports, it is important to recognize the benefit that can be gained through the encouragement of appropriate and accepted analyses of past errors for the purpose of improving patient safety and physician wellbeing (e.g., by accounting for feedback reception and its influencing factors)<sup>63</sup>.

One of the key components within our meta-narrative is the importance of the coach-athlete relationship. Within our analysis, we recognize that the coach-athlete dynamic in sports is represented by a physician-supervisor dynamic. This is because for most practicing physicians, a 'coach' is often a senior colleague. Furthermore, unlike sports where the coach can witness performance in real time and blocks out sustained

protected time for an athlete, in medicine, the supervisor may only get self-reported data, may not always observe performance directly, fulfills their ‘coach’ duties off the side of their desks, and divides their loyalty between assessment and advocacy.

This dynamic has been significantly researched in sports due to the tremendous influence that coaches have on the physical and psychological development of their athletes. Short & Short (2005) have distilled this relationship to symbolize the mutual interconnection of the following components: closeness (based on trust, respect, appreciation), commitment (interpersonal intentions that maintains the relationship over time), complementarity (cooperation, responsiveness, friendliness)<sup>64</sup>. For this relationship to flourish, the coach must play a variety of roles that include teacher, organizer, learner, and friend<sup>63</sup>. The coach’s experience, knowledge, access to resources, and relationship-building skills become key attributes to successful coach-athlete relationships. When the coach provides intellectual stimulation and appropriate role modelling<sup>65</sup>, it contributes to positive coach-athlete relationships and the minimization of athlete anxiety<sup>66</sup>. Although coaching has existed as a fundamental component in the fields such as sports, music, lifestyle, leadership, and business, coaching in medical education has recently emerged as a valued element of the medical teacher’s toolbox<sup>65-73</sup>. Within clinical environments, the concept of coaching is more poorly defined and there has been little examination of the transferability of coaching principles from other fields<sup>74</sup>. In a study by Watling and LaDonna, three primary similarities between the philosophies of coaches in the clinical learning setting, physicians with experience as sports/arts/business coaches, and sports coaches who did not have a medical background were identified: 1) a focus on growth and development (goal to ‘unlock human potential’); 2) continuous reflection; and 3) the embrace of failure as a catalyst for learning<sup>74</sup>. Despite the commonalities, the role of coaching in medicine was ill-defined because: 1) coaching is often embedded within clinical supervision; 2) the lines between coaching and other pedagogical roles are blurred; 3) the role between coach and player are frequently interchangeable. Thus, although our metaphor illuminates the potential for coaching to catalyze the conversion of errors to learning, precautions must be taken to identify meaningful opportunities for this to occur. More pragmatic and interdisciplinary research is needed to better understand the role of clinical coaches and how they can be integrated into the medical curriculum.

Although most generalist physicians who work in teaching hospitals reported that they typically discuss errors with their colleagues, a large number also reported that they avoid such conversations due to fear that their colleagues would not be supportive listeners<sup>75</sup>. Therefore, another potential opportunity for future development could be around training physicians to be supportive and empathetic colleagues. Because medicine is a field where professionals are continuously learning, it is important for support around medical errors to not only occur during official training periods such as medical school, residency, and fellowship, but throughout one’s career trajectory. By offering avenues to engage in dialogue, colleagues and friends can be important sources of support for growth and development. This change can be achieved in a structured peer support program<sup>76</sup>, formalized continuing professional development discussion groups where they can discuss their personal performance metrics or practice patterns<sup>77,78</sup>, or more informally outside of the clinical setting<sup>79</sup>. Health and wellness techniques tailored for physicians may also serve as avenues to further support this growth process. In general, contemporary medical education should focus on establishing a medical learning environment where errors are recognized rather than denied, and trainees are trusted and supported, rather than judged<sup>76</sup>.

## Figure Legends

Figure 1 Meta-story plot overview where the Y-axis represents self-perception related to clinical performance and the X-axis represents time

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## Tables

**Table 1 Inclusion and Exclusion criteria for sample selection**

Inclusion Criteria	Exclusion Criteria
Physician licensed to practice Family Medicine, Emergency Medicine, Internal Medicine	Unable to participate in an English

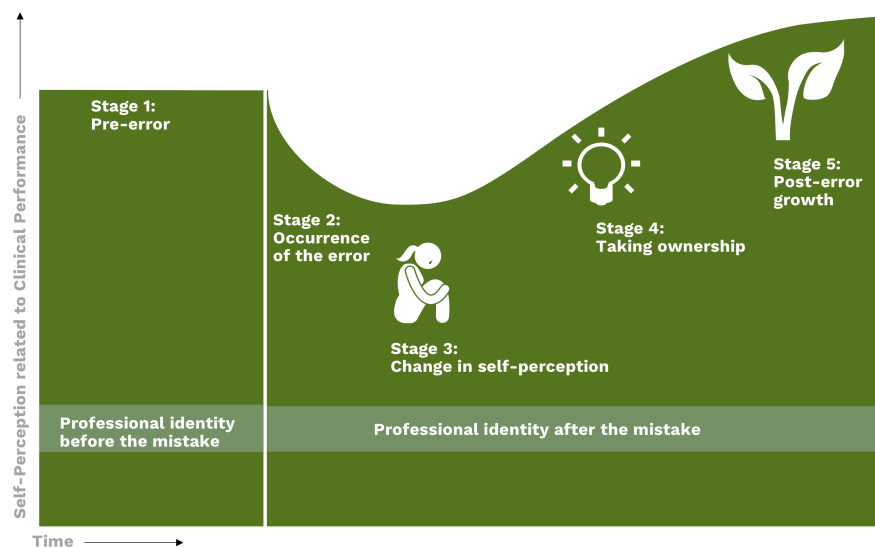
## Inclusion Criteria

Physicians with at least 5 years of independent practice  
Willing to share a story about a personal error

## Exclusion Criteria

Demographic	Median
Number of years in practice	13
Discipline	n (%)
Emergency	11 (42)
Internal	7 (27)
Family	8 (31)
Training	Training
Canada	12 (46)
USA	9 (35)
International	5 (19)
Type of practice	Type of practice
Academic	21 (81)
Community	5 (19)
Involved in Research, Leadership, or Administrative duties	20 (77)
Country of practice	Country of practice
Canada	17 (65)
United States	9 (35)

## Figures



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Table 1.docx available at <https://authorea.com/users/349958/articles/474926--i-made-a-mistake-a-narrative-analysis-of-experienced-physicians-stories-of-preventable-error>

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Table 2.docx available at <https://authorea.com/users/349958/articles/474926--i-made-a-mistake-a-narrative-analysis-of-experienced-physicians-stories-of-preventable-error>

