

Second victims in health care: current perspectives

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Ozcan Ozeke ¹
Vildan Ozeke^{2,3}
Ozlem Coskun³
Isil Irem Budakoglu³

¹Health Sciences University, Ankara City Hospital, Department of Cardiology, Ankara, Turkey; ²Gaziosmanpasa University, Department of Computer Education and Instructional Technology, Tokat, Turkey; ³Gazi University, Department of Medical Education and Informatics, Ankara, Turkey

Abstract: Medical errors are a serious public health problem and the third-leading cause of death after heart disease and cancer. Every day, the health care professionals (HCPs) practice their skill and knowledge within excessively complex situations and meet unexpected patient outcomes. These unexpected complications and unintentional errors will always be a part of the medical system due to the universal nature of human fallibility and technology. While not all errors are life-threatening, they can significantly compromise a patient's quality of life. However, the victims of medical error reach far beyond the patient. The second victim (SV), which defined for the first time by Albert Wu in his description of the impact of errors on HCPs by both personally and professionally, is a medical emergency equivalent to post-traumatic stress disorder. When the errors occur, it causes a domino effect including the four groups: the patient and family (first victim), the HCP [SV], the hospital reputation (third victim), and patients who are harmed subsequently (fourth victims). The rights of our patients to safe, reliable, and patient-centered care are critical and most important as a primary and utmost aim of medicine. However, we also have to take care of our own (SVs), especially when we have good people who mean to do well and then find themselves in an emotionally complex situation. There is a need to articulate to the public, politicians, and media how system failure leads to medical error even in hand of well-educated and competent HCPs are given an increasing clinical workload. Furthermore, despite several leading institutions in western countries have developed formal support programs that allow HCPs to cope with their emotional distress by obtaining timely support in an emphatic, confidential, non-judgmental environment, we need to raise awareness of this phenomenon and appropriate institutional responses both to harmed patients and their families and HCPs.

Keywords: second victim, defensive medicine, medical malpractice, medical errors, clinical-judicial syndrome, second victim syndrome

Introduction

Every day, health care professionals (HCPs) practice their art and science within excessively complex health care (HC) situations and meet unexpected patient outcomes. Avoiding complications is a major goal of all patient safety efforts; however, medical errors and adverse events will likely always be a part of the medical system due to the universal nature of human fallibility.¹ These adverse events may cause a patient serious harm or death; therefore, the patient becomes the “first victim” of these events. However, the victims of medical error reach far beyond the patient. When the errors occur, there is a knock-on effect with four groups: i) the patient and family (first victims), ii) the HCPs [second victim (SV)], iii) the hospital reputation (third victim),^{2,3} and iv) patients who are harmed subsequently (fourth victim). First and foremost, we have to take care of the

Correspondence: Ozcan Ozeke
Sağlık Bilimleri Üniversitesi, Ankara Şehir Hastanesi, Kardiyoloji Kliniği, Ankara 06800, Türkiye
Tel +90 505 383 6773
Email ozcanozeke@gmail.com

patients and families (first victims). However, we have to take care of our own (SVs), especially when we have good people who mean to do well and then find themselves in an emotionally complex situation.⁴ We should keep intentional negligence and harm because of malice, out of this topic.

Definition of second victim

The SV term was used for the first time by Albert Wu in his description of the impact of medical errors on HCPs – especially when there has been an error or the HCP feels responsibility for the outcome.² Using the term victim leads to two concerns as follows: signifying passivity or stigmatizing involved HCPs.^{5,6} Some authors recommended to abandon the term SV.⁶ It can be seen as insensitive to the patient⁵ as well as dissipating the professional identity of the HCP,⁷ and even Wu has recently acknowledged concerns about its use.⁵ However, it has been used as an internationally recognized term by HCPs and managers as well as policy makers⁵ because it is memorable and connotes urgency.⁵ It is not denying responsibility but highlighting that something needs attention.⁸

Prevalence of SVS among medical subspecialties

After an adverse event, the prevalence of SVs varied from 10.4% up to 43.3%.⁹ Almost half of HCPs experience the impact as an SV at least one time in their career.¹⁰ Indeed, there are always SVs, when there is a serious patient adverse event,¹¹ but mostly silent because of the fear of litigation and absence of a well-defined reporting system.¹² The effects were particularly strong among physicians specializing in surgery, anesthesiology, pediatrics, or obstetrics and gynecology.^{12–14} In hospitals, most of the malpractice assertions are related to “surgical” or “infusion errors”, whereas for outpatient care, the most assertions are related to “unnoticed” or “late diagnosis”.^{12,14,15} Nurses, pharmacists, and other members of the HC team are also susceptible to error and vulnerable to unanticipated patient harm.^{16–20} Trainees and interns may be particularly defenseless to continuing damage to their clinical confidence and self-esteem.²¹

Impact of SVS on HCP and recovery process of SVS

The second victim syndrome (SVS) is defined as the HCPs who commit an error and are traumatized by the event

manifesting psychological (shame, guilt, anxiety, grief, and depression), cognitive (compassion dissatisfaction, burnout, secondary traumatic stress), and/or physical reactions that have a personal negative impact.² Wolf et al described SVs’ reactions as unique and traumatic in terms of social, cultural, emotional, spiritual, and physical characteristics.²² Some have suggested that the SVS has very similar signs and symptoms with acute stress disorder^{10,23,24} and a medical trauma requiring a psychological emergency care.⁴ One clinician with SVS describes his experience as “emotional tsunami”, which he had never ever experienced before in his professional career.³ These emotional effects can last for weeks or up to several years^{10,24} depending on the nature of the case and severity of injury to the patient, and even cause long-term consequences similar to posttraumatic stress disorder (PTSD).²⁵ The victim repeatedly reassesses the situation with “what if” questions.³ However, this idea of SVs as an emergency situation is not the common point that all authors agree. These types of cases are unforgettable and can leave permanent emotional scars on HCP.²³ Psychological distress, aftermath of adverse events, has a long-lasting impact on HCP’s quality of life and it may affect the job performance and the ability to provide safe patient care (fourth victims). The severity of the SV response is affected by a number of variables.²⁶ For example, a patient may remind the clinician a loved one from his/her own family (eg, the same name, age, or physical characteristics), the close relationship between the patient and HCP,²⁴ the length of professional relationships, cases that involved pediatric patients, the clinician’s past clinical experiences, support or blame by colleagues/mentors, and spirituality³ may be some of the SV response variables.

The course of events is largely predictable.^{3,19} Scott et al identified the natural history of the SVS phenomenon³ with six stages as SV recovery process: i) chaos and accident response, ii) intrusive reflections, iii) restoring personal integrity, iv) enduring the inquisition, v) obtaining emotional first aid, and vi) moving on³ (Table 1). During the first stage of “chaos and accident response,” immediately after the adverse event occurs, SVs begin to understand the magnitude and may experience inner strife or easily get distracted. At the second stage of “intrusive reflections”, the SVs reenact the event and may feel insufficiency.³ During the critical third stage of “restoring personal integrity,” HCPs will begin to seek support from a trusted individual such as a mentor, colleague, family member or friend. Without a positive supportive environment during

Table I Second victim recovery trajectory^{3,19}

	Stages of second victim syndrome	
Stage 1	Chaos and accident response	"How and why did this happen?"
Stage 2	Intrusive reflections	"How did I miss this and could this have been prevented?"
Stage 3	Restoring personal integrity	"What will others think?" "Will I ever be trusted again?"
Stage 4	Enduring the inquisition	"I might get fired," "the double fear"
Stage 5	Obtaining emotional first aid	Peer supporters
Stage 6	Moving on	
(a)	By dropping out	"Every day is like eternity,"
(b)	By surviving	
(c)	By thriving	"Following the event I learned my lessons."

this stage, HCPs may find extreme difficulty moving forward from the event.³ Personal reflections of HCPs reveal challenges such as "what will others think about me" and "will I ever be trusted again".³ SV may pass through one or more of the first three stages at the same time.³ Stage four of the recovery process is known as "enduring the inquisition" when the SV begins to focus on the potential repercussions affecting job security, licensure, and future litigation. While awaiting investigation of the error, the SV is often plagued with fears of losing the job and its financial consequences; being labeled as incompetent or careless by colleagues, their family, and the patient's family; losing coworkers' respect; involvement in a civil or criminal court proceeding; and losing the professional license.¹⁷ During this stage, it is critical that the HCPs start to worry about reactions from their organization and potential repercussions. Stage five involves "obtaining emotional first aid". Victims seek emotional support and are often concerned about who is safe to confide. Peer supporters, patient safety, and risk management all play a crucial role in ensuring the HCP has a safe space to recover from the event. In the final stage, "moving on," has three notable ways. Some "dropped out" either by moving another places or quitting medical practice completely (eg, changing jobs) while others "survived" but continued to carry significant emotional luggage. Some give up their profession and a few HCPs even commit suicide because of the experience.²⁷ The "thrived" HCPs were able to acquire something positive from the experience (ie, making something good out of the experience). The culture and rapid response of an organization is essential for the recovery of victims and will ultimately affect how they move on.²⁸

For the five human rights of SVs, there is a suggested proposal as an acronym of TRUST (Treatment, Respect, Understanding and compassion, Supportive care, and Transparency and opportunities to contribute their learning).⁴ In the literature, there are potential solutions which are proposed as follows: HCP counseling, learning from mistakes without fear of punishment, discussing mistakes with others, emphasizing HCP wellness, and focusing on the system versus the individual.²⁹ SVs deserve the assumption that their intentions were good, they deserve respect and common reverence, and they should not be blamed and embarrassed for their human fallibility.^{4,17} They need compassion and gratitude for their recovery, and leaders must understand the psychological emergency that occurs when a patient is unintentionally damaged.^{4,17} In terms of contributing to the prevention of future events, the SVs should have the opportunity to share the problems that cause errors, and to participate learning from gathered error, and the opportunity for recovery should be provided to them.^{4,17}

Impact of SVS on health care system: defensive medicine

If resulted in a tragic death, the representation of these adverse events as criminal acts will have adverse effects on HC system. After the adverse events resulted in a tragic loss of life, the representation of these events as criminal acts is likely to have an adverse effect on HC system. In addition to SVS, the literature has described another condition; the clinical-judicial syndrome which is affecting caregivers at any moment during a medical litigation.^{30,31} It is well documented that a lawsuit can be one of the most

emotionally damaging experience for a clinician.²⁴ It may become common for HCPs to practice defensive medicine³² aimed to protect themselves from liability rather than actually advancing care of patients,³⁰ that often translates to ordering unnecessary tests and costs.³³ The impact of medical malpractice litigation on medical practice is grossly underestimated by politicians and “Super Lawyers”. As a natural result, defensive medicine emerged as a consequence of a deep crisis in the relationship between physicians, payers, and society.³⁴

Management: whom/when/how should/must support the SV?

It is crucial that the patients and families harmed by medical errors must be paid increased attention.³⁵ On the other side, it is also crucial that we have to take care of our own SVs, especially when we have good people who mean to do well but then find themselves in an emotionally complex situation.^{4,17} However, very little attention has been dedicated to HCPs involved in adverse.²⁴ Most SVs have often suffered in silence.¹⁷ Only 10% of the SVs agreed that HC organizations adequately supported them in coping with error-related stress.¹⁰ Even some HC organizations have an employee assistance program, SVs may be reluctant to access this service because of concerns about confidentiality and other barriers.^{36,37} SVs often felt that others saw their efforts to seek help as a sign of professional/personal weakness and vulnerability. In that point, the role of clinical leaders is utmost important by providing empathy and emotional support. Whereas colleagues, rather than friends or family, offer the most useful support; a few HCP may also require psychological therapy/counseling.¹² Both emotional and informational support by colleagues, a mentor, or a supervisor are the most requested and most useful strategies.²¹ Scott et al concluded that, in the early stages, trained supervisors and colleagues would be ideal for providing support and, in the later stages mental health professionals could be beneficial. The best strategy appears to be to create supporting networks at individual, organizational, national, or international level.³⁸ Supportive care must be delivered by a professional in an organized way when needed. The HC organizations and clinical or senior leaders have a moral obligation to take care of HCPs, after a system failure or human error which resulted in patient harm, and must encourage their organizations to respect those involved in that event.^{4,39,40} Hospitals publish clear guidelines for

handling adverse events and should share their institutional policy on open disclosure. For example, the HC institution should develop the accountability mechanism, simple checklists, and clear guidelines about who will be responsible for what and when, and how they will act.⁴ When starting a prosecution about a significant adverse event, in addition to the root cause investigation, a parallel investigation should be started to determine if there are SVs.²⁴ The influence of the adverse event on SVs’ work is particularly important in the first 4–24 hrs,⁴¹ because at those moments, they had high potential to be involved in another adverse event. Scott et al provide details about performing a SV rapid-response team right after a harmful error.⁴² Basic education which may reduce some of the anxiety about the possible legal process surrounding adverse events should be organized.^{24,43} Both psychological help and legal assistance are significant for SVs. Several leading institutions in western countries have developed formal support programs that allow HCPs to cope with their emotional distress by obtaining timely support in an emphatic, confidential, non-judgmental environment. Johns Hopkins Hospital has a multi-disciplinary SVs Work Group, which is working to assist the hospital in delivering care and support to the HCPs.²⁴ Johns Hopkins Hospital has RISE (Resilience in Stressful Events) program which uses an emotional peer-support with volunteer HCPs. These volunteers as a part of multi-disciplinary peer responder team are learning how to talk to SVs and give them a safe harbor for exploring their emotions aftermath a traumatic event.⁴⁴ John Hopkins Medicine (<http://bit.ly/2ivYCIp>) and the Center for Patient Safety (<http://bit.ly/2iwPS4Q>) have online resources about SVs. The Second and Third Victims Research Group reported the following recommendations in order to prevent the adverse events timely,⁴⁵ as structured around eight areas: (a) safety and organizational policies, (b) patient care, (c) proactive approach to preventing reoccurrence, (d) supporting the clinician and health care team, (e) activation of resources to provide an appropriate response, (f) informing patients and/or family members, (g) incidents’ analysis, and (h) protecting the reputation of HCPs and the organization.⁴⁵

Root analysis: from “culture of blame” to a “just culture”

Blaming individuals is emotionally more satisfying than targeting institutions.³⁹ In ancient times, the bearer of the

news that a battle had been lost was often killed. Similarly, while responding to bad news, some patients blame their clinicians.⁴⁶ Unfortunately, our medical culture has been lacking in its support of the HCPs involved in these cases. Whereas the HCP can be severely affected by the adverse event itself, the main decisive factors are the response of the patient, family, peers, and managers. The colleagues offer unsympathetic comments that can be help (or harm further) to HCP.^{2,24,43} The HCPs have stated that many organizational reactions to medical errors are malicious, threatening, isolating, and fundamentally unhelpful.¹⁹ The SVs reported that it is impossible to move forward when the adverse event was followed by non-supportive, malicious gossip.³ As a moral necessity, our current culture of renunciation, isolation, and punishment of SVs should transform into a culture that maintains accessible and effective support for these wounded.¹⁷ In medicine, determining the root cause of errors (by root cause analysis) is also important to help prevent the occurrence of future errors. Investigation of the adverse event has become a routine part of the hospital's reaction. However, the above scheme of support is not meant to disrupt any correct medical investigation or to stand between the SV and his superiors, but rather to allow them to cope with these events.⁴⁷ It is critical but often misunderstood.¹³ Careful investigation is important in order to avoid treating the physician as if he were in court for committing a crime.²⁴ This type of criminal prosecution of human error will likely have terrible everlasting outcomes.

Indeed, medical error causes the patient harm because of two factors; individual or systemic.⁴⁸ There is a risk of human error behind every endeavor, but each person should be held accountable only for things under his control. In order for the patient safety, HCPs should have appropriate tools and environment to perform the necessary tasks and coordinate their effort. The Swiss cheese model is a useful theoretical model for accident causation while explaining the multidimensional (human, organizational, and technological) aspects of HC data breaches.⁴⁹ James Reason² categorized errors under active or latent factors. The active errors at the "sharp end" are related with the interaction of HCPs with patients or equipment. The latent errors at the "blunt end" are related with defects in the design of systems, organizations, management, training, and equipment. Latent factors or conditions are inherent in the system (eg, heavy workload, structure of organizations, the work environment), and in time, these factors begin to trigger the problems and start to affect

HCPs and care processes, then one day an active error occurs. These blunt-end factors, including economic policymakers, insurance administrators, payers, regulators, and technology suppliers influence and shape the demands within the hospitals. The totality of active and latent errors of a system may regard as systems fault.³⁹ Focusing on their root causes reduces the number of hazards and risks.

Underlying medical condition of the patient is the main source of "harm". However, a medical error may be another source of unintended harm to the patient, and it is related to the care and/or services provided to the patient.⁵⁰ Still, one of the most challenging unanswered question is "What constitutes a medical error?" Nobody have clear answer to this basic question, which makes "medical errors" difficult to measure scientifically.¹⁵ Some can accept bad consequences ("harm") as "accident" and "misfortune" instead of "mistakes/errors".⁵¹ There are many ways for error categorizing. One common way is determining if the act is an omission of action or a commission of action. Lee expands the omission/commission conceptualization of error making as follows: underuse, misuse, and overuse.⁵² The error of omission occurs as a result of no action (underuse), the error of the commission occurs as a result of the wrong action taken (misuse or overuse).^{15,53} Medical error defined as an unintended act⁵⁴ (either of omission or commission) or one that does not achieve its intended outcome.⁵⁵ Error of execution is defined as the failure of a planned action to be completed as intended, error of planning is defined as the use of a wrong plan to achieve an aim,³⁹ or a deviation from the process of care that may or may not cause harm to the patient.^{39,53} Wu et al⁵⁶ define a mistake as

commission or omission with potentially negative outcomes for the patient that would have been judged wrong by skilled and knowledgeable peers at the time it occurred, even it doesn't have any negative outcomes.

Although there are differences in definitions, four general elements exist for defining the errors in the literature: Intentionality, Outcome, Choice, and Culpability.⁵¹ Malicious acts are not considered neither a mistake, nor as if it was done for beneficial purpose. Morality based on being the more "proper choice" among at least two choices or paths.⁵⁴ Therefore, the ethical decisions are more suitably characterized as "better choices" or "more fitting", rather than "right" or "wrong".⁵¹ Howe believed that consensus could detect when an error has occurred.⁵⁷ His definitions of nonmistakes, mistakes, and possible mistakes are

detected by the views of other practitioners' judgments about that action. If there is a consensus of practitioners, a mistake or nonmistake could be defined, but a possible mistake could be defined when there is no consensus of practitioners. More recently, Marx has introduced a Just Culture term which differentiates between error and unjustifiable risk-taking.^{4,49,58} In Just Culture, individuals are evaluated in their actions, based on whether or not they take unjustifiable risk. Because nobody has the right to increase the risk unjustifiably. If a patient has two different problems, the HCP has to take risk to balance them, then the balance may change in this condition.⁴ There are algorithms and associated educational materials that can be previewed online (<https://www.outcome-eng.com/>). These tools can help distinguish among (a) human error (what was done instead of what should have been done), (b) reckless behavior (causing harm to a patient), and (c) at-risk behavior (unsafe).⁵⁹ With the help of these tools, the experts can be more effective while separating blameless error and justifiable risk from unjustifiable risk-taking,⁴ and also decide better in differentiating system accountability and individual accountability.⁴

Apology and error disclosure: ethical obligation and learning from errors

When the error occurs, there are three stages in responding ethically: disclosure, apology, and amends. Apology is painful on its own, but it is also cleansing and refreshing.⁵¹ When an error occurs and is noticed, HCP's explanation of the error to patients, families, and hospital colleagues is a difficult and/or threatening process for most physicians. In particular, the expression of moral feelings such as guilt, regret, and remorse play an important role in explaining the errors to patients and families.⁶⁰ HCPs fear that acceptance of guilt or expressions of remorse could be used by litigants in malpractice lawsuits,⁶¹ so apologies and full disclosure are rare in the medical world.⁴ Nevertheless, the ethical thing to do is disclosing adverse events and apologizing to harmed patients, regardless of whether it decreases or increases rates of litigation.⁵⁰ Recently, in some of US states the courts have attempted to encourage physicians to reveal medical errors by enacting "apology laws". Under these laws, a physician's apology to a patient or family cannot be used against that physician in future litigation.⁶¹ Promoting and protecting open communication was the main goal while enacting these laws.⁶² Even though it is

no guarantee,^{50,63,64} the studies showed that full disclosure to patients is associated with greater trust, higher satisfaction, more positive emotional response, less support for sanctions against the physician, and less probability of changing physicians.⁶⁵ On the other side, insurance companies may avoid payouts after these laws, but injured patients can be damaged if they accept the apology in lieu of full compensation.⁶³ It remains unknown whether these laws will reach their aims of encouraging apologies and open communication and decreasing litigation.⁵⁰

The most important thing about error is recurrence, the fact that the same situation shapes the same kinds of errors in different people.⁴⁹ Hospitals and organizations need to support clinicians throughout the disclosure process and facilitate learning for the system and individual in order to prevent recurrences. Learning from errors is possible only when the errors are reported.⁶⁶ In particular, blaming or punishing individuals for errors due to systemic causes does not address the causes nor prevent a repetition of the error.⁴ Governmental, legal, and medical institutions must work collaboratively to remove the culture of blame, shame, and punishment while retaining accountability.¹⁵ Otherwise, it remains as blame and shame culture and gets difficult to change the non-reporting culture.

Primordial prevention of medical errors by education at medical schools and institutions

Medical education in all levels (undergraduate, graduate, and continuous) aims to train successful HCPs. Medical Schools are sometimes insufficient to prepare trainees for the reality of the practice of medicine, to the more pragmatic skills such as time management, conflict resolution, and damage control. Junior residents, overwhelmed by the demands of daily floor work, can easily lose sight of the reasons that they went into medicine.⁶⁷ When an adverse event occurs, they feel important barriers such as fear of outcomes, attitudes about disclosure, lack of skill and role models, and lack of peer and institutional support.⁶⁸ The medical education should also emphasize confronting the emotional dimensions of the errors by the physician trainees, with the full acceptance by the senior attending medical staff.⁶⁹

The new technology may make one part of our life easier, but many of us rarely trained on new technologies in real-life conditions.⁴ The simulation labs might become much more effective when we need to repeat the real experience⁴ and

practice more for different scenarios. There are online training programs^{26,70,71} on medical errors, and SV education toolkits such as the SVS toolkit, the mindfulness and meditation toolkit and the positive psychology toolkit²⁷ which improves self-evaluation, attitudes, and skills in junior doctors.³ However, the online materials (video, podcast, simulation, animation..., etc.) about practice of medicine are more than the materials which aim to teach pragmatic skills. Medical educators should focus to design and develop more resources for these skills. One of a physician's most difficult duty is breaking (delivering) bad news, and medical education offers little formal preparation for this difficult task.⁷² Most HCPs avoid such conversations entirely or they speak to patients using medical jargon.⁷³ Medical faculties should train the residents for communicating with patients and their family aftermath of an adverse event about following issues; i) how to disclose bad news or errors (ABCDE model⁷² or SPIKES protocols⁷⁴), ii) apologize to injured patients and families, iii) reinforce the commitment to continued care, and iv) repair of trust.^{69,75} Combining evidence-based clinician training with health system workflow redesign would likely maximize the impact of this training.⁷⁶

Physicians often discuss their colleagues' mistakes among themselves, but less with patients.^{77,78} The prevalent culture of perfectionism and individual blame in medicine may play a prominent role toward these negative acts.²⁹ On the other side, more acceptance of criticism of professional conduct may prevent patient harm and may also give more support to peers who have involved serious patient injury.⁷⁹ Doctors who found it easy to criticize peers also reported having received more support from their peers after a serious patient injury.⁷⁹ Present medical culture was critiqued by Coulehan as "characterized by arrogance and entitlement".⁸⁰ According to Berger, the arrogance is systemic and beyond the individual physician. Today, being a physician is not idealized, the doctor-patient relationship in the HC system has depersonalized and the "system arrogance" has emerged in which the patient is seen not as a person but as a job.⁸¹ Additionally, arrogance among medical staff, such as doctors and nurses, affects relationships between a doctor and their patient negatively. This failure to communicate as a team may result in costly mistakes by physicians and nurses and could potentially cost them their jobs or patients' lives.⁸²

Medicine is a stressful career, and physician wellness is often neglected within the culture of medicine.⁸³ Physician burnout is a hot topic these days and increasing at an alarming rate. Nearly half of the residents report burnout during

their second year of residency, and 1 in 7 reports regretting their career choice.⁸⁴ If we can change the conditions under which people work, then it may cause an indirect change in their personal condition.³⁹ In their zeal to promote HC quality, payers, regulators, politicians, and employers have meddled in the doctor-patient relationship with requirements promoted by the performance assessment tools, quality measures, and workflow issues related to the use of electronic health record (EHR) system.⁸⁵ Moreover, in the era of #MeToo, physicians should confirm that the medical profession has nonimmunity to bullying, harassment, and discrimination, and act to remove these attitudes.^{83,86} The literature has found that women physicians may be more likely to experience negative emotional and professional outcomes related to adverse events than men and that these outcomes may be more pronounced among women with family responsibilities.⁸⁷ It has been recommended that sexual harassment, mobbing and burnout awareness and training should be implemented in the medical school curriculum.⁸³

Change in medical culture

Culture change is ultimately more important than any single intervention. Patients' expectations and the role of the doctor in the patient-physician relationship are changing.⁸⁸ Patients may perceive their doctors as infallible experts. Physicians similarly tend to expect the same unrealistic levels of perfection from themselves. Although it is often said that "doctors are only human" or "Err is human", developments in medical technology and the greater precision of laboratory tests since 1980s have in fact generated an expectation of perfection.² Furthermore, popular media have a perception that morbidity and mortality should be "never events" in minor surgeries, pregnancy, and delivery, and if an adverse event happens, it is because of an error.^{6,89} The HCPs are also victims of a system motivated by politics and "Super Lawyers".^{31,90} The political and media climates in many countries too often demand that HCPs are held responsible regardless of the reason.^{31,90} The proliferation of news magazines and the success of investigative journalism have made sensationalized investigations of many institutions, including hospitals, a highly successful and profitable enterprise. Trust has always been the basis of the doctor-patient relationship; however, in their article entitled "The End of the Golden Age of Doctoring," authors capture the impact of managed care on the erosion of patients' trust.⁹¹ Fueled by anecdotal reports of excessive salaries and managed care company profits, public opinion is turning

against physicians and the essential trust has been weakened by changes in the structure and financing of the HC system. Mistrust in HC is associated with the increment of medical negligence, complaints and lawsuit cases.⁹² Bawa-Garba's case became a cause celebre among doctors, many of whom thought that she had been made a scapegoat for an overstretched and underfunded NHS. In 2015, Dr Hadiza Bawa-Garba was found guilty of gross negligence manslaughter after mistakenly misdiagnosing sepsis as gastroenteritis in 6-year-old Jack Adcock, who subsequently died in 2011 at Leicester Royal Infirmary. This was a case that triggered a public debate about the increasing pressures facing doctors at work, how they are impacting upon their effectiveness, and the extent to which they should be taken into account in medical negligence cases. Bawa-Garba told the jury that she had worked for 12 hrs without a break.⁹³ The media and politicians should realize the extremely damaging nature of reporting presumed medical errors and subjecting physicians to public trials through newspapers, radios, television, or websites before they are eventually judged in court. Mirza explained the Bawa-Garba principle states as

when an otherwise competent doctor is given an increasing clinical workload in situations of inadequate support or systemic failure, or both, at some point medical error becomes inevitable.⁹⁰

Therefore, we will need a cultural shift in medicine.⁹⁴ The traditional culture of shame and blame aimed at HCPs who have experienced an SV phenomenon should be rapidly replaced by a movement toward a "just culture". Medicine can never have complete validation for each treatment for each patient subgroup. We will always be alone with our "best guess" for many patients. However, we need also to take steps to reassure patients and rebuild public trust in our efforts.^{32,95–98} The more humble the medical profession is, the more likely we will avoid costly errors.^{94,95} We should explain more to the public, as described in the book "To Err is Human", People working at HC are not bad people, they are good people who are trying to make bad systems safer.⁹⁹ Despite several leading institutions in western countries have developed formal support programs that allow HCPs to cope with their emotional distress by obtaining timely support in an emphatic, confidential, non-judgmental environment, we need to raise awareness of this phenomenon and also appropriate institutional responses¹⁰⁰ to both harmed patients and their families and HCPs.

Disclosure

The authors report no conflicts of interest in this work.

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