Among other less than charismatic descriptors, 2020 could be described as reactive. It seemed as though there was always another news announcement to brace against with the dawn of each day, from fires, to conflicts, to isolation. Nowhere is this state of reaction more evident than in healthcare, an industry quickly overwhelmed upon the massive influx of patients, so much so that the structures that held it in place quickly crumbled. The COVID-19 pandemic came to full fruition in 2020 and influenced nearly all attention to healthcare performance, access, and resource use.

Major contributors to the estimated $202.6 billion financial impact in US hospitals, significant drug shortages in Brazil, and crippling lack of oxygen supplies in India due to the pandemic, to name only a few examples, have been the lack of emergency preparedness plans and the lack of highly reliable, coordinated, global healthcare systems (Kaye et al., 2020; Alves 2021; Moole 2021). Healthcare has historically been built and improved in siloes, where the right hand doesn’t know what the left hand is improving and no one is left out of the loop more than the patients and family members. Unfortunately, it took the shock of something as monumental as COVID-19 to serve as a reality check against our fragmented, uncoordinated healthcare system, which is often built without a foundation for safety, reliability, and person-centeredness across the continuum.

In April 2020, the Patient Safety Movement Foundation (PSMF), a non-profit focused on eliminating preventable patient deaths and harm in healthcare around the globe by 2030, launched an inquiry to understand the perspectives of medical error from those within the general public and from those within the PSMF network itself. Because this initial inquiry was conducted only as the pandemic was in its nascent stages, and because the spotlight was strongly on healthcare for much of the year, it is reasonable to assume that healthcare’s strengths, such as the healthcare workers and teams themselves, and weaknesses, such as the equipment and bed shortages, were noticed by many since the first inquiry was conducted. To harvest the perceptions of medical error after a year of relentless discussion about healthcare, the PSMF launched a Part II survey in April 2021 to complement the March 2020 Part I survey into the perceptions of medical error among the general public and members of the PSMF network.

The comparison of the results from Part I (March 2020) and Part II (April 2021) are described below, followed by take home messages for patients, family members, healthcare professionals, and the general public to leverage the lessons learned from 2020 and apply the findings to collective improvement into the foundation of our healthcare systems for years to come. The following report highlights the pandemic’s role as a torch to the curtain previously covering issues in healthcare that have long been present. We can’t just hope for zero deaths and harm from medical error any longer. We have to plan for it.

**Methodology**

This Part II survey was conducted in a similar manner to the March 2020 Part I survey with differences noted in the following statements. Exclusive to the Part II methodology was the inclusion of four English-speaking countries in the sample of participants surveyed, with participants from Australia (n=208), India (n=198), Philippines (n=218), South Africa (n=219), and United Kingdom (n=191). The 2020 survey consisted of 1,504 respondents, with 195 respondents within the PSMF community. The 2021 survey consisted of 1,725 respondents, with 216
respondents within the PSMF community and 1,006 non-U.S. respondents. As an organization that operates globally, the addition of English-speaking countries helps to broaden the results outside of just the United States. Additionally, specific questions were reworded for relevance. Similar to the Part I inquiry, two surveys were still disseminated to members of the general public and to those within the PSMF network. The PSMF contracted with ClearPath Strategies to poll the general public and the PSMF sought out survey responses for the “PSMF Network” via social media and email communications to their global email list. This survey was conducted before India’s significant increase in cases, therefore, the data that follows will not be reflective of that change.

**Themes**

While medical error is still a new concept to many, PSMF investigators remained interested in understanding how different groups interact with the healthcare system. The following information highlights key themes within survey responses, distinguished by whether the participants belonged to the general public respondent group or the PSMF network respondent group. The final section highlights key points, take home messages, and next steps for patients, family members, members of the general public, healthcare professionals, and the PSMF team and network.

**Awareness of Medical Error**

Upon asking both groups about their familiarity with the term ‘medical error’ (see fig. 1), 95.4% of those within PSMF’s network knew what the term meant. Within members of the general public, there was a 8.2% increase in familiarity with the term ‘medical error’ from 2020 (45%) to 2021 (53.2%). Delineated by English-speaking country, India led the pack with 58% of participants from India familiar with the term ‘medical error’, followed by the United Kingdom (54.1%), Australia (51.8%), the United States (51.7%), Philippines (44.3%), and South Africa (40.0%).

However, noting ‘Yes’ or ‘No’ when being asked if they were familiar with a term does not put that knowledge to the test. Harvard School of Public Health found that 57% of Massachusetts residents did not understand the term ‘medical error’ completely until it was fully described to them (Harvard School of Public Health, 2014). Therefore, reports of medical error in the media may lead to some confusion if the term is not clearly defined (Harvard School of Public Health, 2014). A description of medical error was presented to the respondents and of the 53.2% who answered they “know” what the term means, 37% say the definition is “exactly what they thought”, an increase of 34% from Part I.

![Figure 1](https://example.com/figure1.png)

**How familiar are you with the term “medical error?”**

<table>
<thead>
<tr>
<th>Option</th>
<th>2021 Public</th>
<th>2020 Public</th>
<th>2021 PSMF Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know what this term means</td>
<td>45%</td>
<td>39%</td>
<td>16%</td>
</tr>
<tr>
<td>Heard, unsure what it means</td>
<td>3.2%</td>
<td>39%</td>
<td>11.5%</td>
</tr>
<tr>
<td>Never heard of the term</td>
<td>53.2%</td>
<td>35.3%</td>
<td>61.5%</td>
</tr>
</tbody>
</table>
Worry about Medical Error

Upon analysis of the results of ‘How worried are you personally about medical error?’ (see fig. 2), there was little change in the responses from those within the PSMF network from Part I to Part II, with 96.9% responding with "I worry about medical error every time I have to use the healthcare system" or "I occasionally worry about medical error depending on how I am using the healthcare system" in Part I and 91.2% responding "Every" or "Occasionally" in Part II. Among members of the general public, there was a 2.1% increase in worry about medical error during “every” visit or “occasionally”, from 56.0% in Part I to 58.1% in Part II. However, 41.9% of members of the general public still reported that they ‘rarely’ or ‘never’ worry about medical error, a decrease from 44.0% in the Part I survey. Globally, members of the general public who reported that they ‘worry every time’ were from India (42.5%), Philippines (42.1%), and South Africa (42.1%), with respondents from the United Kingdom responding with ‘worry every time’ the least of all English-speaking countries surveyed (14.7%) (see fig. 3).

![Figure 2](image2.png)

**How worried are you personally about medical error?**

![Figure 3](image3.png)

**How worried are you personally about medical error?**

<table>
<thead>
<tr>
<th>Country</th>
<th>Worry every time</th>
<th>Occasionally worry</th>
<th>Rarely worry</th>
<th>Aware, not worried</th>
<th>Never considered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>16.8%</td>
<td>46.9%</td>
<td>24.8%</td>
<td>4.4%</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>42.5%</td>
<td>40.6%</td>
<td>9.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>42.1%</td>
<td>36.4%</td>
<td>13.6%</td>
<td>3.1%</td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>42.1%</td>
<td>38.7%</td>
<td>9.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>14.7%</td>
<td>34.2%</td>
<td>28.1%</td>
<td>14.3%</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>24.6%</td>
<td>38.6%</td>
<td>23.2%</td>
<td>0.0%</td>
<td></td>
</tr>
</tbody>
</table>

![Figure 3](image3.png)
Experience of Medical Error

While the above data suggests some level of ambiguity over the term ‘medical error’, thereby making it difficult to identify pragmatically, members of the general public still report significant awareness of medical errors happening to themselves or their loved ones due to the pandemic (see fig. 4). 75.4% of those in India reported that they or someone they love has experienced a medical error due to the COVID-19 pandemic, followed by Philippines (69.7%), United States (57.1%), South Africa (52.5%), Australia (42.1%), and United Kingdom (40.0%).

Control over Health

When given the option to select which statement resonated more with their point of view (“I have control over what happens to my health” or “What happens to my health is beyond my control”), participants from every country in both the PSMF network and among the general public reported feeling much less in control over what happens to their health in the Part II survey versus in the Part I survey (see fig. 5).
Local Reports of Medical Error
There was an increase in those who had heard about medical errors in their local community in the last year among the general public and the PSMF network (see fig. 6). A continued decrease in the percentage of people who have heard “very little or nothing” is desirable.

Perceptions of Global COVID-19 Impact on Medical Error
Respondents were asked whether they thought that medical error had increased, decreased or stayed the same due to the COVID-19 pandemic. Among all general public respondents from English-speaking countries surveyed, the Philippines and South Africa perceived that medical error had increased due to the COVID-19 pandemic the most, with 66.10% and 64.40% of participants reporting ‘increased’ in each respective country (see fig. 7).
Priorities for Improvement

Upon being presented with a list of actions that nonprofits that work on addressing patient safety and medical errors issues can take, members of the PSMF network 'very much support' or 'somewhat support' "Informing the public on how big the problem is and how it might affect them" in both Part I and Part II. When faced with the same question (see fig. 8), the general public responded with an 11.4% increase in "very much support" or "somewhat support" from Part I (71%) to Part II (82.4%).

![Figure 8](image)

Both the general public and the PSMF network members saw a significant increase in ‘very much support’ or ‘somewhat support’ from Part I (51% general public versus 60% PSMF network) to Part II (69.4% general public versus 86% PSMF network) when asked if they believed nonprofits should focus on promoting patient safety awareness through virtual walks, fundraisers, or other socially distant events.

Finally, both groups ‘very much support’ or ‘somewhat support’ the creation of a patient safety curriculum for universities and medical schools (85.3% general public versus 97.1% PSMF network). This support is comparable to the Part I results, though amplified specifically. In Part I, both the general public and members of the PSMF network ranked the “Creation of a patient safety curriculum for universities and medical schools” as the highest priority when asked what action nonprofits that work on addressing patient safety issues can take. Based on these results, it is clear that the demand for a patient safety curriculum in universities is unwavering across all audiences and it can be argued that universities and academic medical centers are well-positioned, and even expected, to influence patient safety trajectories for years to come.

General Areas of Concern

In both Part I and Part II, both groups were presented with a multiple choice list of general concerns that may be relevant. In the Part I inquiry, both the PSMF network and members of the general public reported COVID-19 as their biggest concern, followed by "access to healthcare" and "economy" as second and third priorities for PSMF network members and "economy" and "access to healthcare" as second and third priorities for members of the general public (see fig. 9). In Part II, “poverty” introduced itself as a priority area of concern for both groups and COVID-19 has taken on less concern recently while social justice concerns rise.
Healthcare Areas of Concern

The members of the general public were then presented with a list of concerns specific to healthcare and asked to rank their top three healthcare issues that are of the greatest concern (see fig. 10). In Part I, “Out of pocket costs”, “Healthcare worker safety”, and “Access to healthcare” were the top concerns. In Part II, there was a 5.6% increase in concerns around mental health and a 10.3% decrease around concerns for healthcare worker safety, thereby pushing the top three priorities to “Out of pocket costs”, “Unexpected or surprise bills”, and “Access to quality hospitals and treatment” for members of the general public.

Here is a list of issues specific to our healthcare system. Choose the TOP THREE healthcare issues that are your biggest concerns today.
Convincing Message Design

Respondents from both groups were presented with various message design options and were asked to rank which were the most convincing that patient safety is something the viewer should care about (see fig. 10 and 11). Both groups ranked the message example that ‘gave information’ as the most convincing, with 88.1% of the members of the general public ranking this message design as ‘Very convincing’ or ‘Somewhat convincing’ and 95.1% of PSMF network members ranking this message design as ‘Very convincing’ or ‘Somewhere convincing’. This was the example with which they were presented under the ‘give information’ category:

“Patient safety is an important public health issue that impacts everyone. Medical errors are the third leading cause of death in the United States and the 14th worldwide. We need to raise public awareness that errors like misdiagnosis, incorrect medication dosage, and hospital infections are preventable.”

Thereafter, both groups split in agreement of message design. Members of the general public ranked messages around vulnerable populations (87.3%), the preventability of medical error with better protocols (86.2%), the ‘we are all patients’ mentality (83.7%), and the notion that medical error could happen to anyone (83.3%) as the subsequent most convincing messages, with the percentages representing the participants that deemed the messages ‘Very convincing’ or ‘Somewhat convincing’. The PSMF network deemed messages around the ‘we are all patients’ mentality (94.7%), the urgency of the issue (93.0%), the notion that medical error could happen to anyone (91.2%), and vulnerable populations (91.2%) as the subsequent most convincing messages, with the percentages representing the participants that deemed the messages ‘Very convincing’ or ‘Somewhat convincing’. The value of sharing these data are that other patient safety organizations can understand what messages the public, and the PSMF network perceive as convincing.

<table>
<thead>
<tr>
<th>Top 5 MOST Convincing Messages - General Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>For each message, would you say the message is convincing that patient safety and medical error are something you should care about?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Give Info #1</th>
<th>Very Convincing</th>
<th>Somewhat Convincing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient safety is an important public health issue that impacts everyone. Medical errors are the third leading cause of death in the United States and the 14th worldwide. We need to raise public awareness that errors like misdiagnosis, incorrect medical dosage, and hospital infections are preventable.</td>
<td>52.2%</td>
<td>35.9%</td>
<td>88.1%</td>
</tr>
</tbody>
</table>

| Vulnerable Treatment & Elderly and high-risk populations have been disproportionately impacted by the pandemic. This shows how important patient safety is, not only in hospitals, but also for our parents and grandparents, whether at home, in nursing homes, or in long-term care facilities. We need to treat all medically vulnerable populations with the same protocols. | 52.4% | 34.9% | 87.3% |

<table>
<thead>
<tr>
<th>Preventable Error #3</th>
<th>Very Convincing</th>
<th>Somewhat Convincing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare providers sometimes make mistakes, but too often these mistakes are preventable. It’s important to raise awareness about patient safety and work towards zero medical errors. Healthcare facilities can put certain procedures in place and require better training on best practices for their medical practitioners to reduce medical errors.</td>
<td>46.1%</td>
<td>35.3%</td>
<td>86.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Safety Culture #4</th>
<th>Very Convincing</th>
<th>Somewhat Convincing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>If we’ve learned anything from the COVID-19 pandemic, it’s that we are all patients and patient safety impacts everyone — especially doctors and nurses on the frontlines. We must act alongside our global partners to prioritize patient safety and implement lessons learned during this pandemic to instill a culture of safety and transparency in times of crisis and build a better healthcare system.</td>
<td>49.2%</td>
<td>34.6%</td>
<td>83.7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Personal #5</th>
<th>Very Convincing</th>
<th>Somewhat Convincing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical errors can happen to you or someone you love. It could be your mother coming in for a routine procedure and leaving with an infection, your child getting the wrong dose of medicine, your grandparent not getting respectful care, or even agreeing to a treatment plan you don’t understand. We will all be patients at some point during our lives, if we haven’t already been.</td>
<td>45.9%</td>
<td>37.4%</td>
<td>83.3%</td>
</tr>
</tbody>
</table>
Participants were presented with a list of common patient safety issues (see fig. 13) and asked to rank those that concern them the most. Participants from both groups cited “Communication issues between healthcare workers” as a key concern for patient safety. Members of the general public also included “Worse healthcare” as their number one area of concern (44.0%) and “Incorrect or late diagnosis” as their number three area of concern (34.3%). Members of the PSMF network cited “Communication issues between healthcare workers” (58.7%), “Worse healthcare” (46.2%), and “Healthcare worker health” (44.9%) as their three priority areas of concern.

Similar literature surveying the general public supports these findings. Specifically, it has been found that 31.4% of the general public perceive prescribing, dispensing, and administering the wrong medications as a key reason for medical error and 10.9% believe that lack of communication between medical staff and the patients contributes most significantly to medical error (Shaikh & Al-Ruzaigi, 2019).

Which of the following healthcare system and patient safety issues we’ve discussed concern you most amid the coronavirus pandemic? Choose up to THREE that concern you the MOST.

Figure 13: The x-axis represents the responses and the key is below.
Figure 13 key:
1. Communication issues between healthcare workers or between healthcare workers and patients
2. Worse healthcare (i.e. long wait times, risk of exposure to disease in care centers, skipped elective medical procedures)
3. Healthcare worker health
4. Healthcare workers’ diagnosis is incorrect or too late
5. Inability to engage patients and families as partners in their care
6. Facility issues (e.g., aging facilities, lack of space, no clinics near me)
7. Medication or dosage error (at the pharmacy or from the healthcare worker)
8. Telemedicine and remote healthcare appointment effectiveness
9. Family caregiver safety
10. In-home professional caregiver safety

Patient Safety In Politics
Towards the end of the survey, after the respondents learned a bit about patient safety and medical error, we asked them which concepts they think political leaders should prioritize. In figure 14 below, the top three concepts for both groups was related to “Establishing an agency focused on healthcare safety, similar to the Federal Aviation Administration (FAA), to regulate healthcare as it relates to safety, which would mean that this agency would have the authority to remove licenses, issues fines, and make rules to enforce safety” and “Healthcare workers can report errors without blame”. Members of the general public also included “Establish a process for clinicians to file a claim after the medical error” (11.5%) and members of the PSMF network included “Paying organizations based on safety/quality, not volume” in their priority list (16.9%).

Similar literature investigating the opinions of the general public versus those of physicians found that members of the general public view reporting of medical errors to state agencies as an effective means to reduce medical error, while physicians are more skeptical of this proposal (Blendon et al., 2002). According to this study, the general public advocates for a range of potential solutions that could mitigate the impact of medical error, while physicians primarily advocate for one of two strategies: 1) requiring hospitals to establish and maintain systems for preventing medical errors and 2) increasing the number of nursing staff members (Blendon et al., 2002). In a questionnaire surveying the general public in Oman, the majority of respondents (81.7%) also agreed that a widespread medical error reporting system should be established to reduce medical error, as lack of transparency was cited as one of the major barriers to rectify or prevent medical errors (Shaikh & Al-Ruzaqi, 2019).

In short, there is a significant agreement between all parties that the majority of patient safety incidents are related to systems issues, a finding that upholds the evidence from PSMF’s survey.
Figure 14 key:
1. Ensuring that health workers can report errors without blame or fear of losing their jobs or going to jail in order to make the system safer.
2. Establishing an agency focused on healthcare safety, similar to the Federal Aviation Administration (FAA), would regulate healthcare as it relates to safety which would mean that this agency would have the authority to remove licenses, issue fines and make rules to enforce safety.
3. Paying healthcare organizations based on the quality and safety they provide instead of the volume of hospitalizations, visits and procedures completed.
4. Appointing an agency to be responsible for investigating safety issues, similar to the National Transportation Safety Board (NTSB) which investigates plane crashes.
5. Establish a process for a clinician who made a medical error to file a claim after the error occurs, similar to the workers’ compensation model, to keep medical errors from going to court but maintaining a thorough event investigation.
6. Measuring the true number of medical errors and whether they resulted in harm or death by making it mandatory to list on a death certificate.
7. Paying hospitals only for safe care and penalizing those who cannot show that processes were in place to prevent harm from occurring in the first place.
8. More actionable guidelines to facilitate federal policy implementation.

Key Findings and Summary
As anticipated with the spotlight on the healthcare system for a better portion of the last year, there has been an increase in awareness of medical errors among members of the general public, unfortunately aligned with an increase in worry and stress and a decrease in perception of control over one’s own health. This feeling of losing control was a prevalent theme among both groups and may suggest an ideal time for which PSMF and other patient safety-focused organizations can position opportunities that provide solutions to the problem, and opportunities to get involved in activism to promote patient safety for all.

While COVID-19 concerns are still widely prevalent in both audiences in the recent survey, evaluation of the Part II responses illustrates that the concept has slightly diminished over the last several months, with concerns around mental health and social justice issues climbing the ladder in priority. Specifically, there was a 5.6% increase in concerns around mental health among members of the general public, likely due to isolation and hardship throughout the last several months. With the elevation of mental health as a concern, concern around healthcare workers decreased by 10.3% among members of the general public. Both statistics clearly indicate the influence of the pandemic on priorities specific to healthcare and may even underline the increasing frustration with the healthcare system due to the significant systems failures exposed from the pandemic.
Next Steps

In the past, and even currently, the culture in our healthcare systems has been significantly hierarchical. The ‘doctor knows best’ mentality is nearly tangible within patient-clinician interactions and the interprofessional, unspoken hierarchy is clearly illustrated within organizational culture, so much so that a safety concern raised against the normal hierarchy gradient is frowned upon. In recent years, advocacy and awareness campaigns have elevated the role of the patient from that of a passive recipient of care to one encouraged to participate in care, though not to the extent essential for meaningful person-centeredness as the norm in all care interactions. In the early days of the COVID-19 pandemic, there was a period in which members of the general public supported and celebrated healthcare workers as they fought on the frontlines. In very recent months, however, this support and celebration from the general public has dulled in favor of a general public push for mental health care likely due to isolation. Historically, it can be argued that healthcare has maintained an ‘us’ versus ‘them’ mentality between patients, family members, the general public and the healthcare system. There has never been a period in which all parties, patients, providers, and the general public, were unified toward a common goal with role-specific actions for each individual.

The misaligned push for patient safety from all angles has left us spinning our wheels with little to show for the immense amount of time and energy contributed by all. Instead of fighting against one another for the same result, it is necessary to heighten awareness of steps needed to make the shared goal a reality, to eliminate the perception that patient safety is ‘their’ responsibility, to invest in the future leaders of patient safety, and to maintain a sense of urgency for all involved. Tactically, these steps look like the following:

1. Prioritize the development of a patient safety curriculum for academic medical centers and universities. Sustain its principles post-graduation and into the working world.
2. Clearly outline specific, aligned action items for members of the general public, patients, family members, policy makers, and healthcare professionals to take to achieve maximum impact.
3. Publicize the issue of medical error to the general public as the third leading cause of death with strong evidence, clear calls to action and tools to help them become empowered patients.
4. Highlight the common ground between patients, family members, the general public, and the healthcare systems to underscore the need for collective action and collaboration.

Until patient safety is top of mind for all, upheld by a mindset for collective improvement toward a common goal, that common goal will remain out of grasp.
About the Patient Safety Movement Foundation

Each year, more than 200,000 people die unnecessarily in U.S. hospitals. Worldwide, 4.8 million lives are similarly lost. The Patient Safety Movement Foundation (PSMF) is a global non-profit on a mission to eliminate preventable patient deaths from medical errors. PSMF uniquely brings patients and patient advocates, healthcare providers, medical technology companies, government, employers, and private payers together under the same cause. From our Actionable Patient Safety Solutions and industry Open Data Pledge to our World Patient Safety, Science & Technology Summit and more, PSMF won’t stop fighting until we achieve zero. For more information, please visit www.patientsafetymovement.org.

References


