Steven Shorrock
Editor in Chief of *HindSight*

SURPRISES IN HEALTHCARE

Surprises in healthcare are common and can have lasting effects on clinicians. **Steven Shorrock** asked clinicians to reveal aspects of their experience with implications for learning.

When asked the following question, ten clinicians responded with a range of scenarios, each with lessons for us in how we think about and handle surprises.

"Thinking about surprises in your work that left a trace in your mind, what have you learnt about handling surprises that you wished you had known earlier and that you would wish to pass onto others?"

"As a result of regular surprise, I have concluded it is my response to them that is most important"

After over 25 years working in an ICU, I have learned that surprises occur regularly. These surprises range from sudden life-threatening events to unexpected admissions, diagnoses, and good outcomes. As a result of regular surprise, I have concluded it is my response to them that is most important. I have learned a couple of lessons that have served me well when dealing with surprises. First, act calm, even if you felt otherwise. Fear is contagious and disruptive to teamwork. Next, remember the basics of your industry. In my world it's the ABCs: airway, breathing, circulation. Addressing those things saves lives and buys time while you sort out what to do. A final invaluable lesson in dealing with surprises is asking for help. It is common for young providers to "not appear weak" and have all the answers. Instead, strength is shown by putting patient care before your ego and asking for help.

Matthew Scanlon
Professor of Pediatrics – Critical Care, USA

"With bad surprises it is best to reflect before responding"

Surprises in my work have been clinical and emotional. I have learned unexpected situations require novel ideas and different perspectives. Teamworking and welcoming ideas from all reveals unexpected and amazing talents. But surprises trigger emotional responses, and responding from emotion can be positive or unhelpful. Centring dignity and respect helps in every situation, and with bad surprises it is best to reflect before responding. Clinically, focusing on the process rather than the outcome helps keep an open mind and adapt to dynamic situations. Fixation on a set agenda or outcome means surprises are generally unpleasant. I have also learned it is better to listen to hear rather than fix, and let go of the need to be right. Connection with colleagues and families means that surprises are shared, deepening understanding and compassion. When surprised by

appreciation, I have learned to be grateful and share my appreciation with others.

Fiona Miles

Paediatric intensivist, New Zealand

"It's hard to assess the competence of team members, especially in a crisis"

When it comes to handling surprises, it's hard to assess the competence of team members, especially in a crisis. Cognitive load can negatively impact this too; an otherwise excellent clinician can struggle to manage the unexpected. I don't enjoy the 'surprise' of finding out a team member is less experienced or less prepared during a critical moment than anticipated. I've learned to say, "*I haven't worked with you before. Tell me a bit about yourself.*" Sometimes I have to be more explicit: "*How many of these have you done?*" Expecting that people will function a level below their usual expertise in an unexpected situation helps me to form a plan with a 'failure' step, and using a straightforward case to talk about what could go wrong means I know what the colleague knows (which is not the same as what they would actually do!).

Dr. Kara Allen

Specialist Anaesthetist, Australia

"I'm regularly surprised when people who don't look sick are, in fact, experiencing a serious, life-threatening emergency"

I'm regularly surprised when people who don't look sick are, in fact, experiencing a serious, life-threatening emergency, or when people who do look sick are actually fine. I remember one day in the Emergency Department where I was taking care of three women in a row who all looked well. Despite this, they were all having life-threatening medical emergencies: a collapsed lung, internal bleeding, and a torn aorta. I sent the medical student to meet them all to learn that emergencies can be subtle. Because of this challenge, I try to be humble in my predictive accuracy, and allow room for me to be wrong in my clinical plan. When talking to the patient, I try to put in guardrails so that even if things unexpectedly change, we make a plan to address that before they have a chance to experience harm.

Shannon M.

Emergency Medicine Physician, USA

"Encountering unexpected and dramatic physiologic changes in patients can startle even high-functioning individuals and teams"

To be startled is to feel sudden concern or alarm. Encountering unexpected and dramatic physiologic changes in patients can startle even high-functioning individuals and teams. They can experience acute stress reactions (fight-flight or freeze-hide), limbic system hijacking (intense emotional response), and loss of situational awareness (tunnel vision). Changes in workload can increase beyond an individual's cognitive capacity, further exacerbating the situation. Over my nearly four-decade-long career in anaesthetics, I've been fortunate to use measures developed to help mitigate the startle response. The 'Safe Surgery Checklist', one of several tools adapted from aviation, has been of tremendous value in identifying gaps in structures or processes before they affect patients. Other aviation tools (checklists for routine and critical events, and simulation for critical event training) have helped OR teams with situational awareness, flattened team hierarchy, better communication and improved decision-making. I wish they had been in place much earlier in my career!

Dr. J.N. Armstrong

Associate Professor Emeritus – Anesthesiology, Perioperative & Pain Medicine, Canada

"The main surprise was not what happened, but what didn't happen"

I remember a young boy suffered a cardiac arrest on our paediatric intensive care unit and needed to go onto ECMO (a form of heart/lung by-pass). He also needed a surgeon and me, an intensivist. It was a Sunday evening, and we were both at home. When we got there, the resuscitation was ongoing and the anaesthetic team, who had just delivered the patient from theatre, had stayed to help. Three highly effective zones had naturally formed with people who had never been together in this scenario. They were: direct patient management; making up drugs and infusions; getting help and organising other resources. We got the child onto ECMO very quickly thereafter, and he survived. For me the main surprise was not what happened, but what didn't happen. The rest of the unit, which had 20 critically ill patients, was now being looked after by a relatively junior nurse for the first time, while the senior nurses were helping with the arrest. When I asked her how things were the answer was a casual "Yep, we're all good. Nothing's happened." Yet when I rounded a few hours later, it turned out that multiple things had happened to ensure patient stability. Protocols were not adhered to, guidelines not followed. Rather decisions were made that made sense to staff at the time. Managing surprise, that 'special case', is impressive. Managing to maintain a soft, background resonance in a complex system, which goes largely unnoticed, is something else. An environment encouraging trust and two-way feedback allowed for an evening of 'Plan B's' and workarounds, which meant the system performed despite the ever-changing conditions of work.

Neil Spenceley

Intensivist, UK

“We were faced with an influx of patients with severe volcanic burns”

At 2.11pm on the 9th December 2019, Whakaari (White Island), New Zealand, erupted with 47 people in the vicinity of the crater. As part of the National Burns Centre, we were faced with an influx of patients with severe volcanic burns – a situation never described before. It felt chaotic at the beginning, but it’s about minimising the chaotic time. Information was fragmented, numbers kept changing and the situation evolved unpredictably. We had a dedicated coordination role, allowing the rest of the team to focus on caring for patients. Surprise is the gap between your expectations and the situation you find yourself in. Our disaster plans were based on the past, but this situation was entirely different. The ability to adapt and change the plan became as important as the prior planning. This adaptation needed to occur at all levels of the system, including hospital, regional, and even international levels. Without these, the frontline would have been overwhelmed.

Carl Horsley
Intensivist, New Zealand

“I expected that the people who were in this emergency team were equipped to handle any situation”

One of the biggest surprises in my role as a critical care outreach nurse came at a time when it really wasn’t wanted. I wish the team knew about this before we went to work that day. Members of the cardiac arrest and medical emergency team are: nurses, doctors, anaesthetists, clinical nurse specialists, porters and healthcare assistants. We attend to the sickest patients in the hospital as part as an ad hoc team. I had been part of this team for a year or so into my career as an outreach nurse. I expected that the people who were in this emergency team were equipped to handle any situation. Then came a big surprise. One afternoon we were called to a patient who was in respiratory distress. The nursing team on the ward called for the cardiac arrest team. This was because they knew that an anaesthetist would be within this team (whereas the ‘medical emergency team’ did not include this speciality). It was expected that the anaesthetist would support this patient’s airway and breathing during the emergency.

On arrival, the anaesthetist looked worried. They turned to me and said – “I can’t intubate a breathing patient yet – I haven’t completed that part of my training”. Why did we not know that the most junior anaesthetist was on the cardiac arrest team, expecting them to perform complex tasks under extreme stress? We needed to think fast and get help, and we were able to make a call to the more senior anaesthetist. After the event, we held a debrief and tried to understand the current process and what happened, using an after-action review (AAR).

As part of quality improvement, this issue was highlighted within the anaesthetic team. A new process was created. A new emergency call was created called ‘anaesthetic emergency’. This was for all calls that involved a patient with breathing/airway issues. This alerted a consultant to attend the call along with the junior anaesthetist. A ‘starred’ consultant was allocated for the shift, which gave support to juniors throughout the day and was a named point of contact. Surprises happen. We must deal with them in the moment, but then we must learn from them. Surprises are gifts for quality improvement! (The patient in question made a full recovery.)

Claire Cox
Former Critical Care Outreach Sister, UK

“I was often surprised by how hard ‘implementation’ is”

In my clinical career, especially in paediatric intensive care, I was constantly being surprised. In fact, a surprising day is when you are not being surprised. You are trained to deal with the unexpected. But when I moved from my clinical role to one working in management and policy, I was often surprised by how hard ‘implementation’ is. What I thought would take a matter of days often took months and sometimes years. I undertook research about the implementation of national guidance. I was surprised to find that the vast majority of people had not even heard of the guidance, let alone implemented it. I realised then that you cannot rely on passive dissemination of what you consider to be helpful guidance, there is a need to actively communicate and engage with the people on the receiving end. This needs to be done at the beginning to minimise surprises along the way. It is vital to listen and work together to understand the problem that needs to be fixed, and jointly figure out the solution to the problem.

Suzette Woodward
Former Paediatric Intensive Care Nurse, UK

“A big surprise for me was how the reaction to safety initiatives was so strongly coloured by personal belief”

Healthcare professionals are supposed to be rational and evidence-based. A big surprise for me was how, in the field of safety, the reaction to safety initiatives was so strongly coloured by personal belief, and even assessments of the background and character of the person or groups advocating for particular actions. This isn’t news to sociologists, psychologists or leaders of change, but it was to me. Where had my rational colleagues gone, who could dispassionately debate the merits of the latest clinical trial? What did I learn? Evidence is not enough. People’s prejudices and biases (though they will rarely admit to those terms) need to be addressed. Peer narratives are important. Surgeons, or at least some, give more weight to what a surgeon says than to an anaesthetist. And the reverse is true. So, finding the right storyteller may be just as important as the right story.

Iain Moppett
Professor of Anaesthesia and Perioperative Medicine, UK