

The husband's story: from tragedy to learning and action

Martin Bromiley

Correspondence to
Martin Bromiley, Clinical Human Factors Group, The Health Foundation, 90 Long Acre, London WC2E 9RA, UK; info@chfg.org

Accepted 27 February 2015

Sir Robert Francis, in his inquiry into failings at the Mid Staffordshire NHS Foundation Trust,¹ has described 'action plans' as the worst disease of the English National Health Service (NHS). He noticed that whenever a tragedy occurs, the NHS produces excellent action plans. But they then fail to produce any action. It's as if the production of the action plan is an end in itself, requiring no further steps.

When you've made mistakes I bet you've committed to action, usually to avoid making the same mistake again. Of course then you've often made the same mistake again, but over your career I expect you've also successfully changed your practice so that the same mistakes are far less likely to occur, or when they do are far less likely to cause harm.

The challenge for any healthcare organisation should arguably be the same: to make real changes that avoid, trap or mitigate against the threats or potential errors that occur day to day. If some individuals seem to be able to do this, why is it that healthcare organisations often struggle? And what are the ingredients that help make it happen? If feedback is 'the breakfast of champions', why, in healthcare, is it usually flushed away and forgotten the next day?

In trying to answer these questions, I'm only really qualified to talk about one particular case. It involves a compelling story, a well-established evidence base (although one that is largely unfamiliar in healthcare), and passionate professionals who could see the value of change.

Ten years ago at 23:15 on the evening of 11 April 2005, a patient in a coma died in the intensive care unit (ICU) of a hospital in England. The death was not unexpected: the patient's life support had been withdrawn 6 days earlier. What was unexpected was the subsequent impact of her death, not just on those closely involved, but on healthcare delivery

across many parts of the wider national, and even international, system.

The facts seemed simple enough. This healthy mother of two was admitted for an elective surgical procedure that never took place because problems emerged almost as soon as she was anaesthetised. Her airway rapidly became compromised, resulting in serious deterioration in oxygenation. Staff in the operating room (OR) made repeated attempts at laryngoscopy and intubation over a prolonged period with no success.

In hindsight this seemed to be a case of 'can't intubate, can't ventilate', a well-known emergency in anaesthesia that can't necessarily be foreseen, especially in a healthy case such as this. It was, if you like, a rare but recognised complication. The standard procedure in such situations is a tracheostomy/cricothyrotomy followed by admission to ICU—yet the team of surgical and anaesthetic doctors managing the patient did not execute this option, despite the nursing staff identifying that it was the right thing to do and going as far as booking an ICU bed and bringing the equipment tray into the OR.

During the futile attempts at intubating the trachea, the patient's oxygen saturation remained extremely low over at least 20 min. She was left without ventilation or other physiological support to wake up 'naturally'. When admitted to the ICU some hours later, it became clear that she had suffered severe hypoxic brain damage and that recovery would not be possible.

After the patient died, the head of the ICU and the late patient's husband spoke on a number of occasions. The husband was an airline pilot who knew nothing about healthcare and was accepting of the events leading to his wife's death. But he also wanted an investigation to be carried out just in case there were any lessons that could be learned. It so happened that the head of ICU knew an

To cite: Bromiley M. *BMJ Qual Saf* Published Online First: [please include Day Month Year] doi:10.1136/bmjqs-2015-004129

independent professional who might be prepared to conduct such a review, and so an investigation began.

The term serendipity is often used to describe positive events, the finding of pleasant things that are not looked for. What had happened to the patient and her family was a terrible tragedy. But the coming together of an independent professional and a grieving husband, who it so happened worked in another safety critical industry, turned out to be serendipitous. The report into the tragedy identified a set of awful circumstances, which the widower could translate into the language of the modern science of human factors and generate important lessons—and action.

So what does this case teach us? There were multiple human factors that conspired on the day to turn a probably salvageable emergency into a very bad outcome. The team failed not because they were bad, but because they'd never been exposed to such an emergency before and had not been trained in the valuable lessons that other professional groups outside of healthcare have learned about managing a crisis.

But actually the team didn't fail. They delivered everything predictably. It was really the system that failed that day, and not just that day. It had been failing for years, and still fails clinicians today. A system that doesn't encourage people to recognise their own fallibility, that doesn't develop methods, processes and training systems that make it easy to do the right things, both when things are going badly but also when things are going well, is a failing system.

Like many harmed relatives, the widower was determined make a difference, and specifically to help make sure it didn't happen to anyone else by changing the system. Using his knowledge of human factors and a small list of people inside healthcare, he sought to publicise the investigation findings. Not wanting to cause further harm he chose, as is the way with professional investigations in other safety critical industries, to publish the report with the names deleted.

A couple of years later a video was made of the case, paid for by the NHS with a budget of £15 000, and combining a reconstruction of the case with commentary.² To this day that film continues to be used, not just in the NHS, not just in medical and nursing schools, but worldwide from Japan and China to Brazil and Botswana. It's even been used outside healthcare, teaching people from engineers, firemen and bomb disposal teams to helicopter pilots. Those who watch it learn about thinking ahead, about teamwork, about situational awareness, about decision making—all basic human factors principles that are fundamental to safety critical industries, yet have never fully penetrated healthcare.

I am that widower.

What really struck me after Elaine died wasn't that anything wrong had been done, but that it wouldn't be investigated as a matter of routine. But I pressed for an investigation, because that is my training and

I can see the benefits clearly. As I sit here now, 10 years later, I know with certainty that many lives have been saved, and life-limiting injuries avoided, because of the insistence that Elaine's death was investigated properly. I receive emails and messages on a regular basis from those who've found themselves in emergencies and have subsequently acted differently and saved the day. But this is the tip of the iceberg.

Two years after Elaine died I knew that I wasn't going to change much, as simply having a film but no real insight into healthcare wouldn't have made much difference at all. Changing individual practice was great, but how about changing the whole system?

What I needed were others, experts, who were able to speak to other professionals. I formed the Clinical Human Factors Group (CHFG) in 2007, with the aim of promoting an understanding of human factors in healthcare by bringing together academics, whose evidence base from other industries was vast, and clinicians, who'd started to recognise that an understanding of human factors was fundamental to sustainable safe outcomes.

Since then the CHFG has gone from strength to strength, not in its size or budgets, but in its ability to influence the learning agenda. I have been amazed by the speed with which some professional groups and some healthcare organisations have started to get to grips and engage with human factors, not just in action plans but in real research, and even more, in real day-to-day practice.

But what is it that's made this action something exciting, tangible and real for the frontline?

As I reflect now I think it's tapped into something at the heart of what makes a professional. We all—pilot, doctor, nurse, manager, researcher, and many others—want to do what we do better. We hate the thought that there's science out there that we don't know about.

Certainly for healthcare professionals whose relationship with patients is at the core of what you do, having a patient's relative encouraging that improvement and learning (even if he's not an expert) seems to have 'given permission' for people to explore human factors. The fact that my own values and beliefs, as a professional, seem to align with the values and beliefs of the clinical community has been an unexpected way to open doors. Early on I was often asked 'what do you want?' In other words, what was in it for me, was I earning money/commission or trying to sell something? The answer was always no. I just wanted for this not to happen to someone else.

Finally, being able to cross boundaries and find out about the science of human factors, locate the resources and links has, in an example of inadvertent role modelling, made it easy to identify the right things to do.

So is this a model for future learning?

Maybe, maybe not. What is true is that healthcare is full of stories of inadvertent harm, and it's also full of

patients and their families who have more insight than you realise.

To be a learning organisation, you need to be open to experiences and perspectives. This is especially true of large organisations who have their own strong cultures. Probably the strongest, most impenetrable organisational culture I know is healthcare. And in the system of healthcare, human factors was pretty well unknown 10 years ago.

Healthcare systems worldwide are slowly recognising the scale and cost of harm. Multiple coordinated actions across multiple system players backed by human factors evidence 'making it easy to do the right things' will make all the difference. Training in human performance and limitations for undergraduates as well as team resource training for entire front-line teams would be nice. Professional regulators requiring and examining such things would also be

nice. But more importantly, every policy influencer needs to make sure that the systems those clinicians work within and with—the processes, protocols, computer systems and the equipment, drugs and devices—are all designed to make it easy to do the right thing.

The human cost in life and harm is both the inspiration for and the insight into those actions which must make a difference.

Competing interests None.

Provenance and peer review Not commissioned; internally peer reviewed.

REFERENCES

- 1 Francis R. *Report of the Mid Staffordshire NHS Foundation Trust public inquiry*. London: Stationery Office, 2013. <http://www.midstaffspublicinquiry.com/report>
- 2 <https://www.youtube.com/watch?v=JzlvgtPIof4>

**BMJ Quality
& Safety**

The husband's story: from tragedy to learning and action

Martin Bromiley

BMJ Qual Saf published online May 13, 2015

Updated information and services can be found at:

<http://qualitysafety.bmj.com/content/early/2015/05/13/bmjqs-2015-004129>

These include:

Email alerting service

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:

<http://group.bmj.com/group/rights-licensing/permissions>

To order reprints go to:

<http://journals.bmj.com/cgi/reprintform>

To subscribe to BMJ go to:

<http://group.bmj.com/subscribe/>