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VIEWS AND REVIEWS

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THE BOTTOM LINE

Partha Kar: Applying aviation safety to healthcare—are we missing the fundamental?

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If we want to improve patient safety the healthcare sector should become more like the aviation industry. This, at least, is a common refrain we hear whenever the issue of patient safety comes up.

It's certainly not fanciful to think that healthcare organisations should try to learn from a high risk industry with an enviable record in keeping people safe. With just 0.07 deaths per billion passenger miles, flying is currently the safest mode of transport, and trying to reach something equivalent to that level of safety in healthcare certainly isn't a bad aspiration.

The comparison has even brought some useful insights, particularly in terms of recognising how an understanding of human factors can help to improve safety. This has long been recognised in aviation, and there's much to learn from Martin Bromiley's work on the use of human factors in healthcare.[1]

But, if you're going to use the airline industry as a barometer of safety, you can't pick and choose which bits you compare with the healthcare sector and which you conveniently ignore. After all, the aviation and healthcare sectors have many important differences that make such comparisons unhelpful.

One example is how the two systems deal with the mismatch between capacity and demand. The aviation industry's response to increased demand has not been to ask flight attendants to fly planes. It has instead been to increase the number of planes and trained pilots, as this is vital to safety.

Another key difference is how the two systems deal with fatigue. You can walk away from flying a plane. But, when you're short staffed, or a locum hasn't turned up, you can't walk away from a patient struggling for breath. And the fundamental challenge facing healthcare systems worldwide is the workforce—or more the lack of it.

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So, what do we do? Do we simply brush aside examples of good practice from the aviation industry? Or do we choose to recognise that we can learn from them?

My gut feeling is that there is much to learn, and a genuine step away from soundbites may need to be the first step. We can all learn something from each other. And we'd do well to bear this in mind when comparing systems that are fundamentally different.

Aviation safety lessons have much to offer—as do other domains that showcase efficiency and safety, such as Formula One racing. The Aviation Safety Network stated that 16 airliner accidents occurred in 2018 and killed a total of 555 people—about a 900% increase on 2017, when only 59 people died.[2 3] We should be open enough to learn from that and see what changes are being made that are adaptable, while also openly admitting that the biggest challenge to safety continues to be an inadequate workforce—not necessarily just the process or the tick box.

Competing interests: I am associate national clinical director for diabetes with NHS England.

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1 Clinical Human Factors Group. https://chfg.org/.
2 Shepardson D. Fatalities on commercial passenger aircraft rise in 2018. *Reuters* 2 Jan 2019. https://uk.reuters.com/article/uk-airlines-safety-worldwide/fatalities-on-commercial-passenger-aircraft-rise-in-2018-idUKKCN1OW009.
3 Shepardson D. 2017 safest year on record for commercial passenger air travel: groups. *Reuters* 1 Jan 2018. https://www.reuters.com/article/us-aviation-safety/2017-safest-year-on-record-for-commercial-passenger-air-travel-groups-idUSKBN1EQ17L.

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