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The Night in the ICU

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Is COVID-19 the Black Swan?

Nassim Taleb, in his book, "The Black Swan: The Impact of the Highly Improbable," describes the term Black Swan as a rare, unknown event, which with hindsight is rationalised. Taleb talks about the human tendency to always find simplistic explanations for unknown events, what he calls the Black Swan theory. Is COVID-19 a black swan?

Introduction

Physicians working with critically ill patients are exposed to emerging diseases and have been challenged relatively frequently in these recent years. Grumbles of chatter surfaced planning and managing Ebola, Severe Acute Respiratory Syndrome (SARS), Zika virus, H1N1 influenza and now coronavirus (COVID-19). In many ways, this portrayal was largely underestimated at its start at the end of 2019. Governments and Institutions such as the World Health Organization (WHO) saw no merit in panic, nor the need to acknowledge the sequelae in light of globalisation, commerce and aviation on spread at the beginning of 2020.

Writing from a British junior doctor's perspective, the virus did not attract enough global attention, nor the gravitas to its own title at the start. At face value, it appeared as yet another health-scare distant from the shores of Europe. Even then, thanks to human arrogance, pride and unawareness, the threat did not seem entirely real. By February, this latest unwelcome celebrity had become a household name, wreaking havoc within Italy. By now, the virus was worthy of a COVID-19 identity and much attention was drawn to Italy opting for lockdown, using the military and police to enforce this seemingly undemocratic draconian measure. Two months later, more than 4 billion of the world's inhabitants are in some form of lockdown and nearly 600,000 global deaths and in excess of 18 million infected. The UK, as many other nations, has been in lockdown and thousands of NHS staff are redeployed and adapting, much quicker than in the past, to evolve into COVID-19 doctors, nurses, physiotherapists and the like.

The News and Redeployment

Leading up to the escalation of British measures, there was increasing front line discussion about the reality of the threat. Trusts had promptly disseminated campaigns to warn staff of what is to come to the United Kingdom. Doctors and nurses were essentially no different, nor immune to this virus and as a result several died in this pandemic. Study and annual leaves were cancelled and research suspended due to the closure of most laboratories and cancellation of conferences. Publicly, the Prime Minister, who would later check in to the Intensive Care Unit (ICU) at St Thomas' Hospital, essentially although more eloquently stated we have to ride this out and people will die, lots of them. Even, then this mismatch in public perception and that of NHS staff could not be greater. Frontline workers, which according to NHS reports were 70% represented by women, were now bracing for a tsunami. The epicentre was a few weeks away when simulation and training started in a more systematic manner. Those few weeks of incubation period had after all fooled the world once before at the point of spread from China to Italy. The first patient was declared in Italy on February 20, and yet we identified a COVID-19 case at Imperial College on March 9, and he was admitted 10 days before isolation. There was a clear overlap in the timing and course of this disease confused by the discordance between the science and politics of a lockdown decision.

As an academic general surgical registrar, I would now be told I will not rotate to my next surgical placement and that my new multi-centred robotics project would be placed on hold until further notice. I would receive news of my redeployment to the intensive care unit (ICU), having rotated for four months through ICU in the past. The emotions at the time were those of excitement, purpose wrapped in fear, anxiety and concerns for my family, whom I could infect. Another feeling, commonplace amongst junior doctor colleagues is that of competence. All our working lives, we have been drilled into the merits of subspecialty, safety and working within limitations. Junior doctors have a duty to do no harm to the patients. The feeling at that point was that of being called up to go to war, where the rulebook was yet to be written and discovery was the only reality. Colleagues would cancel weddings, (myself included), vacations, and family visits. Doctors and nurses who were called

to work would move out of their family homes, and would send their pregnant wives away in fear of the unknown. Personally, my wife, a first year doctor elsewhere in the UK would be redeployed to a COVID ward a week earlier, despite their peak reportedly arriving a couple of weeks after the capital. She would experience three of her colleagues infected with COVID-19, only then to be informed she had been redeployed a second time to ICU.

Déjà vu in ICU

I was back in ICU, having never thought I would be required to use my skills and knowledge there. I had attempted to ensure I was fit tested for FFP masks and relied on the individual helpfulness of colleagues in ICU to show me the basics of ventilation usage. The emotions on the first day were those of apprehension and surrealism. Even as a clinician, COVID appeared all too distant, yet ICU was full of intubated patients. The handover was a reminder that no age group is immune, nor would a healthy background act as a guarantor against this invader.

It appeared all too different from surgery. The pace, smell, language - all appeared foreign. Having said that, an unspoken yet shared sentiment amongst redeployed staff was that of resilience, dedication and responsibility. We knew we may be useless but we would proactively be useful. The bureaucracy of staff grade no longer mattered. This is a clean slate and we are all learning to adequately manage COVID-19 patients. Seeing patients succumb in such a way to this virus is upsetting and despite putting a brave face on, is life changing in ways only time will tell.

Personally, my first week left me with nightmares, dreams of cardiac arrests and interrupted sleep. Particularly challenging is seeing colleagues you work with intubated days later. Having said that, there is a silver lining. For once, there is no shame in saying "I do not know." Staff are united, and this includes nurses, doctors, physiotherapists and allied health professionals. I know each more personally and like a new family, rely on their sharing and caring to remain resilient during this marathon. Every day, junior doctors sit and have charitable community meals, a show of public solidarity to our so called sacrifices, which most frontline workers would rather describe as a duty. In many ways, departments have taken on this new wave of staff and skillfully turned them into a productive workforce who receive weekly teaching, verbal appreciation and admiration.

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COVID-19 has forced us away from the specialist clinician towards our physician ancestors reminding us our bachelors in medicine are wide and varied, in medicine and surgery alike. As we continue to understand this disease, I have learnt to operate ventilation machines, supporting teams in proning, and along with colleagues, personally developing myself to better understand ICU and COVID-19 to help my patients. I am becoming a more mature clinician in an environment where flexibility and adaptability are essential. As a team, nurses are empowered to educate doctors about critical care principles, and doctors seek to support nurses and cover their rest breaks. As a team we have experienced patient recoveries and remain optimistic our global knowledge towards COVID-19 will continue to build in a race to curing it.

A Black Swan

In Nassim Taleb's book, The Black Swan: The Impact of the Highly Improbable, he describes the term as a rare unknowable event, which with hindsight is rationalised. Taleb talks about the human tendency to always find simplistic explanations for unknown events, what he calls the Black Swan theory. Is COVID-19 a black swan? I believe it is far from it; rather we as humanity have been a sitting duck and undoubtedly, a change in dogma is inevitable. As for me, I worry for my patients and my team but am optimistic this reconciled unity, backed by family and friends and the public will carry us across the finishing line.

Now we are all almost back to our routine and all seems like a distant story. Several lessons have been learned and this experience will remain unique in terms of really being at the frontline of an unknown battle. ■

Key Points

- Coronavirus was largely underestimated at its start at the end of 2019. Governments and Institutions such as the World Health Organization (WHO) saw no merit in panic.
- By February 2020, this latest unwelcome celebrity had become a household name, wreaking havoc within Italy.
- The UK, as many other nations, went into lockdown and thousands of NHS staff were redeployed.
- Doctors and nurses were essentially no different, nor immune to this virus and as a result several died in this pandemic.
- Study leaves and annual leaves were cancelled and research suspended due to the closure of most laboratories and cancellation of most conferences.
- No age group is immune, nor would a healthy background act as a guarantor against this invader.
- As a team, we have experienced patient recoveries and remain optimistic our global knowledge towards COVID-19 will continue to build in a race to curing it.