



EDITORIAL

Apocalypse perhaps

Was that a pivotal historical moment we just went stumbling past?

Kate Tempest, People's Faces, 2019

Apocalypse is a Greek word meaning a revelation, an unfolding of things not previously known or able to be known. The word has resonance for a pandemic which, by its very nature, involves an outbreak with an organism not previously known. In the Bible's Book of Revelation, the Apocalypse denotes the final destruction of the world (Fig. 1). In common parlance, the word is often used to describe a massive catastrophe such as a World War. The link between a pandemic and the apocalypse is potentially petrifying. Little wonder that pandemics engender panic.¹

Dates can be fateful. In Chekhov's plays, people often die on their birthdays, a poignant dramatic device. William Shakespeare died on his birthday. The exact starting date of the novel coronavirus pandemic COVID-19 will never be known, but China informed the World Health Organization (WHO) about the disease on New Year's Eve, 31 December 2019. A few hours later and we might have called it COVID-20. Transmission of severe acute respiratory syndrome (SARS)-CoV-2, the virus that causes COVID-19, was accelerated by traditional travel of 3 billion people for 40 days before the Chinese New Year on 25 January 2020.

The world has been preparing for a pandemic for decades² and reacted swiftly to the 2002–2003 outbreak of SARS³ and the 2009 H1N1 influenza pandemic. However, the COVID-19 pandemic has proved far more problematic than those two outbreaks. The mortality from SARS was reportedly even higher than from COVID-19, but SARS was controlled within 8 months after infecting a mere 8100 people.³ In contrast, in fewer than 6 months, SARS-CoV-2 has infected 5 million people, killing over 300 000.⁴ SARS-CoV-2 is more infectious than SARS because infected adults are infectious for anything up to 6 days before they develop symptoms.⁵ If we can catch the disease from asymptomatic people, then every other adult in the world is a potential source of infection. The world is against us. No wonder passers-by keep their heads down and refuse to acknowledge our greeting or even smile back at us. While some countries have recommended or even mandated that every individual should protect themselves and others by wearing a mask in public, there is scant evidence of benefit.⁶ Wearing masks in public arguably diminishes human connection just when physical distancing makes social connection most desirable. Mask-wearing may frighten children and add to public fear.⁶ In his last 2010 novel, *Nemesis*, Pulitzer Prize-winning American author Philip Roth describes the terror and panic caused by a fictitious epidemic of polio in 1944 in his home town of Newark, New Jersey. Although allegorical, there are parallels with COVID-19, not the least being that polio too spreads silently from people who are infected but asymptomatic, a silent menace.⁷

Responses to a pandemic are individual, dependent on personality and values. Pessimists may predict doom and gloom; optimists may make light of the situation. Nostradamus was not neutral. The doom-laden predictions of pessimistic 'catastrophisers' are coping mechanisms: if you predict the Apocalypse, anything less is an improvement. Human experience and response is contextual, varied and subjective and should not be unfairly judged. Sometimes however, catastrophising can harm others in society. The damaging closure of Australian schools, against the advice of the experts advising the Chief Medical Officer Brendan Murphy, resulted from unresolved fears of parents and teachers, arguably fuelled by doomsayers prominent in the media.^{1,8} Unwarranted optimism may also be harmful; overly blasé people may fail to adhere to preventative measures, putting themselves and others at risk.

When we feel threatened it is critical to know what and whom we can trust. Trust is fragile in a pandemic when uncertainty is the norm. It would seem wise to heed the advice of health experts as regards how best to cope at a national level.^{2,3} When the Australian Chief Medical Officer activated the pandemic emergency response plan, weeks before the World Health Organization declared a pandemic, the Government was legally obliged to act. This has kept the pandemic under control in Australia, avoided overwhelming the health-care system and kept the mortality low. In other countries, most notably the USA and the UK, expert advice was largely ignored, to disastrous effect.

When it comes to personal protection, it would seem logical to listen and ideally trust the views of infection control experts. Early stories of the deaths of health-care professionals in China, Iran and Europe understandably frightened their colleagues world-wide. Infection control experts tried to offer reassurance that these deaths were almost certainly caused by failure to use personal protective equipment (PPE) rather than failure of PPE. But in a pandemic, 'almost certain' is not certain enough for all. Some consultants have sought elusive 'certainty' by taking swabs to test for SARS-CoV-2 virus from all children admitted, despite a recommendation that wearing the same PPE would be appropriate, regardless of the result. Fear of taking the virus home and infecting their family⁹ led some colleagues to request excessive PPE for themselves and their staff, potentially threatening supply. Not judging people's motives does not preclude acting. Inappropriate use of PPE jeopardises its availability for those most in need.¹⁰ Inappropriate swabbing of children awaiting procedures can traumatise children, waste scarce resources and may delay urgent management. We should address harmful practices, preferably by civil negotiation, but if necessary by setting reasonable rules.

Data from China suggest that most transmission of SARS-CoV-2 occurred within households; nosocomial transmission to health-care staff was uncommon.¹¹ A study screening symptomatic hospital staff in Newcastle-on-Tyne, UK found the same rate of SARS-CoV-2 infection in clinical and non-clinical staff.¹² The authors conclude that staff were being infected through



Fig 1 The woman of the Apocalypse from the Book of Revelations – redrawn from a 12th century original illustration by Herrad of Landsberg.

community transmission and that PPE was effective in protecting front-line health-care workers.¹²

Humans often use war as a metaphor: the war against cancer; the war against drugs, the war against famine, the war against infection. People sometimes refer to broad-spectrum antibiotics (and cancer drugs) as ‘magic bullets’, an analogy as inaccurate as it is sinister. Using the metaphor of war is a defensive manoeuvre which externalises the threat; in George Orwell’s classic novel *1984*, the dictator Big Brother invents an enemy state to fight against perpetually, thereby uniting his people. The war metaphor may resonate as we laud the courage of our front-line health-care workers, like heroic soldiers, going off to do battle. But war is scary, particularly to children, who are arguably at greater risk than adults of being scared by a pandemic. Wars end

in victory or defeat, with no middle ground. Prevention is vital in limiting the spread of a pandemic; a war means diplomatic prevention has failed. At a time when world leaders want to blame each other for aspects of the COVID-19 pandemic, the war metaphor is particularly menacing.

In a pandemic, even more than in a war, solidarity is at a premium. We tolerate measures taken for public health reasons, such as restriction of movement and social contact, which infringe civil liberties under normal circumstances. If people fail to follow directions, some level of coercion, such as clearing beaches, may be needed and accepted by the public until viral transmission is controlled. There may be an expectation that we will shelve criticism of our Government’s response to the pandemic. Where freedom of speech is valued, criticism may be

tolerated. Authoritarian regimes do not tolerate but suppress criticism. Ophthalmologist Dr Li Wenliang was made to sign a redaction saying he lied after alerting his colleagues in Wuhan to the new respiratory disease; tragically, he died aged 33 from COVID-19 while trying to save others.¹³ More worrying are reports of medical workers in the UK being threatened with disciplinary action for raising workplace safety issues such as inadequate PPE.¹⁴ Pandemics provide a concerning excuse for regimes to introduce new laws to silence critics which may not be repealed later. We should advocate that any measures that infringe civil liberties be proportionate and be reversed as the pandemic recedes.


Messaging is critical during a pandemic. The public should be informed regularly about progression of the pandemic, without increasing fear and engendering panic. People who are fearful need to feel their fears are not being dismissed or ignored. Apocalyptic messaging may foment fear. Reassurance without information to support optimism may paradoxically increase panic by raising doubts and losing trust. People who feel they have lost control of their destiny may be helped regain a measure of control. An example is to provide clear directions about how people can protect themselves and their family through physical distancing and hand hygiene.

National pandemic responses vary depending on priorities: different leaders have prioritised saving lives and saving the economy differently. Mental health is threatened by isolation, uncertainty and unemployment, leading to post-traumatic stress disorder, domestic violence, depression, and suicide risk.¹⁵ Health-care staff are also at risk of mental health problems and moral injury.¹⁶ A one-size-fits-all approach can be disastrous in resource-poor countries, if physical distancing prevents employment, leading to starvation or prevents access to essential health services.¹⁷

Hundreds of thousands have lost their lives. Millions have been infected. The entire world has been affected. At present, many countries have started to relax their lockdown and allow survivors to try to resume their lives. For the survivors, the Apocalypse is postponed. The pandemic is not over but the world lives on. Now is a time for reflection: what did we do well, what should we have done better, how do we make the best of the current situation? There are positives as well as negatives to take from the pandemic. The environment has had a reprieve. Initial unethical behaviour such as hoarding and profiteering has been offset by ethical human behaviour such as altruism and solidarity. Let us emerge from this horrible pandemic sadder but wiser.

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Professor David Isaacs ,
Editor-in-Chief,
Children's Hospital at Westmead,
Sydney, New South Wales,
Australia

References

- 1 Isaacs D, Britton P, Preisz A. Ethical reflections on the COVID-19 pandemic: The epidemiology of panic. *J. Paediatr. Child Health* 2020; **56**: 690–1.
- 2 World Health Organization. *WHO Checklist for Influenza Pandemic Preparedness Planning*. Geneva: The Organization; 2005. WHO/CDS/CSR/GIP/2005.4. Available from: https://www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_4/en/ [accessed 16 May 2020].
- 3 Institute of Medicine (US) Forum on Microbial Threats; Knobler S, Mahmoud A, Lemon S *et al.*, eds. Learning from SARS: Preparing for the Next Disease Outbreak: Workshop Summary. Washington, DC: National Academies Press (US); 2004.
- 4 *Worldometer COVID-19 Coronavirus Pandemic*. 2020. Available from: <https://www.worldometers.info/coronavirus/> [accessed 16 May 2020].
- 5 Arons MM, Hatfield KM, Reddy SC *et al.* Presymptomatic SARS-CoV-2 infections and transmission in a skilled nursing facility. *N. Engl. J. Med.* 2020; **382**: 2081–90.
- 6 Isaacs D, Britton P, Howard-Jones A *et al.* Do facemasks protect against COVID-19? *J. Paediatr. Child Health* 2020; **56**: 976–7.
- 7 Brody R. The Eerie Familiarities of "Nemesis", Philip Roth's Story of a Polio Epidemic. *New Yorker*, 2020. Available from: <https://www.newyorker.com/culture/culture-desk/the-eerie-familiarities-of-nemesis-philip-roths-novel-of-a-polio-epidemic> [accessed 16 May 2020].
- 8 Viner RM, Russell SJ, Croker H *et al.* School closure and management practices during coronavirus outbreaks including COVID-19: A systematic review. *Lancet Child Adolesc. Health* 2020; **4**: 397–404. [https://doi.org/10.1016/S2352-4642\(20\)30095-X](https://doi.org/10.1016/S2352-4642(20)30095-X).
- 9 Howard-Jones A, Almuzam A, Britton P *et al.* Should I be worried about carrying the virus that causes COVID-19 home on my clothes? *J. Paediatr. Child Health* 2020; **56**: 980.
- 10 Jansen M, Irving H, Gillam L *et al.* Ethical considerations for paediatrics during the COVID-19 pandemic: A discussion paper from the Australian Paediatric Clinical Ethics Collaboration. *J. Paediatr. Child Health* 2020; **56**: 847–51. <https://doi.org/10.1111/jpc.14946>.
- 11 Wu Z, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: Summary of a report of 72314 cases from the Chinese Center for Disease Control and Prevention. *JAMA* 2020; **323**: 1239–42. <https://doi.org/10.1001/jama.2020.2648>.
- 12 Hunter E, Price DA, Murphy E *et al.* First experience of COVID-19 screening of health-care workers in England. *Lancet* 2020; **395**: e77–8.
- 13 Green A. Li Wenliang. *Lancet* 2020; **395**: 682.
- 14 Horton R. Offline: COVID-19 – Bewilderment and candour. *Lancet* 2020; **395**: 1178.
- 15 Hawryluck L, Gold WL, Robinson S, Pogorski S, Galea S, Stya R. SARS control and psychological effects of quarantine, Toronto, Canada. *Emerg. Infect. Dis.* 2004; **10**: 1206–12.
- 16 Greenberg N, Docherty M, Gnappagasam S, Wessely S. Managing mental health challenges faced by healthcare workers during covid-19 pandemic. *BMJ* 2020; **368**: m1211.
- 17 Cash R, Patel V. Has COVID-19 subverted global health? *Lancet* 2020; **395**: 1687–88. [https://doi.org/10.1016/S0140-6736\(20\)31089-8](https://doi.org/10.1016/S0140-6736(20)31089-8).