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Petrichor revisited

Priscilla Robinson

ANZJPH Editor

During Advent at the end of 2020, which was supposed to be the year of perfect vision, we found ourselves waiting, and not just for Christmas. We waited for many things – for improvements in COVID-19 case numbers, for this summer's fire and storm season, for the 46th president of the USA, for BREXIT, permission to travel overseas (or, for some of us, anywhere at all) to see family ... It is now Epiphany, a time of realisation. As the familiar Christmas story goes, the Christ child's arrival was broadcast by angels, His family was visited by shepherds and, in the Christian calendar, Magi from the Orient arrived bringing meaningful gifts, because they understood the significance of His birth, before fleeing the murderous king Herod to become refugees in Egypt.

Petrichor. Four years ago we published an editorial¹ in which we considered the likely forecast for public health with the storm clouds generated by the USA's incoming president, and cautioned that the consequences for public health and the attitudes of our own governments meant that we needed to protect our own public health systems. Things were not looking too good Stateside, with the forecast removal of controls on water, air quality, road safety measures, and the dismantling of public health infrastructure and the CDCs², just about all of which has happened. Leaving the Paris agreement section of the United Nations Framework Convention on Climate Change and the World Health Organization were subsequent aberrations, alongside the strenuous attempts to dismantle America's Affordable Care Act. Whilst the world welcomes USA's incoming president, we hope that this petrichor heralds a gentler rain to wash and heal USA's wounded public health and environmental health infrastructures. Thankfully the new president's leaders are already seeking to mitigate the worst effects of the storms of the past four years, restoring environmental controls, re-joining the Paris accord and protecting the Affordable Care Act. It is worth reiterating, after the strangest imaginable past twelve months, that for us in Australia the COVID-19 pandemic was 2020's fourth disaster, following on from lengthy droughts, terrifying bushfires and sudden floods. We also need to remember that

these, including the pandemic, were entirely predictable – not necessarily in precisely the ways they occurred but we certainly knew of them as potential threats (n.b. the word 'unprecedented' needs elimination from the disaster lexicon). Just as we have modelling to estimate the likely progression of an outbreak given different control measures, we have climate modelling to show us the effects of uncontrolled global warming, of natural habitat destruction, and displacement of indigenous plants and animals with continued use of fossil fuels and urban expansion. Otherwise why would we already have a set of emergency management plans, detailing available emergency services for responding to fires and floods, and pandemic preparedness plans? These are not there just for fun but have been designed for effective responses to sudden and disastrous emergencies. In many ways these responses have been remarkable as, although the precise nature of both the epidemiological patterns and the responses to them differed between States, the broad approaches to them provided a level of overall stability, which has resulted in local suppression of new cases of COVID-19 all over Australia and should provide the basis for a national response mechanism in the future.

Part of the point of disaster and mitigation plans, especially in public health, is that they are needed only rarely. When public health systems are working well things *don't* happen, which makes continuing support of public health planning difficult for governments. We have many formal local and state-based strategies, and periodically run operational exercises to test them. But when operationalised for real, 2020 did not go to plan and the various formal government enquiries, which have published outcome reports so far, have spotlighted some important and common deficiencies, in particular our uncoordinated state-based emergency communication systems.

In many ways 2020 has improved the visibility and highlighted the importance of public health, worldwide. Using that most accurate of tools, the retrospectroscope, we can show how public health principles helped provide for displaced, or isolated, or quarantined, people (albeit managed by other agencies, the provision of safe food and water, shelter and so on are certainly public health measures). We can reflect on how public health stepped up and provided leadership at both State and Federal levels, public health departments and their Chief Health Officers having provided advice to their territory, state and federal

governments. Whilst the temporary national cabinet consultation processes did provide a level of national coordination of public health response strategies, it was basic public health principles which helped to control the spread of SARS CoV-2 infection, not just in Australasia but in WHO's WPRO and SEARO regions more generally, public health principles and intelligence having provided evidence for conclusions we certainly can draw from the successful ways in which these population-sized problems were managed: for example, masks and social distancing are effective measures.

We need to start planning for future events now.³ There has been much talk about going back to 'life as normal', but we already know about normal. Normal summer in Australia routinely brings disaster. We know there will be wildfires, storms, floods and droughts. Normal behaviour brought us COVID-19, which may be mitigated through vaccination programs, but will certainly not be the world's last pandemic. Normal also sees terrible treatment of refugees, asylum seekers, and people with no job or home. Normal sees inequitable resources for Indigenous peoples worldwide, including Australia and New Zealand. Normal sees environmental destruction. We should not long for normal. Just smell the petrichor.

Sufficient funding for sustainability depends on political insight and foresight, based in public health (particularly OneHealth) principles.⁴ This work rarely shows profitability in ways that will generate long-term political enthusiasm – too few photo opportunities. It is our job in public health to work towards a less disrupted future by making sure that the lessons of 2020 do not have to be repeated. Epiphany 2021 is important – we need to welcome all wise people and the significant gifts they bring.

Wishing you all a safe, healthy and happy New Year.

References

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