

Dr Yvonne Ho

Over generations, knowledge is shared through education, organisations, friends and families. This deliberate and sometimes incidental transfer is one of the ways we adapt to challenges as a species.



In 2019 and 2020, as we address the global pandemic, public health practices have become part of our daily lives here in Australia.

But while they may feel new to us, some of the strategies we see in action now have been tested over decades or even centuries. For Dr Yvonne Ho AM (MBBS 1989), a fourth generation western-trained doctor, such intergenerational knowledge is both a professional and a personal experience.

After graduating and specialising in radiology and nuclear medicine, Dr Ho moved to Singapore. There, she co-pioneered the Royal Australian and New Zealand College of Radiologists (RANZCR)'s radiodiagnosis program and oversaw the expansion of the nuclear medicine department at Singapore's National University Hospital. She also owns and runs a successful music school.

Knowledge from historical roots

"While living in Singapore, I came to appreciate my own medical roots and I took the opportunity to learn more about my ancestor, Dr Wu Lien Teh. He is well known in Asia as a historical figure and details of his life are stored in the National Library of Singapore," said Dr Ho.

Dr Wu, born and raised in the British colony of Malaya, was the first person of Chinese heritage to graduate in medicine from the University of Cambridge. He is renowned for his role in eradicating the 1910-1911 pneumonic plague in China, also known as the Manchurian plague.

These days, Harbin, in north-eastern China, is known for the world's largest annual ice-festival, but in 1911 it was the epicentre of an outbreak that killed more than 60,000 people, with a death rate of 100 per cent.

Dr Wu led the response to the epidemic and initiated public health measures such as isolation, containment, mitigation and public education to contain the spread of disease. He invented and popularised the use of a new kind of face mask with protective layers of cotton wool, held within a gauze bandage positioned securely over the nose and mouth.

The mask formed a major defence against infection in 1911 and is considered to be the earliest version of the N95 mask. Under Dr Wu's direction, the pneumonic plague was contained and eradicated in Harbin, with the last case recorded on 1 March 1911. Dr Wu became world-famous for his interventions and was nominated for a Nobel Prize in 1935.

The wearing of masks was revived during the Spanish flu pandemic of 1918. Today, masks are being worn in unprecedented numbers worldwide in response to the COVID-19 pandemic: cloth masks by the public and surgical and N95 masks by healthcare workers. Contemporary scientific evidence indicates that mask-wearing reduces the transmission of infected droplets and, therefore, the transmissibility of disease from human to human.

Mobilising action to make an impact

In March 2020, Dr Ho helped to coordinate a multidisciplinary effort in response to the COVID-19 pandemic in Australia. Working with the Australian and New Zealand Intensive Care Society (ANZICS) and Australian Veterinary Boards Council (AVBC), Dr Ho was pivotal in connecting the siloed medical and veterinarian fraternities. Their work resulted in the creation of a live nationwide registry of human ventilators belonging to veterinarians that can be mobilised quickly for use in intensive care units (ICUs) in the event of a COVID-19 surge.

"Subsequently, in collaboration with a larger team of intensivists and researchers, we determined a profile of the COVID-19 surge capacity in all Australian ICUs and highlighted the potential shortfalls in available staff and equipment" said Dr Ho. In record turnaround, they published a paper on the topic in the Medical Journal of Australia on 19 April 2020.

"We are fortunate that in 2020 we have medical advances and digital connectivity to address diseases. However, just as the Manchurian plague showed, we hope the COVID-19 pandemic will emphasise that a medical pandemic response has the best chance of success if centrally coordinated, led by medical and scientific experts, guided by science, away from politics. Politics has a role to inspire the people to follow science and medical leaders. It is hoped that our pandemic will impress upon politicians and citizens worldwide that, far more critical than politics, money and conflict, it is good health that leads to a nation's prosperity," said Dr Ho.

Dr Ho was inducted into the Victorian Honour Roll of Women in 2013, was an Outbound Endeavour Fellowship awardee in 2014, and awarded a Member of the Order of Australia in 2015 in recognition of her service to the community.

To hear more about Dr Yvonne Ho's work tune into the Chiron podcast:



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