



THE germ OF THE future

The world expert on a possible pandemic sounds a warning about the risk and recalls the personal battles she has fought to play a leading role on the scientific world stage

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Julie Hall with the growth on her lip that became apparent when she was seven and was removed in several operations; as a teenager playing guitar in her home in Yorkshire; graduating from Guy's and St Thomas' Medical School, London, in 1991.



In March 2003 Dr Julie Hall was sitting with the leadership group at the operations centre of the World Health Organization (WHO) in Geneva when the historic decision was made to issue the organisation's first global alert for a frightening new disease.

Reports had been coming in that morning from Singapore, Canada and Vietnam about a new disease that was spreading rapidly. They decided during that meeting to call it SARS or Severe Acute Respiratory Syndrome.

That day in Geneva was a turning point in the long-term efforts of international health authorities to prevent the recurrence of a catastrophe like the 1918 influenza pandemic, which was responsible for the deaths of more people than the estimated 20 million killed in the Great War.

That day in Geneva was also a personal turning point in the career of Dr Hall. She'd been in Geneva for just two weeks, on secondment from the United Kingdom Department of Health, when SARS broke out. Even though she was the new kid on the block, she chose to take the plunge and speak up at that meeting.

For this interview Julie Hall, 42, and I met in the Qantas Lounge at Sydney airport (she says her membership is the result of flying the equivalent of several trips around the moon) to talk about her life and career, including her most recent work as a medical adviser on pandemic prevention to the Australian Government and her new regional job for the WHO, based in the Philippines.

As we drank coffee, Hall answered all of my questions with precision and clarity. A friendly and unpretentious woman with a delightful Yorkshire accent, she has a remarkable capacity to answer complex questions in a simple but informative way.

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It's not hard to see why she became a WHO spokesperson during the SARS outbreak.

She recalls the moment when the director-general of WHO came into the operations centre. "It was pretty intimidating because the room was full of the world's best experts," she says, "but I remember just taking the plunge and saying a couple of things that I thought we should be looking at and doing."

She must have said something right. It wasn't long before she was off to China for three and a half years to head up the team responsible for communicable disease surveillance and response.

"The team ranged from 20 to about 40 people," she tells me. "We helped to support the Chinese government in their response to SARS, and later bird flu, and various infectious disease outbreaks."

Her work in this challenging field was recognised in 2007 when Hall received an MBE from the Queen at Buckingham Palace for her international work in health protection.

Hall is playing a similar role in her new job for WHO in Manila, although now on a regional scale, supporting around 30 countries including Australia.

"It's about increasing the ability within the region to detect infectious diseases, respond to them very quickly and stop large outbreaks occurring, as well as strengthening all of those systems so we have a much stronger health system," she explains.

A big job like this in Asia is a long way

from the small village where Hall grew up: Knaresborough in semi-rural Yorkshire, "nestled between York and Leeds", as she describes it with affection.

She went to the local primary school and the local comprehensive high school until she was 16. Then she read in a *Reader's Digest* magazine about a scholarship to the United World College, an international school in a small town called Montezuma in New Mexico. She applied for the scholarship, won it and found herself, at 16, flying to the United States, where she spent the next two years.

"I thought nothing of getting on a plane, though I'd never flown before, and going to the US. I thought I could do anything at that age," she laughs.

Her confidence is all the more remarkable when you consider that Hall had had to overcome two significant obstacles as a child.

"I found it difficult to spell and read," she recalls. "I was a bit dyslexic and I had to come up with little ways of remembering how to spell and how words looked."

I ask her for an example and she quickly obliges: "I remembered 'because' as 'Big Elephants Can Always Understand Small Elephants' and things like that." This remarkable capacity to remember words and images must have been invaluable when she was completing her medical degree.

The other obstacle she faced was a growth on her face that first became apparent when she was seven years old. "I had repeated



Clockwise: Family time in the garden with husband Chris Lark and children Roberta and Adam. Working for the World Health Organization with officials in China in 2004 during the SARS outbreak and then bottom right in Qinghai Province in central China investigating a massive die-off of birds. Opposite page: The Spanish flu pandemic of 1918 even made it into the lives of May Gibb's gumnut babies in this illustration.



surgery as a child and a teenager, with final surgery that removed 60 per cent of my lower lip and reconstruction when I was 22 years old," she explains with characteristic precision and brevity.

Hall believes this experience had a major and, for the most part, positive impact as she was growing up.

"I spent a lot of time in and out of hospital and this gave me my early interest in medicine," she reflects. "I used to question the doctors a lot and took great pride in signing my own consent forms when I was old enough. And I had to deal with a lot of questions from strangers about something

I thought was quite personal and the inevitable teasing as a child.

"I developed a fairly tough exterior and usually just dismissed people who had a problem with how I looked as someone with whom I was unlikely to want to be friends, anyway. It gave me an understanding, at a very young age, that you can't judge people by the way they look. You have to reach below the surface.

"I also learnt never, ever, to ask anyone with a visible difference how it happened or what it is. That is very, very precious personal information that the person should only share when they want to."

The intrusive behaviour of strangers has had a long-lasting impact on Hall's approach to personal information: "As a child, I often told strangers who approached me in the street that my lip had happened as the result of a car crash that had killed my whole family.

"It was an awful thing to say but I found being stopped in the street by a complete stranger, having your unique feature pointed out in public and being asked to give details, much more hurtful than the teasing at school.

"As a doctor, I try hard to really respect the personal information that patients share and the emotions that go along with that sharing."

Julie Hall's remarkable resilience, personally and professionally, is underpinned by her relationship with her parents.

"My parents were brilliant," she says. "I swear, when they looked at me, they truly did not see my big lip but a normal little girl. This gave me incredible confidence."

Hall's mother Avis, 65, grew up in a farming family in a small Yorkshire village. She left school at 15 and now runs a bed-and-breakfast business in the Yorkshire hills. Her father Richard, 66, also grew up in Yorkshire. He combined work as a lecturer in photography with an active political career as

a county counsellor. Indeed, many of Hall's family were active in local causes: "I think that was a strong influence in my upbringing. I was brought up as a Quaker so that the ideas of social justice, of treating people equally and having equal access to opportunities, ran strongly through my childhood."

While neither of her parents went to university, Hall says there was a strong emphasis on education. "My mum spent a lot of money on books and spent time reading to us and just showing us things," Hall remembers. "She took us to the theatre and scrimped and saved for piano lessons."

The education message was effective. Hall's sister Nina, 41, is a lawyer in London and brother Anthony, 40, an operating theatre department technician in Wales.

Most significantly, Hall's mother repeatedly encouraged her children to explore the world beyond Yorkshire and to give things a go, whether they worked or not. This message was summed up in an apocryphal family story about the time Hall's parents, newly married and in their early 20s, took refuge



THE 1918 PANDEMIC,
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from a rainstorm in a travel agency. Three hours later they had tickets to Canada where they lived together for a year, never having left Yorkshire before, until they returned to the United Kingdom to have their first baby, Julie.

It was this often-told story about her parents' adventure as a young couple that Hall recalled when she was asked to go and work in China during the SARS outbreak in 2003—2004. Her husband, Chris Lark, 46, a former paramedic and health manager who works in immigration for the British High Commission, and their two young children, now 8 and 6, went to live in China as well.

"When we went to China we took a plunge as a couple, just as my parents had done when they travelled to the other side of the world to Canada 40-odd years ago," Hall muses. "In many ways, when we went to China it was a risky thing to do but it was that little voice at the back of my mind saying, 'Have the courage to do it.'"

Hall pays a warm tribute to her "lovely husband", who has now accompanied her to the Philippines with the children as well: "I couldn't have done any of this without him. He's there for the kids. He's their constant. He has this inner strength and confidence that supports everything we do."

Which brings us back to the weighty responsibilities of Dr Hall's current job. What is SARS and how serious was the 2003—2004 outbreak? Is another pandemic possible like that of 1918?

As Dr Hall carefully answers my questions and discusses the ever-mutating viruses that capture her attention every hour of every day, her forensic precision reminds me of Sherlock Holmes and her foe, the virus, sounds as complex and challenging as the arch villain who tormented Holmes, Professor Moriarty.

"SARS is a nasty little virus that can spread from one human to the next causing a severe, respiratory illness, a severe pneumonia. Back in 2004, there were 8000 cases globally with about 800 deaths. It was the 21st century's

first major, unknown outbreak that had the potential to spread globally very quickly.

"The 1918 pandemic, the Spanish flu, took 18 months to circumnavigate the globe. SARS took less than 24 hours."

So what has happened of significance since then? "Avian influenza, which could eventually mutate and change into something that could spread easily between humans, is certainly something we've been focused on for the past few years," Hall says. "The risk is still there. It hasn't gone away. And history tells us that it is almost inevitable that there will be a pandemic at some point in time.

"And we have some other viruses. Nipper virus, for example, is rare but can cause severe neurological symptoms. This virus lives in bats and seems to affect humans when they are in close contact with these animals. It's a virus that is very unstable and it's changing all the time."

It is viruses that come from animals, that

are unstable and therefore often mutating and can potentially jump into humans, which occupy the minds and constant attention of international health officials like Dr Julie Hall.

Dr Hall believes another pandemic is likely but it's within our power to limit its impact if we work together as a whole region and community, across sectoral boundaries.

"It is likely that a virus will emerge at some point that can spread easily from human to human," she explains. "An influenza pandemic occurs when there is a new strain of influenza, which we're all susceptible to, that can spread quickly from one human to the next and that causes severe disease, more severe than winter flu."

How likely is it to happen?

"Nobody can answer this question," Hall begins in a measured tone. "There are a few scientists who believe that it will never happen but there are a greater number of scientists who believe it has happened repeatedly in the past.

"There are currently lots of avian influenza viruses around, circulating in birds, constantly mutating, so it is almost inevitable that we will face a pandemic again at some point."

Hall believes Australia is "well prepared for a pandemic, although there are always things we can do to improve". It is her job now to keep promoting preparedness and vigilance across our region and planning systems to reduce transmission should a pandemic occur.

The primary goal in a pandemic is to limit close contact and social interaction between people — by closing schools, for example — and to change behaviour, including increasing hand-washing and other hygiene measures. There is an important emotional component as well, which relies heavily on the capacity of trusted community leaders to communicate effectively with their citizens.

After my conversation with Dr Julie Hall, we drove to the University of NSW where she gave a lecture on the psychological aspect of managing a health crisis like a pandemic. She will continue, in her new job, to give countless presentations of this kind about strategies for engendering what she calls "a Blitz mentality", referring to the spirit shown by many Londoners under Nazi bombardment during the Blitz when people pulled together and dealt with the unspeakable.

If the challenge of a pandemic ever becomes a reality in our region, you can be sure that wherever our community leaders gather, as Churchill did in his underground bunker, Julie Hall will be there giving measured and pertinent advice. ♦