

Leaders

Bringing people together to drive change

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Mark Nicholls speaks to cardiologist Clara Chow about her career and research in cardiovascular prevention and her pride in becoming the first female President of the Cardiac Society of Australia and New Zealand

As a medical student, Clara Chow worked in remote parts of India and Bangladesh to deliver preventive cardiology programmes to villagers with few facilities and often without electricity. They were initiatives that not only benefitted the local population but also shaped her future career. In the years since, Prof. Chow has been involved in the groundbreaking PURE (Prospective Urban Rural Epidemiology) study, established cardiovascular preventive measures in Australia, worked to inspire women in the field of cardiology, and most recently has become the first female President of the Cardiac Society of Australia and New Zealand.

Science and people

Born in Sydney, Australia, in 1972, the daughter of a Japanese mother and Chinese father, her interest in science, maths, people, and solving problems saw her gravitate towards medicine.

'I added that up and that meant medicine and doctoring', she said.

Prof. Chow did her medical training at the University of Sydney (1991–97) but the move towards cardiology came later, following the experiences that shaped her preventive outlook. A year off saw her work as a journalist in Japan where an assignment to cover the first HIV conference in Asia aroused her interest in research and preventive measures before heading to Bangladesh to do voluntary work.

'Those experiences exposed me to international public health, seeing the challenges of healthcare in low-and-middle-income countries through latter part of my medical school', she explained.

She joined the cardiology training programme at the Royal Prince Albert Hospital in Sydney, where cardiologist Dr Anuska Patel introduced her to the nearby George Institute for Global Health of the University of Sydney where she completed her PhD in cardiovascular epidemiology and international public health. At the George she developed strong research methodology with leading international health researchers including her supervisor Prof. Bruce Neal and later Prof. Anthony Rodgers. Her PhD studies centred on developing a cardiovascular prevention programme suitable for low-

income settings and saw her spend time in the Andhra Pradesh region of India (Figure 1).

'I had all sorts of fantastic experiences there, setting up clinics with no energy so we had to drag a generator to run the ECG machine and echo machine', she recalled. 'It was a really interesting time but it was fun and I enjoyed myself as well as having the opportunity to run a preventative cardiology programme in such an untouched setting'.

International public health

Having met her husband in medical school, she accompanied him to Glasgow where he did his fellowship and spent a year at the British Heart Foundation Cardiovascular Research Centre before writing to Prof. Salim Yusuf at McMaster University in Canada.

'I distinctly remember being interviewed on a park bench outside the conference centre in Barcelona by Salim', she said. 'I wanted to go and learn clinical trials from him but he was fascinated by what I had done in international public health and wanted me to work on his PURE study'.

On route to McMaster to do her Postdoc in clinical trials and cardiac imaging, she spent a few months at the London School of Hygiene and Tropical Medicine with Martin McKee in 2007 learning about social epidemiology and policy work.

'Salim also sent me to Harvard School of Public health on the way through way to get some exposure to environmental epidemiology in his plan to get me involved in the PURE study', she added.

On her return to Australia, she joined the Westmead Hospital as a cardiologist in 2010 and returned to the George Institute, becoming Director of its Cardiovascular Division. In 2018, she founded the Westmead Applied Research Centre (WARC), which she is currently Academic Director of in the Faculty of Medicine and Health at the University of Sydney. She is also the Program Director of Community Based Cardiac Services at Westmead Hospital, dividing her time equally between clinical work and research.

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Figure 1 Clara Chow (left), and at work in a village setting in Andhra Pradesh, India.

Inspiration and influence

While a number of people have influenced and inspired her, Prof. Chow reflects on the impact of her mother Misuzu, who was raised in Japan in a time when it was not conventional for women to go to high levels of education. Having obtained a place as one of only seven women among a faculty of 1200 at a prestigious Japanese university, she later went to the University of California at Berkeley before emigrating to Australia in the year Prof. Chow was born.

'The course of her life was if you want to do something you can work it out and find a way', said Prof. Chow. 'That inspired me to think that there is nothing one can't do, you just have to dream what you want to do and work your way through it somehow and find people to help you along the way'.

Prof. Chow has also been inspired by cardiologist Sania Nishtar from Pakistan through her work with the World Heart Federation (WHF), as well as Prof. Yusuf, a person who has made 'massive differences in how we practice cardiology'.

Cardiovascular prevention research

Prof. Chow's research focuses on the prevention of cardiovascular disease, innovation in the delivery of cardiovascular care, and the evaluation of digital health interventions. With expertise in the design, delivery, and implementation of clinical trials, her skill set is in epidemiology and international public health.

In her current role, Prof. Chow, who continues to collaborate with the PURE programme,¹ heads a programme focused on opportunities for prevention at the clinical interface, from post discharge, managing and supporting patients in the community and innovation in models of care, with a strong emphasis on digital health.

Work she is particularly proud of is a recent study looking at a quad pill—a single pill with four quarter doses of different blood pressure lowering medicine² as an alternative approach to managing hypertension, with the results due to be presented as a late breaking trial at ESC 2021.

Another initiative, in partnership with the Australian National Heart Foundation, is the roll out of the first digital health support programme for patients with heart disease in Australia and follows the TEXT ME trial.³

'It is a text message-based support programme for patients with coronary heart disease. Based on our clinical trial that found patients randomised to the programme had lower blood pressure, LDL cholesterol and did better on smoking, diet and exercise. That is something I am very proud of here in Australia', she said.

Future projects centre around models of care and implementing rapid access clinics in Australia, while more broadly, she remains concerned about the 'implementation gap' in cardiology, despite half a century of endeavour.

'We are still trying to control blood pressure', she said. 'Hypertension is still a leading cause of morbidity and mortality globally yet we have had blood pressure drugs for years, so we need to get these implementation problems addressed'.

Broader engagement

Prof. Chow was elected the first female President of the Cardiac Society of Australia and New Zealand in August 2020, having joined the society's board 6 years ago, and believes that it is now time to 'think differently' about the role of women in the profession.

'It was a little crazy that the society had not had a woman president before but I am proud to have been able to take up the role', she said. 'For early-career women coming through, I am excited to see that they now feel they can go far'.

Relishing the opportunity to shape and influence events, by bringing people together, a key goal of her tenure is to improve engagement with the community and all sectors of the membership and steer the society away from its more traditional outlook. Despite COVID, society membership has increased in recent months; there is a new website and a society app, which includes a Forum function to enable the membership to better connect. She has also set up the society's first diversity committee and is now implementing a diversity policy.

Prof. Chow also works with the WHF emerging leaders' programme and with public health preventive initiatives in Australia. Away from medicine her time is spent as much as possible with

her husband and two children, and she also enjoys bush walking and skiing.

Advice she would give to young researchers is to enjoy what they do: 'I have always said that if I am not enjoying it, I should not be doing it, and for me, a big part of enjoying what I am doing is feeling that I am making a difference'.

References

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