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COLLEGE OF MEDICINE & DENTISTRY

JCU medical pathway nurtures rural and regional health



Images: Dr Jackie Holloway is based in Emerald, while fellow 2014 JCU graduate Dr Emma Gillmore (cover) is practising in Cloncurry.

Medical school's rural focus delivers results

James Cook University's first 10 cohorts of doctors are more than twice as likely to practise in remote, rural and regional areas as other Australian medical school graduates, a peer-reviewed study shows.

The study by Dr Torres Woolley, Professor Tarun Sen Gupta and Kath Paton, published in the Rural and Remote Health Journal, reaffirms JCU's record for successfully producing health professionals for rural and regional Australia.

JCU's medical school, the first in Australia to be based outside a metropolitan area, enrolled its first students in 2000 with a mission

to address the needs of north Queensland communities. The University's innovative, rurally focused medical education program operates across a distributed network of clinical schools and other teaching sites across northern Queensland.

Prof Sen Gupta says the fact rural and regional outcomes are maintained at mid-career shows the JCU model works.

Addressing a need

The study, 'Mid-career graduate practice outcomes of the James Cook University medical school: key insights from the first 20 years', highlighted Australia's continued reliance on international medical graduates to fill positions in regional, rural and remote areas despite producing 86 per cent more domestic medical graduate numbers since 2007.

Only 53 per cent of rural Queensland's medical workforce was trained in Australia, according to the 2020 Health Workforce Queensland dataset.

Prof Sen Gupta said government support was needed to continue to strengthen training locations outside the big cities. "We've shown it's effective to train people in rural and regional locations, that many of them stay rurally and regionally, but we need continued support to increase the places and the training pathways," he said.

The researchers say their study "reinforces the importance of all components of the training pathway – every ingredient in the recipe is important – and the need for further investment in regional, rural and remote medical education across the training continuum".

Graduates of JCU's first 10 medicine cohorts are:

I More likely to practise in remote, rural and regional areas

While only 20 per cent of all Australian medical school graduates practise outside metropolitan areas, 46 per cent of graduates from JCU's first 10 medicine cohorts are based outside the big cities.

In addition, one in six graduates from the first 10 cohorts is practising in a rural or remote town. "The critical thing is that the early indicators we had from internship location and intent at graduation are being followed through into mid-career: postgraduate years (PGY) five to 14. By PGY5, most doctors are on a training path, and by PGY14 most have finished training," Prof Sen Gupta says.

Regional: Graduates from JCU's first 10 medicine cohorts were three times more likely than the national average to work in regional cities – 29 per cent compared to 9.2 per cent of graduates from all Australian medical schools.

Rural: 14 per cent of graduates from the first 10 cohorts were working in rural areas, versus 10 per cent of graduates from all Australian medical schools.

Remote: 2.9 per cent were working in remote towns, more than double the proportion from all Australian medical schools.

Graduates of JCU's first 10 medicine cohorts are:

2 Working where doctors are needed

"The rural and remote distribution of our graduates is in proportion to the population distribution, and the proportion of graduates working regionally is greater," Prof Sen Gupta says.

"About a third of the first 10 cohorts are working in regional cities, which represent about 20 per cent of Queensland's population. Typically, it's the opposite – there's a much greater concentration of graduates in metropolitan cities, where 62 per cent of the population lives, and not enough in rural and remote locations."

Prof Sen Gupta says JCU is about regional health as much as rural health: "Producing specialists and specialist GPs in regional cities is a win," he says. "We've done a very good job at providing a regional workforce, and we're doing a good job of providing a rural workforce. However, the tide was out a long way and there were a lot of vacancies to fill."

3 More likely to choose generalist careers

Just as importantly as addressing workforce maldistribution, more than half of JCU's PGY5-14 medical graduates have chosen to become general practitioners, rural generalists or generalist specialists.

"When we look at the careers, 33 per cent were in general practice, 24 per cent were sub-specialists, 11 per cent were rural generalists and 10 per cent were generalist specialists or hospital non-specialists," Prof Sen Gupta said.

Another JCU study in 2019 noted: "There is growing evidence that health systems with a generalist orientation consistently achieve a better and more equitable distribution of health outcomes across the population regardless of patient socioeconomic or geographic constraints."

4 Making an impact in the rural health workforce

The study was based on a large dataset comprising 97 per cent of graduates in the first 10 cohorts with a known practice address in Australia. "This is real data on what people actually do, as compared to intent," Prof Sen Gupta said. "It's giving us an idea not just of the careers people intend but the careers they're undertaking and the locations in which they're living, because both things are important."

The researchers say the location and specialty career data "make a strong case that JCU graduates are having a significant impact across a high proportion of communities within the JCU medical school's reference area of North, North West, Central and Central West Queensland."

Half of all North and Central Queensland towns with a hospital and/or medically led community health centre have one or more JCU medical graduates, the 2019 dataset shows.

READ THE STUDY: www.rrh.org.au/journal/article/6642

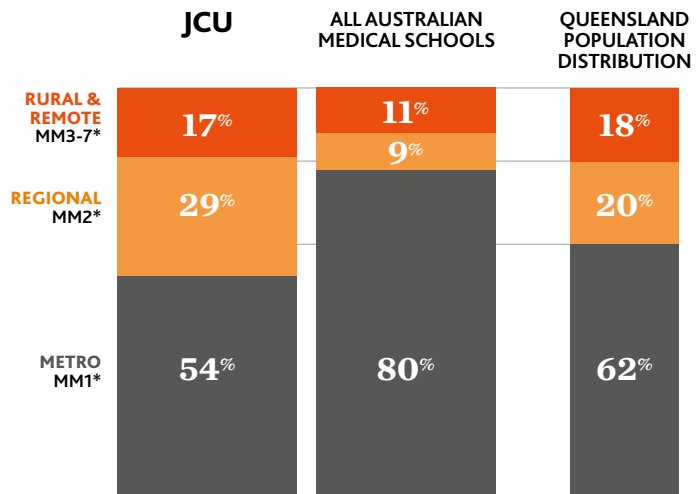


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Mid-career outcomes: First 10 James Cook University Bachelor of Medicine, Bachelor of Surgery graduate cohorts (2005-2014)

JCU doctors are:

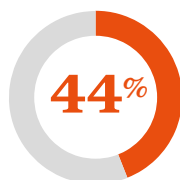
- 3 x** more likely to practise in regional areas as other Australian medical school graduates
- 2 x** more likely to practise in remote areas as other Australian medical school graduates



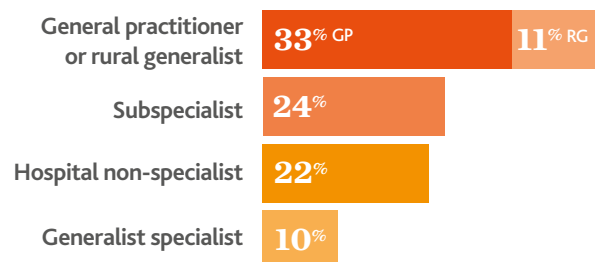
[*Modified Monash Model of classifying rurality. Queensland population figures derived by the National Rural Health Alliance, based on Australian Bureau of Statistics 2011 Census data.]



of all North and Central Queensland towns with a hospital and/or medically led community health centre have one or more JCU medical graduates



proportion of medical graduates from JCU's first 10 medical cohorts undertaking careers in general practice or rural generalism



Woolley, Torres, Sen Gupta, Tarun, and Paton, Kath (2021), Mid-career graduate practice outcomes of the James Cook University medical school: key insights from the first 20 years. Rural and Remote Health, 21 (4).

The JCU rural experience: How we do it

JCU's six-year Bachelor of Medicine, Bachelor of Surgery degree focuses on producing doctors with the skills, experience and commitment to work in underserved northern Australian communities.

This is achieved through at least 20 weeks of rural and remote medical placements for each student, a curriculum focused on rural, remote, Indigenous and tropical medicine, and a selection process oriented towards applicants from North Queensland, rural or Indigenous backgrounds as well as applicants with a strong commitment to serve.

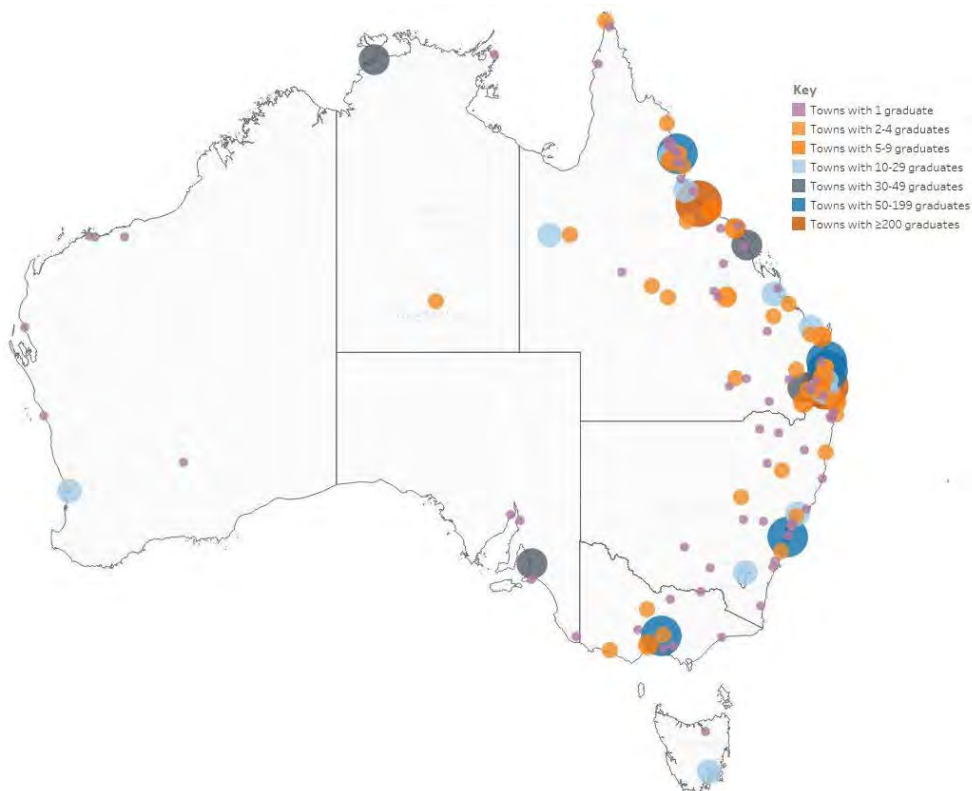
One of only two Australian medical schools who admit school leavers, JCU has a young, values-driven and diverse student cohort, with 74 per cent of graduates from non-metropolitan areas and 57 per cent from North Queensland communities at time of application.

More recently, JCU's postgraduate training in general practice and its Northern Queensland Regional Training Hubs partnership with hospitals and health services have formed a complete pathway or pipeline that enables doctors to continue their training in the north. The JCU GP Training Program, which provides formal training for general practice and rural medicine, has 470 GPs in training across a region that covers 90 per cent of Queensland.

The authors of the mid-career practice outcomes paper say the JCU medical school's extended undergraduate rural training programs and postgraduate general practice training are showing positive early results in improving rural and remote generalist medicine practice outcomes across northern Australia.

"Additional government measures such as the Northern Queensland Regional Training Hubs initiative will also be important to support and advocate for increased intern places in non-metropolitan hospitals, and in establishing more local training places for JCU and other medical school graduates who wish to train in generalist specialist or subspecialist pathways across north Queensland hospitals," they write.

Where the first 14 cohorts of JCU Medicine graduates were practising (2019)



Prof Andrew Mallett
Nephrologist | Class of 2006
Hometown: Bowen

Townsville University Hospital's Director of Clinical Research is internationally recognised for his work in identifying new approaches and treatments for genetic kidney disease. Prof Mallett was the first JCU Medicine graduate appointed professor of medicine.



Drs Courtney & Rosh Samuel
Paediatric rheumatologist & paediatric and fetal cardiologist | Class of 2010
Hometowns: Townsville; Hamilton, NZ

Dr Rosh Samuel leads the Townsville Hospital and Health Service's new paediatric and fetal cardiology service, while Dr Courtney Samuel is Australia's only paediatric rheumatologist based outside of a capital city.



Dr Nadia Trustum
Emergency physician
Class of 2006
Hometown: Aramac

Dr Trustum, a champion of rural and regional emergency medicine in northern NSW, co-founded the Tamworth Primary Course, a six-month study guide and preparation course for the Australasian College for Emergency Medicine Primary Exam.



Dr Riley Savage
Rural generalist | Class of 2009
Hometown: Dampier

Rural generalist Dr Riley Savage is the medical lead for the Weipa Birthing Project, which allows women in western Cape York Aboriginal and Torres Strait Islander communities to give birth closer to home.



Dr Aileen Traves
General practitioner | Class of 2005
Hometown: Canberra

Canberra-raised Dr Traves was a rural health trail blazer as part of JCU's first cohort of doctors, and trained throughout the Far North. She is a GP medical educator and a Senior Lecturer in General Practice at JCU Cairns Clinical School.



A/Prof Brad Murphy
Rural generalist | Class of 2005
Hometown: Gunnedah

A Kamilaroi man, Bundaberg-based Associate Professor Murphy was one of JCU's first Aboriginal medical students. He was awarded an Order of Australia Medal in 2022 for his service to community health.



Rural generalists Drs Welwyn and Priscilla Aw-Yong came to Barcaldine as JCU medical students and returned in 2018 as GPs in training. Now they lead the central western Queensland town's medical services and have put down roots in the community.

Training 'in, with and for' underserved communities

From medical students to mentors leading primary health care in the small outback community of Barcaldine, rural generalist doctors Priscilla and Welwyn Aw-Yong exemplify the intent of JCU's integrated training pathway.

When the JCU graduates were deciding where to pursue their GP training, a second-year rural placement in Barcaldine came straight to Priscilla's mind. "I got a very positive impression of Barcaldine in the four-week placement, so that's what we applied for," Priscilla says.

"Just seeing the way the practice was run and watching the doctors and how they work; they were relaxed and approachable to us students. I think that's what drew us to Barcy."

The Aw-Yongs moved to Barcaldine in 2018 and quickly became embedded in the community and advanced in their training and careers. With plenty of training and development opportunities on offer in rural settings like Barcaldine, it wasn't long before the students became teachers.

Now a JCU GP medical educator, Priscilla works across the hospital and Barcaldine Medical Centre providing care to patients and training junior doctors on the GP pathway. Likewise, Welwyn has made the most of the advancement opportunities

on offer for rural generalists. Following with the Australian College of Rural and Remote Medicine in 2020, Welwyn now works as Acting Director of Medical Services at Barcaldine Hospital and Multipurpose Health Service in addition to his work at the local GP practice.

The couple's story is a familiar one in towns across rural Queensland, where graduates have become integral to their communities' health, providing continuity of care and stability.

Welwyn loves the diversity of his combination of roles. "Barcaldine is the type of place where you have to think on your feet. Sometimes there might not be anybody else; you can't just refer them 'down the road'," he says. "You do all these investigations and emergency procedures yourself, particularly as you get into advanced skills training. You have this really broad scope of practice and that is very rewarding."

Priscilla, who completed internal medicine advanced skills training, says her aim as

a medical educator is to build a strong relationship with GP registrars. "We're sharing their successes, the light-bulb moments, and the challenges. On top of teaching, I see the role as providing mentoring and pastoral care elements as well. Living and working rurally, while rewarding, isn't all rainbows and sunshine. We're in it together."

"One of the best things about being a rural generalist is that you care for your patients through a whole journey."

Now in their fifth year at the hospital and general practice, the Aw-Yongs are helping provide the town with something it desperately needed in its access to a GP: stability. "When we arrived in Barcaldine, one of the first questions you get from patients is 'How long are you going to stay here?'. Then it was 'I'm surprised you're still here'. It goes to show that communities like Barcy get used to doctors leaving," Welwyn says. "It makes a big difference when your patients see you here for a longer time, putting down roots in the community."



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