

UQmedicine

Winter Edition 2019



Oh, the PLACES you'll go

One graduate's journey to the
World Health Organization
in Vanuatu

Curing cancer
through tragedy

• Telehealth tackles Indigenous
health challenge

• Research outcomes
prioritise safe sex



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COVER IMAGE
Michael Buttsworth – article on page 2

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MESSAGE from the Executive Dean

I am now approaching the end of my first year at UQ and I remain delighted with the productivity and positive influence of the Faculty and its partners. This past year has necessarily focused on establishing a robust and transparent governance and clear strategy for the Faculty and its organisational units. The governance work is well advanced and anchored in our purpose and values.

The governance structure facilitates a collegial style of decision making with ultimate reference to the formal delegations of the University. Some new committees have been established to better serve the work of the Faculty including Equity, Diversity and Inclusion; International; Trusts and Donations; and Honours and Scholarships committees. The Indigenous Health Committee has been moved to Faculty level and I am delighted that Pro-Vice Chancellor Indigenous Engagement Professor Bronwyn Fredericks has agreed to chair this important group. In further support of the UQ Reconciliation Action Plan (RAP) we are also appointing an Associate Dean (Indigenous Engagement) to the leadership team in 2019.

We are currently refining the work done on the strategic plan and developing a strategic intent document with an annual action plan. This document is currently under consultation but will be important in guiding our activity.

Our work in teaching and learning, research and advocacy are strong, however, I do see opportunities for growth and greater collaboration. This is particularly true in research. The global research enterprise is changing with an increasing emphasis on the construction of optimal teams to solve real world problems. These teams may not reside in a single institution or geographic region, and the problems we solve are increasingly derived from consultation with the communities we serve.

New funding sources such as the Medical Research Future Fund (MRFF) will allow the Faculty to embrace a shared approach to research. Brisbane, as a research ecosystem, has an extraordinary opportunity to leverage this new environment, and I see a spirit of collaboration that is unique to this city. Over the coming years, I hope we can further this spirit both in the University and beyond to allow us to best serve our purpose.

There are also opportunities in our teaching and learning portfolio. The Bachelor of Health Sciences and the Doctor of Medicine (MD) are both undergoing curriculum reviews which will apply the best pedagogical principles to the needs of our students. In these pursuits we need to be courageous about evidence-led change. The educational landscape is changing globally and we need to anticipate and embrace these changes.

A critical partner in these developments are the students themselves, who bring a strong and important voice to our reflections. In this regard, the Faculty has recently partnered with Central Queensland University, Central Queensland Hospital and Health Service and Wide Bay Hospital

and Health Service to examine the opportunity of end-to-end medical training in the Central Queensland/Wide Bay region of the State. These discussions are at their early stages, but are an important reflection of the importance of partnership.

So as I reflect on my first 12 months, I see that the Faculty has a strong momentum and sense of optimism for the future. This is of course as a result of the wonderful professional and academic staff, alumni and partners who work so hard to achieve our purpose – some of whom are featured in this edition of *UQmedicine*.

This edition we have taken a global outlook and have journeyed across Australia and around the world to bring these stories to you. We begin in South West Queensland with our Indigenous telehealth services and Rural Clinical School, go around the world with medical and public health alumni, before landing back on home soil to discover the lifesaving research being conducted across our schools, centres and clinical sites.

I hope you enjoy the journey.

Professor Geoff McColl
Executive Dean, Faculty of Medicine

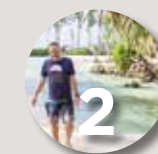
Our purpose

Through the education we provide and the research we conduct, the Faculty's medical, biomedical and public health endeavours aim to save lives and improve human health in material and lasting ways.

Our values

*Pursuit of excellence
Creativity and independent thinking
Mutual respect and diversity
Honesty and accountability
Inclusiveness and wellbeing*

Features



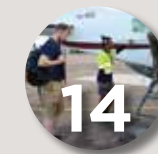
OH, THE PLACES YOU'LL GO
Graduate lands dream role at the WHO in Vanuatu



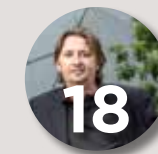
CURING CANCER THROUGH TRAGEDY
Dr Marina Reeves's research is a tribute to her late mother



CHANGING LIVES AROUND THE WORLD
How our globetrotting alumni are giving back



INDIGENOUS TELEHEALTH SERVICES JOIN FORCES
Telehealth services combine to close the gap



LET'S TALK ABOUT SEX
Dr David Whitley says safe sex should be a priority



COMMUNITY CONTRIBUTIONS
Letters from our alumni, donors and friends

Oh, the places you'll go

MICHAEL BUTTSWORTH

Michael Buttsworth turned his passion for healthcare and international development into a career at the World Health Organization in Vanuatu.

It was while working as a physiotherapist in remote and rural communities that Michael Buttsworth became consumed by an unshakeable truth.

"I was struck, as many are, by the structural barriers and challenges that prevented Aboriginal people from attaining the same level of healthcare as non-Indigenous people," Buttsworth recalls.

"You come to realise the most effective means of improving healthcare comes from focusing on prevention rather than a cure."

These early career experiences laid the foundation for Buttsworth to return to study at UQ, where he completed a Master of Public Health.

Textbooks closed, it wasn't long before Buttsworth was jetting across the globe, undertaking several roles with non-government organisations (NGOs) in developing countries.

Upon accepting a role at the World Health Organization (WHO) in Vanuatu, Buttsworth headed for his biggest challenge and career highlight.

"Primarily, I am based in the Ministry of Health in the capital Port Vila, where I provide high-level support to strengthen the health system," Buttsworth explains.

"A major component of this work is assisting in the development of the Ministry's health information system.

"One day I can be in Port Vila in meetings, the next day I can be riding in the back of a 4WD ute, crossing rivers to deliver a workshop for nurses in a remote part of the country. I suppose this is what I love most about my job."

He may be on 'island-time', but he shows no signs of slowing down.

"Working for the WHO has allowed me to tap into an enormous network of expertise, travel to global meetings, contribute to regional and global agendas, and be at the forefront of health," Buttsworth explains.

"Equally valuable has been the opportunity to work in a country like Vanuatu and understand the real-life country context.

"To tell the truth, the country has given me as much, if not more than I could give in return."



Michael Buttsworth travels around Vanuatu to meet with locals and understand their healthcare system.

Family tragedy steels resolve to help cancer patients



“I was aged 24 and my whole world crumbled”

This was the life-defining moment UQ School of Public Health Associate Professor Marina Reeves learnt her mother had been diagnosed with terminal breast cancer.

At the time, Dr Reeves had just completed her PhD and commenced work at Cancer Council Queensland.

“Mum’s diagnosis came within two weeks of me working at the Cancer Council,” Dr Reeves recalls.

“For us as family, even though it wasn’t us being diagnosed, it completely flipped our lives. It was a very challenging time.

“As Mum’s disease progressed, I decided to have my children younger than first planned, both to lessen my own risk of breast cancer, and so my children Sam and Zoe would have the chance to know their grandmother and vice-versa.”

Tragically, it was during the maternity leave period following Dr Reeves’s second child that her mother Maria passed away.

The confusion, desperation and heartache that surrounded that time will be forever embedded in Dr Reeves’s subsequent work.

Her highly-personal research focus now lies in improving outcomes for women with metastatic breast cancer by studying the role of weight, body composition, diet, nutrition and physical activity in those with the condition.

“There is basically no evidence of what women who find themselves in that position should do as far as exercise and nutrition are concerned,” Dr Reeves says.

“That group is my Mum.

“Mum had a daughter who was a cancer researcher and nutritionist who couldn’t tell her accurately what to do, because there is no data to answer the questions.

“I thought to myself: ‘That’s not good enough’.”

The lack of proven research led to all manner of treatments being recommended for Dr Reeves’s mother by well-meaning friends.

Meanwhile, a naturopath endorsed coffee enemas, which quite possibly accelerated Maria’s decline.

“Strong research is going to have profound psychological and physiological impacts,” her daughter says.

“Naturally, I want to contribute to improving the quality, and hopefully, the quantity of life that those with breast cancer experience.

“One aspect that isn’t often considered is the guilt endured by women with metastatic breast cancer.

“A lot of women live with guilt that they aren’t doing enough, or perhaps doing things to worsen their condition, but nobody can say if that is even justified.”

Although statistics paint increasingly positive signs of survival rates and life expectancy for women who have been diagnosed with breast cancer compared to past generations, Dr Reeves knows it is not all about faceless numbers.

“About 3000 women still die each year in Australia from breast cancer,” she says.

“They are all somebody’s partner, or sister, or friend, or mother.

“It’s a condition that forces people into incredibly tough positions and decisions. For a young woman it may mean delaying chemotherapy until after childbirth, or conversely, terminating a pregnancy.

“The work I do includes a lot of long hours, hard work, stress and a constant battle for funding, but I do it because I hope it will have some impact for a group of women who are really struggling against great adversity.”



Dr Marina Reeves with her father and mother.

Changing lives *around the world*

The Faculty of Medicine is proud to have many alumni changing lives around the world. Doctors, surgeons, psychiatrists and policymakers have taken their education and global outlook to the furthest corners of the world, making a difference through exceptional medical care and public health. Their work is not just saving lives; it is changing lives and communities. Meet our heroes and their healing hands.

Dr Barbara Hall

Performing hundreds of gynaecological surgeries across Africa and other developing countries has allowed Dr Barbara Hall to give countless women a second chance at life.

"It's not lifesaving, but it is life-changing," remarks Dr Hall, who has witnessed the transformative impact of even basic medical care.

"I volunteer up to four times a year, going to developing countries to operate on women with gynaecological conditions, such as uterovaginal prolapse and obstetric fistulas, and to train local surgeons."

The surgical team, consisting of Dr Hall, Professor Judith Goh and Dr Hannah Krause, will perform around 100 to 120 operations in the space of two to three weeks in Uganda.

"We only operate on women who have major uterovaginal prolapse because we simply do not have the capacity or resources to operate on more minor cases," Dr Hall explains.

These gynaecological conditions are not only physical handicaps, they are socially isolating.

"A lot of these women have been completely ostracised by their communities and are often thought to have been cursed by witch doctors.

"Doing something like fixing their prolapse or fistula means these women can be reintegrated back into society – this is what certainly changes their lives."

Training local doctors has become a large part of the work, in the hope each community can sustain the practice in their absence.

"We will always try to train local doctors when we can, however Uganda has a major shortage of doctors. In the Kasese area, there are only three gynaecologists for more than 80,000 women."

Dr Hall is involved in training gynaecologists in pelvic organ prolapse surgery in Bangladesh and Nepal, and has worked with Professor Goh and Dr Krause in Cambodia and Myanmar.

Professor Judith Goh and Dr Hannah Krause

Professor Judith Goh and Dr Hannah Krause's makeshift theatre rooms are often without running water and electricity, but for the many women who travel for days to see the Brisbane surgeons – they are a sign of hope.

Since 1995, the two urogynaecologists have been travelling to Africa and South-East Asia to perform obstetric fistulas, chronic fourth-degree perineal tears and severe uterovaginal prolapse surgeries.

Many of their patients have been ostracised and disabled by their conditions.

"These women have been suffering for months or even decades," Dr Krause recalls.

"Following successful surgery, it is wonderful to see these women once again looking forward to resuming their lives, after many years of physical suffering and social isolation."

The medical visits, pioneered by Professor Goh, have become a training opportunity for locals.

"In Myanmar and Cambodia we run surgical workshops training local gynaecologists in the specialised surgical techniques," Professor Goh explains.

"In Myanmar, there is a 1000-bed hospital which is looking to sub-specialise in urogynaecology.

"Here, we have trained six key people to perform surgeries and provide appropriate outpatient care.

"This is about looking at the big picture so that communities can sustain this level of care independently."

The two surgeons spend between six and eight weeks overseas each year, operating and running surgical training programs.



Home-grown *hero*

Dr Wendell Rosevear's constant and crusading voice has rung loud for LGBTIQ healthcare rights in Queensland over the past 40 years.

The UQ alumnus pioneered healthcare for gay and marginalised communities, putting a spotlight on the issue before homosexuality became legal in the state.

In an attempt to balance the scales and provide equal access to healthcare, Dr Rosevear and Dr David Orth created the Gay and Lesbian Health Service in 1990 and Stonewall Medical Centre in 1995.

Stonewall became a safe haven for those who were not only suffering, but left to die from their diseases.

"We responded to the HIV-AIDS epidemic that was happening at the time," Dr Rosevear recalls.

"There were no identifiable community services, no treatment options and no cure for these people – we were simply providing palliative care."

As technology and treatments advanced, Dr Rosevear found his clinic and patient base expanding to include those from all walks of life, and all sides of the tracks.

He worked in prisons between 1975 and 2005, caring for 1320 male sexual assault victims and 144 perpetrators.

"I have been given the unique opportunity to work with a broad cross-section of the community, to allow them to regain a sense of personal value.

"People who don't value themselves turn to harmful behaviours, whether that be sexual assault, drugs, alcohol or violence.

"All of my work is very focused on providing relief for these people and it is a great honour to be trusted by people who have never trusted anybody."

Survivors and 'sinners' can find non-judgemental healthcare and a real chance of recovery behind the safety of Stonewall.

"Some of the world's most-hated people will come into the clinic to address their issues – murderers and perpetrators of child sexual abuse," Dr Rosevear explains.

"Having these people address their issues means we can help prevent and end the cycle of abuse. It is always about trying to prevent future abuse, including self-abuse."

Thanks to Dr Rosevear's passionate work and fight for justice, thousands have accessed lifesaving treatments.

"UQ always inspired me to be part of the relief and change in the world," he says.

"We were always encouraged to broaden our minds and gain new experiences.

"Even though my work is diverse, I'm thankful for the opportunity it's given me to be a voice for marginalised groups. It has opened up a lot of opportunities."

He lives by his motto, 'make love infectious'.

Dr Mark Loane

The impact of Dr Mark Loane's Cape York Eye Health project is as vast and extensive as the region itself.

His team has provided optometrist and ophthalmologist services to people living in remote communities of Queensland's Cape York Peninsula for more than 20 years.

His tireless efforts have allowed thousands of residents to access basic and advanced eye healthcare, despite the isolating tyranny of distance.

"These people are entitled to capital city levels of care, and that is what we've aimed to provide," Dr Loane explains.

The coordination of this project reminds the ex-Australian rugby player of playing in a football team.

"We have a team of people with different skills, all working together to achieve one goal," the veteran of 28 international tests says.

That goal has transformed the lives of many Cape York residents who would otherwise have difficulty accessing prescription glasses and high-grade ophthalmological surgical procedures.

Governments and industry partners have invested in the project, understanding the importance of building a localised healthcare system from the ground up.

"At UQ, I was given more than just a medical degree," Dr Loane says.

"I was given the palette which allowed me to paint my own picture of what a career in medicine can look like."

Thanks to his work establishing the Cape York Eye Health project, thousands can now see the brushstrokes.



"We had to earn the respect of the locals and demonstrate that we could provide a world-class level of care"



"Their stories of inadequate conditions and resources inspire me to continue this work"

Dr Neil Wetzig

Dr Neil Wetzig voluntarily shares his surgical skills with local Congolese doctors and nurses to help improve patient outcomes at the HEAL Africa Hospital in Goma.

"I first travelled to the Democratic Republic of the Congo in 2003 and saw for myself the enormous medical needs of the population," Dr Wetzig explains.

"I was overwhelmed by the poor surgical outcomes from rural areas and knew I could make a difference through medical and surgical education if I spent more time in the Congo.

"I saw many patients, mainly young women, maimed by poor surgery and anaesthesia simply because doctors and nurses were inexperienced."

In 2015, Dr Wetzig and his team established a two-year essential and emergency surgical training program for young rural doctors.

"I now have the privilege of mentoring and training a new generation of Congolese doctors who want to lead their country out of war and provide improved healthcare for their communities.

Dr Wetzig still operates on some of the hospital's most serious cases, like a young woman who tried to take her own life by drinking battery acid.

"It took an eight hour operation but the woman survived and has since made a magnificent recovery, returning to school and university.

"She qualified as an accountant and now works at the hospital as a valued and trusted employee.

"She is married with two children and has her third child due later this year.

"This is what successful medical care can do – it changes lives and provides hope and a future, even amidst the poverty."

Dr Carolyn Russell

One of the most significant barriers to treatment for patients holding spiritual beliefs can be the fear of misunderstanding of their world views.

Dr Carolyn Russell has made it her life's work to build a safe space that unites spiritual, mental and physical health for those who choose to access her services.

"I wanted to start a clinic that understood people's Christian and spiritual world views," Dr Russell explains.

"These people were suffering simply because they held beliefs often dismissed by other healthcare professionals.

"Appreciating the context of a person's illness, especially spiritual and cultural understanding, is essential to promoting healthy change."

Dr Russell's clinic has become a welcome space for patients who are living with mental health conditions, both in Australia and abroad.

"We have expanded our teaching opportunities by training local community leaders across Asia.

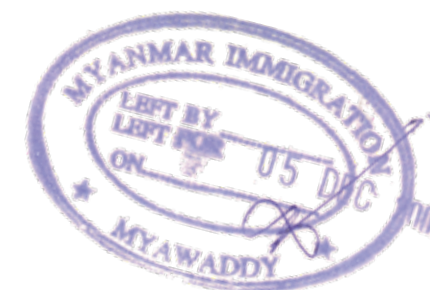
"At the end of their training, locals can return to their communities and better manage mental health conditions.

"Recently, we have been invited to Mongolia to train a group of pastors who want to upskill their awareness of mental health and bring a more balanced view to what might be a psychiatric illness.

"As I'm getting older, my greatest achievement has been to sit back and watch other people take my classes and see them expanding on the framework I've taught them."



"Training teachers has been the real joy for me; you think you're giving something up, but really you're passing it on to the next generation"



"I've always strived to pursue academic and research activities that will bring justice to marginalised populations"

Dr Amanuel Alemu Abajobir

Dr Amanuel Alemu Abajobir has made significant contributions to the Ethiopian public health system, improving the health outcomes of its most vulnerable populations.

He has been working with the Ethiopian Public Health Institute (EPHI) to lead several major research projects, assessing maternal health and chronic kidney disease.

"Recently, I have been engaged with local health services to try and better understand the overall effects of chronic kidney disease, as it has become an emerging clinical and public health concern."

"I want to empower the next generation of scientists to measure the impact of development interventions and translate these research findings into better public policies."

The School of Public Health alumnus is currently working with the Africa Population Health Research Centre to develop and test new models of healthcare delivery for populations with disadvantaged maternal and child care.

In photos

Sporting affair

UQ Senate member and fourth year medical student Thomas Mackay, pictured with fellow student Bryn Rohdman, scrubbed up nicely for this year's Sports Day.



Pink ladies

The Redcliffe Pink Snapdragons visited UQ's Centre for Clinical Research and joined Dr Jodi Saunus (far left) for a research update. This group of dragon boat racers and breast cancer survivors generously support the research of the Brisbane Breast Bank.



Donor impact

The Lions Medical Research Foundation toured UQ's Diamantina Institute and heard about the impact of their funding. Pictured from left to right: Denise Jackson, Narelle Parkins, Graham Jackson and Allan Turner, Chairman.



An evening at the Mayne Medical Building

Pictured from left to right: Deborah and Dr Jeffrey Forgan-Smith, Professor Brett Emmerson and Dr Julie Humphries enjoyed seeing the progress of the building's refurbishment.



East Coast Forum Luncheon

The event brought local business leaders together to learn how to further medical research through partnerships. Pictured from left to right: Mr Michael Johnson (host), Diamantina Institute Director Professor Paul Clarke, Professor Fiona Simpson and Professor H. Peter Soyer.

Stroke research in London

Alumni and friends attended a presentation on stroke research and care, hosted in collaboration with the Institute for Molecular Bioscience. Pictured from left: Professor Michael O'Sullivan (speaker), Zsuzsanna Custance and UK Trust partners Nicholas Shiren and Matthew Custance.



High achiever

Congratulations to UQ MBBS graduate Adjunct Associate Professor David Francis, elected President of the Australasian College of Dermatologists.



Health Matters Lecture

The breast cancer lecture illustrated the importance of keeping research efforts focused on prevention. Pictured from left to right: Professor Charles Gilks, Dr Graham Colditz, Pat Cox, Professor Marina Reeves, Executive Dean Professor Geoff McColl, Professor Liz Eakin and UQ Vice-Chancellor and President Professor Peter Høj.



Academic excellence

Executive Dean Professor Geoff McColl celebrated academic excellence, opportunity and philanthropy with students and donors at the Prize and Scholarship awards.





Table returned ahead of Mayne event

A historical table, which sat proudly at the Mayne family residence in the 1800s, has found its home at UQ's Faculty of Medicine.

Formerly the dining room table of the Maynes's Auchenflower residence 'Moorlands', it was gifted to the University in the 1890s.

It served part of its history as the meeting place of Queensland's greatest minds as the UQ Senate table, until it was sold in 1970.

The Mayne Inheritance – a 1997 biography about the Mayne family's legacy – detailed several references to the table, but the author had been unable to track down its location until now.

Fortuitously, the table had found its way into the heart and home of a new family.

UQ architect Mr John Maccormick privately acquired the table from the University in the late 1970s.

The Maccormicks kept impeccable care of the enormous cedar dining-room table and captured its history with an engraved bronze plaque.



UQ architect
John Maccormick

When it was time to downsize in January 2019, the Maccormicks reached out to UQ and shared the historical significance of the table.

With the current refurbishment of the Mayne Medical School building underway, it was fitting the table returned back under the roof of its original owners – the Maynes.

UQ Faculty of Medicine Executive Manager Marni Jacoby believes it is opportune timing.

"It was serendipitous the table could be brought back into our care at the same time we have begun refurbishments," Ms Jacoby explains.

"Once building refurbishments have been completed, we aim to relocate the table to the Executive Dean's office.

"It will take pride of place on Level Two of the Mayne Medical Building."

The restoration of the Mayne Medical Building at Herston is due to be completed in March 2020.

Ceasing seizures: the energy boost holding epilepsy at bay

School of Biomedical Sciences researcher Associate Professor Karin Borges is finding a more straight-forward approach to the treatment of epilepsy, a debilitating neurological disorder.

You may be familiar with the ketogenic ('keto') diet for weight loss, but an even stricter version of the low-carbohydrate, high-fat diet is also widely used to help control epileptic seizures in children.

Many people with epilepsy find the strict dietary regimen difficult to follow due to the medical supervision required and highly-restrictive food choices.

Hunger and low energy are also side effects of the ketogenic diet, since the body's main energy source, carbohydrates, are kept extremely low.

Dr Karin Borges and her team recently completed two clinical trials at the Queensland Children's Hospital and the Royal Melbourne Hospital, demonstrating promising results for a less-restrictive alternative treatment.

"People living with epilepsy need extra brain fuel to prevent and recover from seizures," Dr Borges explains.

"If you have less energy in your brain cells, you are more likely to have a seizure. Not only that, but it will also be harder for your brain to recover.

"In the lab, our research team discovered that medium chain triglycerides (MCT) – oils that can be added to regular meals – delivered an alternative source of energy to the brain.

"In addition, we found that MCTs could provide similar protection against seizures as the ketogenic diet."

Even more encouraging, patients on the trial did not experience any of the typical side effects of anti-seizure medication, such as tiredness, behavioural disturbances or rashes.

"The next step is a large-scale clinical trial. Later this year we will apply for a Medical Research Future Fund grant to help fund an international study."



For information on the clinical trial, visit bit.ly/UQBorges.



Indigenous telehealth services *join forces*

UQ's Centre for Online Health (COH) has united its telehealth efforts to provide better health care for Aboriginal and Torres Strait Islander communities.



A mobile van visits local Indigenous communities to conduct routine ear and hearing screening services.

COH Director Professor Anthony Smith is leading several major telehealth research projects, providing remote communities in Queensland with improved access to specialist services for common medical conditions such as ear diseases, diabetes and dementia.

"The COH has been working with various Indigenous communities since 2006," Professor Smith explains.

"Our early work began in Cherbourg, where we pioneered a mobile screening service (van) for the routine assessment of ears and hearing function in young children.

"What began as a research project has continued into a 'community-driven' telehealth service, which is accessed by hundreds of school-aged children in the Cherbourg and South Burnett region every year."

The success of this telehealth project inspired the COH to branch out into other health disciplines to address other identified needs in Cherbourg, Charleville, Cunnamulla and the Torres Strait.

"We are currently implementing telehealth strategies to improve access to specialist aged-care services for carers and people living with dementia.

"Our focus is on empowering health service staff in these communities through training and support.

"The skills and experience gained then remain in the community, where local staff can deliver their own education programs, conduct dementia assessments and prepare cases for telehealth consultation."

The use of videoconferencing and other digital health technologies is helping to bridge the gap in healthcare.

"A videoconference appointment can bring together the patient, the health workers, the local medical team, and the specialist all in one room – without the need for a full day of travel by car.

"These interactions also offer valuable training opportunities, the sharing of information, and a collaborative approach to the delivery of care."

The tyranny of distance had isolated many of these remote communities from equitable health care, where medical conditions could manifest for months without proper treatment.

"Someone might have to wait three months before they can see a doctor about their diabetes or talk to a dermatologist about a worrying skin lesion if they don't want to travel to the city.

"We know from published reports that Australians living in rural and remote communities experience higher rates of disease and lower life expectancy when compared to people living in major urban locations."

Leaving the community for a specialist appointment is no small feat for locals, who face increased financial pressure and fear of the unknown.

"Many people do not like leaving their homes – and travelling to and from the city can be an expensive and scary prospect.

"Telehealth enables more equitable access to similar specialist health services which can be typically expected in a major city hospital.

"The success of our telehealth projects comes from a grassroots approach which encourages collaboration with community healthcare workers, elders and other stakeholders.

"We don't see ourselves as a standalone unit that goes into a community, offers a solution and then leaves.

"Our work is based on strong relationships with community and a shared approach to solving health-related problems which are important for the community.

"Our research helps us better understand how different models of care work within Indigenous communities, and the role of telehealth in various settings.

"Most importantly, we nurture the partnerships we have developed and enjoy seeing the benefits continue beyond the life of individual projects."

UQ's Centre for Online Health is a foundation centre of the Centre for Health Services Research.



Image: © iStock.com/tornielala

Mapping the *health futures* of Queensland families

The health evolution of Queensland families will be mapped over the next three decades, to establish a link between risk factors and overall health outcomes.

The Mater-Queensland Family Cohort study will follow 10,000 families from pregnancy to adulthood, investigating the causes of disease using biological data.

Mater Research Institute-UQ (MRI-UQ) Principal Investigator Professor Vicki Clifton says the study will focus on life's most formative years.

"This will take a snapshot of Queensland's reproductive age population and look at how different physical and environmental influences affect the health of families in the short term and as they age," Professor Clifton explains.

"The findings will enable us to model future health service requirements to meet the needs of our ageing, reproductive population, and demonstrate the types of paediatric services our children may need as they grow up.

"The research will also look at atmospheric pollutants and track how these environmental factors influence the health of parents and children.

"Mapping this data will show how climate change is affecting the health of Queenslanders and help inform environmental policy.

"We aim to identify how we can introduce preventative measures that influence the health of our children in a positive way."

Preliminary research into placental genes has already predicted which babies will develop an allergy as they grow.

"Knowing these genes exist enables us to introduce simple practices, such as encouraging breastfeeding for the first 12 months of life and introducing foods that may cause allergy at an early age.

"Findings from this research will allow us to develop new diagnostic tests, predict future health outcomes and introduce ways to prevent those outcomes so families live long and healthy lives".

The protocol is being piloting at the Mater Mothers Hospital. Families can enrol by contacting qldfamilycohort@mater.uq.edu.au.



Learning from our *outback* lands

A rural placement in a remote community in Queensland proved to be a rich learning and cultural experience for medical student Joshua Sheehy.

As part of his third year placement, Sheehy went three hours north-west of Brisbane to Cherbourg – a community with only 1200 people.

He came away with significant respect for the opportunities that come from practising medicine in remote locations.

"Cherbourg has one main road and you can drive across town in two minutes; but for a community of its size, the health presence and hospital is quite significant," Sheehy says.

"There is an emergency department, wards and a GP centre at the hospital, as well as a Women's and Children's Clinic, and a Mental Health Clinic next door."

Working in the Cherbourg community offered Sheehy new opportunities from a medical perspective.

"I got to work on the Deadly Ears ENT clinic and I had an opportunity to intubate a child. I undertook initial consultations with patients and performed suturing and incisions.

"Working in Cherbourg gave me real-life insight into the cultural aspects of healthcare in an Aboriginal community.

"The elders I spoke to helped me understand that women's business and men's business is separate, and I would have to

take that into account and adapt some of my work to suit the cultural context."

Sheehy says that his time in Cherbourg helped him realise that rural experiences can add new layers of depth to medical training.

"In Cherbourg, I was in situations that required me to step up and do more decision-making than I have before, and that has been really beneficial."

To support rural scholarships, contact med.advancement@uq.edu.au or call 07 3365 5075.



Image: © iStock.com/Michele Jackson

Let's talk about sex

We don't need a return to the doom-and-gloom advertising campaigns of the 1980s, but a UQ Centre for Clinical Research scientist is urging the community to prioritise safe sex once again.



UQ microbiologist Associate Professor David Whiley and his team have played a key role in developing a new test for gonorrhoea, a sexually transmitted disease with potentially devastating consequences.

Prevalence of gonorrhoea has risen in Australia in recent years, despite the wide availability of education and effective treatment.

"Even though gonorrhoea is currently very treatable, for whatever reason the rates of infection have absolutely surged across Australia and elsewhere," Dr Whiley says.

"In Australia rates of gonorrhoea have dramatically increased in urban heterosexuals, something which we really haven't seen since before the 1980s.

"If you go by the numbers then, as a nation, we do not appear to be doing a very good job of managing gonorrhoea. We really need to understand why.

"There's no need to bring back scare campaigns like the HIV/AIDS adverts, but now that people see these conditions as manageable, sexual health is no longer in the limelight.

"People have almost certainly become complacent about safe sex."

Infertility, blindness in babies, ectopic pregnancies and premature birth can all be potentially caused by gonorrhoea, a condition that not only affects the genital area, but also the throat and anus.

It is often spread without any warning signs as infections can be asymptomatic, particularly in the throat.

Making the situation more volatile is the threat of strains that are antibiotic resistant.

The infection has developed resistance to six antibiotics during the past few decades and doctors have identified cases which have failed to respond to standard treatment.

"Ceftriaxone is the key drug used to treat infection, and we have now documented international transmission of gonorrhoea strains that are resistant to ceftriaxone, including a few cases in Australia," Dr Whiley says.

"While the cases have so far been few, it is still a very worrying development.

"If we get to a point where our antibiotics are no longer effective in treating gonorrhoea, even if in just a small percentage of the population, then it will be totally out of control.

"It's going to be difficult to ever win the battle against gonorrhoea if you have increased prevalence and reduced effectiveness of treatment.

"The first thing we really need to do is make sure that those with gonorrhoea are detected.

"We need those at risk to be tested.

"Then using our new resistance tests we want to ensure that we give the right treatment to the right people."

Treatment of gonorrhoea need not be complex if diagnosed early and correctly.

Using a test his team developed in partnership with SpeedX Pty Ltd, Dr Whiley says that up to 60 per cent of gonorrhoea cases in Australia could potentially be treated with a single oral dose of ciprofloxacin.

"The availability of these new tests can change the way we treat patients, by allowing us to reuse older drugs like ciprofloxacin so we are not just relying on ceftriaxone," Dr Whiley says.

"I didn't originally intend on gonorrhoea becoming my area of focus, although I always had an interest in clinical microbiology.

"A stint working in the laboratory at Brisbane Sexual Health Clinic in the 1990s connected me with that path of research.

"Originally, I thought of gonorrhoea as a disease from the 1960s that was long gone, but my eyes were soon opened to the realities.

"I realised the diagnostic challenges that we were facing and I guess the challenging aspects of the condition are what sustained my interest."

Although prevalence of gonorrhoea peaks in younger age brackets where greater sexual activity is common, the condition is reported across the full spectrum of age groups.

Declining condom usage and technology that facilitates a greater number of sexual partners are two likely contributors to the re-emergence of gonorrhoea as a threat to public health.



How much of the future *is down to fate?*

Born and raised in a small town in south-west Ireland, Dr Aileen McNerney-Leo's career in genetic fatalism came as a result of passion, persistence and a pinch of fate.

I have the gene.
I'm doomed anyway so
I may as well enjoy it.

I don't have the
gene, so I don't
need to worry.

Dr McNerney-Leo is now undertaking a fellowship at UQDI, looking into 'genetic fatalism' and the behaviours of people who have a genetic predisposition to melanoma.

"When someone is told they have a genetic predisposition to melanoma, will they do everything they can to prevent getting the disease, or will they think they're doomed and not employ protective behaviours like applying sunscreen?"

"People assume that because they look like dad that they'll get the same condition he had, or think they are 'off the hook' because they look like mum."

"This way of thinking is particularly prevalent in adult onset conditions like hereditary cancers or neurological conditions."

"Research into this area looks at how much people feel empowered or disempowered to engage in health-protective behaviours based on their genetic predisposition."

"During this project, I will offer members of high-risk melanoma families genetic counselling and testing for melanoma genes and capture risk perception, psychological wellbeing and health behaviours."

"It would be very powerful if those at greatest risk for melanoma engaged in an array of preventative behaviours and were vigilant in their surveillance so any malignancies were detected as soon as possible."

"Wouldn't it be wonderful if Queensland could boast that we are no longer the melanoma capital of the world?"

"I was always interested in biology in school, but studying plants just didn't excite me," Dr McNerney-Leo explains.

Babysitting a child with cystic fibrosis gave Dr McNerney-Leo a new desire to explore the human element of genetics, so she moved to London to undertake a degree in Human Genetics.

After an uninspiring lab session, Dr McNerney-Leo found herself in front of Great Ormond Street Hospital for Sick Children, where she accepted a summer studentship.

"That summer, I found my *raison d'être*: I wanted to work in clinical genetics."

In the years that followed, Dr McNerney-Leo met her husband, Townsville native Associate Professor Paul Leo, had two children, completed her master's, moved to Maryland in the United States of America and delved into research on hereditary conditions.

"Understanding how genetic conditions and genetic testing affected people's lives was my primary focus."

"I was fascinated that people could have the same risk of developing a condition but very different ways of handling the news, based on their individual experiences."

In 2006, the family relocated to Australia and Dr McNerney-Leo began working at UQ's Diamantina Institute (UQDI) as part of a gene discovery project.

After learning how to analyse enormous amounts of data, Dr McNerney-Leo identified a new gene that caused a rare form of dwarfism.

"I can't tell you how exciting that was for me," she recalls.

"After years of clinical practice, we could now find out what condition a child had, how it was inherited, what the prognosis was and the likelihood of having another child with the same condition. I was hooked!"



Lessons learnt outside the classroom

Almost every day I have some reason to be grateful for the teaching I received as a UQ medical student. But what I wasn't taught, and had to learn the hard way, was that at least some of the graduating year would need another set of skills beyond the bedside. They would need to know how to look out for other doctors who could then get on with the job of looking after sick people. These people would become the heads of clinical services in the hospitals and community practice or advocates through the Colleges, the AMA and others. Their task has been to ensure that doctors had the workplaces, the teams and the treatments they needed to meet their aspiration to give their patients their best chance.

We have all known and been grateful to those doctors who have defended and promoted our causes. We need more of them. The evidence is in – it is better for patients. And as the decisions about healthcare move into boardrooms in both the private and public sector, we need the universities to help prepare the next generation for the big jobs in healthcare. Doctors need to be decision makers in healthcare, rather than the medical advisors to Boards. These skills can be taught and learnt. How about it UQ?

Bev Rowbotham AO FAICD
UQ graduate, haematologist, donor

Vaccine education essential for public health

We are in the middle of a global measles crisis!

The resurgence of this disease is a timely reminder of the need for disease prevention.

Measles is a threat because it is extremely infectious and potentially lethal. Global gains in vaccine coverage have faltered due to erosion of public programs in countries suffering conflict, poverty and weak health systems.

The rise of hesitancy amongst parents concerned about the safety and effectiveness of vaccines is making matters worse, especially in areas where measles was once a disease of the past.

Queensland is not immune, and while numbers are thankfully small (13 cases this year so far) it is only a matter of time until the first death or serious disability occurs.

We, as educators, share a collective responsibility to ensure the next generation of health professionals have the knowledge to support parents and build a more positive environment for vaccination.

We must stand up for science, health and the importance of vaccines.

Associate Professor Simon Reid
School of Public Health

Leadership training the focus of new program

The new Doctor of Medical Leadership is a higher degree program targeted at fellows, junior consultants and general practitioners on a medical leadership track. The program combines training in medical leadership and research, offering a point of difference to graduates applying for highly competitive medical leadership positions. Another benefit is that it can be completed part-time.

The workplace-embedded research project will be supported by an advisory panel consisting of a UQ-affiliated clinical academic supervisor and a clinical workplace supervisor. Leadership training is enhanced by the opportunity to be mentored by a senior medical leader who will help candidates achieve their leadership goals.

We are eager to grow further alumni involvement in this program through mentorship or research supervision. In addition, we rely on alumni to identify potential candidates of interest.

Further information can be found at bit.ly/medicalleadership, or by contacting med.adr@uq.edu.au.

Professor Elizabeth Eakin
Faculty of Medicine Associate Dean (Research)

Reflecting on 40 years

I joined the graduating class of 1979 as a fifth-year student, following an interruption to pursue a research science degree. I decided during that degree that my preference lay with people rather than a laboratory.

This class welcomed me, and over time I joined their class consciousness. We grew close, maybe from shared challenges, as much as propinquity. We remain interested in each other's careers, many of which have been distinguished.

Our subsequent working lives and the responsibilities this involved led to a self-fulfilment and a maturing of our personalities. We became ourselves.

I feel grateful to UQ and the Faculty of Medicine in helping us reach our potential. I hold fond memories of our teachers, some inspiring, who gave freely of their valuable time. I hope we fulfilled their expectations.

It was the foundation for our following 40 years. I feel a debt of gratitude.

Dr Jeffrey Forgan-Smith
UQ graduate, donor

We want to hear from you. To be considered for publication in our next print edition, send your letter to med.alumni@uq.edu.au.

Future health leaders value their scientific background

"What can you do with a science degree?" This is a question I am often asked.

As an academic who pursued a very specific career in science, it's hard to imagine what all the different answers could be. We decided to ask the students in our Biomedical Science course about their career goals and ideal graduate positions. The results really surprised us.

This one question led to many different answers – 53 in fact.

In total, students mentioned 53 different graduate positions they hoped to achieve following the successful completion of their science degree.

Many were keen to pursue medicine, but many were aiming for careers in research, allied health and the broader scientific fields.

It begs the question – is a Biomedical Science degree just a stepping stone, or is it valuable in itself?

We asked students if the skills and teachings were applicable to their future professions.

Regardless of their desired careers, most said the skills and knowledge acquired in their degree would serve them well in their future professions.

These answers tell us that students perceive their science degree to be a valuable step in the right direction, wherever the path may lead.

Dr Kay Colthorpe
School of Biomedical Sciences Senior Lecturer

Embracing uncertainty

If there is one thing that students should expect from day one, it is uncertainty.

In medical school, uncertainty lurks in our textbooks, gleefully accompanies us in every patient encounter, and obscures our career trajectory after graduation. Like it or not, it becomes part of everyday life, as a student and later as a doctor.

Over the years, our exposure to uncertainty changes. In first year, we are aware of it when we realise you can't hope to memorise everything for an exam. In fourth year, we are immersed in it everyday on our placements, from the diagnostic dilemma to the management challenge of an undifferentiated patient.

Everyone is different but I think above all, students embrace uncertainty because to not do so would neglect the care of our future patients. Truthfully, this should not be an acknowledgement of one's inadequacies but another tacit reminder that reality checks are invaluable in our careers in medicine.

Matt Kim
UQ Medical Society President

Faculty events

2019
CALENDAR

Class of 1999 (20-year) reunion

15 June
Customs House, Brisbane

Health Matters Lecture

11 July
Customs House, Brisbane
Professor Alan Cooper
The Aboriginal Heritage Project and recent human genetic evolution

Class of 1994 (25-year) reunion

31 August
Customs House, Brisbane

Class of 1969 (50-year) reunion

6–8 September
UQ Arts Museum
Herston Campus, Brisbane and
Brisbane Convention and Exhibition Centre

Class of 2009 (10-year) reunion

21 September
Victoria Park, Brisbane

Class of 1989 (30-year) reunion

19 October
Customs House, Brisbane

Class of 1979 (40-year) reunion

1–3 November
Sheraton Grand, Gold Coast

Please email med.alumni@uq.edu.au for reunion enquiries.

Future shines bright for *multiple sclerosis*

Life changed quickly for Louise Remmerswaal after a shock multiple sclerosis (MS) diagnosis in her early thirties. It was not long before the progressive illness took her movement, independence and quality of life.

She dared to dream she would be there for life's biggest milestones, like watching her daughter walk down the aisle or nursing a grandchild for the first time.

Now, a clinical trial of a new cellular immunotherapy has made this a reality.

"The three most debilitating conditions I suffered from were vertigo, fatigue and incontinence," Remmerswaal recalls.

"Normal things, like being able to go outside and talk to people, to make eye contact or sit in a chair and look up, would make me feel dizzy and physically sick.

"That has completely gone away after the trial."

The treatment targets the Epstein-Barr virus (EBV), and is based on a theory formulated by University of Queensland and Royal Brisbane and Women's Hospital (RBWH) researcher Professor Michael Pender.

Philanthropic gifts and donations from MS Queensland enabled the trial to proceed.

"Without the tireless support and funding from MS Queensland, the Phase 1 clinical trial would not have happened," Professor Pender explains.

"The funding allows us to have full-time, specialist staff on-hand to assist patients as they are going through the trial.

"You never know how a patient is going to respond to treatment. In this case there were no significant adverse effects, but these patients still need comprehensive clinical care.

"We want to conduct the best research and have the patients' best interests at heart."

For over 22 years, MS Queensland has supported the work of Professor Pender and his team to improve the treatment, prognosis and overall quality of life for people living with the disease.

Thanks to this funding, Professor Pender and his team will be able to participate in an international Phase 2 clinical trial scheduled to commence in late 2019.

 To donate to MS research so that trials like this can continue, visit bit.ly/fundMSresearch.



Growing opportunities and improving health through generosity.

Judith Henderson knows firsthand how research can save lives. While holidaying overseas, Judith developed a bacterial infection and became seriously unwell. Far from home, she reached out to UQ's Centre for Clinical Research Director and infectious disease specialist Professor David Paterson for advice. Judith credits his remote consult with saving her life. In gratitude, the Henderson Family Foundation now funds clinical trials to stop drug-resistant bacteria.

Give now at medicine.uq.edu.au/philanthropy



NOT IF, WHEN.
THE CAMPAIGN TO CREATE CHANGE



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