



# Hearing clearly

## MACQUARIE UNIVERSITY AND COCHLEAR

The partnership between Cochlear and Macquarie University aims to build a global hub for new developments in hearing healthcare. The alliance of the two organisations supports the ongoing development of a world-class centre specialising in communication technologies and practice, with translation through to the clinic. This is a multifaceted partnership with engagement across all faculties of the University and across research, learning and teaching (including student placements and professional education), and advocacy around hearing healthcare.



### CO-LOCATION

Cochlear's global headquarters and manufacturing operations are located in a purpose-built facility on the Macquarie University campus. This is located opposite the Hearing Hub ([www.hearinghub.edu.au](http://www.hearinghub.edu.au)).

An initiative of Macquarie University, the Australian Hearing Hub brings together some of the country's leading hearing and healthcare organisations to collaborate on world-leading research projects. The Hearing Hub unites researchers, educators, clinicians and innovators with expertise in linguistics, audiology, speech pathology, cognitive and language sciences, psychology, nanofabrication and engineering sciences.

### A TRUE STRATEGIC ALLIANCE, SUPPORTED BY SHARED GOVERNANCE

From 2016, Cochlear and Macquarie University have put in place a joint steering committee for the partnership. This is composed of senior executives from each organisation and meets monthly, reporting directly to the Macquarie University Vice-Chancellor and Cochlear CEO. This group decides on matters of strategic importance such as investment in shared research programs. It provides oversight of the relationship and allows for rapid decision making at the highest levels.

In 2016, Cochlear's inaugural Global Research Symposium was held in conjunction with Macquarie University. Using both Cochlear and University facilities across campus, this event brought together more than 200 international experts from the audiology community in a world-leading symposium on hearing. The aim was to identify new opportunities for collaboration, and discuss the latest research and future directions to enhance patient outcomes.



### STUDENT PLACEMENTS VIA PACE (PROFESSIONAL AND COMMUNITY ENGAGEMENT)

To date, more than 200 Macquarie University students have completed placements with Cochlear for academic credit. This is across disciplines as varied as engineering, psychology, law and accounting.

## BUILDING LONG-TERM INTERACTIONS WITH AN INDUSTRY RESEARCH PARTNER

A number of joint research programs are co-funded each year in areas of mutual interest, as agreed by the joint steering committee. These studies are used to generate data, which may then be used to support applications for significant public funding. These programs provide Cochlear with immediate access to the specialised research resources of the University in areas such as:



HEALTH  
ECONOMICS



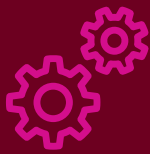
HEALTH  
OUTCOMES



AUDIOLOGY



LINGUISTICS



ENGINEERING



CLINICAL TRIALS

To reflect the special nature of the partnership, Macquarie University and Cochlear recently announced the establishment of the co-funded Cochlear Chair in Hearing and Healthy Ageing, with the goal of developing a leading platform for impactful research in hearing. Cochlear also co-funds a dedicated, full-time partnership manager with the University.



*“The strategic alliance between Cochlear and Macquarie University supports a world-class centre for hearing research and translation. This special partnership between our organisations aims to build a global hub for new developments in hearing healthcare.”*

DIG HOWITT, PRESIDENT AND COO  
(CEO from 2 January 2018)

### EXECUTIVE EDUCATION: OPPORTUNITIES FOR PROFESSIONAL DEVELOPMENT

One of the primary benefits of co-location is the ability of Cochlear staff to easily interact with the University. Programs of professional development can be readily discussed directly between Cochlear and the Macquarie Graduate School of Management (MGSM) or the appropriate faculty. Education may take the form of a customised workshop, as recently run for 35 members of Cochlear’s marketing team, or access to existing short courses, diplomas and degrees offered by the University.

Cochlear also provides guest lecturers for University courses at MGSM, and in the faculties of Science and Engineering and Business and Economics – sharing industry experience directly with Macquarie students.



### THE MACQUARIE PARK INNOVATION DISTRICT – MPID

A University-led initiative launched in August 2016, MPID is a facilitated ecosystem where researchers, entrepreneurs and some of the world’s most recognised businesses have joined forces to leverage the significant innovation and collaboration potential of Macquarie Park. Cochlear has recently joined the MPID initiative. [www.mpid.com.au](http://www.mpid.com.au)

#### FIND OUT MORE

Corporate Engagement  
T: (02) 9850 1387  
E: [ce@mq.edu.au](mailto:ce@mq.edu.au)

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# Partnering in success

## MACQUARIE UNIVERSITY AND OPTUS

As an institution of service and engagement, Macquarie University is deeply committed to developing strategic relationships with our corporate partners. The relationship between Macquarie University and Optus Singtel was formalised in 2014, and is based on the principle of mutual value.

### TACKLING GLOBAL CHALLENGES

Launched in August 2016, an Optus investment of \$5 million over seven years was matched by the University to establish the **Optus Macquarie University Cyber Security Hub** – a multidisciplinary network focusing on:

- enhancing workforce capabilities
- thought leadership
- research and innovation
- engagement.

Optus' investment in the Hub will also enable support for a Master of Research scholarship – all fees and a stipend covered – with a further possibility for the selected student to undertake a PhD.



### DID YOU KNOW?

As of May 2017, the Hub has trained more than 250 Optus employees with the program receiving positive feedback from Optus management. The tailored training has ranged from basic cyber security awareness for sales staff, through to deep technical knowledge for IT staff, as well as governance and risk management for the senior leadership team.

### GROUNDBREAKING FOUNDATIONS

Launched in August 2016, the University-led **Macquarie Park Innovation District (MPID)** is a facilitated ecosystem where researchers, entrepreneurs and some of the world's most recognised businesses have joined forces to leverage the significant innovation and collaboration potential of Macquarie Park.

As a founding partner of and major financial contributor to MPID, Optus continues to play a significant role in the district's development and ongoing strategic direction.

To facilitate this, a member of Optus attends the MPID Steering Committee where industry expertise influences strategic business decisions.

### HAVE YOU HEARD?

Optus was represented on two speaker panels at the 2017 MPID Global Innovation Summit.

Intrapreneurship and Innovation – Megan Forster, Director, Product Innovation and Value Added Services

Creating MPID – Phil Brady, Associate Director, Government Engagement and Affairs

## MORE THAN JUST AN INTERNSHIP

The **Optus Engineering Cadetship program** was established in 2014, and enables up to 10 first-year Macquarie Engineering students the opportunity to gain real-life experience. Cadets become Optus employees from day one of the program, and Optus supports the students' fees throughout their studies. Once in the program, these students apply their learnings with on-the-job work experience and, at the completion of their studies, all graduating cadets are offered ongoing jobs with Optus.

# 13

Macquarie graduates



23% of the Optus 2017 intake of 57 graduates were from Macquarie – the highest number of any university

# 100+

Singtel staff



## COMMITTED TO CYBER SECURITY

In 2014, Macquarie University subject matter experts delivered **seminars on cyber security and data analytics in Singapore**. With more than 100 Singtel staff in attendance, the seminars facilitated the development of purposeful relationships between senior staff from both organisations, who now attend ongoing thought leadership events in Singapore.

## FOSTERING THE FUTURES OF OUR STUDENTS

The University has partnered with Optus in supporting **LifeJourney** – the cyber mentoring platform established in May 2017. This function enables students to test-drive their future by living a day in the life of Australia's cyber and STEM leaders. The online program will be offered at Macquarie University through the Optus Macquarie University Cyber Security Hub to students in 50 selected feeder schools. In addition to supporting students in their STEM endeavours, the University will also sponsor teachers to take part in the program, offering professional development opportunities in the cyber security space to equip them with the skills and capability to teach 'cyber' in the classroom.

## CO-CREATING INNOVATION MASTERY

In 2016, Macquarie University Graduate School of Management (MGSM) was selected to deliver an **Innovation Mastery program** to Optus staff. As a co-created program, it was designed to upskill internal coaches to deliver innovation programs to their teams.



## AWARD-WINNING PROGRAMS

In partnership with MGSM Executive Education, Optus won the **2016 Australian Human Resources Institute Award for Talent Management**. The program involved MGSM designing and delivering two customised programs for 128 Optus leaders.



## EMPOWERING ORGANISATIONAL LEADERSHIP

MGSM delivered **organisational design workshops** in 2016, co-created to provide Optus HR business partners deeper insights into organisational design capabilities so they can provide more strategic advice to the business.



## SHAPING STRATEGY FROM THE TOP

Demonstrating the depth of the Optus relationship, the University's Deputy Vice-Chancellor (Corporate Engagement and Advancement), David Wilkinson, has been invited to join the **Optus Business Strategic Advisory Board**, which is comprised of C-suite executives from a range of Optus partners and clients. This connection fosters exposure to cutting-edge technology and global best practice in thought leadership.



Optus Business Strategic Advisory Board meets quarterly



**March 2016:** Study tour to Israel with a focus on innovation in cyber security and digitisation



**March 2017:** Study tour to Silicon Valley meeting with organisations such as Facebook, Google and Stanford University

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E: ce@mq.edu.au

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# Forward thinking

## MACQUARIE UNIVERSITY AND JOHNSON & JOHNSON MEDICAL

As an institution of service and engagement, Macquarie University is deeply committed to developing strategic relationships with our corporate partners. The relationship between Macquarie University and Johnson & Johnson Medical was formalised in July 2014, and is based on the principle of mutual value.

### TAILORED AND TARGETED

From the very beginning, both Macquarie University and Johnson & Johnson (J&J) Medical outlined specific objectives for the partnership focused on four identified workstreams:

	Talent development and student engagement
	Surgical training
	New research and development (R&D) and innovation projects
	A comprehensive range of additional initiatives across healthcare, entrepreneurship and leadership activities

### UNIQUE BUSINESS SOLUTIONS

In 2017, J&J Medical supported the Macquarie Graduate School of Management (MGSM) **Living Case Study program**, which offers students the opportunity to solve real-world business issues currently experienced by the partner organisation. J&J's Medical senior leadership team briefed the students at the commencement of the project, provided input throughout the process and attended the final presentations.



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As a founding partner of and major financial contributor to MPID, J&J Medical continues to play a significant role in the district's development and ongoing strategic direction.

### HAVE YOU HEARD?

J&J Medical was represented on two speaker panels at the 2017 MPID Global Innovation Summit.

**Intrapreneurship and Innovation** – Kathy Connell, Senior Director New Ventures ANZ, Johnson & Johnson Innovation

**Creating MPID** – Gavin Fox-Smith, Managing Director, ANZ, Johnson & Johnson Medical

## TRAINING

In 2015 J&J Medical provided a Macquarie student with the **opportunity to work as a full-time executive intern** in the office of the Australian Managing Director of J&J Medical. This internship was so successful for both J&J Medical and the student that the intern was offered an ongoing role within the company.



J&J Medical has provided opportunities for more than 10 students from Macquarie's PACE (Professional and Community Engagement) program over the last few years. In the second half of 2018, the firm will be taking 13 Macquarie students as interns across multiple areas of its business.



J&J Medical offers an Indigenous internship for a student from the University's Office of Indigenous Strategy, Walanga Muru Program. This is separate from the PACE program.



Over the last three years, J&J Medical has partnered with MGSM in the delivery of training to its staff and external partners in areas of leadership, innovation, strategy and financial management.



In support of gender equality in leadership, J&J Medical participates in MGSM's Women in MBA (WiMBA) program, by funding 50 per cent of the costs associated with the course fees for a female student undertaking an MBA from one of its not-for-profit community partners.



Isabella Billet from J&J ANZ Facilities Team (pictured top right) participating in the 2017 MPID Transport Hackathon. Isabella competed in a team alongside employees from AMP Capital, Konica Minolta and ORIX (pictured left-to-right).

## SOCIAL IMPACT

- J&J Medical globally supports the **Bridge to Employment** program, an initiative that supports expanding tertiary study and career opportunities for students from low socioeconomic high schools.
- J&J Medical brought the program to Australia in 2013, and advocated for Macquarie to join as the Australian University partner. In 2016, the first cohort of Year 12 students completed the program, which runs for three years. Throughout the program, J&J Medical and Macquarie combined to provide mentoring and learning support activities, with a 'day in the life of the Macquarie University Hospital' a highlight.
- As a founding partner of the Macquarie Business Partnership, J&J Medical works in collaboration with other businesses in the Macquarie Park district. The **Read, Learn, Succeed** Program is one such project which focuses on supporting children as they enter the primary school years, and then continues that support as they consider and determine their career options and tertiary studies in high school.

*“Macquarie University is one of Australia’s most respected academic institutions and our ability to harness its unique talents, research capability and human capital is a fantastic opportunity to provide graduates with competencies that will enhance their future careers.”*

GAVIN FOX-SMITH  
MANAGING DIRECTOR, ANZ, JOHNSON & JOHNSON MEDICAL

## RESEARCHERS AT THE READY

In 2016, Janssen-Cilag (a J&J Medical company) **commissioned** the University's Department of Statistics to develop and evaluate statistical techniques relevant to cost-effectiveness analysis of new medicines in Australia, with particular reference to cancer. Janssen invested \$120,000 in this research and arrangements are currently under discussion for a further study in 2018.

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T: (02) 9850 1387  
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# A break from tradition

## MACQUARIE UNIVERSITY AND KONICA MINOLTA

Konica Minolta has traditionally been a supplier of office equipment to Macquarie University. However, in 2014, Konica Minolta's local management invited the University's Office of Corporate Engagement to meet with several of its executives who were visiting from Japan. The organisations have now created a diverse, holistic and interesting partnership.

### TRAINING FOR THE FUTURE

The most significant aspect of the partnership is Konica Minolta's support for the PACE (Professional and Community Engagement) program. Konica is a champion of the program, both internally and externally, and now numerous managers from within the business are eager to take on Macquarie's PACE trainees.



Konica Minolta's PACE intern intake began in 2015 with seven students, progressed to 35 students in 2016 and in 2017 it has taken 23 students.



A special feature of Konica Minolta's engagement with the PACE program is the opportunity for Macquarie students to shadow its senior executives, including the director people and culture and the managing director. This is a mutually beneficial aspect of the placement where the students receive a learning experience that is deeply enriching to their academic program, while the executives receive fresh perspectives on business issues and challenges.



Konica Minolta Australia's MD has been a regular speaker at PACE events and attends a number of functions as a Macquarie guest, including a Fulbright dinner in Parliament House, Canberra, in March 2017.



Other placement opportunities for Macquarie students at Konica Minolta are spread across its departments including Client Services, CSR and Ethical Sourcing, Sales and Marketing, eLearning and Finance.

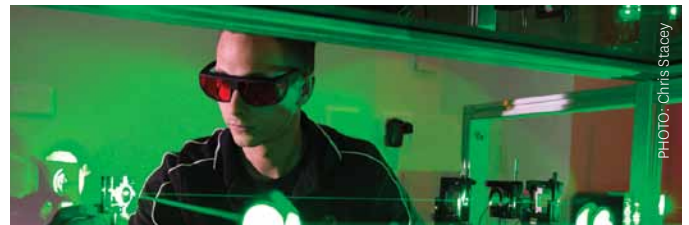


PHOTO: Chris Stacey

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As a founding partner and contributor to MPID, Konica Minolta continues to play a significant role in the district's development and ongoing strategic direction.

To facilitate this, Konica Minolta Australia's managing director is leading the MPID Social Enterprise Group, which is seeking to extend MPID's agenda into this area.

### ART WITH A CAUSE

In 2016, the University hosted a Konica Minolta photographic exhibition: 'Out of the Shadows: Portraiture of Domestic Workers in Nepal'. The exhibition featured photographs of female domestic workers in Nepal to raise awareness of gender parity issues. It aimed to encourage viewers to recognise the importance of gender parity for all women, no matter where in the world they live and work. This project demonstrates the depth and diversity of the partnership, and highlights the strong alignment of values.

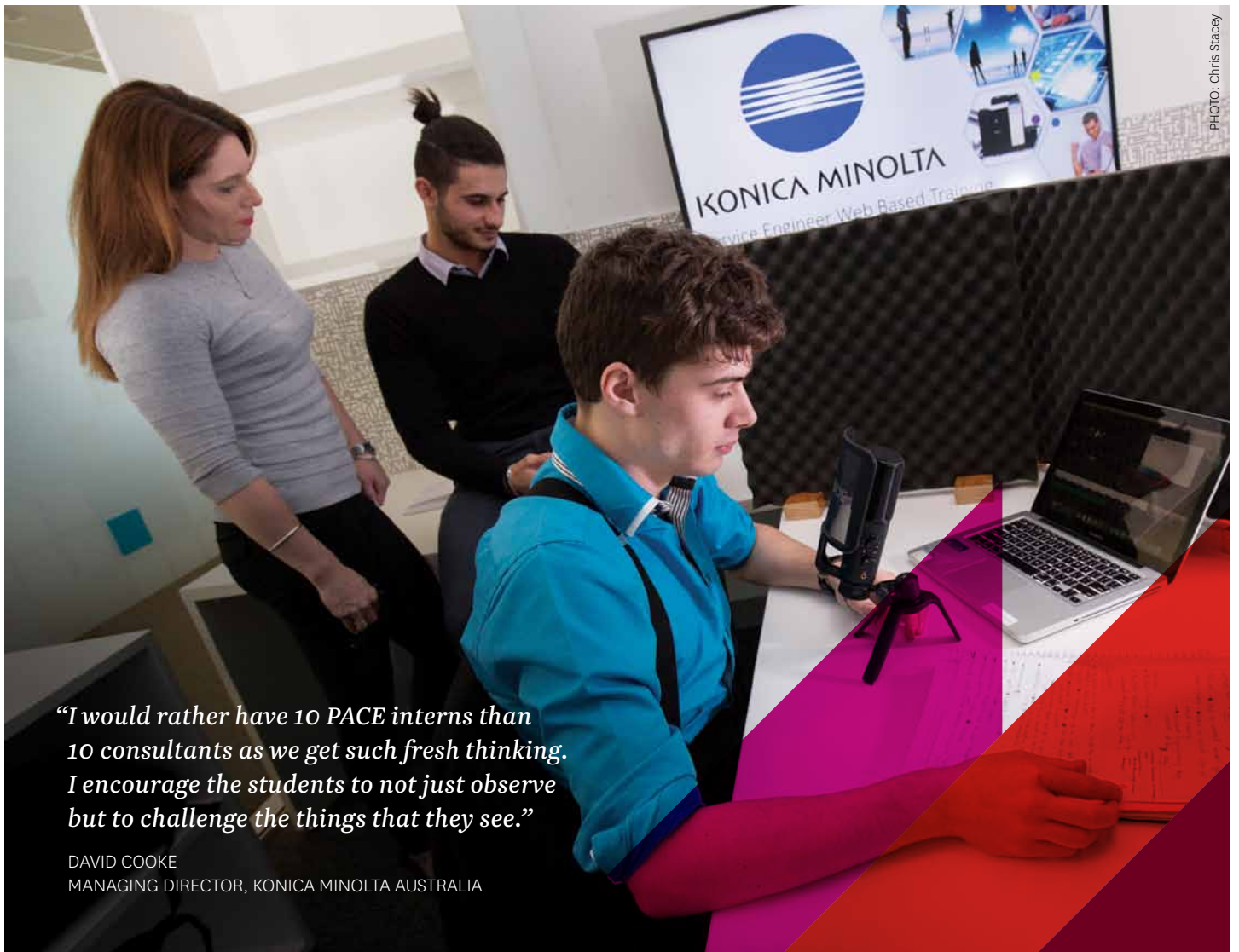


PHOTO: Chris Stacy

*“I would rather have 10 PACE interns than 10 consultants as we get such fresh thinking. I encourage the students to not just observe but to challenge the things that they see.”*

DAVID COOKE  
MANAGING DIRECTOR, KONICA MINOLTA AUSTRALIA

### HEALTHY BODY, HEALTHY MIND

Demonstrating the depth and diversity of the relationship, Konica Minolta has also engaged the services provided by the Macquarie University Sport and Aquatic Centre. Konica Minolta employees have joined the University’s sport centre, and the University personal trainers and professionals conduct four small group exercise sessions per week at Konica Minolta’s office in Macquarie Park. These sessions include cross-training, stretch and stability classes, and high-intensity sessions, and are conducted at convenient times for Konica Minolta employees.



PHOTO: Alex Craig

### ABOVE AND BEYOND

Macquarie University provides a number of services, both in Macquarie Park and further afield, that are not necessarily the traditional offerings of universities. These services range from primary and specialised health services, health and fitness services, and business and economics consulting.

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Corporate Engagement  
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E: ce@mq.edu.au  
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# Turning night into day

MACQUARIE UNIVERSITY AND PHILIPS/EMORY HEALTHCARE

Renowned for its innovative approach to medicine and health, Macquarie University has always sought to partner with those looking to lead the way and explore new frontiers. One such relationship is with Philips and a ‘tele-medicine’ project that could potentially revolutionise how hospitalised patients are monitored.

In July 2016, a groundbreaking collaboration between Macquarie University, Philips and Atlanta-based Emory Healthcare to trial an eICU centre began.

Utilising Philips technology, patients at Emory Healthcare Hospital in Atlanta, USA, were monitored remotely from Macquarie’s campus. To give the medical staff on the US ward additional support, the patients were monitored throughout the daylight hours in Sydney to cover their night shift, local time.

## LIFE-SAVING TECHNOLOGY

A state-of-the-art set-up that would enhance both the treatment of patients and the lives of doctors was installed in the Faculty of Medicine and Health Sciences and included:

- three workstations – two that were in use regularly with one as a backup
- nine screens and two PC units per workstation to monitor the patient’s appearance (via a live in-ward feed) and their vital signs such as heart rate and blood pressure.

The stations allow the Emory medical staff based at Macquarie to have almost the same monitoring capabilities as their colleagues on the ward, and while they could not physically gather observation data from each patient, the remote monitoring systems included live-feed video surveillance controlled by the Macquarie-based doctors, which allowed the zoom-in on monitors, IV drug units and other equipment in the room with the patients. This ensured the remote doctors in Sydney were able to alert the doctors in Emory to potential problems and complications they may not have been picking up in the room.

## SPREADING THE WORD

During the project, the US doctors based at Macquarie treated around 7000 patients, or about 35 patients each night.

From Philips/Emory Healthcare’s perspective, the pilot project was viewed as a great success. The seven doctors and five nurses who took part in the project are eager to extend the relationship beyond the pilot and engage

for a two-year period. Additionally, word has spread and Emory is using the project as a recruitment tool, with many doctors in the US keen to be part of this innovative project.

While the trial gave Philips the opportunity to showcase its equipment and integrated technology to hospitals, there were also significant benefits for the doctors. No longer needing to work through the night, the US doctors at Macquarie had their sleeping patterns, exercise routines, and their cortisol and other hormone levels monitored. The results clearly show better health outcomes and only further demonstrate the value of such a life-changing initiative.

## BUILDING BLOCKS

Macquarie is using the project to investigate and build its capabilities in remote medical monitoring. The University is also looking at several concepts for research projects that look at the medical economy, medical costs and innovations, and improved patient outcomes.

While remote medical monitoring is occurring in many areas around the world, this trial was unique in its application in an intensive care unit (ICU) setting. To have unrestricted ICU remote monitoring support demonstrated the full capabilities of new technologies and work practices, operating in concert to achieve better health outcomes for patients.

“This project is changing lives,” said Dr Timothy Buchman, Project Leader, Philips/Emory Healthcare.

“Everyone wants to come back, and it is fundamentally changing our ICU processes.”



6  
MONTH TRIAL  
PROJECT



27  
SCREENS IN  
OBSERVATION CENTRE



7000  
PATIENTS TREATED



35  
PATIENTS TREATED  
PER NIGHT



7  
DOCTORS TOOK PART

# BRINGING NIGHT INTO DAY

A collaboration between

**EMORY**  
eICU CENTER



**MQ Health**  
MACQUARIE UNIVERSITY  
HEALTH SCIENCES CENTRE



*“We aim to transform the delivery of care to address growing clinician shortages while improving patient outcomes. I am confident that the application of these kinds of solutions will shape the future of healthcare. If we are able to do this across continents we can certainly replicate it locally, connecting Australian clinicians with patients in need across regional and remote areas.”*

KEVIN BARROW  
MANAGING DIRECTOR, PHILIPS AUSTRALIA AND NEW ZEALAND

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Corporate Engagement  
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E: ce@mq.edu.au  
[mq.edu.au/corporate-engagement](http://mq.edu.au/corporate-engagement)

