



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.”



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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