

Case Study ACT Health (Canberra Hospital)

»We've had visits from lots of hospitals to see the webcam solution for themselves and the overwhelming feedback is that they love it. It's an intuitive, user-friendly and secure way of bringing parents and baby together over long distances.«

Belinda Connors, NICUCAM Project Officer, ACT Health Directorate



The customer

Canberra Hospital is located in Garran in the Australian Capital Territory, housing 672 beds and catering to a population of about 550,000. It was formed when the Woden Valley Hospital and the Royal Canberra Hospital were amalgamated in 1991, and was renamed the Canberra Hospital in 1996. The institution acts as a teaching hospital for the Australian National University Medical School and the University of Canberra's School of Nursing.

The challenge

Canberra Hospital Neonatal Unit serves a radius of up to 800km with around 40 per cent of its patients coming from outside the city. This presents a significant challenge to those travelling with severe illnesses but particularly for parents with infants in the Neonatal Intensive Care Unit (NICU) and Special Care Nursery (SCN).

"Babies can be with us for weeks so for parents with work commitments and other children to look after, it is difficult to spend as much time with their new baby as they would like," explains Professor Kecskes, Neonatologist, ACT Health Directorate. "This leads to separation anxiety and great stress while also making it hard for us to teach them how to best care for the new arrival."

The hospital wanted to find an innovative way to allow parents to see and bond with their baby while demonstrating the special needs involved. After seeing a webcam system in a Berlin Hospital, Professor Kecskes lead the NICU team to implement their own in-house solution, however, it was not without its problems.

"It was clunky with a poor interface and limited functionality, depending on staff to allocate and re-allocate babies to a specific camera. For example, we often move babies to a different cot if they get sick, meaning there was a risk that parents logging on could be looking at a different baby," adds Kecskes. "We wanted a more dynamic, automated solution that would offer more flexibility and reliability."

Following a tender process, the hospital elected to partner with local specialist ADTEC and Fujitsu. ADTEC is an industry leader in connecting people in urgent situations. For over 15 years, numerous organisations and companies have trusted ADTEC with their emergency alerting and communication network requirements.

The customer

Country: Australia
Industry: Healthcare
Founded: 1914
Website: www.health.act.gov.au



The challenge

In 2008 Canberra Hospital implemented an in-house webcam system in its neonatal intensive care unit to help reduce parental stress but it was clunky, not intuitive and lacking certain safety features. In 2015 the hospital wanted to deploy a more dynamic, automated solution that would offer greater flexibility, reliability and a better experience for the parents.

The solution

The hospital worked with Fujitsu and ADTEC to design a secure, user-friendly webcam solution that would be streamed via the Fujitsu Cloud to authorised viewers anywhere.

The benefit

- Camera feeds can be dynamically provisioned, ensuring the right baby is on show, increasing safety
- New features allow parents to upload or download pictures, add specific baby info and blog
- Solution has suffered zero downtime since installation, so parents can always virtually connect with their baby
- Solution enables outreach teaching to regional hospitals, facilitating the exchange of knowledge to improve the care and treatment of new born babies

The solution

The development of the solution involved careful consideration of the unique needs of the hospital environment in which there are stringent needs for security and privacy. This process was highly complex and required navigating through sensitive issues to come to fruition.

“Security and authentication are critical in this project, particularly when you consider we are streaming live images of young babies,” says Belinda Connors, the NICUCAM project officer. “We also wanted extra features such as the ability for parents to upload photos, add specific baby info and blog.”

Security measures taken in the design include SSL encoding of data streams and a secure stream that requires remote computer authentication and token authentication to access any streaming components. It also includes integration with Drupal CMS and WOWZA video streaming and system monitoring for a seamless and user-friendly experience.

The streaming server is installed on the Fujitsu Cloud, providing high reliability and compatibility with streaming protocols including Apple HLS, Silverlight, MPEG-DASH, Adobe RTMP, RTSP and HTML5. This wealth of compatibility means that the hospital can comfortably deal with any current video app or device available now and in the future.

The benefit

One of the key advantages is that it helps parents to bond with their child regardless of physical location. A survey conducted by the hospital shows that this has led to a 98 per cent reduction in stress, which in turn makes life easier for families and staff. The system also enables nurses to demonstrate how to carry out simple procedures such as inserting a feeding tube.

“It helps bring parents and children together no matter where they might be and it allows relatives around the world to virtually visit their new arrival,” continues Connors. “It’s easy for nurses to turn off when necessary or switch feeds between cots to ensure they are with the right baby. That makes for happier staff and more relaxed parents.”

Products and services

- Fujitsu Cloud Services

Canberra Hospital has also been impressed by the reliability of the ADTEC/Fujitsu solution. Whereas the previous in-house system was prone to regular downtime, the new solution has experienced 100 per cent uptime. And, in the case of any problems, there is the peace of mind of 24/7 support from both partners.

The camera system also enables outreach teaching to regional hospitals via video link. This networking improves the professional relationship with the surrounding region and also facilitates the exchange of knowledge to improve the care and treatment of new born babies.

Furthermore, it makes the hospital a more attractive choice for patients by enabling it to offer new services, building its reputation as a pioneer in the field of healthcare. It also reduces the number of people trying to access the ICU at peak times, which frees up staff to focus on healthcare rather than facilitating visitors.

Conclusion

Canberra Hospital now enjoys a cost-effective, stable and secure webcam solution that encourages bonding between parents and premature or sick babies. The success of this solution has encouraged other health care organisations to evaluate the solution.

“We’ve had visits from lots of hospitals to see the webcam solution for themselves and the overwhelming feedback is that they love it,” concludes Connors. “It’s an intuitive, user-friendly and secure way of bringing parents and baby together over long distances.

“We’ve had people from every continent bar Antarctica log on securely to see their baby or relative. The webcam solution from ADTEC and Fujitsu is really helping people connect in times of great stress.”

Prof Zsuzsoka Kecskes, Neonatologist, ACT Health Directorate

In collaboration with



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2015-10-29

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