



## CASE STUDY

# Nganampa Health Council

“customised data centre solutions  
and managed IT services”

Alice Springs-based Nganampa Health Council is proving innovation has a place in the bush with its new centrally-hosted medical practice management system, Communicare, providing health workers with access to patient information from any of its nine clinics located in remote northwestern South Australia.

Five clinics are already operational with full implementation expected to be completed by February 2008.

The initiative is funded by the Department of Health and Ageing (DoHA) as part of its Broadband for Health Managed Network program.

Hosted by the Australian Centre for Advanced Computing and Communications (ac3) in Sydney, the IT infrastructure used by each clinic is based on the highest level of security. Critical components have been duplicated to ensure high reliability of operation; if one part of the infrastructure malfunctions another will take over, eliminating down-time.

Reliable communications is essential to a centrally hosted service, which is why the Nganampa Health broadband network mixes satellite and ADSL communications technology to provide parallel and redundant communications paths.

## Aboriginal health sets the pace for patient medical record management.

The overall design of the service was carried out by Darwin-based Convergence e-Business Solutions, and Director Alistair Muir believes that access to health and related systems are being delivered to the most demanding location in Australia.

“We have specialised in building IT systems into some of the remotest locations in Australia for the past five years. The biggest problems we’ve encountered are access to networks and finding people with IT skills to operate them. With ac3 now hosting and supporting the infrastructure, know-how, reliability and affordability are no longer an issue for these remote communities.”

The Nganampa Health clinics access the centrally hosted service via NetLeverage’s ThinPoint, which provides the clinics with secure and cost effective access to the centrally hosted Communicare system through a standard web browser. No software component of the service is located at the clinics, so there is no need to provide any support at the actual clinics, other than basic PC maintenance.

Satellite technology is used as redundant communication because of the remoteness and seasonal weather conditions - flooding after heavy rains plays havoc with normal terrestrial telecommunications infrastructure. ThinPoint’s bandwidth efficiency means that the service works just as well over a satellite link as it does over terrestrial.



“It is already proving its worth. We are using consumer grade telecommunications services which is much cheaper than dedicated services without sacrificing performance, reliability or security,” said Rob Curry Aboriginal Medical Services Alliance Northern Territory’s Programs Manager (AMSANT).

AMSANT is the peak body for community controlled Aboriginal medical services, and brokers the establishment of IT services for its member organisations, including Nganampa Health Council. AMSANT also owns the equipment in the ac3 data centre.

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"We are creating a platform for the future deployment of systems for business processes, from human resources to financial management," Mr Curry said.

Building a health information system to service isolated Aboriginal health centres was a challenge. Nganampa Health Service covers 105,000 square kilometres an area the size of Tasmania - and services a population of around 3,000 people. The closest clinic is 400 kilometres south of Alice Springs and the most remote is 900 kilometres away.

A single repository for all Nganampa Health's medical health records was critical to the accessibility and quality of health provision to mobile Aboriginal communities.

"Our patients are highly mobile, but now no matter which clinic they visit the same information can be accessed. This reduces the risk of the same treatment being given twice and improves patient care. Also, medical officers are responsible for two to three clinics and they need to be able to access patients' records from any clinic," said David Busuttill, Nganampa Health Council's Corporate Services Manager.

"One of the benefits of hosting information centrally is that a patient recall or reminder can be sent out automatically and be accessed from any of the clinics. We believe this will change the landscape for Aboriginal health in the future as the centrally hosted network, combined with the patient information recall system provided by Communicare, will improve the capacity to generate statistics on prevalent health conditions in Aboriginal communities, and will lead to better planning and monitoring of health services in response to these conditions" said Mr Curry.

According to Mr Curry, Nganampa Health provides an example of how this technology can assist in improving clinical quality and safety.

"If a patient enters one clinic for diabetes treatment and goes to another clinic for the same problem, their centrally stored health record on Communicare is immediately accessible. It's about prevention, early intervention and opportunistic and planned care."

Physical mail comes once a week in this remote area but now doctors don't have to wait for the mail or rely on faxes. "We now receive our pathology data electronically, can lodge our Medicare

## ABOUT ac3

ac3 provides professional management services for computing and networking equipment to best practice standards. All equipment is housed in secure, reliable data centres at the Australian Technology Park and at Global Switch.

ac3 is a private company, owned by the NSW government and eight universities.

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claims on line and shortly expect to link into the NT Government's Health Connect program so we can receive such things as hospital discharge notes," said Mr Busuttill. "Our environment is probably the most challenging IT environment in the country as we need access to our data 24/7, we have unreliable telecommunications, our data is highly confidential, and providing IT support is difficult. Now information is transmitted securely via the public internet," Mr Busuttill said

The new health system is also providing health workers with the opportunity to value-add to patient health care.

"If a patient comes into the clinic for something as basic as a sore foot the health worker or medical officer can immediately check the patient's record on screen to see if they need any further treatment, such as when their next immunisation or a regular health check is due," Mr Busuttill said.

Development of the service has been driven by DoHA's Office of Aboriginal and Torres Strait Islander Health (OATSIH). Staff analyse data to understand the health trends in Aboriginal communities, measure the effectiveness of current programs, and understand where further investment is required.



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