

2021 - CASE STUDY

Visionflex telehealth: Helping Kimberley Aboriginal people stay in community



The challenge:

The Kimberley in Western Australia's north is one of the country's most remote areas and home to more than 100 Aboriginal communities.

A peak body that oversees the delivery of primary healthcare to these remote communities is Kimberley Aboriginal Medical Services (KAMS).

Based in coastal Broome, KAMS is a member-based, regional Aboriginal Community Controlled Health Organisation (ACCHO) that supports and represents the interests of seven independent Kimberley ACCHOs including:

- Beagle Bay Community Aboriginal Corporation
- Broome Regional Aboriginal Medical Services
- Nirrumbuk Environmental Health and Services
- Yura Yungi Medical Service Aboriginal Corporation at Halls Creek
- Bidyadanga Aboriginal Community (La Grange)
- Derby Aboriginal Health Services
- Ord Valley Aboriginal Health Services Aboriginal Corporation.



KAMS also oversees five very remote clinics:

- Balgo Health Centre
- Billiluna Health Centre
- Mulan Health Centre
- Bidyadanga Health Centre
- Beagle Bay Health Centre.

This network of community-run health clinics delivers primary healthcare services for Kimberley Aboriginal people under a specific model of care which seeks to foster social, emotional, and cultural wellbeing in the region.

Aboriginal and Torres Strait Islander health outcomes

According to the WA Country Health Service 2018 [Kimberley Health Report](#), when compared to the general population, Australia's Indigenous population experience poorer health outcomes and a higher mortality rate. They have higher rates of cancer, heart disease, self-harm, and mental health issues; higher rates of alcohol and tobacco related mortality and motor-vehicle accidents; greater rates of acute and chronic health conditions, as well as preventable childhood disease including chronic ear problems.

Kimberley Aboriginal people also experience much greater rates of potentially preventable hospitalisations, including hospital admission rates for cellulitis and pneumonia that are five times the WA average.

Many communities do not have full-time doctors on-site and appointments for medical and specialist treatment as well as hospital care, typically requires patients to travel out of community, usually alone, to larger centres such as Kununurra, Broome, Perth (more than 2,000km from Broome), and Darwin (1,800km away).



Travelling out of community without any family support can be a stressful experience for a culture that traditionally practises informed, group decision making. Travel costs are also prohibitive, with specialist visits typically requiring at least three appointments, including a pre-op consultation and post-treatment check-ups.

Language and medical terminology are additional barriers: For many Kimberley Aboriginal people, English is their third or fourth language and they may require assistance at medical consultations to translate or explain treatment details.

The vast distances between clinics, and the Kimberley's tropical monsoon climate only exacerbate the logistical challenges of delivering primary healthcare to remote communities.

The solution:

With assistance from the Woodside COVID-19 Community Fund, KAMS is currently deploying the Visionflex ProEX telehealth system across the Kimberley to support its delivery of primary healthcare to local Aboriginal communities.

Designed and manufactured in Australia, the Visionflex system is unique because it supports a range of medically approved devices that allow full clinical examinations via telehealth.

The ProEX system includes the desktop **ProEX Telehealth Hub** and the portable ruggedised tablet version, the **ProEX Mobile**.

KAMS is using the **ProEX Telehealth Hub** and **Telehealth Cabinet** solution for clinics with limited space where secure storage is required; the **ProEX Telehealth Hub** with **Telehealth Cart** for situations where equipment needs to be easily moved from room to room; and the **Backpack Kit** with **ProEX Mobile** for easy transport to remote clinics.

KAMS is also utilising a range of Visionflex approved medical devices including **Digital Stethoscope USB**; **Pulse Oximeter**; **Blood Pressure Monitor**; **Infrared Forehead Thermometer**; and **Video USB Otoscope** with LED illumination. KAMS is already using a pair of **Visionflex Video Examination Glasses HD**.



Telehealth Cart with ProEX Telehealth Hub and Peripherals

Simple, intuitive design

Easy-to-use and secure, with the click of a button, the ProEX delivers health services and medical expertise to patients – anywhere, anytime via HD video conference.

The **ProEX** medically approved digital and analogue devices, revolutionise the way a physician or nurse can examine, diagnose, monitor, and treat remote patients.

Available devices include **ultrasound, digital stethoscope, endoscope, otoscope, colposcope, pulse oximeter, ECG, thermometer, blood pressure monitor, weighing scales**, and a **GEIS General Examination Camera HD**.

Health professionals can use the ProEX with devices to perform remote general imaging; ear, nose, and throat examinations; wound management; dental examinations; ophthalmology; dermatology; mental health; speech pathology, along with many other patient observations via Bluetooth and USB-connected devices.

The software driving the ProEX delivers world-class sound and HD vision, and it can connect with multiple participants on any PC via a local network, WiFi, and the internet.

Vital patient data can be collected and viewed on-screen in real-time. The data can be securely shared, recorded, and saved to an electronic health record (EHR) system for future reference or review.



VF-Sync Software

The system's store-and-forward capabilities provide added flexibility for telehealth settings that require travel to outreach clinics. All patient data is encrypted to comply with HIPAA requirements.

Embedded with VF Sync software, multiple ProEX units can be easily programmed to communicate securely with each other and share information in a customised network.

The ProEX units have multiple ports for optimum connectivity including HDMI, USB, DVI, CVBS and S-Video inputs, as well as LAN, Bluetooth, and WiFi capability.

All Visionflex products are IEC 60601 compliant, making them suitable for clinical medical assessments. Visionflex is also certified ISO 13485 2016 for the manufacture of non-sterile image capture and data storage systems for medical devices.



ProEX
with GEIS Camera



Testimonial:

Dr Lorraine Anderson

KAMS Medical Director

KAMS Medical Director, **Dr Lorraine Anderson**, says the ProEX telehealth system and peripheral medical devices will transform the way that remote medical examinations are performed across the Kimberley.

“One of the big limitations we found with our telehealth model was not being able to thoroughly examine patients,” said Dr Anderson.

“We were unable to see into throats, or to listen to hearts and lungs. These were big issues and that is what we’re looking to resolve with the Visionflex equipment that we have purchased.

“We’ve got very good clinicians, nurses, and Aboriginal Health Practitioners on the ground in our clinics, but we don’t necessarily have doctors in every clinic, everyday and there are no doctors on call in the clinics at night; the on-call process has traditionally been by phone.”

“What our Visionflex equipment means is the patient can be seen.”



Video Examination Glasses HD

“The patient has got a clinician with them – either a nurse or an Aboriginal Health Practitioner – and they can dial up the doctor and the doctor can instruct them on what they need to do.

“They can see through the Video Examination Glasses and know exactly what the health worker is looking at. They can take photos and video, and it’s all done in real-time across the technology.

“Most importantly, the technology is going to allow, for example, the nurse or health worker to look inside someone’s throat, and for the doctor on the other end to be able to see what they are looking at so they can make a diagnosis and treat accordingly. The same applies to looking in ears.



Video Otoscope

“The other piece of equipment that we’re very excited about is the Digital Stethoscope. We can listen to heart sounds and we can listen to lung sounds and the doctor at the far end can get the health worker or the nurse to just pop the stethoscope in the right place, get the patient to breathe, and the doctor on the other end can see and hear what’s going on.

“This will transform a lot of the work we do across telehealth.”



Digital Stethoscope

Dr Anderson is careful to point out that telehealth will never be a replacement for in-person medical visits; but she believes the Visionflex system will greatly improve health outcomes for Kimberley Aboriginal people, and support Closing the Gap on access to primary healthcare services.

“It’s going to mean that there’s a better, more accurate service going into these communities. It’s going to be more timely, so patients are not going to have to wait until the doctor comes and it’s also going to mean that people don’t have to leave the community as often to seek medical care outside.

“We will be able to look after a significant proportion of people by using telehealth.”

To date, says Dr Anderson, community members have been overwhelmingly supportive of telehealth.

“They feel comfortable in the community clinic with one of the clinicians,” she explained.

“...We’ve got people who can translate; we’ve got family who can support; and it makes a big difference: it’s more acceptable and it’s safer for people.

“And we know for sure that the health outcomes are better when people can be treated in community.”

Visionflex, a leader in telehealth technology, was formed in 2014 by two Australian engineers with the goal of making world-class healthcare accessible to everyone.

You can learn more about Kimberley Aboriginal Medical Services [here](#).

You can learn more about the health of Kimberley residents [here](#).

Visionflex – delivering healthcare in remote communities.

[Learn more here](#)

For further information and a demonstration,
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Equality healthcare

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