The Department of Health and Community Services
JADE Clinicals - A Clinical Information System

THE CHALLENGE
DHCS’ doctors needed a clinical information system that would make it easier and faster to access a patient’s results no matter which clinic they were located in.

THE SOLUTION
The DHCS chose to implement JADE Clinicals, which was designed to give clinical staff a single point of access to key patient information.

THE BENEFITS
JADE Clinicals gives DHCS’ clinicians quick access to a patient’s diagnostic results and previous documentation at the point of service. JADE Clinicals also enables effective communications between health service providers, which means more appropriate care for patients after they leave the hospital and better health outcomes.

DEPARTMENT OF HEALTH AND COMMUNITY SERVICES, NORTHERN TERRITORY, AUSTRALIA

The Department of Health and Community Services (DHCS) provides a range of health services to 200,000 Territorians in five hospitals and 85 health centers across the vast geographical area of the Northern Territory. DHCS employs approximately 3,800 people to provide a range of acute, community and primary health care services.

The DHCS is committed to improving the health of all Territorians, but particularly the region’s Aboriginal people, who suffer from a range of illnesses that affect them at a much higher rate than the rest of the Territory’s population. Aboriginal people in the region suffer from a range of chronic illnesses and have a mortality rate that is three to four times that of the region’s non-Aboriginal people. Their life expectancy is approximately 20 years less than the rest of the population.

Since 1996, DHCS has worked in partnership with Jade Software Corporation to develop and implement systems in acute, community and primary care settings in order to improve the health care they can provide throughout the Northern Territory.
BUSINESS NEEDS

Since 1991, DHCS has used a comprehensive patient management system, called CareSys, in their five general hospitals. With approximately 2,500 users, the system provides extensive business-critical functionality supporting the medical, nursing and administrative personnel of the hospitals, covering the inpatient, emergency and outpatients departments, as well as radiology, operating theaters, infection control and more. CareSys is the major feeder system for the DHCS data warehouse and interfaces with a number of other systems, including a community care information system, a laboratory system, a pharmacy system, a scheduling system and a clinical repository system, while also maintaining the Northern Territory-wide Patient Master Index. CareSys was not however designed as a clinical information system to support clinical practice in hospitals.

Prior to 2000, clinicians in DHCS’s hospitals, like clinicians in many other hospitals, managed their patients’ results in paper form, which was both labor intensive and time consuming. The filing of medical records alone was an onerous task and created massive storage problems for the hospitals. The clinicians wanted a system that would not only give doctors access to results, but also record the date and time a doctor received and accessed a patient’s results. While a signature on the paper copy was doing this at the time, the DHCS was keen to find a system that supported electronic signatures in order to eliminate the need for paper copies of results and reduce their filing workload and storage problems.

The DHCS also wanted to improve the communication between their health care providers, which because the remoteness of some of the rural health centres in the Northern Territory made traditional post and fax communications ineffectual. These traditional methods of communication could not guarantee that a referral letter or discharge summary would arrive at the appropriate community clinic prior to the patient arriving for follow-up care, whereas automated electronic communications could provide that guarantee.

The DHCS already operated a number of JADE systems, including CareSys, so they approached Jade in 2000 with their business requirements and worked together with Jade’s health care developers to implement the JADE Clinicals solution.
**JADE CLINICALS ENABLES:**

- Better access to clinical information at the point of service
- More efficient and effective distribution and management of diagnostic results
- Better health services and improved health outcomes for patients
- A reduction in paper records, which means less filing and therefore lower labor costs

**JADE CLINICALS**

JADE Clinicals has been designed to give clinical staff a single point of access to key patient information. JADE Clinicals is made up of a core database repository and three modules. The JADE Clinicals database is a repository for receiving clinical and demographic information from any relevant feeder system, which is then made available to clinical staff through the three JADE Clinicals modules.

The Results Reporting Module captures results information from pathology, radiology, cardiology and any other feeder systems, and presents a clinician-focused view of the information. The Clinical Document Module enables clinicians to customize, produce and distribute patient documents, via email, fax, or hardcopy, such as discharge summaries and outpatient emergency department letters to those who need the information. The Clinical Audit System enables clinicians to monitor and improve not only their own practices but also their clinical staff through peer review.
JADE CLINICALS AT DHCS

JADE Clinicals at DHCS runs on an NT Server, using a mixture of Citrix applications and JADE Thin Clients, and has approximately 90 concurrent users at the DHCS. JADE Clinicals receives information from the DHCS’s major feeder system, CareSys.

The system provides quick access to a patient’s diagnostic results and previous documentation at the point of service, which means that doctors don’t have to rely on the patient’s paper record being available at the point of care. Discharge summaries are now automatically despatched through JADE Clinicals by email and fax on their completion, eliminating the time lag that used to occur between the completion of a discharge summary and its arrival in a remote community clinic. According to Jan Robbins, Information Services Manager for Hospitals, NT Department of Health and Community Services, “JADE Clinicals automatic faxing allows doctors to send the discharge summary without the usual manual process of sending a fax. Email is also widely used by service providers who have access to computers.”

Since implementing JADE Clinicals, DHCS and Jade have continued to work together to enhance the system to meet their business requirements. In 2003, DHCS and Jade staff developed the system’s functionality to enable the witnessing of results by clinicians. This functionality enables doctors to sign a patient’s results, using a Personal Identification Number (PIN), after the results have been viewed and noted. According to Jan Robbins, “This helps to eliminate results being missed by a doctor, which could result in an adverse health outcome for the patient”.

The witnessing of results functionality can also generate a report listing all of the results for a doctor, ward or unit that have not been viewed by a doctor. This enables a quality audit check on the management of results in DHCS hospitals, which “is an example of information technology playing a vital part in improving patient care,” says Jan Robbins.

THE FUTURE

The DHCS’ systems will continue to evolve to meet their specific business challenges. In the next 12-months DHCS will trial Electronic Prescribing, which will give doctors access to information about a patient’s medications. The electronic prescribing functionality will be seamlessly integrated with JADE Clinicals.