

Mobile Computer Project

Royal District Nursing Service is a decentralised organisation comprised of its head office in St Kilda, and 20 nursing centres and service sites in various locations across metropolitan Melbourne. RDNS' 1000 nursing staff make nearly 1.3 million visits to almost 31,000 clients a year.

In 1994, RDNS developed its Strategic Information Systems Plan (SISP) and analysed its information management process. Issues to be resolved included the likelihood of information duplication; a lag-time in client information transferral to head office's database; increasing client needs and complexity; a lack of information currency and an increased administrative burden at RDNS' 21 nursing centres.

A mobile, real-time, two-way communications system between the mobile nurses, their nursing centres and the head office was acknowledged as a way of both managing clients' health as well as improving nurses' work practices. A computerised communications system would improve both through accuracy and efficiency of record keeping and facilitating teamwork.

Although the technology to support a mobile computing system had not sufficiently evolved at the time, RDNS was aware of potential benefits. The SISP identified that a computerised system would give nurses current clinical details of any client and make diagnosis and assessment notes immediately clear during client 'hand over' between nurses. The flow of the nurses' day could be simplified with real time staff rostering and client scheduling, with mobile telephones and access to email and online database allowing them to complete tasks on the road instead of in the nursing centres after a day of client visits.

RDNS undertook years of extensive piloting research to improve communications flows through the most efficient hardware and software available. In 1997/98, the mobile computing project commenced a 12 month pilot with 80 mobile computers. This successful trial highlighted issues including the complexity of software, acceptance testing, and the importance of training. However, Apple, the manufacturers of the device, ceased production. Equipped with the knowledge and experience gained with the initial testing, in 1999 a new handheld device linking to the RDNS patient database was tested by nurses at several centres.

Again, end-user and infrastructure issues were refined through RDNS' extensive training programs supported by dedicated project staff available for nurses' inquiries. With its software programs, operating system Gemino and database system Camillus, in full operation, Hewlett-Packard's Tablet PC was selected by RDNS for its versatility, portability, and ability to meet the variable needs of the nurses. Its touchscreen, handwriting recognition technology and a detachable keyboard makes it user friendly and less intimidating for clients. It features excellent battery life and outdoors screen visibility.

The ultimate goal of improved care for clients was achieved through streamlined processes such as:

- Better communication throughout the organisation via real-time data capture and transferral
- Improved data integrity due to the information being stored at the point of collection
- Increased flexibility and control for staff in scheduling their client visits and the potential for clients to be visited earlier in the day as field staff can access all information before leaving home in the mornings
- Reduced documentation through eliminating over a dozen paper forms and reduced duplication of information
- Finally, the project could ultimately result in an extra 2,500 hours of direct nursing care every week.

The Mobile Computer Project has been cited as world's best practice by the Department of Human Services, and awarded the Digital Innovation category of the Celebrating Melbourne Awards of 2003.

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