



MIDCENTRAL DISTRICT HEALTH BOARD STREAMLINES PHARMACY MANAGEMENT WITH DIGITAL SOLUTION

CASE STUDY: MIDCENTRAL DISTRICT HEALTH BOARD

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Like hospitals everywhere, MidCentral District Health Board's (DHB) Palmerston North Hospital must carefully manage its pharmacy. Its 13 pharmacists and five pharmacy technicians must keep accurate inventory records of all medicines in stock, dispense medicines in the correct dosages and to the right wards and patients, and complete all associated billing and financial accounting in a timely way.

But unlike many healthcare providers, MidCentral DHB — which provides public health services for a region of New Zealand that's home to nearly 179,000 people — was trying to do all this with a collection of five software solutions, each from a different vendor and each unable to share data with the others. Some of these systems still ran on the 1980s-era DOS (disk operating system), received new data via a command line and could not accommodate a mouse. "It was an absolute nightmare," says Lorraine Welman, chief pharmacist at MidCentral District Health Board.

Because the legacy systems could not share data, achieving a transparent view of pharmacy stock movements was impossible. This meant medicines were often overstocked, which, in turn, led to expired — and therefore wasted — medicines.

In addition, dispensing medicines involved a labour-intensive process, one that took ward nurses from time with patients to sign off on every incoming package. Errors were not uncommon; labels were misprinted and medicines were dispensed in the wrong quantities. As a result, some processes had to be repeated as many as three times before being completed correctly. "It was essentially a guessing game," Welman says. "Everything was a workaround."

STREAMLINING TO A MODERN SYSTEM

For help moving MidCentral DHB’s hospital from the siloed legacy systems to what Welman refers to as “the modern times,” the region’s shared IT-services agency engaged Dedalus in early 2013. The work began with an implementation study and a series of planning workshops, which resulted in a project roadmap, method and scope. “We recommended streamlining by consolidating all of the systems onto one modern system,” says Dedalus project director Simon Green.

The big question was how, and by whom, this regional system would be funded. Following extensive consultation in 2015 across MidCentral DHB, it was decided that the pharmacy-management system would be adopted by another two of the Central Region’s six district health boards, and that MidCentral DHB would work directly with Dedalus. Work progressed in mid-2016, and the system launched in early 2017. “It was a smooth and successful go-live,” Dedalus’ Green says.

MidCentral DHB’s new unified pharmacy-management system is powered by Dedalus Pharmacy Management, a scalable software solution designed to accurately maintain inventory movements in a multi-organisational, multi-site, multi-store environment. The solution’s modules cover multiple pharmacy processes, including patient dispensing, extemporaneous dispensing and compounding (enabling a pharmacy to custom-manufacture medicine for a single patient), repackaging, supply chain, stock control, ward stock, drug files, labelling, reporting and security.

CHALLENGE

- A complicated mix of five mutually incompatible legacy pharmacy-management systems
- Incompatibility that led to errors, wasted medicine, time-consuming manual processes and high costs
- Systems difficult to use, resulting in low employee engagement

SOLUTION

- Replace multiple legacy pharmacy-management systems with a single unified system
- Implement Dedalus Pharmacy Management (ePharmacy in New Zealand) in-hospital dispensing system

RESULTS

- Stock wastage reduced, resulting in cost savings of NZ\$182,000 in first year, three times the expected return
- Number of prescriptions dispensed increased by 45 percent per day
- Greater visibility into stock on hand in both pharmacy and wards, lowering inventory and reducing expired andwasted medicines
- Elimination of many manual processes; improved staff engagement and clinical decision support
- Enhanced patient safety



IMMEDIATE BENEFITS

Among the many benefits have been major gains from the stock-management module. The new system enables the delivery of medicine in smaller quantities; this reduces the quantities of medicines stored in the hospital wards, lowering both costs and the risk of medicines passing their expiration date. “We can now manage all the way down to the last tablet,” says Dedalus’ Green.

Also, the hospital’s wards have been equipped with three wireless scanners to check in commonly used medicines. Later, when those drugs are dispensed to patients, information is wirelessly transmitted to the pharmacy, saving time, increasing the reliability of records and reducing dispensing errors.

Costs have been reduced, too. Welman credits the new pharmacy management solution with first-year savings of NZ\$182,000, or more than 1 percent of the hospital’s total spending on medicines. Not incidentally, that’s three times the savings originally expected.

Another benefit has been a dramatic increase in the number of prescriptions the hospital’s pharmacy can dispense. With the older legacy systems, errors often plagued prescription-related activities, requiring them to be repeated — sometimes up to three times — until they were correct. Because the new system eliminates these errors, each prescription can be dispensed accurately and in less time, streamlining outpatient services, where most bottlenecks occur.

It also means that nearly 45 percent more prescriptions can be dispensed every day — more than twice what had been expected. “That,” Welman says, “has been massive.”

Looking ahead, Welman and her team hope to continue working with Dedalus to achieve a closed-loop, end-to-end medication management system. The next steps involve integrating Dedalus’ solution with a paperless system for medication orders and rolling out an automated dispensing system across the hospital.

“Everything we’ve done so far has been met with absolute relief from the staff,” Welman says. “Engaging with our customers — patients, nurses, doctors and others — is now a pleasure. And engaging with Dedalus has given us a lot of faith in the company and what it can deliver.”





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About Dedalus

Dedalus is the leading healthcare and diagnostic software provider in Europe and one of the largest in the world. With its innovative framework of comprehensive and process-oriented solutions, Dedalus enables a revolutionary digital transformation of country-wide Healthcare Systems fully supporting the patient digital journey. Dedalus serves more than 6,100 private and public hospitals across 40 countries, through more than 5,500 highly specialized resources, of which 2000 are dedicated to R&D activities. We aim to help caregivers and healthcare professionals to deliver better care to the communities they serve and for this reason we are very proud of doing a special job, working with healthcare organisations to improve healthcare outcomes for patients.

Life flows through our software.

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