

# Improved health care with barcode technology

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Private Hospitals are increasingly under pressure to provide improvements to the quality and effectiveness of health care. This invariably results in increased costs, but the ability of hospitals to recoup these costs through increases to the price of services is made difficult due to many factors:

- The competing interests of health funds hinder the ability of hospitals to negotiate increases for services provided. Negotiations for increases are therefore long and drawn out.
- Cost of services provided is often not correlated to the rebates received by health funds for procedures.
- Increased political and media scrutiny.
- Increased competition.

So how can hospitals improve the quality of service and at the same time maintain or improve their bottom line?

The answer may well be partly found by adopting barcode technology into many of the hospitals business processes.

## Bar-coding applications

Bar-coding is a mature technology that has been successfully used by the fast moving consumer goods market for many years to improve efficiency by automating the data capture function. Whilst the business of running a hospital can in no way be likened to a supermarket store, the ability to encode valuable information into a machine readable bar-code has many applications in the hospital setting.

There are huge potential savings from adopting automated data capture using barcodes for controlling supply chain costs. Most suppliers label their products with bar-codes, however, in the hospital setting, bar-codes are generally not used in practice. By implementing processes that support bar-coding technology, hospitals can track their inventory down to individual storage areas within wards, and, where applicable, usage can be apportioned down to individual patients (eg pharmaceuticals or medical and surgical devices). The benefits of doing this include:

- Improved management of supplies replenishment

- Improved inventory management down to individual wards
- Reduced wastage (numerous studies have reported waste of 30% or higher)
- Better reporting of costs down to individual patients (supplies can be accurately apportioned to each patient)
- Improved cost control

In terms of patient care, bar codes are gaining acceptance in hospitals around the world, from patient wristbands to automatic dispensing and recording prescriptions. Integrating bar code data capture technology into patient care applications, provide care givers using portable handheld devices with a critical tool for reducing medical errors – simply by capturing the bar code and verifying the information at the point of care.

## The Universal Product Number (UPN)

Increasingly, hospitals are purchasing their supplies using E-Commerce. The effective transmission of electronic data, however, relies on accurate information so that hospitals can communicate to suppliers the exact product that they require. The UPN is a unique number that is assigned to products to unambiguously identify the products in the supply chain, thereby simplifying product distribution. The UPN is indeed the number that is represented by the bar-code placed on the product.

The UPN repository, which is a central database of health supplies is maintained by the Health Industry Business Communications Council (HIBCC), a not-for-profit organisation that develops and provides standards based products and services to the health industry. HIBCC AU, the Australian affiliate (read adjacent boxed article), is currently creating the database for Australian products, and this will be available to its members in June/July 2002.

The potential savings that can be achieved through the implementation of simple and reliable bar-code technology are substantial. At the same time, bar-code technology has the potential to improve the quality of care through reduced medical errors and improved processes in the treatment of patients.

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## Health Industry Business Communications Council of Australia (HIBCC AU)

*The Australian affiliate of the Health Industry Business Communications Council (HIBCC) has recently commenced operations. HIBCC AU Incorporated has been established as a not-for-profit standards organisation providing bar-coding and e-commerce standards to the health industry.*

*A major initiative of HIBCC AU is to create the Universal Product Number (UPN) repository for the Australian market. The UPN is the preferred numbering standard amongst suppliers of medical, surgical and diagnostics equipment, and the UPN repository in Australia will provide suppliers and their customers, the health service providers, with a valuable tool for supply chain management.*

*In addition to the UPN, HIBCC AU will also provide education and training, implementation advice and other services around the HIBCC suite of standards, including HIBC bar-coding, EDI and XML.*

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