



## DHBNZ Safe and Quality Use of Medicines Group Position Statement Barcodes 2005

### **Background**

Bar coding is widely used in retail settings to identify specific products and allows software to link the product to the price and other information. Such bar coding could be used to address some of the safety concerns around errors associated with medicines use.

Bar coding of medicines would uniquely identify each medicine and would help prevent medication errors when used with a barcode scanning system and computerised database. Such a system could work as follows

- A patient admitted to hospital is given a bar coded identification bracelet linked to the patient's computerised medical record
- All medicines would have a bar code on their labels
- The hospital would have bar code scanners or readers
- Before a healthcare worker administers a medicine to the patient they would scan the patient's bar code, scan the computerised medicine chart and scan the medicine to be administered
- The computer would then match the three records to ensure that they agree. If there is a problem, the computer would send an error message
- The problem could be one of many things:
  - Wrong patient
  - Wrong medicine
  - Wrong dose of medicine
  - Wrong time for administration
  - The prescribed medicine has been changed in the electronic record

Bar coding also helps with inventory control for manufacturers, wholesalers and pharmacists.

In New Zealand bar coding of medicines is already employed in areas of community pharmacy and within some anaesthetic departments but both systems employ their own unique bar codes. Community pharmacy use pharmacodes, a system of bar coding administered by the Pharmacy Guild of New Zealand and used for electronic claiming and mapping of warehouse data amongst other things. The pharmacodes can map down to packet size. Within anaesthesiology bar codes are used as part of the integrated drug administration system (IDAS).

In 2004 the FDA in America issued regulations on the bar coding of medicines. The FDA now require bar coding on most prescription medicines and on certain over-the-

counter drugs. Bar coding of medicines is being actively considered and in some cases trialled within both the UK and Australia. The Australasian Medicines and Devices Terminology Process have been developing a catalogue of medicines. At the present time EAN Australia has been engaged to manage the development of a national product register stored on EANnet and based on EAN's that would provide bar codes for all medicines and some complementary products.

### **Summary**

Bar coding is recognised internationally as being one method of reducing medication error. The technology to fully introduce bar coding of medicines that can be linked to both the patient and an electronic prescription has limited availability. There will be costs associated with the introduction of bar code technology. These are falling and are likely to be offset within healthcare by:

- Reducing errors in patient care that cause costly litigation
- Reducing extra bed days resulting from errors
- Possible efficiency gains resulting from the use of bar code technology

### **Conclusion**

The DHBNZ Safety and Quality of Medicines Group support's the use of internationally recognised bar codes on medicines. It would envisage that the technology to link patient identity bar code, patient prescription bar codes and medicine bar codes would be the ultimate aim.