# The cost of doing nothing

*When it comes to medicine management and the hospital medicine supply chain, the cost of doing nothing can be measured in both human and financial terms*

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Unnecessary costs and worry are created through preventable medication errors, and for inventory, from higher than needed holding costs, distribution costs, pilferage, and the "sleeper" in Australia, counterfeit medicines. The adoption of global product identification standards and barcoding has been demonstrated to be one of the most effective systems for reducing medication errors and inventory costs.

Research by McKinsey & Company concluded that widespread adoption of global product identification standards and barcoding in hospitals can result in significant, cost-effective improvements on a very large scale.[1] In addition, using global product identification through barcoding to match patients with medicines for example, can also help hospitals reduce the number and severity of adverse drug events.

The McKinsey data points to large savings in inventory reduction, product recalls (through more efficient and comprehensive stock management), and in the reduction of obsolescence through the use of standardised product numbering and barcoding. McKinsey believes health is about 30 years behind grocery in terms of sophistication.[2]

## Global product identification standards

The global product identification standards are an integrated suite of standards that when used together enables visibility of the total supply chain from manufacturer through to end consumer or patient. GS1 manages these standards. GS1 is a global, voluntary community of all healthcare supply chain stakeholders including manufacturers, distributors, healthcare providers, solutions providers, regulatory bodies, and industry associations. The standards include:

the Global Trade Item Number (GTIN) which is an identification number for products and service; the Global Location Number (GLN) which is a 13-digit number that identifies any physical location or party involved in a given transaction; and the Serial Shipping Container Code (SSCC) which is an 18-digit number that uniquely identifies a logistic unit and is a key to accessing information associated electronic procurement messages that includes batch number and expiry date.

## Where does the National Product Catalogue fit into this?

The National Product Catalogue (NPC) was developed in 2006 by the National E-Health Transition Authority (NEHTA) as the single source of item master data for Australian health care organisations when purchasing medicines, medical devices and medical consumables.

Since its introduction, NEHTA has worked with GS1 Australia (which hosts the NPC on GS1net) to encourage suppliers of healthcare products to use the NPC to communicate product and price data to key government and private sector healthcare purchasers within Australia.

## Reducing medication errors

Barcoding of individual medication doses, patient ID wristbands and medication orders has been shown to significantly reduce the chances of medication errors. As an example, barcode-scanning procedures at the point of care (BPOC) cut potential adverse drug events by 51% to 63% at Brigham and Women's Hospital in the USA and by 75% at Gelre Hospital in the Netherlands.[3]

## Other benefits of barcoding and global standards include:

- improving drug recall efficiency and effectiveness

- protecting patients from counterfeit products (a worldwide problem which to date Australia has largely avoided but for how long?)
- reducing inventory assets and associated costs as excess inventory imposes needless expense at every step in the value chain.

McKinsey concedes that hospitals and their suppliers will need to make investments in hardware, software and personnel, but with a payback time of less than a year in the conservative scenario. The Dutch Government and GS1 Netherlands estimate that these savings correspond to cutting hospitals inventory by 20%, new inventory handling expenses by 25% and obsolescence (mostly in non-pharmaceutical inventory) by 80%.[4]

**Next steps to achieve benefits in Australian private hospitals**

For these benefits to be achieved:
- join peers and align with global standards
- don't try to undertake your own proprietary implementations
- work with industry associations such as the APHA, professional organisations (e.g. ACHSM) and experts in BPOC to investigate the cost and benefits of barcoding in Australian hospitals

Get started and realise the benefits. PH

1. Strength In Unity: The promise of global standards in healthcare. Report by McKinsey & Company October 2012. Available at: http://www.gs1.org/docs/healthcare/McKinsey_Healthcare_Report_Strength_in_Unity.pdf
2. Ibid p12
3. Ibid p31
4. Patient Safety and Efficiency in the Operating Theatre. GS1 Traceability Business Case, GS1 Nederlands.