

## Executive summary:

The use of '2D' barcodes has been increasing organically within healthcare for many years, with the significant focus on traceability and batch management also driving this change. Investment in scanning equipment and solutions upgrades to ensure the ability to scan and interpret data from 2D barcodes such as the GS1 DataMatrix are now critical for all stakeholders within healthcare.

## Background:

Automatic Identification and data capture (barcode scanning) provide an enormous opportunity to make the healthcare supply chain more efficient plus increase accuracy and safety using technology and real-time management of data.

Though we have been relatively slow to adopt barcoding at point of care (BPOC) in many parts of healthcare in Australia, the quest for greater visibility and increased digitisation is rapidly changing what we need to consider our technology investment.

Regulations across the globe have been driving the change to use GS1 Datamatrix barcodes on medicines for traceability purposes and similarly for medical devices 'UDI' regulations have also seen the increased presence of these barcodes on products with information including the product identifier (GTIN), Batch, Expiry and in many cases other data such as serial numbers, manufacturing date or potency. In addition, the requirement to capture more identification elements in healthcare related activities to ensure accuracy and safety, such as patient ID, location, staff identification and so on, are also driving greater use of 2D barcoding.

Choosing camera-based scanning technology and ensuring that solutions or applications can read data from the 2D barcodes and can parse the data string following global data standards should now be included in the digital strategies across healthcare.

## Why are camera-based scanners needed?

Whilst traditionally we have had linear barcodes being used, with the requirement of more data elements to be available the size of linear barcodes have tended to be too large for many applications. Although many products will have both linear and 2D barcodes for some time, multiple barcodes create confusion over which barcode to scan and are also challenging with regard to space on packaging.

Though a camera or Charged Coupled Device (CCD) based scanner can still read a linear code unfortunately the reverse is not true, therefore with any upgrades to scanners a change to camera-based scanners is recommended.

## Why do solutions need to be able to support global data standards?

In the past healthcare has largely used internally created codes or no scanning at all, the focus has now changed to the use of global data standards such as ISO, GS1 or ISBT as they ensure a consistent structure and interpretation of data – effectively supporting interoperability.

## Recommendations:

To support the evolving needs for increased accuracy and safety across Australian healthcare it is recommended that healthcare organisations review their scanning capability. Organisations need to review where necessary and appropriate and look to upgrade technology that is capable of scanning and correctly interpreting 2D barcodes such as the GS1 DataMatrix.

