

# Building traceability in Australian healthcare

## ABSTRACT

Concerned by a lack of traceability processes within the Australian healthcare industry, Clifford Hallam Healthcare (CH2), Australia's largest national Healthcare Service Provider, has embarked on a 10-year scalable plan to ensure our facilities have total supply chain integrity through use of the GS1 System. By implementing a Radio Frequency based bar code scanning inventory management system, and electronic messaging with key suppliers, we have made significant gains in supply-chain efficiencies such as reduced pick errors, faster put away, reduced backorders as well as improved data quality and improved logistics partnerships which leads to more favourable working capital investment ratios.



Article by **Ged Halstead**

## Background

Clifford Hallam Healthcare (CH2) is Australia's largest national Healthcare Service Provider. Trading with more than 11,000 facilities in all states and territories, the company has been in business for 35 years and has developed a business management system that meets the specific requirements of AS/NZS ISO 9001:2008.

CH2 operates seven warehouses nationally. All carry a comprehensive range of medical and surgical products, pharmaceuticals, general hospital consumable items and healthcare equipment. Our customers are located in metropolitan, regional and rural areas and include public and private hospitals, nursing homes, general practitioners, specialists, day surgeries, diagnostic imaging, pathologists, veterinarians, physiotherapists as well as Federal and State Government bodies such as the Armed and Emergency Services and the Justice Departments. CH2 now also delivers to home enteral nutrition (HEN) patients.

The company has 32,000 catalogue lines (or SKUs) offered, of which approximately half are stock lines. CH2:

- Delivers up to 320,000 lines per month
- Picks and ships over 3 million units per month
- Fulfils over 40,000 orders per month
- Has internal pick rates exceeding 96% and a Delivery in Full on Time (DIFOT) target of 95%

CH2 must comply with a number of Acts and Regulations at both Federal and State level and operates in a highly regulated environment. Our warehouses are temperature controlled and dust free, ensuring all products are kept constantly in a clean and controlled environment (25 deg Celsius or below) all year round.



## Traceability to Enable Efficient Recall – The End Goal

In 2008 there were 24 therapeutic goods recalls in Australia based on notifications provided to the Minister for Competition Policy and Consumer Affairs. For CH2, recalls can vary between full product recalls, single or multiple batches, supplier withdrawals or safety alerts. Some recalls may affect only one branch while others may affect every branch in Australia.

CH2 follows Australia's Therapeutic Goods Administration guideline, Uniform Recall Procedure for Therapeutic Goods<sup>1</sup>, when taking recall action. In the event of a recall the following procedure is adhered to:

- A manual check of CH2 branches is undertaken to determine which sites have affected stock.
- All affected stock on hand is quarantined ensuring further supply to customers is prevented.
- A report indicating customers who have purchased the product over a nominated period is sent to key personnel at CH2.
- The relevant customers are notified and are required to take their own action to collect any stock in question.
- The return and replacement of the recalled product is subject to the procedure set out by the manufacturer.

Currently, the processes for supply of medical and pharmaceutical products in Australia are mainly manual and this has led to concerns that both suppliers and their customers can not easily identify and locate products in the case of a recall. Such concerns have prompted CH2 to initiate a 10-year plan working with suppliers and customers to ensure that supply chain integrity is achieved.

Right now there is no easy way for many of our customers to locate products in the case of a recall without employees going into each and every ward, or hospital pharmacy or operating suite and physically checking if the product is there. This leaves room for error and when you are dealing with potential risk to human life, there can be no margin for error.

In Australia we do not have a mandate for suppliers to use the GS1 System for product identification. This is a voluntary system and CH2 are urging companies to adopt the GS1 System so we can ultimately improve patient safety.

### Working with GS1 Australia

To help drive this 10 year plan, CH2 has been actively working with GS1 Australia. CH2 is the chair of the GS1 Healthcare User Group (HUG) Australasia, the local chapter of GS1 Healthcare (the GS1 global healthcare user group). HUG Australasia is one of several such groups around the world reviewing, developing and refining the GS1 System to ensure it is applicable for all aspects of the global healthcare sector while remaining relevant to other industry sectors.

<sup>1</sup> *Uniform Recall Procedure for Therapeutic Goods*, Australian Government, Department of Health and Ageing, Therapeutic Goods, © Commonwealth of Australia 2004.

Along with other areas of focus, this has meant potentially extending the concept of a trade item to 'unit of use', which is the level of trade item dispensed to the patient in a hospital environment.

CH2 is also working with GS1 to help engage their suppliers to implement, where possible, GS1 Global Trade Item Numbers (GTINs) for product identification, Global Location Numbers (GLNs) as primary delivery/pricing records and Serial Shipping Container Codes (SSCCs) for tracking logistic unit movement (warehousing and distribution).

### Supplier Engagement – eMessaging

In 2007 none of CH2's 900-plus suppliers were undertaking electronic messaging with our organisation. As the first step in their supply-chain transformation, CH2 initiated eMessaging (using GS1's EANCOM purchase order, purchase order response) with seven suppliers, using GTINs as the primary item identifier and GLNs as the primary location identifier. Within two months of eCommerce implementation 100 per cent data accuracy rates were achieved in the messages exchanged, and much of this was due to the GTIN being used as the unique product identifier.

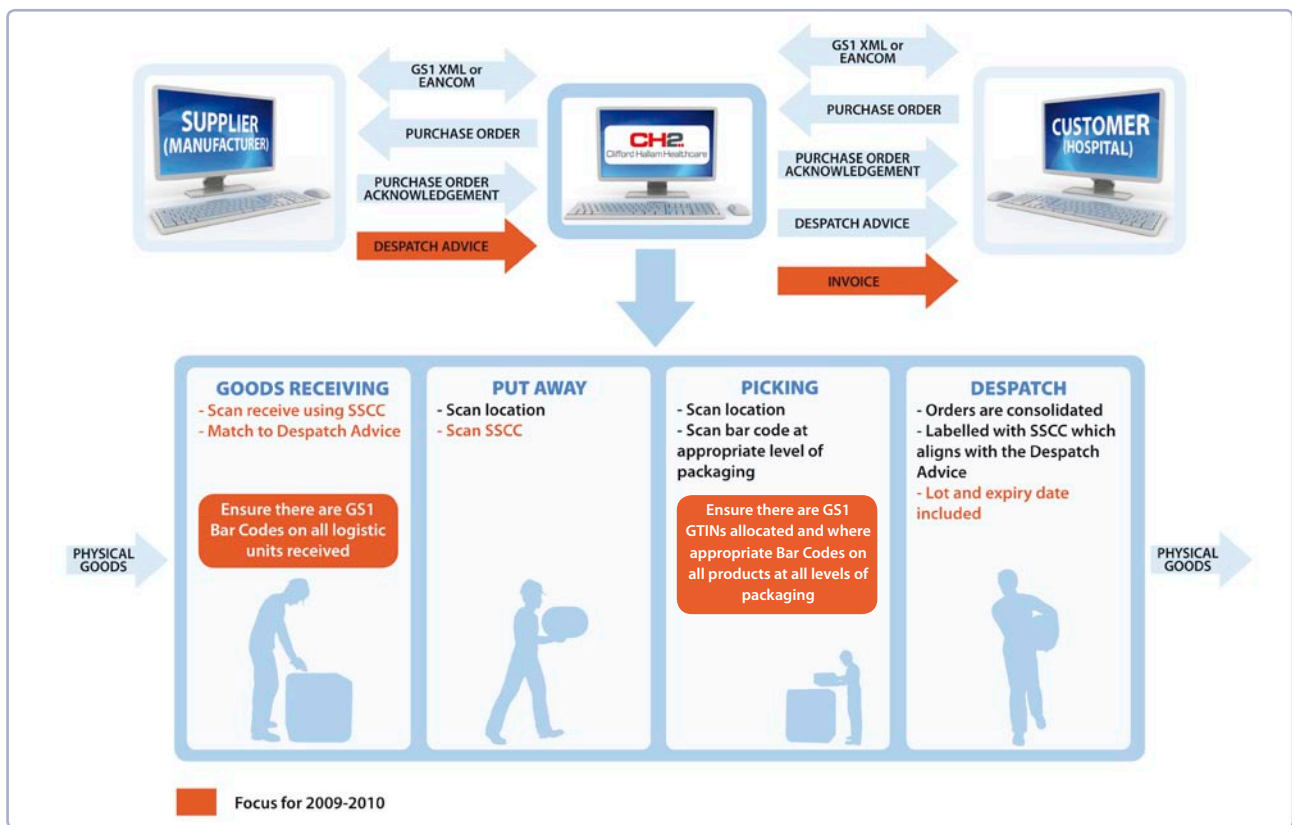
The use of the GTIN has provided another notable benefit as CH2 and its partners are now starting to overcome an issue that continues to plague the healthcare sector- differing Units of Measure.

This is having a flow-on effect throughout the CH2 Supply Chain and has put our company in a stronger position to achieve Delivered In-Full, On-Time to Quality (DIFOTQ) with our customers – a key objective for 2009. This is consistent with our goal of having the right product in the right place at the right time.

The company continues to progress, aiming for all suppliers to be trading via electronic messaging, including providing Despatch Advices with lot and expiry dates as well as SSCC labels. If this goal is achieved, CH2 estimates a 45% reduction in receiving time.

### Warehouse efficiency

CH2 had identified that our warehouse processes were hampered by the inability to easily track goods. As the next logical step in our supply chain transformation, we identified the need to implement scanning of products on receipt, put-away, picking and packing.



CH2 worked with those suppliers already using GS1 Bar Codes to ensure these were entered in our database and then began their scanning based on these products. For those products without bar codes, CH2 applied internal identifiers and bar codes at carton level so we could track products and their location in our warehouses. Applying these internal labels has been clearly recognised as a non-value adding process, and elimination of this process by provision of supplier GS1 Bar Codes, has been identified as a key focus moving forward.

Of the CH2 suppliers, approximately 240 are now providing GS1 GTINs and appropriate bar codes, however it is recognised that there is much more work to be done to engage the remainder of the 900 suppliers. To address this, CH2 is partnering with GS1 and commencing a supplier engagement and education program.

The ultimate goal is to have products carrying bar codes, as the business benefit is clear. With the bar code scanning processes in place CH2 warehouse pickers are now picking and packing up to 400 lines a day, a very significant productivity improvement compared to the pre-scanning days.

### Organisational Consolidation

In early 2008 CH2 acquired the Cottman Australia business, extending their supply offering to other trading partners.

Cottman was a business with 50,000 line items, very limited eMessaging capability, no scanning and no use of the GS1 System. This had to be merged with CH2's 32,000 line items.

As a result of the work CH2 had already done to implement GS1 Bar Codes and eMessaging with suppliers, we found that we were in a strong position to merge the two businesses using the scanning processes we had implemented in our existing warehouses.

In what amounts to proof that using proprietary item identification does not cross-translate within the industry, CH2 were only able to match 3.12% of items between the two businesses using their vendor part number. This was a startling revelation and is a strong reason for the industry to get on board to use GTINs for item identification. The advent of the National Product Catalogue meant that there was now another valuable data source that was useful for the data matching exercise.

CH2's purpose-built warehouse in South Australia was the company's first site for physically merging the inventory of the two businesses. As a result of this merge, 500 pallets were moved in a day and put into bar coded locations. The merger was completed in 1.5 days and scan packing was then enabled in the warehouse. The Western Australian operations were merged next and by using scanners to

ensure inventory integrity, CH2 was able to complete the operation in a weekend. It is estimated that CH2 would have taken twice as long to merge the operations if the scanning process had not been in place.

### Customer focus

Turning to the customer side of our business, CH2 has initiated a multi-streamed eMessaging protocol using both GS1 XML and GS1 EANCOM.

The first stream entails establishing eMessaging with public and private hospitals. This involves a business-to-business (B2B) model with hospital pharmacy customers, using the GS1 System based on EANCOM messaging standards for purchase orders, purchase order response and despatch advice.

The second stream relates to CH2's proprietary online ordering system - Simple Order System (SOS). This system is used by the majority of customers not using EANCOM. CH2 is moving SOS to the GS1 standards and we have recently added a GTIN search capability.

Already, Melbourne's The Alfred Hospital Pharmacy, a 400-bed, acute tertiary referral hospital renowned for its specialist services, uses the SOS ordering system with products identified by GTINs.

### Looking forward

CH2 will continue to drive the implementation of GS1 eMessaging with suppliers and encourage them to apply GS1 Bar Codes to all levels of packaging as well as SSCCs to logistic units. Our vision includes being able to receive batch and expiry date information in electronic messages and to have that information physically bar coded on the products.

### AUTHOR

**Ged Halstead** is the Chief Information Officer for CH2. He has over 20 years experience implementing ERP systems for a broad range of industries in Australia and the United States. Ged has spent 12 years in the IT consulting space, principally engaged as a project manager and practice leader. He has 10 years in the healthcare industry delivering solutions for global leading brands in both medical devices companies here and abroad, and to medical services companies and pharmaceutical manufacturers in Melbourne, Sydney and Auckland. Other industry sectors



CH2 is confident that improved data interchange and collaboration between wholesalers and manufacturers and based on the GS1 standards will reduce stock holding across the entire supply chain and ultimately lead to improved patient safety.

The backbone of this system is accurate and reliable product data and CH2 is working to implement the National Product Catalogue, the Australian Healthcare data synchronisation solution hosted on GS1net, both as a recipient of supplier data and a source of data to their customers.

CH2 understands the value of quality data and is committed to implementing the GS1 System through our business and with our partners. The use of the GS1 standards for eMessaging, GTINs, GLNs and SSCCs are paramount to our industry moving forward. We believe the uplift in quality systems will lead to improved patient safety.

This is a very long journey for the Australian healthcare sector and we are just at the beginning. As a middle player we see suppliers taking steps to implement the GS1 System and now hospitals are making demands on us for a system that will give them better inventory management and traceability. This work requires patience, persistence and passion.

in which Ged has implemented financial, distribution and warehouse systems are petro-chemical, print media, grocery wholesale and frozen foods.

Ged is actively involved in the Healthcare standards community, notably as the current Chair of the GS1Healthcare User Group Australasia, on the leadership team for the Monash Medical Project, a member of the GS1Net advisory group, as well as participating on advisory groups for a number of eCommerce exchanges.