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Special feature: Improving medication safety

Medication errors do not always get much attention, but they represent a significant problem and it has been proven that bedside bar code scanning helps to prevent such errors. In this special feature, we have outlined some recent developments.

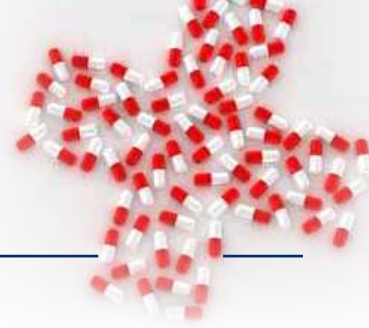## The GS1 System – A holistic view

The GS1 System of Standards has evolved over many decades. From the seemingly humble bar code to networks of interconnected systems, using global standards that allow users to more efficiently and effectively manage their value chain and improve visibility. The GS1 System continues to provide value and benefits to a multitude of organisations and sectors around the world.

"Out of the danger zone"

Several studies, in different countries, indicate that adverse effects from medication errors represent a significant problem for Healthcare worldwide. "It is absolutely critical to focus on adverse drug events," said Dr. Charles Denham, Chairman Texas Medical Institute of Technology (TMIT) (Safety Leaders and the Dennis Quaid Foundation), "There is a lot of attention on hospital acquired conditions […]. However, we know the area where we have the best understanding of adverse events is in medication management." View Dr. Denham's keynote at the GS1 Healthcare Conference.

View the video presentation

Charles Denham, MD
Chairman, TMIT

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Previous research has demonstrated that medication errors are common, and many of these medication errors are serious because they have the potential to harm patients if not intercepted. Some notable examples are:

• Spain - a study indicated that 9.3% of hospital stays incurred a serious adverse event, with medication errors being the main cause (37.4% of such events).

• New Zealand - the Ministry of Health found that each year about 5,000 patients are subject to medication errors. As a result, about 150 patients die, over 400 are permanently disabled and nearly 3,500 are disabled for less than one year.

• USA - medical errors in hospitals result in preventable adverse events with up to 98,000 patients dying each year, which costs the sector US$138 to 192 billion annually. Medication errors account for 7,000 of these deaths.

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"Catching errors at the point-of-care"

Bedside bar code scanning for administering medication has been demonstrated to reduce medication errors and avoid adverse drug events, but few hospitals have implemented it. "Most hospitals have bar coding — in the gift shop!" wrote Mark Neuenschwander, patient safety advocate. "The American Society of Health-System Pharmacists encourages hospital and health-system pharmacies to incorporate bar code scanning into inventory management, dose preparation and packaging, and dispensing of medications. [...] Prudent use of bar coding technology in these processes will enhance patient safety and the quality of care."

Read more

"In hospitals, personalised treatments are prepared in the pharmacy or ward, and administered by nurses to the patients. A complete and unambiguous identification of the drug, up to the moment of administration, is a key element of a safe dispensing procedure when drugs are dispensed," said Roberto Frontini, President, European Association Hospital Pharmacists (EAHP). "We encourage the adoption and harmonisation of GS1 Standards in Europe to enable the effective and efficient implementation of bar codes on all packages of drugs."

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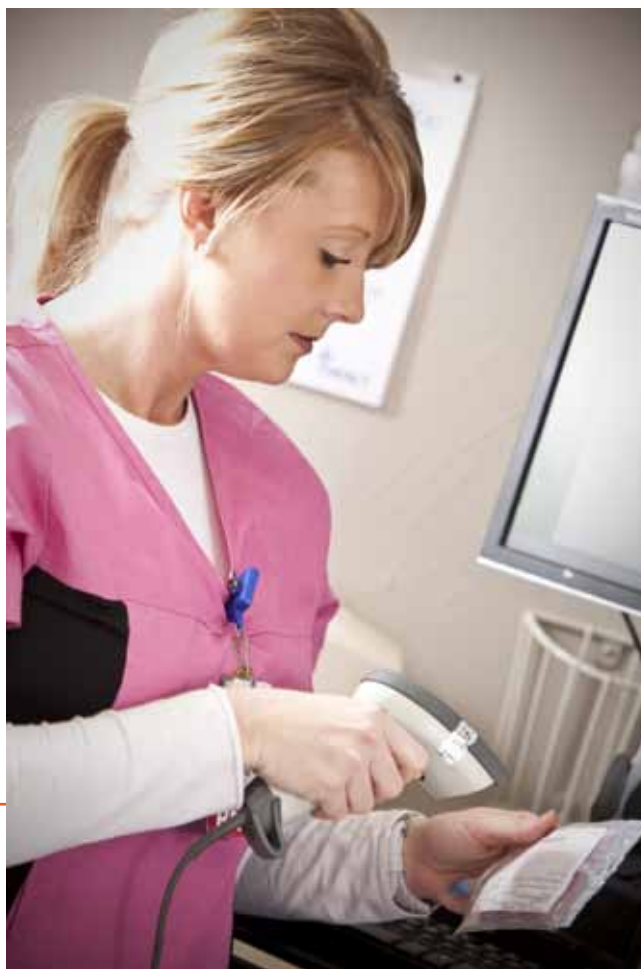
Dr. Jonathan B. Perlin, former Chief Executive Officer of the Veterans Health Administration (VHA) in the USA, a pioneer of bar code verification at the point-of-care, added: "Here is a real story. The discovery moment for hospital bar coding at the VA came when a nurse (Sue Kinneck) was returning a rental car. When she returned her car, the lot attendant checked it in through use of a portable bar code scanner. She became tearful, and it was not from the loss of the rental car. She had been the charge nurse on a ward where a medication error had cost a patient's life. In that moment, the proverbial light bulb went off: She saw the rental car being returned and the receipt printed, all by virtue of a bar code. If we had this for dispensing medication, we wouldn't have the errors that cost patients their lives, she concluded."

Brigham & Women's expects to prevent over 100,000 potential adverse drug events a year

"While [bar code] technology is beginning to be adopted at more US hospitals, the efficacy of this technology in reducing medication administration errors has not been well documented," said William Churchill, Chief of Service, Brigham & Women's Hospital (USA) at the GS1 Healthcare Conference. "Therefore we took advantage of an implementation of bar code scanning technology at the study hospital to evaluate the impact of this technology on medication safety. The study hospital is a 735-bed tertiary academic medical centre that administers about 6 million doses of medication per year. Over a period of 5 months, this hospital rolled out unit-by-unit bar code scanning technology to all the adult non-oncology inpatient units."

Reducing dispensing errors:
Medications are picked by the pharmacy technician using bar coded labels and wireless hand held bar code scanners. Medications are visually inspected by a staff pharmacist to look for errors. If errors are uncovered they are recorded for internal quality control purposes and medications that were erroneously picked are returned to the pharmacy technician for re-dispensing.

Before and after bar code technology implementation:

	Dispensing errors	Potential ADEs
Before	0.81%	0.19%
After	0.61%	0.07%
	31% reduction	63% reduction

To put these reduction rates in perspective, in the study hospital alone, where 6 million doses of medication are dispensed per year, bar code technology is expected to prevent more than 13,500 medication dispensing errors and more than 6,000 potential ADEs (adverse drug events) per year.

Reducing administration errors:
Nurses have on their laptops electronic medication administration records and use these to track what medications need to be administered. Nurses use bar code scanning of the medication, and the patient wristband, to verify that the drug they are administering matches the physician's orders.

Before and after bar code technology implementation:

	Administration errors	Potential ADEs
Before	11.7%	3.2%
After	7%	1.6%
	39.8% reduction	51% reduction

"I think we can conclude that bar code scanning technology can significantly reduce the incidence of medication errors and potential ADEs associated with these errors," concluded Churchill. "Given the high number of medications administered in a typical busy hospital, the impact on patient safety can be significant. For example, in our study hospital that dispenses and administers 6 million doses per year, this technology is projected to prevent over 100,000 potential ADEs a year. Furthermore, a formal cost benefit analysis showed break-even within the first year after go-live. The five year cumulative net benefit is estimated at US$3.3M."

Designing a Canadian strategy for medication safety

"We need a standard for pharmaceutical bar coding. Lacking a standard bar code format, it is not because a pharmaceutical package has a bar code that this means the bar code will be usable in bar code medication administration systems," said Ian Sheppard, National Project Leader, Canadian Pharmaceutical Bar Code Project, ISMP Canada. "Furthermore, bar codes are not found on all levels of packaging throughout the pharmaceutical supply and dispensing/administration chain. Many primary (e.g. vial) and secondary (e.g. outer package) labels do not have bar codes."

In an effort to increase patient safety, members of the Healthcare industry in Canada are collaborating to implement standardised bar codes on all aspects of pharmaceutical labelling. Headed jointly by the Institute for Safe Medication Practices Canada (ISMP Canada) and the Canadian Patient Safety Institute (CPSI), the Canadian Pharmaceutical Bar Coding Project is guided by a national Implementation Committee and is being developed with assistance from a 34 member Technical Task Force (TTF), representing six identified Healthcare sectors.

"We are developing a pan-Canadian strategy for bar coding of commercial pharmaceutical products," concluded Sheppard, "We will also encourage clinical information systems development which utilises automated identification and data capture at each point of the medication chain, and create a national environment for the implementation of automated identification implementation within each identified Healthcare sector."

ISMP Canada and CPSI jointly endorsed the adoption of GS1 Global Standards for automated identification (e.g., bar coding) of pharmaceutical products in Canada.

Read more

Pfizer advances packaging to improve patient safety

"We have a multi-faceted strategy to ensure product security and to prevent medication errors," said Tim Marsh, Senior Manager, Global Package Technology, Pfizer. "This includes anti-counterfeit technologies and serialisation programmes, but also bar codes at unit dose level to enable point-of-care scanning and trade dress design *[how the drug package actually looks]* that helps people as well."

"Unit dose bar coding does bring some additional challenges, including package configuration, installed print technology base and real estate constraints," added Marsh, "End users also expect first time scan quality and that the bar code doesn't compromise the human readable information. Furthermore, our new trade dresses include improved use of colour to differentiate strengths, improved use of lower and upper case lettering and a minimum text character size of 9 point. This allows better differentiation for pre-cuts and formulations."

GOVERNMENT AND REGULATORY ACTIVITIES

Brazil: Working group evaluates traceability options

Agência Nacional de Vigilância Sanitária

ANVISA has established a working group to evaluate the alternative technology solutions to achieve traceability from production to the point-of-dispense or point-of-care. The traceability law, including the requirement for serialisation, is still in force, but the working group will assess the use of special seals versus the printing of two-dimensional bar codes for secondary packages. Besides representatives from ANVISA and the Ministries of Health, Justice, and Industry & International Trade, the working group has also invited experts from the industry and GS1 Brasil.

Canada: Ontario government jumpstarts the implementation of GS1 Standards

As the Canadian Healthcare sector moves towards standardisation of supply chain processes, an Ontario-wide initiative, supported by the Ontario government, is currently underway that will result in the rollout of a 2011 GS1 Company Prefix Licence and Global Location Number (GLN) to every acute care facility in Ontario (locations to which Healthcare, pharmacy and food products are shipped) that does not yet have one. This will enable Ontario hospitals to begin the process of integrating global standards into many of their functions such as asset tracking, patient identification, bedside bar code scanning and e-business communications.

Read more

Council of Europe: EDQM begins development of a demonstrator of its future track & trace system

As part of its anti-counterfeiting strategy, the EDQM (European Directorate for the Quality of Medicines & HealthCare) has initiated an ambitious project for a track and trace system for medicines, open to any manufacturer marketing medicinal products in any of the 36 Member States of the European Pharmacopoeia. The project has now reached Phase 2 in which a demonstrator ("live demo") will be developed. The "live demo" is to be shown as a proof of concept to authorities from the 36 Members, to business stakeholders from the supply chain and to patient organisations during workshops taking place from the fourth quarter of 2011, mainly at the EDQM premises in Strasbourg. During these workshops, the features of the EDQM system will be demonstrated and discussed, and the concept and the 'live demo' will be fine-tuned so that the development of the future working system meets all expectations.

The entire system will comply with non-proprietary standards, such as GS1 (e.g. using GTIN, GLN and the Electronic Product Code Information System ECPIS), thereby ensuring interoperability, especially with existing national traceability or anti-counterfeiting systems.

The EDQM believes that the architecture and governance of the entire project will facilitate a successful, phased implementation during Phase 3. During the current Phase 2, between now and 2012, the EDQM will ensure that interaction with all stakeholders is maximised so that the future working system is properly designed and cost effective.

UK: NAO puts its weight behind GS1 Standards in the NHS

The National Audit Office (NAO) report entitled, 'The procurement of consumables by the NHS acute and Foundation trusts' stated, "Price comparisons within and across trusts are difficult because of the lack of a standard coding system for products purchased. As proposed in its strategy, the Department should require the NHS to adopt standard product bar coding, to improve procurement data and enable price comparisons."

The role of the NAO is to scrutinise public spending on behalf of the UK Parliament - a role it carries out independently of the UK Government. In 2009-10, the NAO's work lead to savings and efficiency gains of GB£890 million.

The standardisation of product bar coding across the NHS, using the GS1 Coding System, is the top aim in the Department's procurement strategy for the NHS. Under the QIPP (Quality, Innovation, Productivity and Prevention) programme, the DH hopes to save GB£1.2 billion per annum on the GB£17 billion expenditure by NHS providers on non-pay goods and services (supplies and facilities management) and GB£1.27 billion a year from the Innovative Technology Adoption Procurement Programme (iTAPP) by 2014-15.

Read more

USA: Strong support for GS1 in responses to FDA Docket

The US Food and Drug Administration (FDA) is looking into potential approaches toward a track and trace system for prescription drugs and has been obtaining input from supply chain partners on attributes and standards for the identification, authentication and tracking and tracing of prescription drug packages.

"The goals of the Track and Trace System are to prevent the introduction of counterfeit, diverted, subpotent, substandard, adulterated, misbranded or expired drugs and to facilitate the identification of [such] drugs," said Connie Jung, Senior Advisor, CDER/Office of Compliance, Drug Integrity and Security Program, FDA, "It should also provide accountability for the movement of drugs by supply chain participants and improving efficiency and effectiveness of recalls."

The main conclusions from the 15-16 February 2011 Workshop in Washington DC were that the FDA should:

1. Focus on developing the functional requirements of the track and trace system;
2. Take a leadership role in standards development and implementation, in particular with regards to the harmonisation of track and trace standards nationally and internationally;
3. Explain the Public Health and Public Policy Case for Track and Trace;
4. Incentivise adoption;
5. Provide timely guidance from the FDA to establish national standards for track and trace.

Written comments could also be submitted to the docket FDA-2010-N-0633, which closed on the 16 April 2011. In general, the respondents support the FDA's efforts to develop system attributes to facilitate the tracking and tracing of prescription drugs and urged the FDA to develop a federal, nationwide system. Many respondents also made the case to leverage GS1 Standards to enable the traceability system:

"Based on AmerisourceBergen's experience, participating in GS1's standard-setting activities (GSMP), we believe that GS1 Standards can be compatible with a potential pharmaceutical supply chain track and trace system," wrote Shay Reid, Vice President Operations, AmerisourceBergen (one of the world's largest pharmaceutical services companies).

"HDMA is taking this opportunity to reinforce this point by agreeing that if FDA were to require a track and trace system for prescription drugs, a single federal standard, harmonised with international requirements but without modifications by any other regulatory entities, will be critical to the successful implementation of any track and trace system for prescription drugs," added Anita T. Ducca, Vice President, Regulatory Affairs, HDMA (the national association representing primary Healthcare distributors). "Given their stage of development, GS1's Standards are best suited to facilitate timely compliance with both California's existing statutory track and trace deadlines and potential FDA requirements. For these reasons, we urge FDA to accept GS1 Standards rather than "reinventing the wheel"."

"UPS recommends […] a Federal standardised numerical identifier for each package level must be established by the agency for application at the point of manufacturing so that it can be supported by GS1 bar code standards for pharmaceutical products throughout the supply-chain," said Timothy W. Bisnop, Quality Assurance Senior Manager, UPS (the largest express carrier and package delivery company in the world).

NACDS believes "that a uniform national approach is necessary for interoperability. We acknowledge that GS1 is the currently available standard," Diane L. Darvey, Director Federal and State Public Policy, NACDS (National Association of Chain Drug Stores).

"Talecris would like to see FDA adopt the GS1 Standards that are currently utilised by the Healthcare industry, providing

an avenue for domestic and global harmonisation," wrote David Corbett, Director Regulatory Compliance, Talecris Biotherapeutics.

"To achieve interoperability, all trade partners must follow a standard process built upon common business execution rules for format and technology," added Mark J. Goldberger, Divisional Vice President, Regulatory Policy & Intelligence, Abbott. "Standards for data code construction and data carriers need to be uniform throughout the supply chain. GS1 Standards are widely accepted as a common standard."

"[…] as member of GS1's working group, NCDP would like to take the opportunity to endorse the GS1 Standards as the preferred method for the FDA's mandate to develop system attributes for the tracking and tracing of prescription drugs," wrote Matthew R. Simmons, Executive Director, NCDP (the National Coalition of Pharmaceutical Distributors).

"Since Johnson & Johnson companies have global manufacturing facilities, we need to ensure standardisation and interoperability across our companies' operations," wrote Michael P. Rose, Vice President, Supply Chain Visibility, Customer & Logistics Services, Johnson & Johnson. "Adoption of global standards is critical for maintaining global interoperability and visibility. J&J endorses the adoption of GS1/EPCglobal Standards for product identification, authentication of the serial number and track & trace."

"To ensure that the various systems can communicate effectively, we support the use of GS1 Standards to include the use of SGTIN (SNI) for product identification, Global Location Number (GLN) for location identification and Electronic Product Code Information Services (EPCIS) for the exchange of the data," wrote Ann Richardson Berkey, Senior Vice President, Public Affairs, McKesson Corp.

"There should be harmonisation of track and trace standards. FDA should encourage standardisation within the United States, as well as working to harmonise with Europe and the rest of the global community," wrote Fred E. Longenecker, US Regulatory Affairs Site Head, GE Healthcare. "After careful evaluation of existing standards (including HIBCC), GE Healthcare (as a company supplying a global pharmaceutical market) is focused on achieving full compliance with GS1 Global Standards."
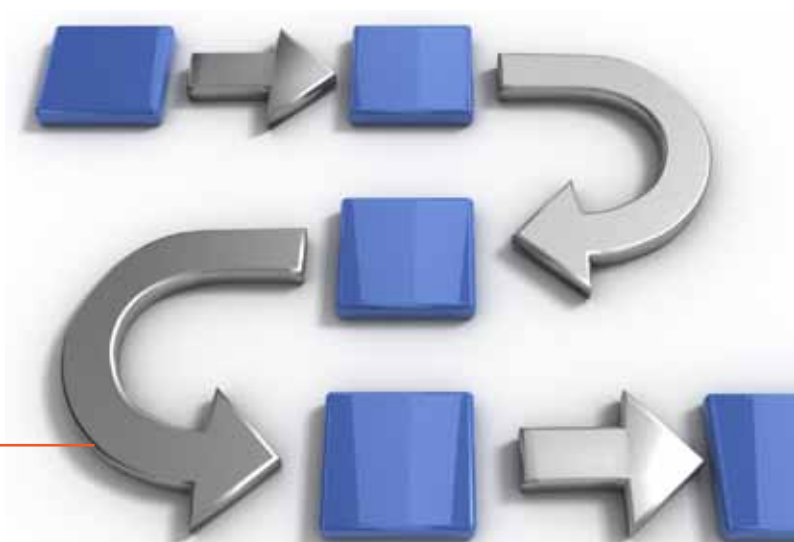
USA: DoD concludes data sync pilot phase III

Dirty item masters, accounts payable mismatches, EDI kick outs and rejections, wasted clinician time, inaccurate rebates, etc. "In a first phase of our pilot project from 2005 to 2006, we had identified the problem of bad quality data," said Colonel Chris Harrington, Deputy PM DHSS, US Department of Defense, "We have noticed that data errors increase the closer we get to the customer. More importantly, we could show that data synchronisation through a central utility significantly improves data quality."

"In a second phase from 2007 to 2008, we have tested if the GDSN (GS1 Global Data Synchronisation Network) meets the needs of the Healthcare industry for standardised data," added Col. Harrington. "And from 2008 to March 2011 we have continued to expand participation, both users and technology providers. We have also been cooperating with GS1 US and GS1 Healthcare to assure coordination of goal setting and avoidance of content redundancy and aggregated education needs."

"We have also already been able to create value with our project," concluded Col. Harrington, "Better contract pricing allowed 80 hospitals to save US$40 million so far and we now have accurate master records for 93% of DoD purchases."

NEWS FROM AROUND THE WORLD

Costa Rica: Leading Costa Rican suppliers embrace GS1 DataMatrix

Farmanova-Intermed and CEFA, two leading pharmaceutical suppliers in Costa Rica, have started to implement GS1 DataMatrix bar codes to improve supply chain efficiency and ensure product safety.

The usage of GS1 DataMatrix has allowed CEFA to manage batch numbers and expiry dates in their information systems. It will also allow their customers to better manage their inventory by automatically capturing this information.

Farmanova-Intermed is committed to ensure traceability of each unit from production to dispensing, allowing to lead concepts like surveillance and quality control, efficacy and drugs safety at any point of the supply chain. The group considers GS1 DataMatrix as one of the most important tools to achieve this and enable new systems of supply to pharmacies, not only to guarantee compliance with best practices for storage and distribution, but also realise a noticeable increase efficiency and simplicity of using these new systems of supply and inventory management to the pharmacy.

GS1 Costa Rica is supporting these programmes.

More information (in Spanish)

Europe: Eucomed informs industry on UDI

Although UDI has received more attention over the last year(s), many stakeholders are still not (sufficiently) aware of how this important development will impact medical device suppliers and the Healthcare sector in general. ETF, the e Business & Supply Chain Task Force of Eucomed, has recently issued a general and technical information sheet on UDI. Both one-pagers clearly describe how UDI will transform the Healthcare supply chain and the opportunities and challenges.

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Making it really tangible is a recent post in the Eucomed blog, in which an employee of a medical device manufacturer shared his experience as a patient being on the 'receiving end' and observing opportunities for hospitals to leverage automatic identification technologies 'I just hope that bar coding doesn't remain in everyone's peripheral vision but comes sharply into focus' concluded Mike Kreuzer (ETF), who wrote the article. Mark Neuenschwander also contributed

to this article and wrote about bar codes that will never be scanned and added, "that would have filled Owl's pot to overflowing [with tears]". A remarkable testimonial.

Read more

Global: SAP supports GTIN and GLN

"SAP's support of GLNs and GTINs may be one of SAP's best-kept secrets," wrote Jonathan Ark, Senior Business Analyst, SAP, in the SAP Community Network. "The fact is, SAP has supported GLNs and GTINs since 2006, and the functionality has been in core ECC since ECC 6.0 EhP2. In addition, SAP supports Traceability in the SAP Auto-ID Enterprise application."

"After validating many of our customers' requests and researching potential approaches, we initiated a project to create guides ("cookbooks") for enhanced GLN functionality that will assist them in building needed GLN enhancements," added Ark. Additional functionality includes usage of GLNs for Ship-to Locations, for all the business objects in the enhanced GLN Table and Search Help by GLN.

The guides are available on the SAP Service Marketplace for Healthcare at http://service.sap.com/healthcare-guides.

"Regarding GTINs, SAP also supports GTINs in the Material Master maintenance, and they appear on various transactions (vendor quotations, purchase orders, receipts, and invoices)," added Ark. "For serialised and batch GTINs, SAP offers the Auto-ID Enterprise application, which supports traceability via the Object Event Repository, which keeps a record and query of the entire chain of custody – from manufacture to packing, shipping, receiving, stocking, picking and issuing, and dispensing to the patient."

Global: J&J communicates GS1 support to customers

The Johnson & Johnson Medical Devices & Diagnostics (MD&D) companies have issued a communication to their customers to provide information regarding an improvement to the bar code standard used by the companies. "By the end of 2012, the MD&D companies will complete the label format transition from the current Health Industry Bar Code (HIBC) to the GS1 Standard," wrote John Hogan, Vice President, Customer and Logistics Services, Johnson & Johnson Health Care Systems Inc. "Our intent is to help prepare you for this transition through frequent communications, to assess your current bar coding method, to ascertain your intent to move toward this global standard, and to address your questions."

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Ireland: Galway Clinic successfully concludes endovascular devices traceability pilot

The Galway Clinic (Galway, Ireland) performs about 8,000 surgeries annually, with another 2,000 catheter laboratory procedures. "With 10 to 20 procedures being performed each day - many of which are complicated, due to the variety of patients - the last thing surgeons need to worry about is whether we have the right product in stock or if the product has passed its expiry date," says Sherif Sultan, the clinic's consultant vascular and endovascular surgeon.

With support from medical device manufacturers; Boston Scientific, Medtronic and Cordis (owned by Johnson & Johnson), GS1 Ireland, Georgia Tech Ireland and the Western Vascular Institute, have joined efforts to develop a model for endovascular device tracking that would include RFID technology and bar codes from the point-of-manufacture to the operating room.

The pilot at Galway Clinic found that UHF RFID tags on high-value implantable endovascular products, such as catheters and stents, can be successfully used in a high-volume clinical setting to improve patient safety and lower costs by reducing the risk of errors, out-of-stocks and product expiration.

The solution trialed by the group included a single, shared database on a server that a variety of users could access via the Internet using software based on EPCglobal's Electronic Product Code Information Services (EPCIS) specifications, and the use of GS1 Standard bar codes and UHF EPC Gen 2 RFID tags.

Some of the pilot project results:

- 660 endovascular products tagged by the clinic (and printed with GS1 DataMatrix bar codes for redundancy)
- 99.7% read rate
- 12 products due to expire
- 2 incidences of a product mismatch (the wrong product for a particular patient) – also intercepted by manual inspection

Going forward, the clinic would like to adopt the system on a permanent basis, but would like to see the manufacturers applying the tags, instead of the clinic.

Read more

UK: Kettering General Hospital wins patient safety award

Kettering General Hospital won a 'Highly Commended' Award at the NHS Patient Safety Awards 2011 for its successful project producing GS1 bar coded patient wristbands. The hospital has implemented GS1 linear and 2D bar codes on its wristbands and blood spot screening labels to improve safety and efficiency. The Patient Safety Awards, delivered by the Nursing Times and HSJ, allow UK hospitals to benchmark and improve patient safety projects.

Read more

USA: Mayo Clinic uses GLN to process over US$250 million in transactions

Mayo Clinic, a leading early adopter of GS1 Standards, is now successfully processing US$250 million annually via purchase orders using the GLN. "Using the GLN to uniquely identify locations, we are eliminating the use of proprietary location numbers for tracking product movement. We no longer have to keep track of hundreds of custom account numbers created by suppliers for all of our locations," said Joe Dudas, Director, Accounting and Supply Chain Informatics, Mayo Clinic. "Surprisingly, implementing the GLN was not a complicated process, and is something all hospitals should start to do right away."

The institution considers GS1 Standards as part of its overarching data-management strategy – a foundational component to its supply-chain management. "Keeping data

clean, setting up standards for contracting and sourcing, and regularly synchronising with suppliers helps us maintain price accuracy, streamline its electronic communications and eliminate costs," said James Francis, division chair and assistant treasurer of supply chain management, Mayo Clinic.

USA: Sisters of Mercy Health System achieves 'perfect order' with GS1 Standards

ROi, the supply chain division of Mercy Health System, has completed end-to-end integration of GS1 Standards with its supply chain information systems, from purchase order to point of consumption, to enable the achievement of "perfect order." It has successfully completed more than 500,000 perfect order transactions with customers over the past 12 months.

"We have successfully overcome two major obstacles — software and standards — to work toward true perfect order," explained Curtis Dudley, Vice President of Integrated Business Solutions with ROi. "Mercy's IT infrastructure now incorporates both GS1's Global Trade Item Numbers (GTINs) and Global Location Numbers (GLNs), to lead to a fully automated synchronisation of data with our suppliers."

Dudley added: "Without standards, such as GS1, and adequate software to support those standards, manual intervention is prevalent throughout the Healthcare industry as part of pursuing perfect order. You must have both in place to be able to fully automate the process from the manufacturer to the patient bedside."

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USA: Lawson, Omnicell and TECSYS support GS1 Standards

"A lack of industry-wide product identification standards has hampered the Healthcare industry's ability to improve supply chain efficiency and accuracy," said Keith Lohkamp, Product Director with Lawson Software. "By delivering solutions that foster GS1 adoption, Lawson continues to advocate for the adoption of these standards to help Healthcare organisations battle escalating supply costs."

Randy Lipps, CEO of Omnicell, a provider of system solutions to acute care Healthcare facilities, added: "As the Healthcare industry works to fully adopt global supply chain standards, the importance of tracking supply consumption at the point-of-care is critical to patient safety. By partnering with providers, such as Mercy through ROi, we remain committed to support GS1 Standards to move Healthcare forward."

"We have made an investment to support the use of GTINs in Healthcare distribution," explained Andrew Brereton, Vice President with TECSYS, a supply chain management software company. "The next step is achieving 100% perfect order through full automation and standards, and enhancing supply chain technology to support initiatives like this is key to achieving it."

USA: 566 Healthcare organisations say they are "GLN Sunrise Ready"

Two months into the U.S. Healthcare industry's "GLN Sunrise," 566 Healthcare organisations, representing all facets of the Healthcare supply chain, report they are amending their business processes and technologies to meet the sunrise requirements.

The GLN Sunrise ushers in the GS1 Global Location Number (GLN) as the one unique number to identify account and product delivery locations for participating U.S. Healthcare providers, manufacturers, distributors, group purchasing organisations and software companies. For two years these entities have been transforming their business processes and technologies to integrate GLNs.

In another measure of success, the GLN Registry for Healthcare now contains nearly 300,000 registered GLNs. Registry users increased more than 250% from 2009 to 2010.

USA: Center for Innovation in Healthcare Logistics recommends GS1 Standards

The Center for Innovation in Healthcare Logistics (CIHL) pharmacy team studied how data standards in hospital pharmacy operations can improve Healthcare supply chains through the adoption of GS1 Standards for item and location identification. Current pharmacy processes at a hospital were analysed, opportunities for improvement were identified and recommendations for implementation were provided. Implementing GS1 Standards has the benefit of increased adoption of bedside scanning practices, increased visibility in the supply chain, utilisation of secondary information (primarily expiration date and lot numbers), providing for real-time patient safety checks, and provided a global identifier on a patient's clinical records. Before the full benefits of GS1 Standards can be realised, implementation issues must first be addressed. These include having the critical infrastructure in place and understanding substitutable equivalent medications and dual numbering systems.

The CIHL is an industry-university partnership that leads a nationwide effort to identify and foster system-wide adoption of groundbreaking Healthcare supply chain and logistic innovations. CIHL facilitates collaboration among researchers at the University of Arkansas' flagship campus in Fayetteville, Healthcare provider organisations, and industrial sponsors including: Wal-Mart, regional Blue Cross and Blue Shield companies, VHA Inc., the Association for Healthcare Resource and Materials Management (AHRMM), Procter & Gamble Co., and IBM.

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GS1 Healthcare and GSMP initiate "AIDC 2" work efforts

The use and needs of Automatic Identification and Data Capture (AIDC) in Healthcare are evolving and therefore, the GS1 System of Standards applicable in Healthcare also needs to develop. Everyone in GS1 Healthcare has an opportunity to play a role in shaping this work. "AIDC 2" encompasses the work efforts driven by GS1 Healthcare as well as the work efforts in other GS1 work groups relevant to the global Healthcare community:

• National Healthcare Reimbursement Number (NHRN)
• Unit Dose/Level below Each
• Unique Device Identification Reference number (UDIR)
• Identification of kits, complex and/or configurable medical devices, software and clarification of GTIN Reuse for Healthcare, Direct Part Marking (DPM) and Human Readable Interpretation (HRI).

For more information and to join the work groups, please contact Chuck Biss at chuck.biss@gs1.org.

GS1 Italy launches local Healthcare user group

GS1 Italy has established a Healthcare user group focusing on medical devices in Italy. In their first meeting, representatives from over 20 organisations looked into the GDSN Healthcare Data Model and produced the Italian data set, based on the global set and translated into the Italian language.

Download the Italian data set

The group has also analysed the AIDC Implementation Guide and started developing a local guide.

The GS1 System – A holistic view

The GS1 System of Standards has evolved over many decades. From the seemingly humble bar code to networks of interconnected systems, using standards that allow users to more efficiently and effectively manage their value chain and improve visibility, the GS1 System continues to provide value and benefits to a multitude of organisations and sectors around the world.

All these organisations need to be confident that the GS1 System is coherent and consistent and that their investment in GS1 compliant systems will bring them the benefits of a common approach to managing their interwoven value chains. The objective of the GS1 System Landscape is to provide a description of the GS1 architecture as it currently exists.

Download the GS1 System Landscape

GS1 Netherlands hosts Healthcare conference

On 27 January 2011, GS1 Netherlands organised a Healthcare conference featuring several experts from the Dutch Healthcare community, including Jos Aartsen (member of the boards of the University Hospital of Groningen and of the Dutch federation of university hospitals), Bas Drese (hospital pharmacist at Gelre hospitals and representing the Dutch association of hospital pharmacists) and Paul Geelen (QA & RA Manager at B.Braun).

A 'common thread' throughout the event was that the sector from supplier to the point-of-care should get started with the implementation of GS1 Standards to leapfrog the quality of care. "The Dutch association of hospital pharmacists appeals to have all medication available in unit dose packaging with bar codes," said Bas Drese. "We have a roadmap in place to require manufacturers to supply unit dose packages with bar codes including a GTIN, lot number and expiry date."

European Commission signs Privacy Impact Assessment

Neelie Kroes, the Commission Vice President in charge of the Digital Agenda signed the Privacy Impact Assessment (PIA) Framework for RFID applications at a ceremony in Brussels on 6 April 2011. The new procedures, developed by commercial companies under the leadership of GS1, are to ensure the privacy of personal data as Radio Frequency Identification (RFID) becomes more commonplace. Mrs Kroes also paid tribute to industry's commitment in developing the new privacy guidelines. The agreement is a milestone and I'm happy the industry will remedy public concerns over consumers' data security, which is the best way to make sure that RFID technology can become a major economic success."

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