

A high level meeting on reducing
medication error in hospitals:

*Making bedside scanning a systematic
reality across Europe.*



Monday 14th October 2013
UZ Leuven, Belgium

A REPORT OF PROCEEDINGS & CONCLUSIONS

[1] **EAHP**

*and GS1 publish report of UZ Leuven meeting on bedside scanning and
medicines bar coding*

24 FEBRUARY 2014

The European Association of Hospital Pharmacists, [2] in alliance with **GS1 Healthcare**, [3] has published a **report** [1] of the proceedings and conclusions of a high level meeting at **UZ Leuven** [4] on the subject of bedside scanning of medicines at the point of administration to the patient. The practice of bedside scanning is important in the prevention of medication administration error in hospitals.

The meeting focused on the need to improve the way medicines are bar coded in Europe in order to make bedside scanning a more common practice. Implementation is frustrated by the fact that medicines do not regularly contain a bar code on the primary package, meaning hospitals in Europe must currently conduct relabeling of medicines in order to implement the bedside scan of a medicine.

Over 80 representatives [5] from across the healthcare spectrum, including patient groups, sectors of the pharmaceutical industry, and organisations representing doctors, nurses, and payers, met in Leuven in October 2013 to hear presentations and take part in the debate about the future. Presentations illustrated how bedside scanning can make a marked difference in terms of preventing medication administration error, a reduction of over 40% according to some studies. It enables a final check that the medicine to be given to the patient is indeed the right one, is about to be given to the right patient, has not been given already, and that it is being given at the right time, and by the right route of administration.

Nurses at UZ Leuven hospital, where bedside scanning has been introduced, demonstrated to event attendees how the system works in practice, as well as the need to achieve systematic bar coding of medicines to the single unit at the point of manufacture if the patient safety system is to become more widespread in Europe. Currently UZ Leuven must place bar codes on the individual pill package after the medicines are delivered. This resource burden prevents all hospitals in Europe taking up bedside scanning technology, despite its proven impact in reducing medication error.

Chris Dierickx from Pfizer navigated attendees through some of the challenges of placing bar codes on the primary packaging of medicines, whilst Ulrike Kreysa from GS1 Healthcare outlined the remedies available from the new **Level Below the Each Bar code standard**. [6]

The second half of the day was devoted to stakeholder discussion about how to unblock the obstacles to wider use of bar code technology to prevent medication administration error. The final conclusions of the event were:

- Efforts towards achieving systematic bar coding of medicines to the single unit package in Europe must be better coordinated. This should bring in not only hospital pharmacy and the pharmaceutical industry, but also representatives of the packaging, software, IT and equipment industries, hospital and health system management, health insurers, and the nursing and medical professions.
- This coalition for medication safety should set out one detailed requirement in respect of the requirements of single unit package bar coding, taking into account the practicalities of the bar code including static data versus variable data.

- This coalition should also look at the possibility of a step-by-step timetable for realising single unit package bar coding and give thought to constructing this timetable according to categories of medicine, whereby orphan drugs could be viewed as step 1, followed by high risk medication.
- Remaining opportunities to utilise the national implementation of the Falsified Medicines Directive should be explored.

Speaking about the Report, **Dr Roberto Frontini, President of the European Association of Hospital Pharmacists (EAHP)**, said: *"The Leuven event vividly demonstrated how interested every kind of health stakeholder is in improving patient safety in European hospitals. There is ample evidence of what a difference bedside scanning can make to reducing administration errors. But until systematic bar coding of medicines to the single unit at the point of manufacture takes place there is no easy way to achieve it. The suggestion that each hospital should conduct its own process of bar coding medicines after delivery is not realistic in the current resource environment. This event took us another step forward, with sensible recommendations, positive engagement from the pharmaceutical industry, and new interest shown from other health sector stakeholders."*

Ulrike Kreysa, Vice-President of Healthcare at GS1's Global office in Brussels, said: *"The recently ratified GS1 standard for the identification of healthcare products at the single unit level enables healthcare stakeholders to now move forward in a globally harmonised approach and implement processes like bedside scanning which will significantly improve patient safety."*

Thomas De Rijdt, Assistant Director at UZ Leuven's Department of Pharmacy, said: *"The introduction of bedside scanning before administration of medication, linked to hospital wide CPOE with prescriber support helps us to prevent medication errors and near misses and therefore optimises the patient's therapy and guarantees the highest possible patient safety. It took a lot of effort to achieve this but it was worth it."*

Andreas Walter, Coding & Serialisation Project Director at the European Federation of Pharmaceutical Industries and Associations ^[7] (EFPIA), said: *"EFPIA has been pleased to be involved in this meeting and the discussions that took place. We now look forward to working with EAHP and other partners to chart the best way forward in its aftermath, including ensuring strong stakeholder dialogue and involvement."*

Timothy Jablonski, Vice President of Sales and Marketing at Codonics ^[8], said: *"As a manufacturer of patient safety technology, we continue to see value in the push for single dose barcoding in the EU. Machine readable barcode devices remove the element of human error. The U.S., Japan and Korea are committed to barcoding their single doses which enables them to track medications throughout the healthcare enterprise while achieving improved safety outcomes. We need to continue to work together to ensure systems and technologies are adopted to improve patient safety worldwide."*

Sascha Marshang, Policy Coordinator for Health Systems at the European Public Health Alliance ^[9], said: *"EPHA supports the application of new technologies to support patient safety in the area of medicine. However a key consideration must be to avoid opening up further health inequalities across Europe. In this context, systematic bar coding of medicines to the single unit is important as it would greatly facilitate uptake of bedside*

scanning as a practice in more resource constrained health environments by avoiding the need to conduct relabeling."

Sabine Van den Abbeele, Manager of Customer Relations, Key Hospital Staff, Pfizer ^[10], said *"The importance of bedside scanning and medicines bar coding is linked to reducing medication errors in hospital practice. This in turn will lead to a better quality and safety for the patient. As an innovative company, we see it as a unique opportunity to create added value through partnerships with the broader community of healthcare stakeholders. This high level meeting is a perfect symbiosis to share theoretical and practical knowledge which will result into delivering greater value and give perspective to hospitals and industry."*

François-Xavier Lery, Head of Section Pharmaceutical Care, Consumer Health Protection and Anti-counterfeiting at the European Directorate for the Quality of Medicines and HealthCare ^[11] (EDQM), said: *"We thank EAHP for inviting EDQM to these fruitful discussions on the efforts of the EAHP and GS1 to prevent medication administration errors in hospitals. The topic of the meeting was consistent with the work carried out by the EDQM's Committee of Experts on quality and safety standards in pharmaceutical practices and pharmaceutical care (CD-P-PH/PC) to improve pharmaceutical care and practices both in hospital and community (ambulatory) care. The initiative for systematic bar coding of medicines to the single unit at the point of manufacture merits further discussion between stakeholders and authorities to take into account the upcoming requirements of the Directive 2011/62/EU and the resources needed to implement such an approach."*

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NOTES TO EDITORS:

1. The European Association of Hospital Pharmacists (EAHP) is an association of national organisations across 34 countries representing hospital pharmacists at European and international levels. More information about the EAHP and its history [here](#) ^[13].
2. The report of proceedings and conclusions from the high level meeting in Leuven is available [here](#) ^[1]. The page also includes video footage, copies of the presentations, photographs, the attendee list and background reading materials.
3. Studies have suggested the use of bar codes on medicines up to the single unit can help to reduce medication error rates by 41.4% ((Poon EG et al. Effect of Bar-Code Technology on the Safety of Medication Administration. N Eng J Med 2010;362:1698-707). NEJM article available online [here](#) ^[14]. Further reference material on the use of bedside scanning to improve patient safety [here](#) ^[15].
4. GS1 is a global not-for-profit organisations dedicated to the design and implementation of global standards and solutions to improve the efficiency and visibility of supply and demand chains globally and across sectors. The GS1 system of standards is the most widely used supply chain standards system in the world. Information about the GS1 Level Below the Each standard is available [here](#) ^[6]. Further information about GS1 [here](#) ^[16].

5. Information about UZ Leuven's implementation of bedside scanning, and its impact on improved patient safety, is available [here](#) [17].
6. CPOE stands for computerised physician order entry and is a process of electronic entry of medical practitioner instructions for the treatment of patients (particularly hospitalized patients) under his or her care. These orders are communicated over a computer network to the medical staff or to the departments (pharmacy, laboratory, or radiology) responsible for fulfilling the order. CPOE decreases delay in order completion, reduces errors related to handwriting or transcription, allows order entry at the point of care or off-site, provides error-checking for duplicate or incorrect doses or tests, and simplifies inventory and posting of charges. CPOE is a form of patient management software.

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Links

[1] <http://www.eahp.eu/content/report-leuven-meeting-bedside-scanning> [2] <http://www.eahp.eu/> [3] <http://www.gs1.org/healthcare> [4] <https://www.uzleuven.be/en> [5] <http://www.eahp.eu/press-room/report-uz-leuven-meeting-bedside-scanning> [6] <http://www.gs1.org/1/newslib/detail.php/new-standard-to-address-missing-link-in-hospital-supply-chain-processes/?nid=1486> [7] <http://www.efpia.eu/> [8] <http://www.codonics.com/> [9] <http://www.epha.org/> [10] <http://www.pfizer.com/> [11] <http://www.edqm.eu/en/edqm-homepage-628.html> [12] <https://www.eahp.eu/contact/info/eahp/eu> [13] <http://www.eahp.eu/about-us> [14] <http://www.nejm.org/doi/full/10.1056/NEJMsa0907115> [15] <http://www.eahp.eu/content/leuven-event-bedside-scanning-background-papers> [16] <http://www.gs1.org/about/overview> [17] <http://ejhp.bmj.com/content/19/3/320.full>