

## How can we achieve bar coding of medicines to the single unit?

EAHP is working closely with the pharmaceutical industry on this issue and recently agreed with the European Federation of Pharmaceutical and Industry Associations (EFPIA) to work towards a joint vision on the future of medicines bar coding to the single unit administered in hospitals.

The two organisations are actively exchanging information in relation to:

- the country-by-country practice of bed side scanning in European hospitals;
- the regulatory and non-regulatory solutions to the problem; and
- the opportunity for the future pan-European system of medicines identification to facilitate EAHP's single unit bar code request.

EFPIA has recognised the potential for patient safety improvement that could be made by using medicines bar coding in this way, and have expressed their willingness to cooperate with hospital pharmacists in exploring ways to achieve systematic bar coding to the single unit of medicine.



Photograph courtesy of Optel Vision

EAHP reports annually to its General Assembly on progress made to achieving this central patient safety goal.

## More information and getting involved

Find out more about EAHP's policy on medicines bar coding at the Practise and Policy section of our website: <http://eahp.eu/practise-and-policy/advocacy>

Further information is also available by contacting [po@eahp.eu](mailto:po@eahp.eu)

## About the European Association of Hospital Pharmacists

The European Association of Hospital Pharmacists (EAHP) was formed in 1972 as an association of national organisations representing hospital pharmacists at European and international levels.

Its mission is to represent and develop the hospital pharmacy profession within Europe in order to ensure the continuous improvement of care and outcomes for patients in the hospital setting. It does this through a range of science, research, education and communication activity.

EAHP represents and serves an estimated 21,000 hospital pharmacists within its 32 member countries.

Further information about the Association, including its annual Congress and its bi-monthly publication, the European Journal of Hospital Pharmacy, are available on its website [www.eahp.eu](http://www.eahp.eu)

You can also subscribe to EAHP's weekly newsletter of European developments relevant to hospital pharmacy via the website and follow the Association on Facebook, Twitter and LinkedIn.



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## EAHP POLICY BRIEFINGS



## BAR CODING TO THE SINGLE UNIT OF MEDICINE ADMINISTERED IN HOSPITALS



## What is meant by the single unit of medicine?

The single unit of medicine is the single item of medicine without any package, for example the single tablet in a blister.

The single unit package is the package that contains one discrete pharmaceutical dosage form. i.e. a tablet or a certain volume of a liquid.

## Why is bar coding the single unit of medicine administered in hospitals important?

### THE OVERRIDING PATIENT SAFETY CASE.

In the interests of protecting patient safety and reducing the risk of medication error in hospitals EAHP requests that the pharmaceutical industry in Europe place bar codes on the primary packaging of the single unit of medicine administered in hospitals.

This would create the possibility for every hospital in Europe to conduct a scan verification of the medicine at the patient bedside to help ensure the right medicine and right dose is being administered to the right patient by the right route and at the right time.

Studies suggest such technology can help to reduce patient error in hospitals by up to 41% (Poon EG et al. Effect of Bar Code Technology on the Safety of Medication Administration. N Eng J Med 2010;362:1698-707).

In recognition of the patient safety case, and the effect on reducing errors, it has been practised in the USA since 2006 that all pharmaceutical products sold to hospitals must now bear a bar code on the smallest unit of use — the size dispensed to the patient.

The United States Food and Drug Administration (FDA) estimate that since introducing this requirement, some hospitals have reduced medication error rates by as much as 85% (1) and in a study conducted at the Veterans Affairs Medical Center, evidence suggested that the use of such bedside verification technology enabled 5.7 million doses of medication to be administered to patients without medication errors(2).

Clearly bedside scanning of medicines in hospitals has much to offer Europe in terms of improved patient safety and the reduction of medication error. However, unless bar codes are placed to the single unit of medicine at production stage, as occurs in the USA, it is often not possible for individual hospitals to do this, meaning a bedside scan of the medicine cannot take place at the point of administration.

1. U.S. Food and Drug Administration, News Release, February 25, 2004 (accessed September, 2012). <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/2004/ucm108250.htm>
2. Eliminating Medication Errors Through Point-of-Care Devices, available at Health Information Management and Systems Society. <http://www.himss.org/content/files/proceedings/2000/sessions/ses073.pdf> (accessed September, 2012).



Photograph courtesy of Oxford University Hospitals NHS Trust

## What other benefits can bar coding to the single unit achieve?

### ASSISTING IN THE COMPREHENSIVE MANAGEMENT OF MEDICINES RECALLS AND ALERTS

The nature of medicines use in hospitals means that drugs which are dispensed in multiple dose blisters often have to be cut, separated and spilled out from their original blister package during drug dispensing. As a consequence, without an identifying barcode, information may be absent from the individual unit of medicine and an accurate control at the bedside is not feasible.

Bar coding to the single unit of medicine administered in hospitals would improve this situation making the tracking and tracing of the single unit of medicine within the hospital always possible.

### PROVIDING FURTHER ASSURANCES AGAINST POTENTIAL COUNTERFEIT MEDICINE INTRUSION

There are numerous points in the supply chain between medicines manufacture and medicines administration where unscrupulous individuals have opportunities to divert and/or replace legitimate medication with counterfeit medication. Bar coding by manufacturers and wholesalers to the single unit of medicines for use in hospitals can therefore provide a further visual assurance of the legitimate nature of a medicine, or its potentially suspect origin if discovered within the community or other part of the medicines supply chain.

### SUPPORTING COMPREHENSIVE MANAGEMENT OF MEDICINES INFORMATION IN THE INTERESTS OF SYSTEMS AND OUTCOMES IMPROVEMENT

As costs of medication for all health systems continues to increase, accurate information about how medicines are used by healthcare professionals and patients, in what dose forms and for what conditions becomes ever more valuable in terms of making evidence-based improvements.

Comprehensive bar coding by industry to the single unit of medicine administered in hospitals will open new possibilities of understanding and knowledge about overall medication use.

### HELPING TO PREPARE HEALTH SYSTEMS FOR AN AGEING SOCIETY

The demographic future of Europe will see a large increase in the number of elderly patients over the coming years. This patient group is particularly associated with multiple morbidities and polypharmacy, which, combined with the effects of age-related frailty, heightens risk factors when medication administration errors occur.

Bar coding to the single unit of medicine, and its role in reducing medication error by enabling bedside scanning and verification, can provide essential assistance for health systems in meeting the challenge of an ageing society. The technology's patient safety benefits apply not only in the hospital setting, but also in nursing and residential homes for the elderly and patients with special care needs.