# The supply chain revolution

## The EAASM talks to PharmaTimes about the huge impact the Falsified Medicines Directive brings to the pharmaceutical supply chain

Edited by **Claire Bowie/Jenny Hone**

A European patient safety revolution is under way. It's a revolution that will impact everyone in the pharmaceutical supply chain – from manufacturer to pharmacist and all points in between. The rallying cry of the revolution is to eliminate counterfeit medicines from Europe but perhaps the most surprising aspect is that, so far, it has been a quiet revolution, says Jim Thomson, Chair of the European Alliance for Access to Safe Medicines. However, that is set to change and change quickly. The name of this revolution is the Falsified Medicines Directive.

The Directive is designed to fully secure the supply chain against the rising tide of falsified medicines. It focuses on the identification and authentication of prescription medicines at individual pack level. While some EU countries have systems already in place, for example, Belgium and Italy – with Germany about to pilot its own version – these will ultimately have to be incorporated within an over-arching European system. In the UK, the Medicines and Healthcare products Regulatory Agency is actively involved in preparing the ground for this legislation.

The new measures outlined in the Directive include: the introduction of an authenticity and tamper evident feature on the outer packaging of 'at risk' medicines; more robust control and inspection of API manufacturing plants (most ingredients are now produced outside of the EU); improved record-keeping requirements for wholesalers; extending regulation to brokers; and an obligation on manufacturers and distributors to report any suspicion of falsified medicines, explains Nimo Ahmed, the MHRA's head of enforcement.

### What must industry do?

Once the Directive is adopted into national legislation, the belief is that the vast majority of prescription medicines will have to carry, at pack level, a unique identification number and a tamper-evident safety feature. The identification number will be recorded to enable wholesale distributors and pharmacists to verify the authenticity of the medicinal product and identify individual packs. Any changes to the product (for example during repackaging) will see these features removed, recorded and replaced with equivalent features to 'maintain the pedigree'.

The challenge is in how this will be achieved, and there are various proposals on the table. One end-to-end option favoured by a stakeholder group of manufacturers, wholesalers, parallel distributors and pharmacists is to record the individual number at the points of entry and exit from the supply chain. This has been put forward by a group led by the European Federation of Pharmaceutical Industries and Associations, including the Pharmaceutical Group of the European Union, GIRP (European full line wholesaling association) and EAEPC (parallel distribution body). "We are striving to establish a cost-effective system that complies with the requirements of the Directive while at the same time allowing for flexible evolution as technology advances in the future," explains EFPIA's new director general Richard Bergström.

There has already been a positive effect on strengthening the legitimate supply chain, adds the head of GIRP, Monika Derecque-Pois, who argues that pharma needs to come together to resolve how best to implement its provisions in regard to the coding and identification of medicines.

### Fast facts

1. 27 May 2011 EU Council adopted the Falsified Medicines Directive
2. Directive to be transposed in Member States' national laws by 1 January, 2013
3. All POMs will have to bear safety features (unique serial no. and tamper evident packaging)
4. Certain prescription medicines might be exempted according to risk. OTCs excluded in principle unless risk of falsification
5. Commission decides on specifications of serial numbers and will set out provisions for establishment, management and accessibility of databases
6. Delegated Acts to be released in next seven to 19 months
7. Transposition on 1 January, 2013, BUT… safety features up to three years after publication of Delegated Acts
8. Active substances: written confirmation for starting materials 1 July, 2013
9. Online pharmacies' logo 12 months after publication of Delegated Acts

➲ "We are proposing a point-of-dispense verification system with additional authentication by wholesale distributors based on a risk assessment, which protects the legal supply chain without a decrease in the speed of delivery."

Indeed, one measure in particular – electronic authentication of medicines – will make it almost impossible for fakes to reach the hands of patients if implemented properly, observes John Chave from the PGEU. "It is complex, and not without cost, but experience to date is very positive. We now need to sit down with other stakeholders and put together an efficient and cost-effective way of making it work."

## What "security" looks like

But the EFPIA-coordinated stakeholder group is not the "only game in town". The European Directorate for the Quality of Medicines and HealthCare – EDQM (part of the Council of Europe and broader in scope than the EU, covering 47 Member States) – has its own solution. "The eTACT project is a pan-European, IT-based, traceability and publicly governed service for authorities and all stakeholders throughout the supply chain, including patients, who will be able to verify the authenticity of their medication using smartphones or the internet," notes EDQM's director, Susanne Keitel.

While the various merits of the proposed systems are being thrashed out, the upshot is that any pharmaceutical company doing business in any EU country will, in time, have to meet the requirements of the Directive. The biggest challenges will be to harmonise the approach, while implementing a system that is scaleable and has a virtually instant response time.

Certain central elements are the same and virtually all of the proposed systems favour a unique identifier based on a 2-dimensional data matrix. This meets the GS1 (the global standard-setting body) standard, as well as being extremely robust in a live market setting. In addition, there are a number of options for the tamper-evident features, including security seals and holograms, which alongside the unique identifier are expected to most directly improve patient safety.

Originally felt to be a stumbling block, the issue of repackaging is also being addressed with the inclusion in the EFPIA group of the EAEPC – the voice of the parallel distribution industry. Heinz Kobelt, its director of European affairs, believes this stakeholder approach delivers distinct advantages and says they want "to ensure the technical specifications relating to safety features are practical and cost-efficient, in the best interest of European patients". And Nicola Bedlington, director of the European Patients' Forum – an umbrella organisation of patients' organisations – warmly welcomes the Directive and looks forward to seeing it implemented.

But while there is broad cross-sector support for the spirit of the FMD, there are some issues that need to be addressed. For example, the EGA (European Generics Association) is concerned the cost of serialisation could impact on the market access of generics, while other stakeholders argue that if generics were to be exempt, they would become an obvious target for counterfeiters. As the EGA's medical affairs manager, Maarten Van Baelen, points out: "There is a risk that new rules requiring the use of seals or mass serialisation could substantially increase the relative manufacturing costs of generic medicines, potentially putting at risk the small- and medium-sized generic companies and reducing patient access to affordable treatments."

The EGA supports the proposal to employ a weighted risk-based assessment of medicines using available data, which will focus efforts on lifestyle drugs and expensive branded medicines. And it believes generic medicines – like over-the-counter products – should be exempt as a category.

## What will this mean practically?

Although the Directive will lead to a much safer distribution of medicines, its central tenet is to improve patient safety and it's easy to see its potential impact. For example, in 2007, criminals (now convicted) managed to infiltrate the supply chain in the UK and more than 30,000 packs of falsified medicines reached patients. This episode spotlighted the shortcomings of the current system – according to data released by the MHRA under the Freedom of Information Act, only eight patients were traced. This is not a criticism of the Agency. The prevailing system simply did not enable that kind of recall to be effectively conducted at patient level. With uniquely identifiable packs, it becomes possible to intercept falsified medicines before they leave the pharmacy and, given the will, to recall them if they reach patients. Of course, the issue of freely available falsified medicines via illegitimate online "pharmacies" remains to be addressed.

There are also potential incremental benefits, as dispensing errors will be more easily avoided and, particularly as polypharmacy increases, contra-indications more clearly identified. Aside from the patient safety benefits, the unique identifier will also effectively combat issues like diversion, theft and reimbursement fraud. For example, the Turkish Ministry of Health estimates that – by stamping out such crime – its coding system saves the country €500m to €1bn per annum.

There are tremendous future ramifications resulting from the introduction of the unique identifier. "This ability to authenticate at the point of dispensing is of huge benefit to patients, and constitutes a massive blow to counterfeiters," says EASSM's executive director, Mike Isles. However, he adds, this is just the beginning: "The industry, healthcare providers and patient groups should be thinking hard, right now, about how this simple mechanism can be used to provide incremental patient information, improve compliance and make a major impact on both health outcomes and – of course – budgets." **PT**

**The EAASM (European Alliance for Access to Safe Medicines) played a crucial part in the inclusion of counterfeit medicines within the European Parliament's Pharmaceutical Package and the new Falsified Medicines Directive. For more information, go to www.eassm.eu, or scan below:**