

HOSPITAL PHARMACY EUROPE

ADVISORY BOARD REPORT

Optimising Medication Management – European Multidisciplinary Insight

Funded by





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An advisory board was convened in September 2019 to provide leading healthcare professionals with an opportunity to collaborate alongside BD, with the common goal of optimising and integrating medication management across European health systems. The objectives of the advisory board were to gain real-world insight into the current landscape of medication management across Europe, challenges faced and potential solutions. The board was comprised of pharmacy, nursing, academic and biomedical engineering representatives, from various European countries, including Austria, France, Germany, the Netherlands, Italy, Spain, Switzerland and the UK. In total, 14 delegates attended. Their extensive expertise provided truly comprehensive and real-world insight into the current landscape of medication management and what needs to be done going forward to improve medication management efficiency and patient safety.

➤ Medication management — why does it matter?

The responsibility of medication management lies not with one individual, but with numerous healthcare professionals, including nurses, pharmacists, physicians and clinical managers, making it a truly multidisciplinary process. It is implemented in a range of settings such as hospitals, pharmacies, primary care and care homes. As a result, exceptional logistics and collaboration are required to ensure first-class medication management, and improve patient safety and economic efficiency. The delegates unanimously agreed, that while medication management is a huge opportunity for us to optimally utilise available medications and improve the standard of patient care, suboptimal management can have significant repercussions for patient safety. In England alone, an estimated 237 million medication errors occur annually at some point in the medication process, with 20% of these errors occurring in secondary care.¹ Regarding the cost of medication errors, an estimated \$42 billion is spent globally every year.² Suboptimal and inefficient medication management can also result in financial loss due to medication >



...to have a management system that means we can use technology better, that we can improve our efficiency and our safety... would be an amazing thing...

Alison Keen, UK

DELEGATES

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Clinical Pharmacology Researcher, Burlo Garofolo Pediatric Institute, Italy

Some of the concerns voiced by delegates regarding medication management



wastage and healthcare professionals spending excessive time carrying out administrative and management tasks, which could otherwise be spent on patient care. Hence, medication management should be prioritised and carefully executed. It was highlighted that suboptimal medication management continues to be an issue throughout Europe, with one delegate describing their system as 'almost broken, and pretty dysfunctional', a concern shared by many of the delegates.

Components of optimal integrated medication management

One of the key consensus reached by the delegates was that optimal integrated medication management is composed of three crucial components or 'pillars':

- End-to-end medication safety
- Improved clinician and IT efficiency
- Enterprise medication inventory optimization

End-to-end medication safety

The phrase 'end-to-end' was consistently re-iterated throughout the meeting. As many delegates highlighted, medication management is not a singular action, but consists of numerous steps, beginning with the manufacturing of the drug and continuing through to the prescribing, dispensing and administration of the drug. In order to ensure optimal patient care, safety must not be compromised at any step. As one delegate pointed out, if the drug prescription is not good to begin with, then you have already compromised patient safety and good medication management.

Another key point highlighted was the importance of 'closing the loop' in the medication management cycle and reviewing outcomes to ensure that the correct treatment was followed. This

also provides an opportunity for the recording and rectification of errors where appropriate.

Improved clinician and IT efficiency

A concern raised by delegates was the current shortage of healthcare professionals, which can place healthcare systems under considerable pressure. Hence, optimisation of current staff is crucial. If the medication management procedure, including the IT components, can be optimised, this can free up significant time for healthcare professionals, allowing them to focus more time on patient care. This reduction in manual workload can also lead to considerable economic savings and a reduction in the risk of errors.

Inefficient IT can negatively impact data collection. Medical devices can be invaluable sources of data that can be rapidly converted into reports, allowing for continuous quality audit and improvement.

However, it is extremely time-consuming if this data has to be obtained separately from each individual medical device. It is more time efficient and feasible if a remote station can collect and combine data from individual medical devices. This data can then be used by healthcare professionals to help make clinical decisions and monitor errors and outcomes. Delegates strongly agreed that IT can be a valuable asset to improving medication management, but it needs to be accessible and easy for staff to use.



We have to close the loop of actually reviewing the patient again to see how they are responding

Inderjit Singh, UK



products or medical devices used, and any staff involved in their treatment, was recommended. This was seen as a method of greatly improving end-to-end patient safety.

Electronic prescriptions and automatic dispensing

The importance of transitioning fully from written to electronic prescriptions was heavily emphasised. As mentioned previously, an appropriate prescription including the correct medication, dose, duration and formulation, is one of the first steps of good medication management. The use of electronic prescriptions and automatic dispensing can help physicians to achieve this standard. An IT system which flags up problems, such as over prescribing of drugs outside of the normal ranges, is a key component to improving patient safety and providing data. Additionally, electronic prescriptions and automatic dispensing can improve staff efficiency and allow for the sharing and integration of data between institutions.

Interoperability between data and IT systems

As medication management can involve numerous individuals in various institutions, it is crucial that there is good communication and collaboration between all individuals involved. A concern was raised that there is often a lack of communication and data sharing between different institutes, particularly between primary care and hospitals. An example given was how an oncologist may prescribe a new anticancer medication for a patient, but if this patient subsequently obtains this drug from a community pharmacy, the pharmacist may lack the necessary knowledge required as insufficient information is being relayed between themselves and the oncologist.

These issues could be massively alleviated if IT systems between institutions were interoperable and allowed data and information to be easily shared.

Education

Undoubtedly, education is a critical component of providing staff with the knowledge and confidence to use IT systems correctly. The adoption of a new IT system into a workplace involves not only its physical implementation, but also a cultural change from staff. Hence, education should be provided across the whole system to all those who may be involved in the IT system's use.

Interlinked drug sharing networks

It was agreed, that while many of the solutions to

Summary table of the main challenges and proposed solutions

Challenge	Proposed solutions
Drug shortages	<ul style="list-style-type: none"> AI to predict future medication needs Electronic prescriptions and automatic dispensing Interlinked drug sharing networks Standardisation of protocols
Data standardisation	<ul style="list-style-type: none"> Electronic prescriptions and automatic dispensing Unique ID barcodes Interoperability between data and IT systems Standardisation of protocols
Unfriendly computer applications	<ul style="list-style-type: none"> Provision of friendly, predictive and intuitive IT Education of staff who will be using the application

The knowledge is in the hospitals and the use is outside the hospitals

Alain Astier, France

drug shortages lie with the manufacturers, there are measures which hospitals and national health authorities can implement to mitigate the impact of these shortages. One such measure is creating an interlinked network between different hospitals, whereby drug stock can be shared and relocated based on each hospital's requirement. Delegates from Italy and the UK, who had used these systems previously, agreed that while these systems can be highly useful, they need to be implemented in a manner which encourages trust and collaboration, to prevent hospitals overstocking or hoarding stock.

Standardisation of protocols

As highlighted by delegates, even within the same hospital, drug protocols may differ between departments or be completely absent. Standardisation of protocols can improve the level of patient care and make drug inventory management more feasible.

Conclusions

Undoubtedly, optimising medication management is a powerful opportunity to improve patient safety and economic efficiency. This advisory board provided an essential and necessary platform for the key stakeholders to collaborate and become proactively involved in the movement of advancing medication management throughout Europe. Many practical solutions were put forward, which at the very least, warrant further investigation and evaluation through trialled implementation.



I think for me it's an opportunity... we have a huge opportunity to have better use of the drugs that we already have

Etienne Cousein, France

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