

# Pharmaceutical supply chain

## — update on the current NHS review

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The pharmaceutical supply chain is currently under scrutiny from a review undertaken by the NHS Purchasing and Supply Agency. This article reviews the recommendations that have been made from the project and outlines future developments for hospitals and wholesalers



The use of e-commerce (eg, order placement, order acknowledgement and invoicing) has been advocated during the review

**I**dentifying changes which may improve performance of the pharmaceutical supply chain in relation to NHS hospitals is the aim of a review now under way. The review reflects the growing importance of the pharmaceutical supply chain in an environment which is affected by factors as diverse as:

- Reductions in storage space in modern hospitals
- Dramatic developments in the technology and culture of e-commerce
- Increased unit costs of medicines
- Enhanced capability of robots

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- Unrelenting pressures to cut costs and non-clinical activity in hospitals

The review has been set up to make recommendations on best practice within hospitals, identify key performance indicators, investigate the relationship between trusts and wholesalers, and look at the potential benefits of using robots. The feasibility of the NHS running its own pharmaceutical delivery service was also being considered.

### Background

The hospital pharmaceutical supply chain was last investigated on a national basis in 1986 which resulted in the Modern Materials Management Consultancy report.<sup>1</sup> A few years ago, the NHS Purchasing and Supply Agency commissioned a further study of the supply chain by management consultants Kurt Salmon and Associates. This group identified a number of strategic and tactical options for improving performance when they reported in 2002.

The next part of this study builds on that report and represents a collation of the work

of a number of subgroups, supported by data from a study of the factors that facilitate and hinder trust-wholesaler relationships.

### Methodology

Crucial to a successful outcome was the decision that this phase of the project should draw on the expertise of NHS staff with current operational experience and also involve other stakeholders in the supply chain including wholesalers, manufacturers, and IT suppliers. Three main workstreams were established (ie, best practice, performance measurement and automation) and these groups reported to a steering group. The steering group has written a report outlining the recommendations made (details are in the box on p106).

### Best practice

Current practice has evolved over many years and reflects local circumstances, management philosophies, history and investment in information technology. Inevitably, few hospitals operate procurement or logistics in the same way. The

intention is that this review will stimulate critical self-audit. The report identifies that the principles of best practice include:

- Use of e-commerce which includes order placement, order acknowledgement (including availability and price) and invoicing. This leads on to the increasing use of barcodes for product identification and data entry.
- Robust internal procedures which are speedy and responsive and which avoid duplication of effort.
- Appropriate use of local wholesalers to consolidate activity, minimise stock holding and ensure a timely response to orders. Wholesalers also offer significant benefits by reducing the number of supplier contacts and deliveries.

Application of these principles will depend, to a large extent, on local circumstances, but the report makes 55 detailed recommendations for hospitals and other stakeholders to consider. These include specific recommendations for service improvement by wholesalers.

## — Key performance indicators

Measuring performance is a crucial first step towards improving the supply chain (see *Hospital Pharmacist* 2004;11:471). Accurate key performance indicators are a powerful diagnostic tool in identifying weaknesses in both the delivery and ordering of product. Most suppliers and customers use key performance indicators but the lack of any standard approach can hinder any attempt at joint resolution of problems by both parties.

This report identifies and defines 12 basic key performance indicators which it is hoped both suppliers and customers can work with and use to mutual advantage. Standardisation will allow comparisons to be made between suppliers and customers on a consistent basis. Discussions are under way with IT companies to allow the automatic collation of the indicators by procurement systems. The key performance indicators agreed cover:

- Ordered lines delivered in full
- Invoiced lines matched first time
- Documentation present, complete and accurate
- Stock turn (ie, the number of times an item of stock is used and replenished over a given period)
- Timeliness of payment

### Further information

More information on the review of the supply chain and copies of the report can be obtained from the following website:  
[www.pasa.nhs.uk/pharma/pharma\\_supplychain.stm](http://www.pasa.nhs.uk/pharma/pharma_supplychain.stm)



Automated dispensing can improve efficiency in the supply chain

- Incorrect items received
- Incorrect quantities received
- Lines returned
- Variation from contracted lead time
- Timeliness of order placement
- Order lines transmitted electronically
- Invoice line reconciled electronically

## — Relationship with wholesaler

Modern retail distribution favours hub and spoke models (ie, a manufacturer delivers to a regional distribution centre and it is the regional distribution centre which makes frequent deliveries to customers). Within the hospital supply chain, pharmaceutical wholesalers act as regional distribution centres. However, anecdotal evidence suggests a significant variation in performance across the country, with some trust-wholesaler relationships being perceived as successful while others can be described as dysfunctional. The steering group commissioned a dedicated study to look at the relationship between a wholesaler and four hospitals to identify reasons for this disparity. The findings generally support those of the best practice workstream, in that wholesaler depots vary in performance, with inaccurate picking, late deliveries, incorrect pricing and outdated payment methods all increasing stress on the relationship. Using e-commerce for orders and invoices, and the rapid identification and resolution of errors helps to reduce stress and improve the relationship.

### NHS Pharmaceutical delivery service

As part of an initial assessment of the strategic options for the future, consideration was given to developing a dedicated NHS distribution service. The report concluded that, while this might be applicable in certain urban environments, a detailed appraisal is not justified in the current climate.

## — Automated dispensing

Automated dispensing has the potential to improve the supply chain, and a range of

support and guidance materials have been developed for hospitals wishing to invest in this technology. Currently, there are only a few examples where hospital managers wish to use automation to integrate their purchasing into the supply chain and explore such concepts as vendor managed inventory (where a supplier or manufacturer is responsible for maintaining stock levels) with suppliers, but such innovative thinking is important if trusts are to maximise the return on their investment. More information is available at [www.pasa.nhs.uk/pharma/technology/default.stm](http://www.pasa.nhs.uk/pharma/technology/default.stm).

## — Conclusion

The review of the pharmaceutical supply chain has provided manufacturers, wholesalers and hospital pharmacists with a new sense of direction. The challenge now is for suppliers and customers to work together towards a common goal of embedding good practice and achieving the potential savings and benefits — which are considerable.

Work has already started on the next stage: piloting the recommendations at three trusts (ie, Birmingham Heartlands and Solihull NHS Trust, Royal Bournemouth and Christchurch NHS Trust and South Tyneside Health Care Trust). The NHS Purchasing and Supply Agency is working with the NHS Logistics Supply Chain Development Group, who provide internal supply chain consulting services within the NHS, to implement the pilot programme. We now encourage other trusts to start building the key performance indicators described into their management processes, where appropriate to local circumstances.

## — References

1. Modern Materials Management Consultancy Group Ltd. Investigation into the provision of pharmaceuticals to health authorities. Project No. 1465. London: Department of Health; 1986.