Pharmaceutical Health Information System

PHIS Hospital Pharma Report 2009

UNITED KINGDOM

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PHIS

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Executive Summary

Background

The overwhelming majority of hospital care in the UK is provided by the National Health Service (NHS). This report excludes private (non-NHS) hospitals. The NHS is a devolved area of responsibility, which means that Scotland, Wales and Northern Ireland run hospital services independently of the English NHS. While some differences have emerged in recent years, the systems remain similar in most respects and continue to be referred to as a single unified system.

The NHS (in England) has a total of 1,600 hospitals (general, mental health, specialist care and foundation) similar to the OECD definitions. Most of the hospitals are run by one of 175 acute NHS trusts or 60 mental health NHS trusts, which are responsible for ensuring that hospital funding is efficiently deployed to meet demands. There are also 115 foundation trusts, which oversee a new type of NHS hospital and which have been given greater financial and operational freedom than other NHS trusts. The 152 primary care trusts (PCTs) in England are the main commissioners (purchasers) of health care and are responsible for deploying NHS resources in their localities, including funding for medicines and hospital care.

The NHS is funded centrally mainly through general taxation. The Department of Health allocates funding to PCTs on the basis of the relative needs of their populations. PCTs commission care provided within in-patient care and expenditure on medicines is part of this commissioned activity.

Pricing of medicines in hospitals

The Pharmaceutical Price Regulation Scheme (PPRS) is the mechanism which the Department of Health uses to control the prices of **branded** prescription medicines supplied to the NHS. It sets the NHS list price, a maximum price that a supplier may charge the NHS. The prices of **generic** medicines are set by the market. Medicines in in-patient care can be purchased centrally via contracts awarded by the NHS Purchasing and Supply Agency (NHS PASA), via regional contracts or locally by individual NHS trusts or hospitals. Most generic medicines are purchased on national contracts and branded medicines on regional contracts. Where there is little therapeutic competition, hospitals may not be able to obtain discounts and pay the NHS list price, as paid in the out-patient sector. The level of prices of hospital medicines, which consist of the NHS list price, VAT minus any discounts the hospital secures, is often lower than the prices paid in the community. The prices of medicines purchased by hospitals are not publicly available.

Reimbursement of medicines in hospitals

Hospital trusts are reimbursed by PCTs for medicines purchased if the medicine has been approved for prescription. Decisions concerning which medicines can be prescribed are made locally by a hospital's pharmaceutical and therapeutic committee (PTC), known as

drugs and therapeutic committee (DTC) in the UK. In some parts of the UK, hospitals work closely with primary care to agree jointly which medicines are used or not used locally. There are no national reimbursement lists for in-patient care. However, the majority of hospitals have hospital pharmaceutical formularies. The reimbursement system for medicines dispensed in hospitals is quite separate from that in the community.

Consumption of medicines in hospitals

In England, NHS Purchasing and Supply Agency (PASA) collects data at trust level on medicines purchased by hospitals through hospital pharmacy computer systems and purchasing information through a system known as PharmEx. Although not all trusts submit data, currently 95% of available purchasing information is collected. PharmEx data can categorise consumption by British National Formulary (BNF) category. Hospitals normally administer medicines to their patients within the confines of their own clinical environment. However, on some occasions the supply and administration of medicines is provided to the patient whilst in their own home and PharmEx does not capture all data on medicines provided to patients in their own home through homecare services. PharmEx data is not publicly available.

Within hospitals, consumption can be analysed by the ward or department (some are identified by the consultant's name rather than the unit) and by individual patient where electronic prescribing systems exist.

Evaluation

As described above, data to monitor the prices and consumption of medicines is collected for England, by NHS PASA through PharmEx on a monthly basis. Through this system, NHS PASA is able to measure the performance of its procurement arrangements and give feedback to trusts on their performance. PharmEx data can monitor expenditure by BNF category. There are also a number of other resources available for this outlined in section 5.

Interface management

Many medicines are initiated in acute/specialist hospitals and subsequently prescribed in primary care, so the use of medicines by patients needs to be co-ordinated throughout the patient's journey. A collaborative approach involving Area Prescribing and Medicines Management Committees (APCs) whose "member" organisations are primary and secondary care commissioners and providers work together to ensure a consistent health community approach to medicines management. Established to manage more effectively the entry of new medicines into the NHS, the functions and forms of many APCs now go far beyond this original remit. In particular, they can be used as a forum to resolve issues around medicines safety and usage across the care interfaces, for example from primary to secondary care. The National Prescribing Centre (NPC) produces a number of resources to support commissioners (purchasers of health care) in relation to prescribing and medicines management including a database of examples of improvement that have been submitted to the NPC for sharing with the wider NHS. Further information is available at www.npc.co.uk

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List of abbreviations

ABPI	Association of the British Pharmaceutical Industry
AIFA	Agenzia Italiana del Farmaco / Italian Medicines Agency (Italy)
APC	Area Prescribing and Medicines Management Committee
BMG	Bundesministerium für Gesundheit / Federal Ministry of Health (Austria)
BNF	British National Formulary
CIVAS	Centralised Intravenous Additive Service
DG SANCO	Health and Consumer Protection Directorate General of the European Commission
DH	Department of Health
DTC	Drug and Therapeutics Committee
EAHC	Executive Agency for Health and Consumers
EEA	European Economic Area
EHIC	European Health Insurance Card
EU	European Union
GÖG/ÖBIG	Gesundheit Österreich GmbH / Geschäftsbereich Österreichisches Bundesinstitut für Gesundheitswesen
GP	General Practitioner
HOSHE	Health expenditure in hospitals
HOSPE	Pharmaceutical expenditure in hospitals
HPF	Hospital pharmaceutical formulary
HTA	Health technology assessment
IHHII	International Healthcare and Health Insurance Institute (Bulgaria)
MHRA	Medicines and Healthcare products Regulatory Agency
NCG	National Commissioning Group
NCU	National currency unit
NHS	National Health Service
NHS PASA	NHS Purchasing and Supply Agency
NICE	National Institute for Health and Clinical Excellence
NPC	National Prescribing Centre

OECD	Organisation for Economic Co-operation and Development
OFT	Office of Fair Trading
OJEU	Official Journal of the European Union
OPD	Out-patient department(s)
OPP	Out-of pocket payments
OTC	Over-the-counter pharmaceuticals
PbR	Payment by results
PCT	Primary care trust
PHIS	Pharmaceutical Health Information System
POM	Prescription-only medicines
PPRS	Pharmaceutical Price Regulation Scheme
PTC	Pharmaceutical and therapeutic committee
QA	Quality Assurance
QC	Quality Control
SHA	Strategic health authority
SUKL	Statny Ustav pre Kontrlu Lieciv / State Institute for Drug Control (Slovakia)
THE	Total health expenditure
TPE	Total pharmaceutical expenditure
UK	United Kingdom
VAT	Value added tax
WP	Work package

Introduction

PHIS research project

PHIS (Pharmaceutical Health Information System) is a research project commissioned under the call for proposals 2007 in the priority area “health information” of the European Commission, DG SANCO. It has been commissioned by the Executive Agency for Health and Consumers (EAHC) and co-funded by the Austrian Ministry of Health (BMG).

The PHIS project aims at increasing knowledge and exchange of information on pharmaceutical policies, in particular on pricing and reimbursement, in the European Union (EU) Member States, covering both the out-patient and the in-patient sector.

This will be done via different work packages (WP) resulting in the following deliverables:

- the PHIS Glossary with key terms related to pharmaceuticals,
- the PHIS Library offering country specific information on out-patient and in-patient pharmaceutical pricing and reimbursement for the EU Member States,
- the PHIS Indicators and the PHIS Database, containing major data for the developed indicators in the Member States,
- the PHIS Hospital Pharma Report with information on pharmaceutical policies in the in-patient sector in the EU Member States, including a price survey.

The PHIS project management is a consortium of the project leader Gesundheit Österreich GmbH, Geschäftsbereich Österreichisches Bundesinstitut für Gesundheitswesen / Austrian Health Institute (GÖG/ÖBIG), which is a research institute situated in Vienna, Austria, and four associated partners:

- the Italian Medicines Agency (AIFA),
- the International Healthcare and Health Insurance Institute (IHHII), Bulgaria,
- SOGETI Luxembourg SA., which is a services provider, and
- the State Institute for Drug Control (SUKL), Slovakia

SUKL is the WP leader of Hospital Pharma.

Further key stakeholders are the PHIS Advisory Board covering EU Commission services and agencies and other international organisations, and the PHIS network, which comprises national representatives from competent authorities and further relevant institutions from the EU Member States and associated countries.

The PHIS project runs from September 2008 to April 2011 (32 months). Further information and all deliverables are made available at the PHIS project website http://phis.goeg.at.

PHIS Hospital Pharma

The aim of the work package “Hospital Pharma” is an in-depth investigation of the in-patient sector, as systematic knowledge of pharmaceutical policies in this sector has been rather poor.

The survey is divided in two phases:

- Phase 1: General survey

  Country reports on pharmaceuticals in hospitals (“PHIS Hospital Pharma Reports”), designed to describe specific pharmaceutical policies in the in-patient sector in the EU Member States (spring 2009).

- Phase 2: Case studies

  A specific survey, including a price survey, provided by means of case studies, in a limited number of hospitals in a few countries (autumn 2009).

The final PHIS Hospital Report, covering information from the general survey (phase 1) and the case studies (phase 2), is scheduled for February 2010.

Methodology of the general survey

The production of the country-specific PHIS Hospital Pharma Reports is based on three steps:

1. Development of a uniform PHIS Hospital Pharma Report Template

The PHIS Hospital Pharma Report Template offers a homogenous, very detailed structure for describing the pharmaceutical pricing and reimbursement system in the in-patient sector of a country. The Template was developed by SUKL, Slovakia (Work Package leader of Hospital Pharma) in coordination with GÖG/ÖBIG (PHIS project leader) and further members of the PHIS project management. It is based on literature and internet reviews as well as interviews with experts in the hospital sector in the EU Member States. Members of the PHIS network received the draft Template for feed-back, and had an opportunity to discuss and provide personal feed-back during a meeting.

2. Collecting information and data and drafting the PHIS Hospital Pharma Report

The country-specific PHIS Hospital Pharma Reports were written by members of the PHIS network. In order to get the needed information and data, hospital experts were contacted and involved in several countries. They provided information and data in written form and during telephone conservations and personal talks. In some countries the reports (or parts of it) were written by hospital experts. In several countries, the preparatory work for drafting the PHIS Hospital Pharma Reports also included study visits of the authors to hospitals and hospital pharmacies. Information on persons and institutions involved can be found in the “Acknowledgements” at the beginning of this PHIS Hospital Pharma Report and in section 8 “References and data sources”, listing “Literature and documents” (section 8.1) and “Contacts” (section 8.2).

3. Editorial process

The draft PHIS Hospital Pharma Reports were submitted to the project management for review, which was undertaken by SUKL, Slovakia (Work Package leader of Hospital Pharma) in coordination with GÖG/ÖBIG (PHIS project leader). The review focused on checking clarity and consistency in general and with regard to the outline of the Template and terminology (PHIS Glossary). In the course of the editorial process, the reviewers contacted the authors for providing feed-back on language and content, offering suggestions for re-phrasing and change and clarified open and/or misunderstanding points.

1 Background

1.1 Definition and scope

The overwhelming majority of hospital care in the UK is provided by the National Health Service (NHS). This report excludes private (non-NHS) hospitals. Although funded centrally by UK taxation, the NHS is a devolved area of responsibility, which means that Scotland, Wales and Northern Ireland run hospital services independently of the English NHS. As a result, the information provided in this report primarily applies to the NHS in England, rather than to the whole of the UK. However, while some differences have emerged between these systems in recent years, they remain similar in most respects and continue to be talked about as belonging to a single unified system.

There is no general technical definition of a hospital, but there are a variety of subtypes, each of which have a different status in terms of autonomy, strategic focus and funding. Similar to the OECD definitions[1], the NHS (in England) has a total of 1,600 hospitals (general, mental health, specialist care and foundation).

1.2 Organisation

Most of the hospitals in England are run by one of 175 acute NHS trusts or 60 mental health NHS trusts. These trusts are responsible for ensuring that hospital funding is efficiently deployed to meet demands. Some acute trusts are regional or national centres for more specialised care. Others are attached to universities and help to train health professionals. Acute trusts can also provide services in the community, for example through health centres, clinics or in people's homes.

There are also currently 115 foundation trusts. These oversee a new type of NHS hospital run by local managers, staff and members of the public, which are tailored to the needs of the local population. Foundation trusts have been given greater financial and operational freedom than other NHS trusts and have come to represent the government's commitment to decentralising the control of public services. These trusts remain within the NHS and its performance inspection system[2].

[1] a. general hospitals, b. mental health and substance abuse hospitals, c. speciality (other than mental health and substance abuse) hospitals

[2] See http://www.nhs.uk/NHSEngland/aboutnhs/Pages/authoritiesandtrusts.aspx or www.nhs.uk for more information

Primary care trusts (PCTs) are the main commissioners (purchasers) of health care in the UK, now controlling 80% of the NHS budget. As they are local organisations, they are best positioned to understand the needs of their community, so they can make sure that the organisations providing health and social care services are working effectively. There are currently 152 PCTs in England, and they are responsible for deploying NHS resources in their localities, including funding for medicines and hospital care.

Hospitals are given strategic direction by one of 10 regional strategic health authorities (SHAs), which are responsible for: developing plans for improving health services in their local area, making sure local health services are of a high quality and are performing well, increasing the capacity of local health services - so they can provide more services, and making sure national priorities - for example, programmes for improving cancer services - are integrated into local health service plans.

The legal framework for this organisation of in-patient hospital care can be found in the NHS Act 2006.

Table 1.1: United Kingdom – Key data on in-patient care, 2000 and 2004–2008

In-patient care	2000	2004	2005	2006	2007	2008
No. of hospitals	n.a.	n.a.	n.a.	n.a.	1,810	n.a.
Classified according to ownership						
- thereof public hospitals[1]	n.a.	n.a.	n.a.	n.a.	1,600	n.a.
- thereof private hospitals[2]	225	207	213	211	210	210
Classified according to subtypes – Not Available						
No. of acute care beds	150,441	150,438	149,303	144,867	n.a.	n.a.
- thereof in the public sector[3]	140,461	141,181	139,725	135,380	n.a.	n.a.
- thereof in the private sector[4]	9,980	9,257	9,578	9,487	9,589	9,489
Average length of stay in hospitals[5]	9.9	9.3	9.0	8.7	n.a.	n.a.
No. of hospital pharmacies	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

n.a. = not available

Note: Data are indicated as of 31 December

[1] NHS in England. Source: www.nhs.uk/aboutnhs/HowtheNHSworks/Pages/NHSstructure.aspx

[2] Independent acute medical/surgical hospitals, UK. Source: Laing's Healthcare Market Review 2008-09. Laing & Buisson

[3] NHS UK. Source: OECD Health data 2008

[4] Independent acute medical/surgical hospitals, UK. Source: Laing's Healthcare Market Review 2008-09. Laing & Buisson

[5] NHS UK. Source: OECD Health data 2008

Table 1.2 shows the number of pharmaceuticals from the year 2000 until 2009. No information is available on hospital-only medicines as there is no such legal definition in the UK.

Table 1.2: United Kingdom – Pharmaceuticals, 2000 and 2005–2009

Number of pharmaceuticals	2000	2005	2006	2007	2008	2009
Authorised pharmaceuticals in total[1]	19,000	29,600	29,800	30,600	29,400	23,300
- thereof hospital-only pharmaceuticals	n.app.	n.app.	n.app.	n.app.	n.app.	n.app.

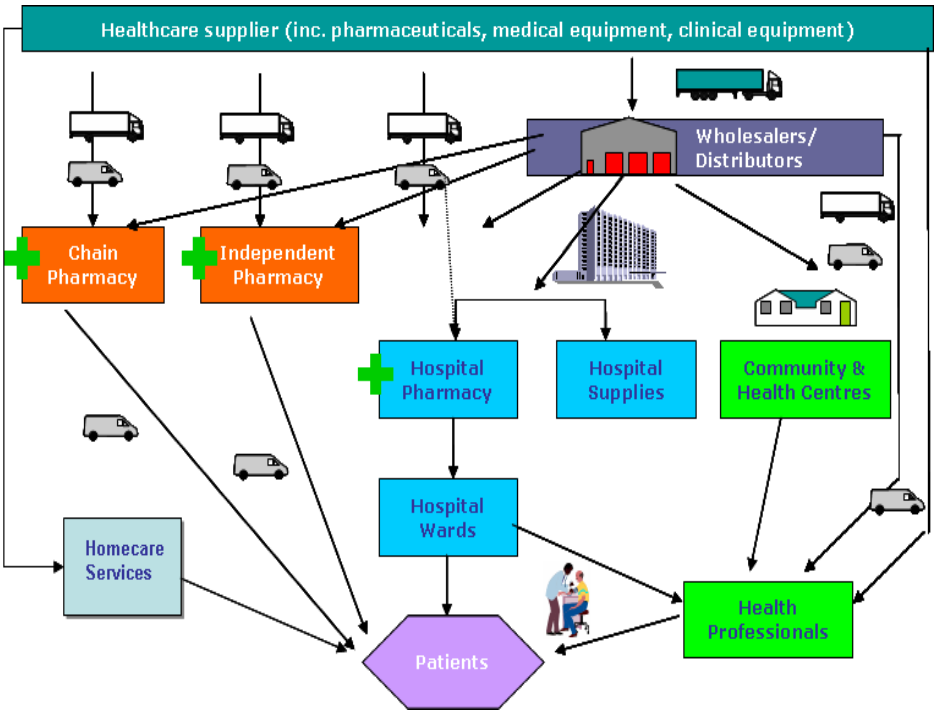
n.app. = not applicable

[1] These numbers represent the number of Marketing Authorisations with a status of 'granted' at 1st January of each year. Some medicines will be authorised, but not marketed - no information is collected centrally on the number of pharmaceuticals currently on the market. The numbers include different pharmaceutical forms, different strengths and different brands and different marketing authorisation holders but does not include different pack sizes. The numbers exclude centralised EMEA licenses.

Source: MHRA Sentinel Database

In terms of the delivery chain, manufacturers, wholesalers and parallel traders are all involved in supplying hospital pharmacies, although parallel traders are used less often than the other two. Community pharmacies may also supply small community hospitals, which do not have a hospital pharmacy. See diagram below for an outline of the delivery chain:

Figure 1.1: United Kingdom – Delivery chain of pharmaceuticals, 2009



Source: Medicines, Pharmacy and Industry Group, Department of Health

Most hospitals have pharmacies, although some of the smaller ones may rely on larger hospitals or local community pharmacies for supplies. The majority of hospital pharmacies are controlled by the trust, although there are private pharmacies in some hospitals that have

negotiated contracts. Hospital pharmacies cater for hospital out-patients i.e. patients who attend hospitals for consultation or treatment without being “admitted” to hospital as an in-patient as well as in-patients. They do not cater for patients not receiving hospital care as community pharmacies do.

Hospital pharmacy departments vary considerably in size, with some departments having specialist units providing services to a much wider population (medicines information for example). A district general hospital has a staff of 50 to 100, a larger teaching trust a department of in excess of 200 staff. A typical ratio is 1 pharmacist to 1 technician to 1 support member of staff, but again this varies with nature of the service and extent of automation.

Hospitals and NHS trusts publish annual reports, which are available on individual hospital and trust websites. The Department of Health and the NHS Chief Executive also publish annual reports.

1.3 Funding

The NHS is funded centrally mainly by tax contributions through general taxation with a small element coming from charges and receipts, including sales of surplus NHS land and proceeds from income generation schemes.

The Department of Health allocates funding to PCTs on the basis of the relative needs of their populations. A weighted capitation formula determines each PCT´s target share of available resources, to enable them to commission similar levels of health services for populations in similar need. The money available for medicines is part of this overall allocation (unified allocation). PCTs individually will then calculate how much money is needed to cover prescribing for their population, for example, primary care prescribing or cancer drugs. PCTs commission care provided within in-patient care. Expenditure on medicines is part of this commissioned activity.

Most medicines (by volume) used in in-patient care are included in the Payment by Results (PbR) tariff (comparable to a fee for service payment). The PbR tariff sets the price that PCTs are expected to pay hospital trusts (or any other providers) out of their unified allocation for a given episode of care. The tariff price for each treatment includes the cost of the medicines used, provision, monitoring of the condition and other costs around the treatment.

Table 1.3: United Kingdom – Health and pharmaceutical expenditure, 2000 and 2004–2008

Expenditure (in million GBP)	2000	2004	2005	2006	2007	2008
Total health expenditure (THE)[1]	68,700	96,700	103,200	111,700	117,900	n.a.
- thereof THE public	54,500	78,900	84,500	91,700	96,400	n.a.
thereof THE private	14,200	17,800	18,700	20,100	21,500	n.a.
THE in hospitals (HOSHE)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
thereof HOSHE public	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
thereof HOSHE private	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total pharmaceutical expenditure (TPE)	9,730	12,770	13,240	13,800	14,400	n.a.
- thereof TPE public	7,660	10,580	11,070	11,660	12,040	n.a.
- thereof TPE private	2,070	2,190	2,170	2,140	2,360	n.a.
Pharmaceutical expenditure in hospitals (HOSPE)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- thereof HOSPE public	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
- thereof HOSPE private	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

GBP = Great Britain Pounds, HOSHE = health expenditure in hospitals, HOSPE = pharmaceutical expenditure in hospitals, PE = pharmaceutical expenditure, THE = total health expenditure, TPE = total pharmaceutical expenditure

Note: Data are indicated as of 31 December.

[1]Data on UK total health expenditure for 2008 are not available at the time of writing this report.

Source: Office of National Statistics and Department of Health

There are no out-of-pocket payments for in-patient treatment in the NHS but there is a prescription charge for out-patient prescriptions. Please refer to section 3.1 for private care in addition to NHS care.

Entitlement to free NHS hospital treatment is based on 'ordinary residence' in the UK, not nationality or UK tax payment. Those not ordinarily resident are deemed overseas visitors and are subject to the NHS (Charges to Overseas Visitors) Regulations 1989, as amended. Under these regulations they should pay for any treatment (including medicines) they receive unless an exemption from charge applies to them e.g. they are a visitor from the European Economic Area (EEA) with an European Health Insurance Card (EHIC).

Under EU Regulations (1408/71), a citizen from an EEA member state is entitled to access:

- NHS treatment that becomes necessary during a visit to the UK (including treatment of a chronic or pre-existing medical condition) via the EHIC.
- Planned NHS treatment in the UK via an E112 form. The overseas patient seeks this authorisation from their home member state.

Either of these could include the provision of medicines.

In both cases, the overseas visitor would be entitled to be treated on the same basis as a resident of the UK. Neither the EHIC nor the E112 cover private treatment.

The UK is able to claim back from the home country, the cost of the treatment provided.

2 Pricing

2.1 Organisation

2.1.1 Framework

The prices of **branded** prescription medicines and the profits that companies are allowed to make on their sales to the NHS are controlled by the Pharmaceutical Price Regulation Scheme (PPRS). It is a voluntary agreement made between the Department of Health and the branded pharmaceutical industry - represented by the Association of the British Pharmaceutical Industry (ABPI) - under Section 261 of the National Health Service Act 2006. The PPRS sets the NHS list price of a medicine. This is the reimbursement price in primary care but in secondary care, hospitals may be able to procure medicines below this maximum price through competitive tendering (see below). The prices of **generic** (non-branded and out of patent) medicines are not controlled by the PPRS but by the market.

NHS purchasers, such as hospitals, will then purchase the medicine for treatment if they judge the evidence to suggest that the price of the medicine reflects its clinical value and efficacy. Hospitals can purchase medicines centrally via NHS PASA contracts, via regional contracts or locally by individual NHS trusts or hospitals and can sometimes negotiate purchase prices below the NHS list price or Drug Tariff price. Hospitals are expected to subject their medicine sourcing requirements, for both patent protected and generic medicines, to competitive tender in compliance with the UK Regulations that implement the EU procurement directives (see 2.2.1).

The role of the National Institute for Health and Clinical Excellence (NICE) is to provide a single and robust source of guidance to these NHS purchasers, based on the clinical evidence and the NHS list price of the medicine. It is not to purchase, negotiate prices or approve a medicine for purchase. These responsibilities lie with local purchasers, with the exception that positive NICE guidance on medicines appraised as being clinically and cost effective places a statutory requirement on these purchasers to make funding available for clinicians to follow the guidance.

Prices are offered to the NHS, by the suppliers, as the result of the tendering process. The decision to prescribe a particular medicine, available to a hospital as a result of this process, then sits locally with prescribers and budget holders, reflecting their relationships with commissioners (purchasers), and the application of NICE guidance where this exists, within the management of their local hospital formularies.

Private (non-NHS) hospitals make their own arrangements for purchasing medicines.

Summary

The PPRS sets the NHS list price for branded medicines, the maximum price that a supplier may charge the NHS. In in-patient care, hospitals can purchase medicines centrally via NHS PASA contracts, via regional contracts or locally by individual NHS trusts or hospitals. Most generic medicines are purchased on national contracts and branded medicines on regional contracts. Where offers are made, contracts are awarded to the most 'economically advantageous offer'(not necessarily the cheapest). Where there is little therapeutic competition, it is not always possible to obtain any discounts and hospitals pay the NHS list price, as paid in the out-patient sector.

2.1.2 Hospital prices

Hospitals procure medicines via contracts following competitive tendering and may obtain a discount to the NHS list price. The NHS list price includes a margin for distribution. Wholesaler and pharmacist margins are not fixed in the UK, so it is not possible to derive the real ex-factory price from the NHS list price. As explained above, the prices of NHS medicines are indirectly controlled through the PPRS.

Medicines supplied to hospitals (and community pharmacies) are subject to VAT at the standard rate (currently temporarily 15% but will revert to 17.5% from 1 January 2010). But VAT on supplies to patients differs depending on the circumstances. Medicines dispensed by a community pharmacist against an NHS prescription are zero-rated for VAT (which means that the patient pays no VAT and the pharmacy can recover the VAT paid when buying the medicines). Medicines prescribed in hospital are subject to VAT at the standard rate and the NHS is funded centrally by the Government to take account of this non-recoverable VAT. Healthcare is, therefore, VAT free to the patient. Sales of OTC medicines direct to patients, without a prescription are standard rated for VAT.

The prices of hospital medicines consist of the NHS list price, VAT minus any discounts the hospital secures. The level of prices of hospital medicines are often lower than the prices paid in the community. The Office of Fair Trading in its market study on the PPRS, published in February 2007, calculated that the discount obtained by hospitals on the fifty medicines on which they spent the most in 2005, was 12.3% although there was variation in the discounts obtained across medicines[3].

In February 2009 a report (Analysis of Hospital Medicines) commissioned by the Danish Ministry for Health and Prevention from COWI consultants on hospital medicines included a comparison of the prices of 39 medicines in six selected countries: Denmark, Norway, England, Sweden, Germany and the Netherlands. The analysis showed that the prices of hospital medicines are lowest in England and Norway both with regard to the official list prices and with regard to the prices that are actually negotiated.

[3] http://www.oft.gov.uk/shared_oft/reports/comp_policy/oft885.pdf

Procurement prices in the hospital sector are not published. There is no legal obligation for hospital trusts to publish the prices of medicines or to notify the price to a competent authority. This information is treated as being held as commercially confidential as discounts vary between trusts. Disclosure of this information would undermine the relationships between the parties and inhibit or curtail negotiations. However, trusts may cooperate on these issues to some extent in consortia. As explained in section 2.2.1, purchasing data is collected for England, by NHS PASA at trust level, through hospital pharmacy computer systems (PharmEx).

However, expenditure on medicines is centrally recorded e.g. a report on Hospital Prescribing in England in 2007 was published in October 2008 by the NHS Information Centre for Health and Social Care. This report revealed that the overall expenditure on medicines was billion £11.2 / € 16,3, 25.7% of which was used in hospitals, with a 12% rise in hospital expenditure over the course of the year. This report is publicly available[4]. Note that the costs for hospital use are provided by IMS Health who collect volume data from a large sample of hospitals and cost this using the Drug Tariff and standard price lists. This means that the costs are not necessarily what the hospitals paid, as they are often able to negotiate a discount.

2.2 Pricing policies

2.2.1 Procurement

Legal Framework

NHS Trusts (including their pharmacies) are public sector organisations therefore the procurement they undertake is governed by the UK regulations (Public Contracts Regulations SI 2006 No 5[5]) that implement the EU procurement directives. The Public Contract Regulations outline the procedures which must be followed when awarding contracts above a specified financial threshold. Contracting Authorities are responsible for achieving value for money, normally through fair and open competition. Procurements must be advertised in the Official Journal of the EU (OJEU) and meet set timescales, from the initial notice to contract award, and define, for example, the minimum time during which suppliers must be allowed to respond.

The contracts that are awarded, against pre-determined award criteria, will either be, occasionally, commitment contracts on behalf of individual hospitals or legal entities, or more likely framework agreements on behalf of defined geographical groupings of hospitals.

[4] http://www.ic.nhs.uk/statistics-and-data-collections/primary-care/prescriptions/hospital-prescribing-2007:-england

[5] http://www.opsi.gov.uk/si/si2006/uksi_20060005_en.pdf

Scope

All NHS trusts are expected to comply with the UK regulations that implement the EU procurement directives to source their requirements for medicines.

Organisation

Whilst hospitals remain free to carry out their procurements as they wish, the NHS as a whole supports a consistent national procurement model. This involves hospitals aggregating their business on a geographical basis through hospital pharmacy purchasing groups. There are six main pharmacy purchasing groups in England. The business of these groups is then competitively tendered on their behalf by NHS PASA, in line with the UK regulations and against a previously agreed timetable. When offer prices are received from the suppliers the hospitals collectively agree the award decisions for their groups. NHS PASA then awards and manages the resulting framework agreements on behalf of the pharmacy purchasing groups.

This NHS contracting model reduces duplication of effort, optimises leverage, manages risk and offers both the NHS and its suppliers a single consistent approach through the use of one tendering and contract management system in compliance with UK regulations.

Process

For the most part NHS PASA manages the contracting process on behalf of hospital pharmacy purchasing groups to ensure adherence with the UK Regulations. Framework agreements for generic medicines are managed within a nationally coordinated programme that takes into account the date that products come off patent. Hospital pharmacists may dispense medicines generically (where there are no clinical considerations) and determine the award decisions for the framework agreements. In this case they are the decision makers, contracts for branded products are awarded as price volume matrices against which hospitals then place their prescribing commitment to achieve the discounts that are available.

Pricing, quality and supplier performance are all delivered through direct competition (for generic medicines) and through prescribing commitment, where opportunities arise, as the result of patent protected medicines being therapeutically similar.

Criteria

Tenders are assessed against the criteria set out in the OJEU advertisement or tender documentation. The assessment should follow the pre-defined evaluation strategy and be consistent with the ultimate objectives of the project/procurement. The final selection should be the tender which offers best overall value for money.

Frequency

Contracts will be let for a period of time which provides optimum commercial benefit to the Contracting Authority. Public procurement regulations restrict the length of Framework Agreements to a period of four years, but many products are tendered more frequently than

this. Across the NHS pharmacy community there will be many procurement processes underway at any one time.

Publication

As outlined above tendering opportunities are advertised in the Official Journal of the European Union (OJEU). Once contracts are awarded a notice is also posted in the OJEU containing information about the suppliers awarded to the contract.

Information on prices

Data is collected for England, by NHS PASA, and at trust level, through hospital pharmacy computer systems and purchasing information. The information collected includes name, form, strength, pack size, number of packs and price per pack. Although not all trusts provide data, currently 95% of available purchasing information available from acute trusts is collected in this way through a system known as PharmEx. Through this system the NHS is able to measure the performance of its procurement arrangements. However, procurement prices in the hospital sector are not published. See section 2.1.2 for average discounts.

2.2.2 Others

There are no other pricing policies besides procurement.

3 Reimbursement

3.1 National hospital reimbursement procedure

Legal framework

Under the NHS Act 2007, PCTs are granted a unified budget, as explained in section 1.3 on Funding. The Payment by Results (PbR) tariff is used to allocate these funds to hospitals based on the treatment courses used, as explained in section 1.3.

Payers

In England, hospital trusts pay for the medicines they use and are reimbursed in one of two ways by the PCTs – either costs are covered in a standard charge for an episode of care (PbR) or specific medicines on a list (known as excluded from tariff) are recharged to PCTs.

Hospital trusts are responsible for paying directly for secondary care, although this expense will be reimbursed by PCTs if the medicine has been approved for prescription. Restrictions are not placed on what can be reimbursed but on what can be prescribed. All items which can be prescribed on the NHS are fully reimbursable. Local restrictions may apply to which medicines are able to be prescribed e.g. those established by the hospital's pharmaceutical and therapeutic committee.

National reimbursement lists

There are no national reimbursement lists for secondary care. Decisions concerning which medicines can be prescribed rest with local pharmaceutical and therapeutic committees, which manage formularies, or restricted lists, but there are normally arrangements for exceptions. In some parts of the UK, hospitals work closely with primary care to agree jointly which medicines are used or not used locally. However, positive NICE guidance can lead to PCTs being required to fund certain medicines for use under the advice of a patient's doctor (cf. section 5.2).

Co-payments for medicines in hospital care

NHS patients who wish to buy additional private care (e.g. buy medicines privately that are not recommended for use by the NHS) can do so as long as the private care can be delivered separately from NHS care. Guidance makes clear that patients should never be charged for NHS care and that the NHS should not subsidise private care.

Specific budgets

The National Commissioning Group (NCG) is responsible for commissioning services for rare diseases on a national basis for the population of England (and, in some cases, of other countries). In general, the number of patients receiving treatment from one of the NCG's

services is less than 400. By concentrating the resources for these services on a national basis, the NHS is able to develop expertise in how best to commission them, to ensure safety and quality through a concentration of skills in a few centres, and to mitigate the risk to individual PCTs of unpredictable episodes of very expensive treatment. National Commissioning is a responsibility of the Strategic Health Authorities (SHAs), and the group is hosted by NHS London on behalf of all 10 SHAs.

Summary

Hospital trusts are reimbursed by PCTs for medicines purchased if the medicine has been approved for prescription. Decisions concerning which medicines can be prescribed are made locally by a hospital's pharmaceutical and therapeutic committee. In some parts of the UK hospitals work closely with primary care to agree jointly which medicines are used or not used locally. There are no national reimbursement lists for secondary care, however specific medicines on a list are reimbursed. The reimbursement system for medicines dispensed in hospitals is quite separate from that in the community.

3.2 Hospital pharmaceutical formularies

Scope

Formularies have been in place in the majority of hospitals for many years; formularies have also been developed by primary care organisations and, more recently, some hospitals have developed joint formularies with primary care trusts. Organisations also share formularies between several NHS bodies. Formularies normally list all medicines that have been given a positive appraisal by NICE (see section 5.2) and other medicines agreed locally, historically they were based on local decision making processes.

Payers

Hospital trusts pay for the majority of medicines directly – either via purchases, or use of prescriptions dispensed in the community, or via homecare arrangements. There are some arrangements where commissioning bodies (for England) pay directly, but this is the exception. Trusts are then reimbursed through the Payment by Results mechanism (in England) (as described in sections 1.3 and 3.1 above) or through budget allocation.

Decision-taking bodies/persons and process

The role of Pharmaceutical and Therapeutic Committees (PTCs) (known as drugs and therapeutic committees (DTCs) in the UK) varies - some are advisory, others are decision makers. Most usually, the PTC oversees the formulary system and members of the pharmacy team update the documentation/electronic system.

Pharmaceutical and therapeutic committees

The membership of PTCs varies but comprises a multi-professional group with a mix of doctors, pharmacists, nurses and others. For an area PTC, General Practitioners (GPs) are also represented, as are pharmacists working in primary care organisations. The PTC manages entry to the formulary but also supports safe and effective prescribing – often with oversight of guidelines, medicines documentation and so on. The National Prescribing Centre has produced helpful guidance on prescribing committees[6].

Process and criteria

The topics discussed in building formulary lists will normally include issues around cost and clinical-effectiveness, safety, efficacy, and whether there are benefits compared to existing medicines on the formulary list.

In 2009 the NHS Constitution was published which include addressing the issue of access to medicines. To support this and to ensure decision-making regarding medicines was of an appropriate standard the National Prescribing Centre was commissioned to provide supporting guidance[7].

Pharmaceuticals on hospital formularies

Each hospital will normally have their own formulary of active substances, and as a result, the number of items on each list will vary significantly. However, as a minimum medicines which are approved by NICE are on this list. Generic substitution is normally practiced with these lists, with the exception of products with narrow therapeutic indices and variable bioavailability.

Updates

The formularies are continually updated, and depending on hospital policy, they are overhauled between every 1 to 2 years.

Publications and binding character

Some hospitals allow specialists to override these lists; others only allow such an override in specially approved circumstances. Formularies are developed locally and may be made available in paper and electronic forms. Electronic copies may be available only on 'intranets' for organisational use or on the publicly accessible internet.

[6] http://www.npc.co.uk/policy/local/apc_guide.htm

[7] http://www.npc.co.uk/policy/local/constitution_handbook.htm

4 Consumption of pharmaceuticals

Data for total annual pharmaceutical consumption at a national level is not available in the format requested as this is measured in different units in primary and secondary care – prescription items in the community[8] and packs in hospitals.

Data on consumption in hospitals in England is available through PharmEx data, as explained at section 2.2.1. PharmEx data categorise consumption by British National Formulary (BNF) category. It is not publicly available. Hospital services normally administer medicines to their patients within the confines of their own clinical environment. However, on some occasions the supply and administration of medicines is provided to the patient whilst in their own home. The use of homecare services is expanding, and it is estimated that in the English NHS 120,000 plus patients are now receiving their medicines via the homecare route. The value of medicines being supplied by this route is estimated in excess of £ 500 million, and these figures are expected to increase substantially as more clinical services move away from hospitals to the community. This data is not fully captured in PharmEx data.

Within hospitals, consumption can be analysed by the ward or department (some are identified by the consultant's name rather than the unit) and by individual patient where electronic prescribing systems exist.

Table 4.1: United Kingdom – Pharmaceutical consumption, 2000 and 2004–2008

Pharmaceutical consumption	2000	2004	2005	2006	2007	2008
Annual pharmaceutical consumption in total						
in packs	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
in DDD (Defined Daily Doses)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
In other measures units (e.g. unit doses, please specify)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Annual pharmaceutical consumption in hospitals						
in packs in million[1]	n.a.	n.a.	n.a.	117	121	131
in DDD	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
In other measures units (e.g. unit doses, please specify)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

DDD = Defined Daily Doses, n.a. = not available

[1]The following caveats apply: 1) Packs are irrespective of pack size i.e. whether a product has a pack size of 1 or 1,000 it is regarded as one pack. 2) A multiplier has been used to account for trusts who don't supply data 3) A portion of homecare data will be missing as it is not currently captured by PharmEx.

Source: PharmEx database NHS PASA

[8] http://www.ic.nhs.uk/statistics-and-data-collections/primary-care/prescriptions/prescriptions-dispensed-in-the-community-statistics-for-1998-to-2008:-england

Table 4.2 shows the top 10 pharmaceuticals by pharmaceutical expenditure and consumption in 2007. The indicated data only refers to England.

Table 4.2 England – Top 10 pharmaceuticals by pharmaceutical expenditure and consumption, 2007

Position	Top pharmaceuticals used in hospitals, indicated by active ingredient, ranked with regard to consumption	Position	Top pharmaceuticals used in hospitals, indicated by active ingredient ranked with regard to expenditure
1	Paracetamol	1	Trastuzumab
2	Co-codamol	2	Immunoglobulin normal human
3	Prednisolone	3	Etanercept
4	Diclofenac sodium	4	Rituximab
5	Codeine	5	Infliximab
6	Aspirin	6	Tenofovir/emtricitabineimatinib
7	Tramadol	7	Imatinib
8	Clozapine	8	Adalimumab
9	Ethinylestradiol/levonorgestrel	9	Efavirenz
10	Ibuprofen	10	Docetaxel

Source: PharmEx database NHS PASA

5 Evaluation

5.1 Monitoring

Monitoring pharmaceutical usage at a national level has been problematic, but work is undertaken on a regular basis. As described in section 2.1.2, for England, the NHS Information Centre for Health and Social care publishes details; the 2007 report was published in October 2008[9]. Some national work led by the National Cancer Director has also been produced – examining uptake of NICE approved cancer medicines – comparing network uptake per population[10].

[9] http://www.ic.nhs.uk/statistics-and-data-collections/primary-care/prescriptions/hospital-prescribing-2007:-england

[10] http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Dearcolleagueletters/DH_098856

As explained in section 2.1.2, data is collected for England, by NHS PASA through a system known as PharmEx on a monthly basis. Through this system NHS PASA is able to measure the performance of its procurement arrangements and give feedback to trusts on their performance. PharmEx data can monitor expenditure by BNF category. However, this data is not publicly available.

Monitoring at hospital level

Hospital trusts expenditure on medicines are monitored closely, this is usually led by the Chief Pharmacist and their team. Budgets are usually devolved to "business units" with trusts (such as General Surgery or Acute Medicine) but with close involvement of the pharmacy team. A minority of hospitals have e-prescribing systems, therefore linking spend to specific case mix tends to be reserved for particular analyses – perhaps where spending is growing or concerns are raised on usage.

Monthly monitoring is the usual approach but process and extent varies markedly between organisations.

Guidelines are often developed on a local hospital basis – including details of and to support local formulary applications.

IT support

Whilst computerised stock tracking is common in hospitals, e-prescribing is limited.

Most hospital pharmacies have sophisticated stock control systems. A medicine's progress through the hospital can be monitored from ordering to administration. Generally the pharmacy computer system will order pharmaceutical goods automatically based upon need and send these orders (after authorisation) to wholesalers and manufacturers electronically. When the stock arrives it is checked and then entered into the system against the original order, batch numbers and expiry dates can be entered as appropriate. The medicine is then either booked out to a specific patient, this is recorded automatically in the notes, then dispensed, and sent to the ward or stock is ordered for a particular ward and administered. Eventually e-prescribing will allow hospitals to monitor individual doses administered to patients and record to the patient's notes.

A daily stock take should occur as good practice, here a few items will be checked and discrepancies investigated, and annually a full stock take should take place for audit.

Role of hospital pharmacists

On a day-to-day basis, hospital pharmacists combine clinical and technical roles. On the one hand, they provide prescribing advice to clinicians and deliver clinical services, while on the other they are responsible for the availability, when required, of medicines of suitable quality through the management, on a day-to-day basis, of purchasing and dispensing activities.

In the UK there has been an extensive move to embrace and develop the role of clinical pharmacy whilst sustaining technical and supply chain expertise. There is also a very strong medicines information network as well as underpinning pharmacy education services based

in secondary care and linking with Higher Education. Pharmacists are supported by technically trained staff (pharmacy technicians and supporting assistant staff) who dispense, prepare, distribute medicines and, increasingly, undertake duties at the ward level.

Parenteral nutrition, radiopharmaceuticals, centralised intravenous additive service (CIVAS) and cytotoxic chemotherapy are prepared locally – either under a Medicines Act exemption (supervised by a pharmacist) or in a unit licensed by the medicines and healthcare products regulatory agency (MHRA) (again with pharmacist leadership). There are medicines, particularly those of lower risk, reconstituted at ward level by medical and nursing staff.

Pharmacy team size varies across organisations, larger trust will provide their own services but there can be collaboration between organisations. Support services include education, computer/IT and procurement specialists. Teams may include or be led by technicians rather than pharmacists. On a “regional” basis there will also be specialist leads in these and other areas. Quality Assurance/Quality Control pharmacists are usually linked to production/aseptic dispensing facilities but there are also regional leads.

The majority of pharmacists are based in clinical services. Pharmacists specialise in specific areas of work (renal, mental health, intensive care, general surgery for example) and work closely with medical teams to provide patient care. There are now around 40 “consultant pharmacists” in England – these are holders of posts approved as meeting Department of Health requirements around expert practice, they work with specific patient groups or in defined areas of practice. Pharmacists at lower grades, in development posts, also undertake routine clinical pharmacy duties.

Clinical pharmacy teams seek to ensure safe and effective use of medicines, implementing guidelines and individualising patients’ medicines regimens. Pharmacists do accompany medical team rounds – but not all rounds and not in all hospitals; they counsel patients on their medicines, and this is supported in some hospitals by technical staff. Pharmacists can now prescribe and undertake this in a number of specialities.

Pharmacists undertake a number of “clinic” type roles, for example managing anticoagulation, supporting cancer therapies. Medicines information services provide enquiry answering and active dissemination of information, critical appraisal of evidence and electronically available information. There is an active network of MI pharmacists – UK Medicines Information. Pharmacists support formulary development, monitoring and implementation. There has been particular work on antibiotic stewardship with pharmacists contributing significantly – guidelines, feedback on use, training, monitoring, joint ward rounds with microbiologists.

There are close working relationships between medical, nursing and pharmacy staff. Pharmacists are active in the education of junior medical staff.

Traceability / tracking of pharmaceuticals

This data is collected for England, by NHS PASA, and at trust level, through hospital pharmacy computer systems and purchasing information. The information collected includes name, form, strength, pack size, number of packs and price per pack. Currently 95% of

available purchasing information available from acute trusts is collected in this way through a system known as PharmEx. Through this system the NHS is able to measure the performance of its procurement arrangements. As noted above, Homecare is excluded.

5.2 Assessment

Cost-effectiveness / HTA reports

NICE provides authoritative, independent advice to the NHS on different health-related interventions and pathways of care. It aims to increase fairness in access to treatments, be a national source of robust clinical guidance and speed up the uptake of cost-effective treatments in the NHS. With regards to medicines, NICE's role is to determine, on the basis of the best available evidence and free from political interference, whether a treatment is sufficiently clinically and cost effective to justify the cost. This guidance is then provided to the NHS. If the guidance is positive, the *NHS Constitution* stipulates that patients have the right to these treatments if their doctor says they are clinically appropriate for the patient. NICE appraisals are not given to all medicines, and so hospitals will often have to make decisions on clinical and cost effectiveness without NICE guidance.

Audit reports

The Audit Commission and the Healthcare Commission frequently publish evaluations of HTAs in their reports on medicines.

Cost-containment

There has been extensive work on cost-effectiveness in hospitals, some examples of initiatives (majority are widespread):

- Clinical pharmacy services – individualising patient care for safety and cost-effectiveness
- Generic substitution
- Therapeutic substitution (more limited – selected products where junior medical staff requests are converted to alternate products as agreed by a PTC)
- Formularies
- Tendering/procurement exercises

Savings and other benefits

Whilst there are examples in the literature of the impact of cost-containment activity, we are not aware of a nationwide quantitative analysis of the impact of the whole system approach to cost effective prescribing.

6 Interface management

Hospitals have been asked to take into account the impact of their prescribing on primary care and joint pharmaceutical and therapeutic committees (PTC) within primary care were established to support this. There are examples of hospitals switching and controlling specific medicines to support cost-effective prescribing in primary care.

Some hospitals minimise out-patient prescribing and provide recommendations to GPs instead. Shared care arrangements are sometimes in place to help GPs prescribe more complex medicines (disease modifying agents in rheumatoid arthritis for example) rather than continuing prescribing from secondary care.

Managing the interface

The use of medicines by patients needs to be co-ordinated throughout the patient's journey. Most patients have their care delivered by more than one health care organisation. Many medicines are initiated in acute/specialist hospitals and subsequently prescribed in primary care. Medicines management and prescribing are key elements of both PCT and acute trust business. Issues relating to medicines and technologies also interface with a number of other areas including specialist commissioning, finance, clinical networks, clinical effectiveness and public health. Problems with medicines often occur at the interface between health care organisations, and health and social care. This risk needs to be managed both clinically and financially, and a coordinated area wide approach to medicines management can help organisations do this.

Health economy prescribing committees (sometimes referred to as Area Prescribing and Medicines Management Committees (APCs)) whose "member" organisations are primary and secondary care commissioners (purchasers) and providers work together to ensure a consistent health community approach to medicines management. Many were established to manage more effectively the entry of new medicines into the NHS. Now, however, the functions and forms of many APCs go far beyond this original remit. In particular, they can be used as forums to resolve issues around medicines safety and usage across the care interfaces, for example from primary to secondary care.

There are clear benefits to patients and organisations of having an effective and influential APC, for example, an APC can:

- promote co-operation and consistency of approach in the commissioning process
- prevent duplication of professional and managerial effort by ensuring local joint working
- ensure that robust standards and governance underpin community wide decision making
- enable key stakeholders, working in the NHS locally, to exert an influence on the prioritisation, improvement and development of healthcare delivery
- co-ordinate the safe and effective use of medicines across a health community

The National Prescribing Centre (NPC) is an NHS organisation whose aim is to 'promote and support high quality, cost-effective prescribing and medicines management across the NHS, to help improve patient care and service delivery'. The NPC produces a number of resources to support commissioners (purchasers) in relation to prescribing and medicines management. In addition, the NPC hosts a medicines management database of improvement examples[11] which allows you to search through examples of improvement that have been submitted to the NPC for sharing with the wider NHS. Further information is available at www.npc.co.uk

7 Developments and outlook

The most recent and significant reforms to the hospital pharmaceutical sector in the NHS include:

- Hospitals gaining more financial autonomy by moving to foundation trust status in England (ongoing since 2004)
- Pharmacy White Paper (2008) gave an emphasis on pharmacy leading for safety in organisations
- The introduction in England of the Payment by Results system and ex-tariff over a four year period to 2008-2009
- The increased emphasis on antibiotic stewardship[12]
- Pharmacists as prescribers from 2006

In terms of initiatives planned for the near future:

- Improving safe transfer of care from hospital to home or other settings needs to be improved and is being addressed
- Introduction of e-prescribing and wider automation
- Likely to see more contracting out pharmacy services (especially supply), rather than services always provided within the organisation
- The responsible pharmacist legislation
- Planned review of the Medicines Act.
- Modernising Pharmacy Careers Programme.

[11] http://www.npc.co.uk/mm/mm_improvement/mm_improvement.htm

[12] http://www.bma.org.uk/health_promotion_ethics/diseases/tacklinghcais.jsp

8 References and data sources

British Medical Association (2009): Tackling healthcare associated infections through effective policy action. Available at: http://www.bma.org.uk/health_promotion_ethics/diseases/tacklinghcais.jsp

Department of Health (2008): The Pharmaceutical Price Regulation Scheme 2009. London. Available at: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/DH_091825

Laing & Buisson (2008): Laing's Healthcare Market Review - 21st Edition 2008/2009.

National Prescribing Centre (2009): Supporting rational local decision-making about medicines (and treatments). A handbook of good practice guidance. Available at: http://www.npc.co.uk/policy/resources/handbook_complete.pdf

National Prescribing Centre (2007): Managing medicines across a health community - Making area prescribing committees fit for purpose. Available at: http://www.npc.co.uk/policy/resources/apc_guide_may_2007.pdf

Office of Fair Trading (2007): The Pharmaceutical Price Regulation Scheme. An OFT Market Study. Available at: http://www.oft.gov.uk/shared_oft/reports/comp_policy/oft885.pdf

Richards, M. (2009): Uptace of NICE approved cancer drugs 2007/2008. Department of Health. Dear colleague letter. Available at: http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Dearcolleagueletters/DH_098856

Statutory Instruments (2006): The Public Contracts Regulations 2006. Available at: http://www.opsi.gov.uk/si/si2006/uksi_20060005_en.pdf

Stephens, M. (2005): Strategic Medicines Management. Pharmaceutical Press

Stephens, M. (2003). Hospital Pharmacy. Pharmaceutical Press

The Information Centre for health and social care (2009): Prescriptions Dispensed in the Community - Statistics for 1998 to 2008: England. Available at: http://www.ic.nhs.uk/webfiles/publications/presdisp98-08/Prescriptions_Dispensed_in_the_Community_1998_2008_England_a.pdf

The Information Centre for health and social care (2008): Hospital Prescribing, 2007: England. Available at: http://www.ic.nhs.uk/statistics-and-data-collections/primary-care/prescriptions/hospital-prescribing-2007:-england

Databases

MHRA Sentinel Database

OECD Health database 2008

PharmEx database NHS PASA

Weblinks

Annual reports of Department of Health and the NHS Chief Executive:
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/AnnualReports/index.htm

National Prescribing Centre: www.npc.co.uk

National Health Service: www.nhs.uk