

Supporting prescribing in general practice - a progress report

Summary report / Prepared for the Auditor General for Scotland

June 2003



Auditor General for Scotland

The Auditor General for Scotland is the Parliament's watchdog for ensuring propriety and value for money in the spending of public funds.

He is responsible for investigating whether public spending bodies achieve the best possible value for money and adhere to the highest standards of financial management.

He is independent and not subject to the control of any member of the Scottish Executive or the Parliament.

The Auditor General is responsible for securing the audit of the Scottish Executive and most other public sector bodies except local authorities and fire and police boards.

The following bodies fall within the remit of the Auditor General:

- departments of the Scottish Executive eg the Health Department
- executive agencies eg the Prison Service, Historic Scotland
- NHS boards and trusts
- further education colleges
- water authorities
- NDPBs and others eg Scottish Enterprise.

Acknowledgments

We are grateful to Dr Jan Jones, Pharmaceutical Prescribing Adviser, Tayside Primary Care Trust who provided valuable support and advice during the project and in the drafting of this report.

The Primary Care Information Group within the Information and Statistics Division (ISD) of the Common Services Agency, NHSScotland, provided all prescribing data used in this report. We would like to thank ISD and, in particular, Duncan Buchanan, Bill Gold and Chris Waugh.

Finally, we would like to thank the members of the advisory panel, who are listed at the end of the report, for their advice and comments, and the many individuals within primary care trusts and other organisations who generously offered their time and comments.

Audit Scotland is a statutory body set up in April 2000 under the Public Finance and Accountability (Scotland) Act 2000. It provides services to the Accounts Commission and the Auditor General for Scotland. Together they ensure that the Scottish Executive and public sector bodies in Scotland are held to account for the proper, efficient and effective use of public funds.

Contents



Main findings

Page 2

Part 1. Introduction

Background

The study

Page 3

Part 2. Prescribing quality and efficiency

Quality of prescribing

Page 5

Prescribing efficiency

Page 6

Potential for further savings

Page 9

Part 3. Implementing national guidelines

National guidance and advice

Cost of implementing guidelines

Page 10

Part 4. Achieving further improvements

National information, prescribing indicators and targets

Strategies and action plans

Page 12

Formulary development and implementation

Repeat prescribing and dispensing

Sharing good practice

Computerisation

Public expectations

Page 13

Part 5. Summary of recommendations

Room for further quality and efficiency improvements

Implementing national guidelines

Achieving further improvements

Page 14

Advisory panel

Page 15

Main findings

We have reviewed progress in improving the quality and cost of primary care prescribing since our baseline report *Supporting prescribing in general practice* was published in 1999. We found that:

- There have been significant improvements in prescribing quality.
 - Trusts have also made efficiency savings since 1999 although price changes of medicines makes this harder to assess than prescribing quality.
 - There is scope to make further efficiency savings of around £14 million. Although significant in its own right this is small in relation to the total prescribing expenditure.
 - Implementing national guidelines improves the quality of patient care but can have significant cost implications for primary care prescribing.
- More work is needed in areas such as developing health board-wide prescribing strategies, repeat prescribing, sharing information and realising the benefits of computerisation.

Part 1. Introduction

Background

1.1 The quality of prescribing has a direct impact on the quality of patient care. Receiving the most appropriate medicine at the right time is important both for treating existing conditions and preventing ill health.

1.2 In 2001/02 primary care prescribing in Scotland cost just over £760 million or 12.4% of total NHS expenditure. Expenditure on prescribing is rising ([Exhibit 1](#), overleaf). Medicine costs rose by 13.6% (£49.9 million) in the first six months of 2002/03 compared to the same period in 2001/02.

1.3 A variety of factors affect both the volume and cost of medicines prescribed including:

- the impact of prescribing in line with national guidelines
- general cost and volume inflation such as an ageing population
- the use of new more expensive drugs

- increased patient awareness
- lifestyle choices
- increased numbers of prescribers
- the behaviour and prescribing choices made by individual prescribers.

The study

1.4 Our 1999 report provided some broad comparative information about prescribing patterns with the aim of improving both the quality and cost effectiveness of primary care prescribing.

1.5 There have been major changes since this report including:

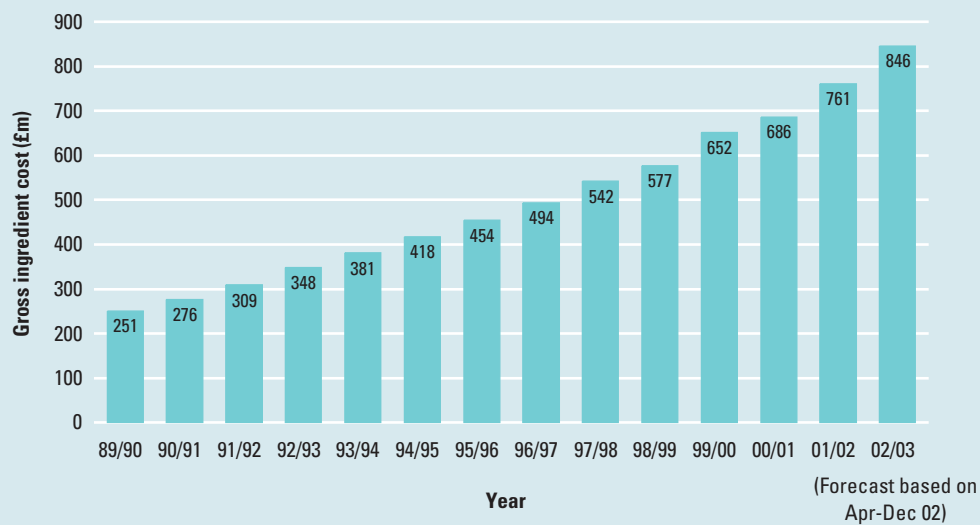
- An increased emphasis on clinical governance and the development of new guidelines for the treatment of specific diseases such as cardiovascular disease.
- New medicines being developed and marketed by the pharmaceutical industry.

- Medicines that were previously considered new becoming established and used more widely.
- Medicines coming off patent and cheaper generic alternatives becoming available.
- Changes in the price of medicines.

1.6 In this report we build upon the 1999 report and look at some of the factors that influence prescribing quality and cost. We also describe how prescribing quality and efficiency may be measured and assess trusts' progress in improving prescribing quality and efficiency since 1999. Finally, we highlight how further improvements can be achieved, and provide recommendations for action.

Exhibit 1

Prescribing expenditure since 1989/90



Note: 2002/03 data is extrapolated from the data for the first nine months of 2002/03.

Source: Information and Statistics Division, NHSScotland (ISD)

Part 2. Prescribing quality and efficiency

2.1 In this section we look at primary care trusts' progress in improving prescribing quality and efficiency since our previous report. We also consider the extent to which trusts can achieve further efficiency savings.

2.2 Information from GP practices about morbidity, coupled with prescribing information, would provide the best indication of the quality of prescribing. However, current information about prescribing is based on medicines dispensed and is not linked to the diagnosis. Information about GP practice morbidity is limited and depends on how accurately GP practices collect and code data. The new GP contract will require practices to collect this type of information for chronic diseases.

2.3 In the absence of morbidity-related information in Scotland, we have used generally accepted prescribing indicators and routine data on medicines dispensed to examine the quality of prescribing. However, these indicators have not been validated with clinical data and there may be justifiable reasons for outlying prescribing patterns which can only really be determined through clinical audit.

Quality of prescribing

2.4 The quality of prescribing, as measured by the indicators in this report, has risen significantly since we issued the 1999 report.

2.5 We have used the following indicators of prescribing quality:

- Proton pump inhibitor (PPI) maintenance doses as a proportion of maintenance and treatment doses.

- Bendrofluazide 2.5mg doses as a proportion of 2.5mg and 5mg doses.
- Single diuretics as a proportion of single and combination diuretics prescribed.
- ACE Inhibitors per 1000 adjusted population.
- Low dose aspirin per 1000 adjusted population.
- Statins per 1000 adjusted population.
- Total prescribing of hypnotics and anxiolytics.
- Established antibiotics as a percentage of all oral antibiotics.
- Amoxicillin as a percentage of amoxicillin and co-amoxiclav.

2.6 The full report explains these indicators of prescribing quality and the clinical evidence we have used to support them.

2.7 Exhibit 2 overleaf summarises changes in these indicators over the last three years. Apart from one indicator (A7) an increase in percentage or defined daily doses¹ (DDDs) is an improvement. Based on these indicators, prescribing quality has improved significantly.

2.8 The appendices of the full report provide an explanation and commentary for each indicator, and highlight changes by each primary care trust (PCT) and island health board between 1999 and 2002. Every PCT and island health board has improved prescribing in indicators that relate to treating

cardiovascular disease; for example statins, ACE inhibitors, aspirin and diuretics. However, improvements in prescribing antibiotics, hypnotics and anxiolytics, and PPIs are more variable.

¹ Defined Daily Doses (DDDs) are the assumed average amount of a medicine needed each day to give optimum therapeutic benefit to adults suffering from the conditions for which it is most usually prescribed, based on recommendations from the World Health Organisation.

Exhibit 2

Indicators of prescribing quality – summary of changes between 1999 and 2002
(based on Scottish average, Quarter 1 – Q1 – for each year)

Indicator	Q1 1999	Q1 2000	Q1 2001	Q1 2002
A1. Proton Pump Inhibitor (PPI) maintenance doses as a percentage of maintenance and treatment doses	33%	37%	40%	40%
A2. 2.5mg bendrofluazide as a percentage of 2.5mg and 5mg	80%	85%	90%	93%
A3. Single diuretics as a percentage of single and combined diuretics	82%	85%	88%	90%
A4. ACE inhibitor DDDs per 1000 adjusted population per quarter	3,035	3,313	4,598	5,720
A5. Low dose aspirin DDDs per 1000 adjusted population per quarter	4,712	5,116	5,396	5,637
A6. Statin DDDs per 1000 adjusted population per quarter	1,708	2,455	3,460	4,689
A7. Hypnotic and anxiolytics DDDs per 1000 adjusted population per quarter*	2,708	2,689	2,688	2,641
A8. Established antibiotics as a percentage of all oral antibiotics	92%	93%	93%	92%
A9. Amoxicillin as a percentage of amoxicillin and co-amoxiclav	81%	81%	82%	82%

* For this indicator, unlike other indicators in this table, a lower value shows increased compliance with good practice.

Source: ISD

Prescribing efficiency

2.9 PCTs have also made efficiency savings since 1999, although price changes of medicines makes this harder to assess than prescribing quality. The full report contains many examples of what trusts have done to improve the quality and efficiency of prescribing. The savings identified from these examples total more than £2 million a year.

2.10 This section shows trusts' performance against the efficiency indicators used in our previous report. The indicators of prescribing efficiency include:

- The use of established therapies as a percentage of established and newer medicines; for example, established antidepressants.
- The proportion of generic alternatives rather than branded medicines.
- The use of medicines marked by the British National Formulary (BNF) as less suitable for prescribing.

- The use of medicines of limited therapeutic value; for example, topical non steroidal anti-inflammatory drugs (NSAIDs), peripheral vasodilators.
- The use of standard formulations in preference to premium-priced products; for example, standard rather than effervescent or modified release versions of medicines.
- The use of less expensive but therapeutically equivalent medicines in preference to more expensive alternatives; such as oxytetracycline instead of minocycline.

2.11 The appendices in the full report provide an explanation and commentary for each indicator and highlight changes by each PCT and island health board between 1999 and 2002.

2.12 Most indicators of prescribing efficiency estimate financial savings that would be made if a more cost effective alternative medicine or formulation were prescribed.

However, simply measuring the difference in total potential savings over time does not give a true indication of savings achieved by trusts. This is because changes in market prices and the relative prices of the different medicines and formulations affect the potential savings.

2.13 It is more meaningful to measure changes over time in how much a medicine has been prescribed, rather than the potential financial saving. This shows how much trusts have altered prescribing practice in an attempt to achieve efficiency gains. This section therefore uses either percentages, or number of DDDs prescribed, to illustrate efficiency changes.

2.14 Exhibits 3 to 7 summarise the changes in efficiency indicators over the last three years (based on data for quarter one of each year).

Exhibit 3

Established therapies as a percentage of established and newer medicines

Indicator	Q1 1999	Q1 2000	Q1 2001	Q1 2002
B1. Established therapies as a percentage of established and new medicines (a higher value is better)				
B1.1 ACE inhibitors as a percentage of angiotensin II receptor antagonists and ACE inhibitors	92%	90%	89%	88%
B1.2 Established antidepressants as a percentage of all antidepressants	93%	91%	90%	87%
B1.3 Traditional NSAIDs as a percentage of all oral NSAIDs (2000 to 2002 data only)		96%	87%	76%

Source: ISD

2.15 The optimum balance between established and newer treatments is unknown. However, established therapies generally have more extensive evidence of efficacy and safety than newer medicines.

2.16 All three indicators show a reduction in the proportion of established agents and, therefore, increased use of the more expensive, newer agents across Scotland. This is perhaps not surprising as prescribers become more familiar with the newer agents, which clearly do have a place in treatment for certain patients. However, there is a large variation among individual GP practices. This suggests that some prescribers may routinely be using newer treatments instead of more cost effective established medicines.

Exhibit 4

Generic medicines as a proportion of all medicines prescribed

Indicator	Q1 1999	Q1 2000	Q1 2001	Q1 2002
B2. Generic medicines as a proportion of all medicines prescribed (a higher value is better)				
B2.1 Generic prescribing rates	68%	71%	75%	76%

Source: ISD

2.17 The generic prescribing rate in Scotland has increased from 68% in 1999 to 76% in 2002. This Scotland-wide picture is close to the optimum rate for generic prescribing, which is considered to be around 80%. However, there is still variation among trusts in Scotland and some can still make savings in this area.

Exhibit 5

Medicines considered to be of limited value

Indicator	Q1 1999	Q1 2000	Q1 2001	Q1 2002
B4. Medicines considered to be of limited value (a lower value is better)				
B4.1 Number of prescription items of peripheral and cerebral vasodilators per quarter	11,976	10,302	8,563	7,558
B4.2 Number of prescription items of topical NSAIDs per quarter	107,492	98,799	89,732	91,340

Source: ISD

2.18 In most areas of Scotland there have been fewer prescription items for medicines considered to be of limited value. This table of 'limited value' medicines is made up of drugs which are generally considered to have little or no lasting therapeutic value for the majority of patients.

Exhibit 6

Substitution of premium-priced products with cheaper standard alternatives

Indicator	Q1 1999	Q1 2000	Q1 2001	Q1 2002
B5. Substitution of premium priced products with cheaper standard alternatives (a lower value is better)				
B5.1 DDDs of effervescent co-codamol 8/500 per 1000 adjusted population per quarter	327	322	279	281
B5.2 DDDs of isosorbide mononitrate modified release (ISMN MR) per 1000 adjusted population per quarter	1,232	1,282	1,300	1,294
B5.3 DDDs of diclofenac MR per 1000 adjusted population per quarter	490	454	391	352
B5.4 Number of 28 days supply of transdermal oestrogen-only HRT patches per quarter	78,355	77,216	74,121	71,213
B5.5 DDDs of salbutamol dry powder and automated inhaler devices per 1000 adjusted population per quarter	556	605	627	677

Source: ISD

2.19 The use of expensive premium-priced preparations has fallen in three of the above indicators: effervescent co-codamol, diclofenac MR and transdermal oestrogen-only HRT patches.

2.20 The use of isosorbide mononitrate modified release (ISMN MR) has risen by 5%. Some PCTs, such as Tayside PCT, have significantly reduced the use of ISMN MR by moving to the standard formulation for selected patients. However, others have decided not to switch due to fears of reducing the level of patient compliance. A number of these trusts have switched to the cheapest modified release (MR) preparation to maximise the saving they can make while still prescribing the MR formulation. This approach carries a risk that future price changes may alter the difference in price between the various MR products.

Exhibit 7

Substitution of expensive medicines with therapeutically equivalent but cheaper products

Indicator	Q1 1999	Q1 2000	Q1 2001	Q1 2002
B6. Substitution of expensive medicines with therapeutically equivalent but cheaper products (a lower value is better)				
B6.1 DDDs of non-fluoxetine SSRIs per 1000 adjusted population per quarter (2001 and 2002 data only)			2,002	2,304
B6.2 DDDs of co-codamol 8/500 per 1000 adjusted population per quarter	701	715	726	718
B6.3 DDDs of minocycline per 1000 adjusted population per quarter	97	97	92	97

Source: ISD

2.21 These indicators show a small rise in the DDDs of the more expensive products of non-fluoxetine SSRIs, co-codamol 8/500 and minocycline.

Potential for further savings

2.22 While significant improvements in prescribing efficiency have already been made, further savings of £13.9 million per annum could be made across Scotland (Exhibit 8).

2.23 We have calculated the savings using current prices. The £13.9 million is based on achieving 50% of the total potential savings that could be generated in the areas listed in the exhibit. We have used 50% as a conservative estimate for four main reasons:

1. It may be inappropriate to make the suggested prescribing change for all patients.
2. Fluctuations in prices will influence future savings.
3. It might only be possible to achieve these savings over a

number of years. This is because it may be more appropriate to change premium-priced, or therapeutically equivalent, products for new patients, rather than for patients already stabilised on particular treatment regimes. Also, the appropriateness of any proposed switch of medicine has to be considered on an individual patient basis and this takes time.

4. Improving the quality and efficiency of prescribing may require changes in prescribing behaviour. This requires time and resources from prescribers and those providing prescribing guidance and advice. The time and resources required to change prescribing behaviour in a particular area needs to be balanced with the expected improvements in quality and cost savings to be made.

2.24 The £13.9 million savings figure is just over half the estimated potential savings given in our previous report. There are a number of reasons for this decrease but the two main reasons are alterations in the pricing of medicines, which have reduced the potential for savings, and work already undertaken by trusts to achieve savings.

2.25 Nearly £14 million is a significant and worthwhile saving in its own right, but the implementation of the national guidelines will far outstrip these possible savings. For example, the recent rise of £28.7 million in six months, in two BNF Chapters alone – Cardiovascular and Central Nervous Systems – exceeds the possible savings to be made from tackling inefficiencies over a year.

Exhibit 8

Potential savings

Efficiency indicator	Potential Saving (£ million)
Increasing generic prescribing rates	1.5
Reducing the use of medicines considered to be of limited value	1.5
Substituting premium-priced products with cheaper standard alternatives	5.8
Substituting premium-priced products with therapeutically equivalent products (not including the fluoxetine indicator)	1.9
Increasing the proportion of maintenance dose Proton Pump Inhibitors (PPIs) as a proportion of maintenance and treatment doses to 50%	3.2
Total potential efficiency savings per annum	£13.9 million

Source: ISD

Part 3. Implementing national guidelines

3.1 Evidence based national guidance and guidelines can significantly improve the quality of prescribing. However, they can also have significant cost implications for primary care. So cost implications of all guidelines should be calculated before they are issued and guidelines with significant cost implications should be seen as service developments. These should then be considered alongside developments in other parts of the health service.

National guidance and advice

3.2 The Health Technology Assessment (HTA) Directorate of NHS Quality Improvement Scotland issues guidance to NHSScotland on the use of technologies, including medicines, procedures and equipment. HTA also provides commentary on guidance issued by the National Institute for Clinical Excellence (NICE) in England and Wales. Such guidance is then issued for implementation across NHSScotland.

3.3 National evidence based guidelines for clinical conditions are produced for NHSScotland by the Scottish Intercollegiate Guidelines

Network (SIGN). Guidelines are statements of best clinical practice and health boards are responsible for implementing them, subject to boards' local priorities.

3.4 New medicines are constantly being developed and tend to be more expensive than existing therapies. Prescribers are helped in their decision on whether newer medicines would be more clinically appropriate for individual patients than existing therapies by appraisal of new medicines by the Scottish Medicines Consortium (SMC).

Cost of implementing guidelines

3.5 Exhibit 9 shows examples of specific medicines associated with the implementation of national guidance or guidelines that are contributing significantly to the growth in prescribing costs.

3.6 The estimated total annual cost of statins is expected to grow to £95.4 million after SIGN 40 and 41 are fully implemented across Scotland. That compares to around £65 million now. It is worth noting that the most frequently prescribed

statin – simvastatin – has recently come off patent, which may lower costs.

3.7 The growth in prescribing expenditure due to implementing national guidance and guidelines suggests that the associated prescribing costs should be seen as service developments and considered alongside developments in other parts of the health service. An assessment of the resource implications of the guidance and guidelines from HTA and SIGN would help health boards to set priorities for service developments. However, the Scottish Executive Health Department also needs to consider the benefits of this local decision making against the increased risk of 'postcode prescribing' where different health boards may adopt different priorities.

3.8 When forecasting likely spending increases in prescribing, the Health Department considers the impact of any expected guidelines, amongst other information. This information is used when considering annual budget uplifts for unified health

Exhibit 9

Examples of growth in expenditure on medicines associated with national guidelines*

BNF Chapter	Significant Growth Medicines	Total cost (GIC) (April to Sept 2002)	Growth in cost (GIC) (April to Sept 2002 compared to April to Sept 2001)	% Growth in cost (GIC) (April to Sept 2002 compared to April to Sept 2001)
BNF Chapter 2 Cardiovascular System	Lipid regulating medicines e.g. statins	£35,370, 000	£7,221, 000	+26%
	Antihypertensive therapy e.g. ACE Inhibitors	£23,453, 000	£4,694, 000	+25%
BNF Chapter 4 Central Nervous System	Psychoses and related disorders e.g.atypical antipsychotics	£9,130,000	£1,844,000	+25%
	Dementia e.g. cholinesterase inhibitors	£1,443,000	£590,000	+69%
	Substance dependence e.g. nicotine replacement therapy	£5,924,000	£1,551,000	+35%

* All figures are based on the six-month period from April to September 2002, compared with April to September 2001.

Source: ISD

boards but is not made explicit within the total budget uplift. The health service does not have access to the analysis and each PCT forecasts the implications for their own local area. Assumptions used by trusts vary widely and can lead to inaccurate estimates of costs and therefore budget requirements.

Part 4. Achieving further improvements

4.1 Despite the improvements already made, there are further actions that could be taken by the Scottish Executive Health Department, health boards and primary care trusts to manage prescribing more effectively and influence the prescribing choices made by prescribers.

4.2 Areas where further progress is needed include:

- agreeing national indicators
- developing health board-wide prescribing strategies and joint formularies between primary and secondary care
- improving repeat prescribing systems
- sharing good practice
- increasing the use of computerised systems
- managing patient expectations.

National information, prescribing indicators and targets

4.3 Information is essential to enable prescribers to manage their prescribing more effectively. Apart from five indicators used in the performance assessment framework (PAF) and Clinical Resource and Audit Group (CRAG) indicators for health boards, each trust has its own indicators based on its own analysis of prescribing information. This makes comparison between trusts and health boards difficult, and results in a duplication of effort by each trust.

4.4 The Information and Statistics Division of NHSScotland, prescribing advisers and others from PCTs and the Scottish Executive have formed a Prescribing Information Group (PIG) and are developing a set of common indicators. 'New PRISMS' is also being developed to provide a more user-friendly form of prescribing information to replace the existing Prescribing Information System for Scotland (PRISMS). Audit Scotland strongly supports these developments.

4.5 It is difficult to measure the quality of clinical prescribing without a link between prescription and diagnosis. Prescribing information is currently collected in terms of medicines dispensed. The development of indicators of prescribing quality that link prescribing with patient characteristics and diagnosis would provide more reliable measures of prescribing impact and performance.

Strategies and action plans

4.6 A clear prescribing strategy and action plan help focus prescribing support where it is needed most and where it can have greatest impact. Since our previous report all PCTs have developed prescribing strategies or action plans. Some trusts are now developing health board-wide prescribing strategies, which look at prescribing across primary and secondary care. These board-wide prescribing strategies help ensure that both primary and secondary care prescribing developments and decisions take account of the needs of the patient in both sectors of the NHS.

Formulary development and implementation

4.7 Developing joint health board-wide formularies can improve patient care by minimising disruption to patients as they move between hospital and primary care. A number of trusts have developed board-wide formularies and some have developed or are developing comprehensive diagnosis based, electronic formularies. A comprehensive and easily accessible formulary providing clear guidance on first and second-line medicines for treating the most common conditions can be an important tool in encouraging high quality and efficient prescribing.

Repeat prescribing and dispensing

4.8 Repeat prescriptions account for around 75% of all items prescribed in Scotland and more than 80% of prescribing costs. Systems are required to manage the process properly; to ensure clinical governance requirements are met; and guard against risks, such as drug treatments not being adequately reviewed as the patient's needs change. The three elements of repeat prescribing are repeat prescribing systems, medication reviews including dose optimisation, and waste management.

4.9 In 2001, a report for the Primary Care Division of the Scottish Executive² recommended a model for repeat prescribing and dispensing based on a system of 'master and slave' prescriptions. The model was based on the results of an extensive literature review and took on board previous pilot work in Tayside and Grampian. It is currently being piloted in North East Fife with encouraging results. A 'master' prescription is produced for a six-month quantity of medication which is signed by a GP.

In addition, either two 56-day or five 28-day unsigned 'slave' prescriptions are also produced. The 'master' prescription is the legal authorising prescription and the pharmacist dispenses the unsigned 'slaves' in sequential order, with the 'master' prescription as the final instalment. Such a system allows the patient to be seen by a pharmacist regularly and any problems with a medicine can be remedied. This not only provides better patient care but also reduces waste. The arrangement is relatively simple and, if the pilot scheme is extended, the programme could be implemented throughout NHSScotland.

Sharing good practice

4.10 Some PCTs have established systems to help share information among people within their own trust area. But there is very little sharing of information and best practice among trusts and health boards. This can lead to trusts duplicating work carried out elsewhere in Scotland.

4.11 The creation of central pools of information on, for example, prescribing initiatives that have been successful, the development of formularies or local guidelines should be developed to minimise the current duplication of effort. This, in conjunction with consistent prescribing information produced centrally by ISD, should be of significant help to prescribing teams.

Computerisation

4.12 There has been limited progress in computerising prescribing systems other than in areas where pilot projects are being carried out. Further work is needed to make the most of computerisation in improving the quality and efficiency of prescribing.

4.13 We have identified the need for further progress in the following areas:

- Computerisation in GP practices, for example greater use of support systems and electronic formularies.
- Linking community pharmacists to GP practices.
- Linking prescribing and dispensing with a unique patient identifier and using this information to monitor the quality of prescribing and for clinical audit.
- Providing more comprehensive information on medicines dispensed.
- Developing stronger electronic links between primary and secondary care
- Providing appropriate hardware and training.
- Setting clear timetables and targets for the implementation of computerised prescribing systems across Scotland.

Public expectations

4.14 Patients are more informed about treatment options than ever before. This, and the high rate of repeat prescribing, make it important to educate the public about the use of certain medicines, particularly antibiotics, and appropriate requests for repeat prescriptions to reduce medicine waste.

² Strath A, *Repeat prescribing and dispensing systems: An option appraisal*, June 2001

Part 5. Summary of recommendations

All findings and recommendations are given in the main report. The main recommendations are listed below.

Room for further quality and efficiency improvements

- PCTs should evaluate where quality and cost effectiveness could be improved. The costs and benefits of improving quality and cost effectiveness should be considered as part of the evaluation. These evaluations should feed into PCTs' prescribing strategies and plans.
- PCTs should have policies and protocols in place to ensure the most cost effective treatment is considered as a first-line option for new patients.

Implementing national guidelines

- For trusts to be able to plan the effective implementation of guidelines, any future SIGN guidelines should include an assessment of the cost impact for Scotland. Where NICE has produced guidance for England, HTA should endorse these as appropriate and clearly emphasise the cost impact for Scotland.
- The Health Department, health boards and PCTs should share their work on estimating the costs of implementing national guidelines. This would reduce duplication and ensure budgets are set using consistent assumptions across Scotland.
- Implementing guidelines should be viewed as service developments, with the associated prescribing costs clearly identified and considered alongside other health developments.

- PCTs should ensure that prescribing medicines associated with national guidelines is managed carefully and targeted accurately, so that the extra spending achieves greatest patient benefits.

Achieving further improvements

- A common set of prescribing indicators should be developed for use by all PCTs.
- The Scottish Executive, ISD and trusts should examine how morbidity/diagnosis related prescribing indicators could be developed and the necessary data collected in Scotland.
- Health board-wide prescribing strategies that address prescribing issues across primary and secondary care should be developed.
- PCTs should develop area-wide formularies involving key stakeholders in formulary development so as to achieve ownership.
- All GP practices should ensure they have repeat prescribing systems which incorporate the points highlighted in the main report and in addition are linked to regular medication reviews. A national model for repeat prescribing and dispensing should be implemented across Scotland as part of the implementation of *The Right Medicine*.
- PCTs should share methodologies, protocols and good practice across Scotland, including the development of existing websites. The Health Department should consider the development of a central

resource to support local initiatives and build on good practice.

- While we accept that communication and computerisation developments take time, we recommend that clear timescales and specific targets are produced for the main, centrally-funded computer developments. It is important that those using existing information systems can plan based on a clear knowledge of when improved information systems will be introduced.
- The Health Department and health boards should develop a joint plan to take action on the public awareness issues raised in the main report.

Advisory panel

Ms J Agnew

Trust Chief Pharmacist, Highland PCT

Dr K Beard

Hospital Prescribing Advisor,
Greater Glasgow Health Board

Mr I Bishop

Lead Pharmacist, South LHCC,
Forth Valley PCT

Ms S Burney

Head of the Primary Care
Information Unit, Information and
Statistics Division of the Common
Service Agency, NHSScotland

Dr D Crookes

Medicines Management Advisor,
Lothian PCT and General Practitioner

Dr L Cruikshank

Associate Medical Director, South
LHCC, Forth Valley PCT, and Chair of
the Forth Valley Joint LHCC
Prescribing Group, and General
Practitioner

Mr G Downie

Trust Chief Pharmacist,
Grampian PCT

Mr G Lindsay

Trust Chief Pharmacist,
Lanarkshire PCT

Professor C Mackie

Head of Centre of Pharmacy, Robert
Gordon University, Aberdeen

Dr S Mackie

Director of Clinical Standards and
Health Improvement,
Lanarkshire PCT

Dr D Richardson

GP Prescribing Lead, Ayrshire and
Arran PCT and General Practitioner

Dr E Rimmer

Medical Prescribing Advisor,
Western Isles Health Board and
General Practitioner

Dr H Simpson

Medical Prescribing Advisor,
Ayrshire and Arran PCT and General
Practitioner

Dr R Taylor

Chair of the Prescribing Group of the
Royal College of General
Practitioners and General Practitioner

Mr A Thorburn

Prescribing Advisor, Lanarkshire PCT

Supporting prescribing in general practice - a progress report



Audit Scotland
110 George Street
Edinburgh EH2 4LH

Telephone
0131 477 1234
Fax
0131 477 4567