An Evaluation of the Expansion of Nurse Prescribing in Scotland

Health and Community Care

social research

AN EVALUATION OF THE EXPANSION OF NURSE PRESCRIBING IN SCOTLAND

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The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

ACKNOWLEDGEMENTS

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GLOSSARY

Adverse Drug Reactions (ADRs): An ADR is an undesirable response associated with use of a drug that either compromises therapeutic efficacy, enhances toxicity, or both. An ADR incident is an ADR event which results in unintended harm or a 'near miss'. ADRs in Scotland are monitored and reported through the Yellow Card Centre Scotland (YCC Scotland). YCC Scotland is a joint venture with the Medicines and Healthcare products Regulatory Agency (MHRA) and the Scottish Government aimed at improving drug safety in Scotland. It is sited within the Centre for Adverse Drugs Reactions Scotland (CARDS), in Edinburgh. (For more information about the Yellow Card System, see below).

British National Formulary (BNF): The BNF is published twice a year by the British Medical Association and the Royal Pharmaceutical Society of Great Britain, the BNF provides practical information on the selection and clinical use of medicines and guidance on prescribing, dispensing and administering medicines.

Clinical Management Plans (CMPs): CMPs are the foundation stone of supplementary prescribing. Before supplementary prescribing can take place, it is obligatory for an agreed CMP to be in place (written or electronic) relating to a named patient and to that patient's specific condition(s) which will be managed by the supplementary prescriber.

Cognitive Behavioural Therapy (CBT): CBT aims to help patients begin to identify and change extreme thinking and unhelpful behaviour. It is thought to be particularly effective for stress related ailments, phobias, obsessions, eating disorders and (at the same time as drug treatment) severe depression.

Committee on Safety of Medicines (CSM): The CSM is an advisory committee of the Medicines and Healthcare products Regulatory Agency (MHRA) it advises the UK on the quality, efficacy and safety of medicines. The Committee on Safety of Medicines is an advisory committee established, by Ministers, under Section 4 of the Medicines Act 1968. The Licensing Authority in the UK may not refuse to grant a medicines product licence or marketing authorisation, nor revoke, vary or suspend it (except, in the latter case, in an emergency) on grounds relating to safety, quality or efficacy, without first consulting this advisory body.

Community Psychiatric Nurse (CPN): A CPN is a qualified mental health nurse who works as part of a team of professionals to provide mental health services in the community. CPNs have a broad knowledge of mental health problems and a wide range of skills that they can use to enable clients to work through any programmes agreed. As well as working directly with people experiencing mental health problems the CPN will try to ensure that the needs of carers are considered. This may mean working directly with a carer or may be related to making sure that the carer is able to access the support needed from other sources.

Community Mental Health Nurse (CMHN) is another term for a qualified mental health nurse working in the community (see CPN above).

Continuing Professional Development (CPD): CPD is the concept of life long learning, whereby skills, knowledge and competence are maintained through a process of study, reflection as well as personal and professional development, and is a recognisable part of the

nurse's professional pathway. Once trained and qualified a nurse independent prescriber and supplementary prescriber the nurse has a commitment to maintain his/her prescribing competence.

Controlled drugs: Controlled drugs include opiates, secobarbital, amphetamine and cocaine. Activities that control the manufacture, supply and possession of Controlled drugs are governed by the Misuse of Drugs Act 1971. Penalties applied to offences involving different drugs are graded according to the harmfulness attributable to a drug when it is misused. For this purpose the drugs are defined into 3 classes; Class A, Class B and Class C. Drugs included in these Classes are listed in the BNF.

Central Office for Research Ethics Committees (COREC): COREC, which is now known as the National Research Ethics Service (NRES), is a UK-wide system of ethical review that aims to protect the safety, dignity and well being of research participants, whilst facilitating and promoting ethical research within the NHS.

Cumulative Index to Nursing and Allied Health (CINAHL): CINAHL was originally a print index to the literature of nursing and allied health information. CINAHL$^®$ is now a searchable database which covers the nursing and allied health literature from 1982 to the present.

District Nurse and Health Visitor Prescribers: Following training, which is incorporated into the initial preparation of district nurses and health visitors, these groups of nurses can prescribe from the Nurse Prescribers' Formulary for District Nurses and Health Visitors (now known as the Nurse Prescribers Formulary for Community Practitioners).

Drug Tariff: The Scottish Drug Tariff is published for and on behalf of the Health Directorates of the Scottish Government. The Tariff contains information regarding the prescribing, dispensing and reimbursement of medicines and appliances on primary care NHS prescriptions.

Extended Formulary Nurse Prescribers: Nurse Prescribers who had completed the necessary training from 2002 to prescribe from the Nurse Prescribers' Extended Formulary list. They could legally prescribe all General Sale List (GSL) and pharmacy medicines prescribable by general practitioners (GPs), together with a list of almost 180 specified Prescription Only Medicines (POMs) plus all items from the nurse prescribers' formulary. This type of prescriber as the Extended Formulary List no longer exists in the BNF.

Nurse Independent Prescribers (NIPs): NIPs are fully responsible for their own prescribing decisions and are able to prescribe any licensed medicine from the BNF, for any medical condition, within their competence, including some Controlled Drugs as listed in Part 8C of the Scottish Drug tariff.

Independent prescribing: This term is generally applied to any prescriber who is legally permitted and qualified to prescribe and is responsibility and accountable for the clinical assessment of the patient, establishing a diagnosis and the clinical management required. Within the supplementary prescribing rules, the 'independent prescriber' must be a medical practitioner or a dentist.

Information Statistics Division (ISD): Information Services Division (ISD) is Scotland's national organisation for health information, statistics and IT services.

Local Research Ethics Committee (LREC): An LREC is a local research ethics committee which receives applications from researchers to undertake research on NHS participants. Multi Site Research Ethics Committees (MRECs) are similar to LRECs, but review applications from researchers applying to undertake research across three or more NHS sites. Applications are made to LRECs and MRECs via COREC (see COREC above). LRECs and MRECs ethically reviews research applications regarding NHS participants to determine whether they are granted ethical approval, and therefore whether the research can take place.

MEDLINE: MEDLINE is an International Journal data-base of published medical and health science research.

MHRA: The Medicines and Healthcare products Regulatory Agency (MHRA) is an Executive Agency of the Department of Health (DoH). It was established on 1 April 2003 and created from a merger of the Medicines Control Agency and the Medical Devices Agency. Department of Health Ministers in England account to Parliament on all matters concerning regulation of human medicines in England, Scotland and Wales. Although responsibility for securing enforcement of the Medicines Act 1968 and related legislation in Scotland and Wales is the responsibility of the Scottish Government and the National Assembly for Wales respectively, the MHRA acts on behalf of those administrations under agency arrangements to ensure that medicines for human use, sold or supplied in the United Kingdom, are of an acceptable standard of safety, quality and efficacy and promotes the safe use of medicines and devices.

NHS (Education) Scotland NES): NHS Education for Scotland (NES) contributes to provide better patient care by providing educational solutions for workforce development. It does this by designing, commissioning, quality assuring and where appropriate providing education for NHS staff in Scotland.

National Prescribing Centre (NPC): The National Prescribing Centre is an English Health Service organisation, formed in April 1996 by the Department of Health. Its 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 delivers a wide range of activities focused on the English NHS including:
· Information on medicines and their use
· Education and development
· Dissemination of good practice
· Information technology
· Informing research and development

Nurse Prescribers Formulary (NPF) / Nurse Prescribers Extended Formulary (NPEF): Appropriately trained nurses and midwives prescribed from the Nurse Prescribers' Formulary. This formulary no longer exists.

Over the Counter medicine (OTC): Medicines which can be bought over the counter (OCM) by members of the pubic in a pharmacy and do not require a prescription.

Patient Group Direction (PGD): A Patient Group Direction (PGD) is a written instruction for the sale, supply and/or administration of a named medicine in an identified clinical situation. It applies to a group of patients who may not be individually identified before presenting for treatment.[1]

Prescription only Medicines (POM): POMs are medicines which can only be given to a patient via a prescription.

Senior House Officer (SHO): A senior house officer (SHO) is a doctor undergoing specialist training anywhere in the United Kingdom National Health Services. A doctor typically works as an SHO for 2-3 years, or occasionally longer, before becoming a registrar.

Supplementary prescribing: The concept of supplementary prescribing, formerly referred to as 'dependent prescribing', was first identified within the 'Review of Prescribing, supply and administration of medicines 1999'. Supplementary prescribing is defined as a voluntary partnership between an independent prescriber (doctor or dentist) and a supplementary prescriber to implement an agreed patient-specific CMP (see CMP above), with the patient's agreement. The key principles of supplementary prescribing emphasise the importance of communication between the prescribing partners, the need for access to shared patient records and that the patient is treated as a partner in their care. Currently nurses, pharmacists and some allied health professionals are eligible to train as supplementary prescribers.

Yellow Card Adverse Drug Reactions Reporting Scheme (see adverse drug reactions above): The Yellow Card Adverse Drug Reactions Reporting Scheme is the method by which adverse reactions to medicines are monitored and collected across the UK. It is vital as an early warning system, by enabling the identification of previously unrecognised adverse reactions, as well as a way of increasing knowledge about known adverse reactions. An electronic version of the schemes was launched in October 2002. At the same time the scheme was extended to include nurses, midwives and health visitors as recognised reporters.

The electronic Yellow Card currently provides a simple and fast way to report suspected adverse reactions. The electronic Yellow Card, together with instructions on how to use it, is available at: www.yellowcard.gov.uk. Health professionals are encouraged to report all suspected adverse drug reactions using this method, although hard copy Yellow Cards are also acceptable (and can be found bound to the back of the BNF)[2].

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[1] http://www.npc.co.uk/publications/pgd/pgd.pdf
[2] http://www.scotland.gov.uk/Publications/2006/08/23133351/9

EXECUTIVE SUMMARY

Main Findings

- The expansion of nurse prescribing has benefited patients, improved public health and benefited health care professionals in many ways.

- These benefits include improved patient access to treatment, enhanced patient care, maintaining and improving patient experience, enhanced professional satisfaction and application of nurse skills, building inter-professional working, enabling effective use of medical staff time, and maintaining public health standards.

- Although nurse prescribing and its expansion appear to have succeeded the depth and breadth of that success varies and the study indentifies some obstacles that may restrict the successes of nurse prescribing. Such variations may be partly due to institutional and resource factors as well as personal and professional attitudes and organisational factors.

- The evidence indicates that in some settings nurse prescribing could be rolled out even further and have a greater beneficial impact on patients, their carers and health professionals and administrative teams if some of the obstacles were removed, if best practice could be more readily exchanged and if communication and support networks could be further facilitated.

- Nowhere in the survey, case studies or stakeholder interviews were any nurse prescribing incidents or problems reported that affected patient safety. However, stakeholder groups, the health professionals themselves and their managers all identified the need for effective education, supervision and auditing of nurse prescribing work.

- For senior managers, this was viewed as an essential part of effective clinical governance. How extensive and exactly how effective such governance of nurse prescribers is may require further research.

- The capacity to demonstrate good governance at all levels and locations of nurse prescribing would provide important and necessary re-assurance for the prescribers themselves, the other health professionals they work with, the patients and public at large, user stakeholder groups and the Scottish Government.

Introduction

1.   Nurse prescribing first became part of the UK government's policy agenda following the Cumberlege Report (DHSS, 1986). By 2001, nurse prescribing was extended to include more nurses and to cover a wider formulary. Nurse prescribers in Scotland can now prescribe a range of controlled drugs for specific medical conditions.

2.   This research project provides an evaluation of the extension of prescribing powers to nurses following the introduction of new legislation in 2001 and aimed to examine:

- The implementation and operation of the extension of nurse prescribing;
- The impact of nurse prescribing on the appropriate use of nurses' skills;
- Patient benefit from nurse prescribing and patients' perceptions of their experiences of care;
- The impact of nurse prescribing extension on workloads;
- The extent to which public health and patient safety are safeguarded; and
- Different approaches to nurse prescribing training.

Methods

3.   A variety of methods were used to achieve the project objectives across two main areas of evaluation: nurse prescribing in practice and preparing for prescribing. The evaluation of nurse prescribing in practice included:

- Stakeholder interviews and meetings;
- A postal questionnaire of all nurses Nursing and Midwifery Council database who prescribe;
- Two surveys of the public;
- Case studies involving nurse prescribers across acute and primary care settings, patients, other health professionals and managers using in depth interviews across Scotland.

4.   The exploration of nurse prescribing education also used a mixture of methods including:

- Documentary analysis;
- A questionnaire;
- Interviews; and
- Focus groups supplemented by case histories and diaries.

Findings: Nurse prescribing in practice

Patient Care

5.   Patient care had been improved by nurse prescribing, particularly in specialist areas and areas of particular competence. The public generally showed considerable confidence in the nurse prescribing processes that they experienced.

6.   Nurse prescribing made patient care both quicker and easier. Patients placed more value on getting appropriate and effective care than on the qualifications of the person providing the care. Patients also found benefits through better inter-professional liaison about their care and tended to prefer team working rather than autonomous practice. Patients receiving 'complete packages' of care, particularly patients with complex health needs who required daily care, found additional benefit from nurses prescribing. This also benefited carers.

7.   Respondents felt that patients benefited when nurses' skills in assessment, observation and diagnosis were improved as a result of learning to prescribe.

8.   Nurse prescribers identified improved consultation skills and contact opportunities to educate patients and promote health as well as to discuss aspects of medication such as side effects and correct administration of treatments like asthma inhalers. This it was felt contributed to improved patient self-care abilities especially in mental health. Nurses' familiarity with medication developed through more careful use of the BNF together with practice in writing prescriptions.

9.   Nurse prescribers' public health contributions were recognised by medical and nursing staff. The benefits to infection control and better treatment of conditions without the use of anti-microbial drugs or with more careful targeting of microbial drugs were also recognised. Nurses found that they had further and more expanded roles, for example in smoking cessation and sexual health areas.

10.   The evaluation found that there was however patchy geographical or professional implementation of nurse prescribing.

Professional impacts of nurse prescribing

11.   The professional benefits associated with nurse prescribing related to increased satisfaction, improved professional development and a related increase in professional recognition and respect. Benefits were seen to be contingent on CPD, support and resources, including allocated time for studying, ongoing support and education and budgetary resources.

12.   Effective support for nurse prescribers included informal colleague support, information from and close working with pharmacists, and positive GP/medical feedback. Pharmacists and health service managers generally found nurse prescribing of benefit to practices and patients. Respondents felt that it ensured a more rapid accessible service for patients with certain conditions.

13.   Some hospital doctors and GPs championed both current nurse prescribing and its extension because of benefits for the public, the NHS, application of nurse skills and workloads across several groups. Rural GPs found major benefits to manageable workloads through the expansion of nurse prescribing.

14.   Hindrances to nurse prescribing practice often centred on administrative issues, including budget and budgetary allocation issues that resulted in major delays in receiving prescription pads and difficulties with prescriptions not being computerised.

15. The medical profession generally found the extension of nurse prescribing to be safe, of benefit to patients and to themselves.

16. Nurse prescribers reported that their work had reduced doctor's workloads, but at the same time concerns were expressed about increased workloads for nurse prescribers.

17. Nurse prescribers had some fears about nurse prescribing becoming 'overly medicalised' and felt it important to retain traditional nursing roles in future prescribing developments.

Management and co-ordination of nurse prescribing

18. There sometimes appeared to be a lack of a coherent, integrated and stable Board level infrastructure for prescribers. In some instances, it wad felt that this demonstrated a slow response to the prescribing agenda. Linked to this, some stakeholders perceived a lack of a joined up approach running from the Scottish Government, through NHS Boards and down to the prescribers themselves. Some NHS Boards lacked any leads or had leads only for some sectors. Some stakeholders identified a lack of strategic leadership to carry through prescribing in under-developed midwifery and mental health areas.

19. The collaboration between post holders at NHS board level, such as medical directors, directors of pharmacy and lead nurse prescribers was vital, but at times it was felt this was lacking. To some, it appeared that nurse prescribing especially outwith the primary care sector was still on the margins of the administrative system.

20. Systems for reviewing and monitoring prescribing practice across Scotland appeared to be assumed, but not always tested. In addition, there was no obvious and suitable medicines management system in place to track the costs of prescribing accurately and document any related benefits.

21. The need to have CPD to ensure prescribers' fitness for practice was identified by respondents. Contradictory views were expressed about the need for personal formularies and for generic versus specific courses for particular courses. However, among the stakeholders, the overwhelming consensus was for a generic course supplemented with CPD opportunities at key intervals.

Findings: Nurse prescribing Education

22. The most important aspect of the courses according to the focus group participants, was that it enhanced the course members' professional knowledge and expertise. The second most important feature of the courses was that it enabled them to acquire a systematic understanding of pharmacology. This it was felt increased patient safety and facilitated communication with doctors and pharmacists. Thus, based on the course members' point of view, the courses was felt to be 'fit for purpose'.

23. The courses presented a generic model of nurse prescribing and taught a broad underpinning knowledge of pharmacology. Whilst there was evidence that some nurses expected a much narrower course of training, focused on the contexts in which they worked and limited to the actual drugs they would be prescribing, the evaluation found strong reasons

for retaining the generic structure. These included preparing nurses to deal with patients with multiple illnesses and supporting the trend towards collaborative practice. Additionally, course members valued the opportunity provided by the generic nature of the course to network with nurses from other specialties, which enhanced their capacity to work collaboratively.

24.   Mentoring was largely viewed positively, however there were cases of both nurses and mentors who found it extremely difficult to get any allocated time for mentoring. Mentors also reported difficulties in knowing what was expected of their role. Suggested solutions included the use of two mentors: one clinical and one nurse prescriber who had experienced the prescribing course.

Conclusions

25.   There is a high level of agreement between patients, the public, nurse prescribers, physicians and other health professionals and health managers about the benefits of nurse prescribing to patients. However, some organisational and procedural challenges remain to ensure the maximum effectiveness of prescribing is fully achieved. Evidence indicates that in some settings nurse prescribing could be rolled out even further and have a greater beneficial impact if some of the obstacles were removed, if best practice could be more readily eschanged, and if commincation and support networks could be further facilitated.

CHAPTER ONE : INTRODUCTION

Introduction

1.1 This report evaluates nurse prescribing in Scotland from its extension in 2001 up to the creation of Nurse Independent Prescribers in 2006. It explores the effect of nurse prescribing in Scotland on patients, the public, nurse prescribers themselves, other nurses, medical and allied health professionals and the health service. It identifies the benefits of, and obstacles to, such prescribing for patients, health professionals and health service delivery.

1.2 Prescribing activity by nurses potentially provides a range of benefits including: continuity of patient care; greater and quicker access of patients to treatments which may, or may not, involve some sort of prescription; the release of doctors' time for other activities; more rapid treatments with patient safety benefits; enhanced and greater use of nurse's skills; and greater health service cost effectiveness.

1.3 There are also potential obstacles to such developments including: a lack of skilled and trained nurse prescribers; safety problems for patients; disengaged nurses and other health professionals; and unresponsive health service organisations.

1.4 This study aimed to provide evidence on how nurse prescribing has operated in Scotland since 2001, how nurse prescribers were prepared for their role, what effects such prescribers have had on patients, fellow health professionals and NHS organisations.

1.5 The projects objectives were to examine:

- The implementation and operation of the extension of nurse prescribing;
- The impact of nurse prescribing on the appropriate use of nurses' skills;
- Patient benefit from nurse prescribing and patients' perceptions of their experiences of care;
- Measure the impact of nurse prescribing extension on workloads;
- Assess the extent to which public health and patient safety are safeguarded; and
- Different approaches to nurse prescribing training.

1.6 The methods used to address these objectives were designed to identify the nature of nurse prescribing and gain a holistic picture of how such prescribing was working in Scotland, through quantitative and qualitative methods. The research comprised the following elements:

- Overview of the development of nurse prescribing in Scotland and associated legislation;
- A review of the relevant literature;
- A postal survey of all nurse prescribers on Nursing and Midwifery Council (NMC) databases in 2004;
- A survey of public attitudes to nurse prescribing in 2003 and repeated in 2007;
- Interviews with stakeholders;
- Case studies of the work of a representative range of nurse prescribers located in two NHS Boards and in a range of organisational and patient settings; AND

- A detailed study of nurse prescriber education.

Details of the methodology and research methods used to conduct the study are supplied in chapter 3.

Overview of legislation

The first nurse prescribers

1.7   The Scottish Government has produced a number of policy documents highlighting the need for changes in the way in which health care is delivered to ensure that the needs of the population are addressed within current resources. Delivering for Health (SE 2005), Delivering Care, Enabling Health (SE 2006a) and Visible, Accessible and Integrated Care (SE 2006b) all highlight the significance of nurse prescribing in extending existing roles and developing new roles for nurses and Allied Health Professionals. There has been a parallel drive by Westminster, via reserved legislation, to increase prescribing powers to nurses and Allied Health Professionals (AHPs) over the last five years.

1.8   Nurse prescribing first became part of the Westminster policy agenda following the Cumberlege Report (DHSS 1986), which included the following recommendation:

> *'The DHSS should agree a limited list of items and simple agents which may be prescribed by nurses as part of a nursing care programme, and issue guidelines to enable nurses to control drug dosage in well defined circumstances'.*

Subsequently, the first Crown report (DoH, 1989) recommended that suitably qualified nurses, with a district nursing or health visiting qualification, working in the community should be authorised to prescribe, in defined circumstances, from a limited formulary. The primary legislation that permitted initial nurse prescribing was the 'Medicinal Products: Prescription by Nurses Act 1992', although the necessary secondary legislation to this did not come into effect until 1994. Following a successful pilot programme, the Department of Health (DoH) introduced nurse prescribing for district nurses and health visitors in 1996. In the same year nurse prescribing for district nurses and health visitors was also introduced in Scotland.

1.9   Although the recommendations on nurse prescribing included in the Cumberlege report were the foundation of nurse prescribing, they were not the start of actual nurse prescribing. Nurse Prescribing Pilots began in England almost a decade later, and were introduced in Scotland in 1996.

Independent prescribing

1.10   DoH's (2006) working definition of independent prescribing is

> *'Prescribing by a practitioner responsible and accountable for the assessment of patients with undiagnosed and diagnosed conditions and for decisions about the clinical management required, including prescribing'.*

In 1997 the DoH set up the 'Review of Prescribing, Supply and Administration of Medicines'. In 1999, the second report of the review recognised the potential benefits to patients of extending prescribing responsibilities to healthcare professionals other than doctors and dentists and the few district nurses and health visitors who were already qualified (DoH, 1999) and NMC 2006).

1.11   This led in 1999, to the DoH report 'Making a Difference' which strengthened and maximized the contribution of nursing, midwifery and health visiting, and in 2001 the Scottish Executive Health Department's 'Nursing for Health: A review of the contribution of nurses, midwives and health visitors to improving the public's health in Scotland' (SE, 2001b) and 'Caring for Scotland - The Strategy for Nursing and Midwifery in Scotland' (SE, 2001a). These documents reaffirmed both the UK and Scottish Governments' intentions to extend the roles of nurses, midwives and health visitors to make better use of their knowledge and skills, including making it easier for them to prescribe. All four countries of the UK subsequently adopted many of the principles contained within 'Making a Difference' in particular the extensions to the role of the nurse in relation to prescribing.

1.12   In 2000, the 'NHS Plan' (DoH, 2000) and 'Caring for Scotland' (SE, 2001a) and 'Delivering for Health' (SE, 2005) in Scotland were published. All these documents called for the empowerment of frontline staff and patients, the harnessing and expansion of skills of all healthcare professionals, the breaking down the traditional demarcations between clinical roles, and the increased flexibility of teamwork.

1.13   In support of this, following a consultation which began in October 2000, the Westminster government announced in May 2001 that nurse prescribing would include more nurses and would cover a wider formulary (Nurse Prescribers' Extended Formulary). Extended nurse prescribing was also rolled out in Scotland (from 2002) supported by the necessary extended training which was made available to any first-level registered nurse or registered midwife.

What could Extended Formulary Nurse Prescribers prescribe?

1.14   Nurse prescribers who had completed the necessary training to prescribe from the Nurse Prescribers' Extended Formulary list could legally prescribe all General Sale List (GSL) and pharmacy medicines prescribable by general practitioners (GPs), together with a list of almost 180 specified Prescription Only Medicines (POMs) and prescribe all items from the Nurse Prescribers' Formulary.

Supplementary prescribing

1.15   In April 2003 legislation by Westminster made it possible for health care workers other than doctors to train to become supplementary prescribers. Supplementary prescribing is defined as a voluntary partnership between the independent prescriber (a doctor or a dentist) and a supplementary prescriber to implement an agreed, patient-specific Clinical Management Plan (CMP), with the patient's agreement (NMC 2006). Supplementary prescribing was rolled out in Scotland in 2003.

What can supplementary prescribers prescribe?

1.16   Nurses, pharmacists, physiotherapists, radiographers, podiatrists and optometrists can prescribe in partnership with a doctor (or dentist). Nurse and pharmacist supplementary prescribers are able to prescribe any medicine including a limited range of Controlled Drugs and unlicensed medicines that are listed in an agreed CMP. All supplementary prescribers may prescribe for any medical condition, provided they do so under an agreed, patient-specific CMP.

1.17   Supplementary prescribing may continue to have a role for nurse independent prescribers, particularly for newly qualified prescribers, or complex situations where there is clearly a need for a team approach to prescribing, or when a patient's clinical management plan (CMP) includes certain controlled drugs or unlicensed medicines (NMC & SEHD 2006).

Nurse Independent Prescribing

1.18   Between 2003 and 2005, work continued to expand the Nurse Prescribers Extended Formulary (NPEF) and by 2005, there were 240 Prescription Only Medicines (POMs), along with all the Pharmacy (P) and General Sale List (GSL) medicines which nurses could prescribe in the formulary.

1.19   In October 2005, the Committee on Safety of Medicines (CSM) considered responses to two previous consultations that examined options for the future of nurse prescribing along with the introduction of independent prescribing for pharmacists. They recommended that suitably trained and qualified nurses and pharmacists should be able to prescribe any licensed medicine for any medical condition within their competence. This was agreed across the UK and legislation came into effect in 2006, which enabled all qualified Extended Formulary and Extended / Supplementary nurse prescribers to become Nurse Independent Prescribers and suitably qualified pharmacists (Pharmacist Independent Prescribers) to prescribe any licensed medicine. Nurse Independent Prescribers, within their own level of experience and competence, can prescribe a range of controlled drugs for specific medical conditions but Pharmacist Independent Prescribers cannot prescribe controlled drugs, although this may change in the future (NMC 2006).

Implementation

1.20   Independent prescribing for nurses in Scotland was introduced in a phased implementation which began in 1996 and is now complete. 2006 saw the publication of Non Medical Prescribing: Guidance for Independent Nurse Prescribers and for Community Practitioner Nurse Prescribers in Scotland (SEHD, 2006), and this document, to guide implementation, was supported by the publication by the nursing regulator of "Standards of proficiency for nurse and midwife prescribers" (NMC, 2006).

Education and training

1.21   Since 1999, preparation to prescribe from the Nurse Prescribers' Formulary was included in the district nursing and health visiting / public health nursing pathways of

specialist practitioner programmes. Until 2006, such prescribing was integral to the education of all district nurses, health visitors / public health nurses and the small number of practice nurses who have successfully completed the assessment requirements of either the stand alone or integrated course and whose prescribing status is noted on the Professional Register held by the Nursing and Midwifery Council (NMC). These training programmes remain for Community Practitioner Nurse Prescribers, but in 2006, the NMC (see above) set out standard for the educational preparation of Independent Nurse Prescribers. These standards have to be met by Higher Education Institutions (HEIs) in order to run approved nurse prescribing educational programmes. During training the potential nurse prescriber is supervised by a Designated Medical Practitioner who is responsible for assessing whether learning outcomes are met and assures clinical competency levels of nurse prescriber trainees.

Nurse prescribing numbers in Scotland

1.22   The number, scale and scope of the work of nurse prescribers in Scotland developed rapidly since 1997. Further increases in the numbers and functions of nurse prescribers are also planned or underway. The number of nurse prescribers in Scotland has grown from 6 in 1996 to over 3,200 by March 2006 (ISD, 2007). The future holds further possible expansion with the introduction of an extension to the Nurse Prescribing Scheme. Over the same period, between 1996 and 2006, nurse prescribing, although small in relation to that of GPs, grew from fewer than 2,000 prescription items in 1996/97 to over 447,000 by 2005/06 (see table 1.1). The gross ingredient cost rose from £15,386 to over seven million pounds. Volume increased by 15.4% and cost by 15.7% between 2004/5 and 2005/06. The reasons for such increases are not necessarily obvious and could link to factors other than more prescribers prescribing more items. For instance, demographic factors such as the growth of the older population, many of which are managed by nurses, may have a part to play.

Table 1.1   The increase in nurse prescribing in Scotland

Year ending 31 March	Number of Prescribed Items	Gross Ingredient Cost (£)
1997	1,871	15,386
1998	17,006	143,086
1999	55,487	539,127
2000	100,666	1,072,407
2001	175,414	2,052,182
2002	247,931	3,234,981
2003	295,104	4,224,857
2004	335,826	5,110,590
2005	387,938	6,243,183
2006	447,787	7,222,794

Source: Information Services, Healthcare Information Group ISD, 2007

1.23   From April 2002 extended formulary nurse prescribers were able to prescribe a wider range of medicines for a broader range of medical conditions - minor injuries, minor ailments, promoting healthier lifestyles and palliative care, and as detailed above. Over this

period, with the introduction of different categories of nurse prescriber, the nature and type of nurse prescribers and their numbers has changed. So, in 2005/06, 52% of all nurses prescribing was carried out by District Nurses, 14% by Health Visitors, 17% by supplementary prescribers, 7% by extended prescribers and 2% by Practice, Community and triple duty nurses[3] (ISD, 2006).

1.24   The enhancement of the nurses', midwives' and health visitors' role by the introduction of extended, supplementary and independent nurse prescribing is seen by many as one of the most significant developments in the delivery of patient care over the last century (Harrison, 2003). The Scope of Professional Practice (UKCC, 1992) provides a legal framework for nurses, midwives and health visitors to practice and prescribe within the scope of their professional competence. The potential 'added value' that may arise from nurse prescribing has been reported elsewhere (Brooks, 2001 and DoH, 1999a and Luker et al, 1997) although much of this evidence comes from the experiences of district nurses and health visitors who have been permitted to prescribe from a very limited range of medicines since 1994. Clark (2002) highlights that nurses have more prolonged contact with their patients and are in a good position to carry out an assessment of the patient's condition, monitor and observe compliance, and observe responses to treatment along with observation of side effects. The expansion of nurse prescribing that has occurred as a result of recent legislative changes will give more opportunities for nurses to provided added value to the patient's engagement with the NHS.

1.25   Table 1.2 shows the changes in the number of items prescribed by nurse prescribers in Scotland for each chapter of the British National Formulary (BNF). This shows that as more extended and supplementary prescribers qualified so associated prescribing increased in a range of areas of the BNF. However, it should be noted that a number of policy and pharmaceutical changes may have been responsible for the variations, but it is virtually impossible to identify these specifically. For example, between 2001 and 2003 it is likely that the majority of nurses' prescriptions were being written by district nursing and health visiting prescribers. It is also possible that each year additional items were added onto the drug tariff. It is also likely that further increased prescribing in 2006 also demonstrates activity as a resulting from the opening up of the BNF to independent prescribers

1.26   The additional opportunities for nurses, midwives and health visitors to prescribe across a wider range of medicinal products bring a number of professional benefits, for example the additional training and responsibility. These opportunities have had a major impact on primary care, (see above paragraph 1.21), where nurses play a major role in the prescribing process but have to leave the final element; the signing of the prescription, to the medical practitioner. There are however a number of challenges (Finnie and Wilson, 2003) for 'new' nurse prescribers, many of which will come from the expansion of nurse prescribing within secondary care settings, such as clinical nurse specialists and nurses working within accident and emergency departments under the auspices of supplementary prescribing where nurse prescribing, has historically been less prevalent.

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[3] Data on prescriber type were not available for 8% of nurses.

Table 1.2   Nurse prescribing - number of prescribed items (ISD, 2007)

BNF Description	2001	2002	2003	2004	2005	2006
Gastro-intestinal system	5,054	5,789	6,264	7,121	8,050	8,441
Cardiovascular system	4	7	10	187	1,272	3,628
Respiratory system	0	1	39	1,116	6,236	14,653
Central nervous system	5,433	13,121	20,592	24,947	30,892	36,128
Infections	2,053	2,778	3,299	5,302	9,771	19,066
Endocrine system	1,079	1,330	1,532	1,685	2,667	4,317
Obstetrics, gynaecology & UT disorders	192	159	484	3,116	8,243	13,785
Malignant disease	0	1	0	17	49	67
Nutrition and Blood	94	89	119	478	1,013	1,476
Musculoskeletal & joint disease	1	7	38	563	1,724	2,571
Eye	4	18	230	1,432	2,975	4,832
Ear, nose and oropharynx	1,664	2,409	2,944	4,227	5,675	7,393
Skin	38,707	53,066	64,463	68,885	75,849	59,335
Immunological products & vaccines	1	1	12	913	3,159	5,595
Anaesthesia	1,059	1,599	1,995	1,947	2,236	2,478
Other drugs & preparations	499	564	530	477	544	645
Dressings	101,627	140,079	161,100	179,131	186,970	193,875
Appliances	8,302	11,345	13,485	14,605	18,573	45,687
Incontinence appliances	5,685	8,466	9,941	10,815	11,167	10,735
Stoma appliances	1,976	3,336	4,788	5,831	6,689	6,466
Unknown Code	1,763	3,272	3,239	3,031	4,184	6,614
Total	175,197	247,437	295,104	335,826	387,938	447,787

Report overview

1.27   This report identifies the context, aims and objectives of the research in chapter one. Chapter 2 explores recent relevant research on nurse prescribing with particular reference to Scotland. Chapter 3 describes the research methodology and the research methods used to explore the project objectives. Chapter 4 examines nurse perspectives on nurse prescribing, and Chapter 5 examines stakeholder perspectives. Chapter 6 provides an evaluation of the initial education courses or 'programmes of preparation' for nurse prescribers in Scotland. Chapter 7 looks at patient perceptions and those benefits of extending nurse prescribing that patients identified. Chapter 8 investigates the impacts of nurse prescribing on health service organisation in Scotland. Chapter 9 contains an analysis of some of the public health and patient safety elements of nurse prescribing. Chapter 10 provides a brief overview of the project and our main conclusions.

1.28   It should be noted that it was agreed in the first year of the project that the results of the study would be fed back to practitioners when completed and, where relevant, to benefit practice. This specifically applied to the evaluation of nurse prescribing education and a number of findings from that work were communicated to NHS Education for Scotland (NES) and incorporated into practice during the course of the project.

CHAPTER TWO: RESEARCH ON NURSE PRESCRIBING

Introduction

2.1   This chapter outlines the literature which was used to underpin the development of the approach taken to evaluating the extension of independent nurse prescribing in Scotland.

2.2   The nurse prescribing literature has burgeoned since 2000. This body of literature was highlighted by a literature review published by the Scottish Executive in 2004 (Harris et al, 2004). Pollock (2006) undertook a further literature review looking at the costs of nurse prescribing, its effectiveness, and aspects of implementation that needed to be addressed to implement nurse prescribing safely. This study did not seek to duplicate past work, nor did it survey the totality of the nurse prescribing literature. Instead its focus was on the literature which was relevant to the project objectives and any additional research that was relevant specifically to nurse prescribing in Scotland. It did this by drawing on past reviews, searching the major electronic data bases including those covering medical and nursing journals such as Medline, CINAHL and other databases and search facilities available within NHS's electronic library. Much of the recent research literature focuses on views of nurse prescribers, patients and various professional groups on the 'benefits and challenges' of nurse prescribing. For example, Lewis-Evans and Jester (2004) conducted qualitative interviews with health visitors and district nurses and identified a series of themes around nurse prescribing *'benefits of nurse prescribing, support and role satisfaction, prescribing difficulties and patient-centred care'*.

Research on nurse prescribers

2.3   There has been one large evaluation of nurse prescribing in England. This was conducted by Courtenay et al (2006) and used a 2 phase evaluation beginning with a national survey of independent nurse prescribers followed by qualitative work with nurses. As this work was carried out in 2004, it did not explore the further opening up of the BNF. Observation and post–consultation questionnaires were used with patients to explore their experience of nurse prescribing. Courtenay et al found benefits in patient care, increased professional autonomy; problems with prescription pad delays, and lack of computerised prescriptions. They found that nurse prescribers' main support was informal peer support. Patients were generally positive and had no major preference for doctor or nurse, although patients preferred to see doctors for certain conditions. The main reasons that patients gave for wanting nurse prescribing were: convenience, saving the doctor's time and a preference for a nurse in certain cases where patients found it "less embarrassing" to talk to nurses rather than doctors about their illnesses.

2.4   Most other research has focused on primary care and on health visitors and district nurses in particular. For example, in a postal survey of health visitors and district nurses in southern England conducted by While and Biggs (2004), district nurses were prescribing significantly more than health visitors and both groups reported increased prescribing confidence, improvements to their role and supportive information sources. Recent available statistics show that in some areas nurse prescribing in acute settings matches the level of activity in primary care. For example, Bradley et al (2005) found that there were almost as many nurse prescribers working in hospital settings as in general practice and community settings (40% and 54% respectively).

2.5   Small qualitative investigations using interviews and focus groups have mainly focused on general professional issues have also been undertaken (Travers 2005). These have included issues specific to nursing groups such as health visitors (Davies 2005), supplementary prescribers (Hay 2004), nurse prescribing effects on inter-relations between professionals patients and carers (Fisher 2005) and nurse-patient relationships (Luker et al 1998b) linked to patent views on convenience and continuity of care. This latter study also suggested that nurse prescribing added value and was well received by patients.

2.6   In addition, Banning (2004) explored the research literature on nurse education and various issues in nurse prescribing, including pharmacology knowledge, patient perspectives, treating minor injuries, clinical competence and professional autonomy. Latter and Courtenay (2004) identified key findings about the impact and effectiveness of nurse prescribing concluding that nurse prescribing has generally been evaluated positively to date. Methodological limitations and under-researched areas were also identified, including lack of research on cost effectiveness and the range of settings that nurse prescribers now work in. In addition, Latter and Courtenay (2003) suggested that further research on nurse-patient interactions would be beneficial.

Research on patient views

2.7   Few studies have focused on patient perceptions of nurse prescribing. Those which have included patients have focused on those who have been exposed to nurse prescribing, or on high, low and new users of nursing services (Luker et al 1998b; Brooks 2001). Berry et al (2006) sought the views of people who have not yet experienced nurse prescribing in order to determine their level of confidence in nurse as opposed to doctor prescribing. Most of the data on patients have been collected either within primary care settings - for example in community nursing settings (Luker et al 1998b) and in health visitor contexts (Brooks et al 2001) - or in the general population. In addition, studies have been limited to the use of the nurse prescribing formulary. More research is therefore needed on patient views since the legislative changes with the BNF and with patients within acute settings.

2.8   Patient perspectives of nurse prescribing have been generally positive, with participants in the Brooks et al (2001) study accepting nurse prescribing as a practical and responsive method of service delivery. More specifically, patients identified that nurse prescribers had key skills in assessment, observation, diagnosing and providing information. The benefits were seen in terms of better use of time, convenience and a quality relationship with the nurse. Disadvantages included the limitations of the nurse prescribers formulary at the time of the study and concerns around the training and competence of nurse prescribers.

Scottish nurse prescribing literature

2.9   Mullally et al (2003) provided a UK picture of nurse prescribing and nurse prescribing education that acknowledged which nurse prescribing in Scotland was seen as a "positive step". "Our National Health: A Plan for Action, a Plan for Change" (SEHD, 2000) set the policy context for extended nurse prescribing in Scotland. As well as specifically making a commitment to expanding the scope of nurse prescribing, it set out the need to provide accessible, user-centred services for patients"

2.10   More recent literature on nurse prescribing in Scotland is limited and currently narrow in focus in contrast to literature relating to the UK as a whole, there is relatively little that relates to Scotland specifically (Mullally, 2003; Liley et al, 2005; McBeath, 1999). Two studies relate specifically to Scotland. Rodden (2001) explored the impact of nurse prescribing on autonomy and found that district nurses in Scotland prescribed more medication and were more autonomous practitioners than health visitors. Snowden (2006, 2007) recently conducted a pilot study in Scotland on nurse prescribing within the mental health sector which showed that registered mental health nurses differ from their colleagues in terms of attitude and experience of nurse prescribing and suggested that this may be a result of different approaches to the therapeutic relationship.

Conclusions

2.11   The research regarding nurse prescribing discussed in this chapter, highlights that it would be beneficial for more research, particularly in Scotland, on patients who had not received nurse prescriptions, patients who had received such prescriptions in different geographical and clinical settings, and further work on patient perceptions of services.

2.12   These gaps in knowledge therefore informed this project's research methods and data collection tools that we used e.g. the choice of case study locations and the work to collect patient and staff views across Scotland and different nursing groups.

2.13   The research reported here provides the first comprehensive view of nurse prescribing in Scotland. Some of these findings will also be applicable to prescribing across UK. This study also adds more information to the research on the views of patients and the public.

CHAPTER THREE : METHODS

Introduction

3.1   This chapter describes the research methods employed in this study and some of the methodological thinking behind the choice of the key methods used during the different stages of the project. It also describes the ethical and governance approvals and structures within which the research operated.

3.2   Nurse prescribing has in recent years been researched using a range of methods. These have included qualitative, quantitative and mixed methods and data gathering tools such as questionnaires, interviews, focus groups and participant observation. These methods individually and together have different strengths and weaknesses. In the initial planning for this study, the focussed literature review described in Chapter 2 was used extensively to inform what methods should be used.

3.3   A variety of methods were then selected to achieve the project objectives (see Chapter one) across two main areas of evaluation, nurse prescribing in practice and preparing for prescribing. The evaluation of nurse prescribing in practice included:

- Stakeholder interviews and meetings;
- A postal questionnaire of all nurse prescribers on the Nursing and Midwifery Council database;
- Two surveys of the public;
- Case studies involving nurse prescribers, patients, other health professionals and managers using in depth interviews across Scotland.

3.4   The exploration of nurse prescribing education also used a mixture of methods including:

- Documentary analysis;
- A questionnaire;
- Interviews; and
- Focus groups supplemented by case histories and diaries followed up.

3.5   The sections below provide a brief explanation about each of the methods used, why they were selected and how they were used in terms of sample and settings.

Methods used to evaluated nurse prescribing in practice

Stakeholder interviews and meetings

3.6   The first method used to evaluate nurse prescribing in practice was stakeholder interviews and meetings. Interviews were semi-structured and were primarily but not exclusively telephone interviews, lasting an average of 45 minutes. The groups and individuals initially contacted fell into four categories listed below. At least two interviews were conducted with representatives in each of the following groups:

- Patient and public-oriented interest groups e.g. Diabetes UK;
- Professional bodies e.g. Nursing and Midwifery Council;
- Representative bodies e.g. Royal College of Nursing; and
- Key individuals' e.g. Scottish Government Lead for Nurse Prescribing.

3.7   Stakeholders were interviewed about their involvement, past and present, in nurse prescribing in Scotland; and their assessment of the benefits and disadvantages of nurse prescribing for the NHS Scotland to date in terms of impacts on patients, on nurses, on GPs and hospital doctors, on allied health professionals (AHPs), practice managers and others.

3.8   The stakeholders were also questioned about how they hoped and expected nurse prescribing to develop over the next 5 years and whether they would like to see activity develop. A copy of the stakeholder semi-structured interview schedule can be found in Annex 17.

Survey research with the general public and current nurse prescribers

3.9   A representative sample of the Scottish population was asked about nurse prescribing at two stages in the project. In addition all nurses who were registered as nurse prescribers in Scotland were given an opportunity to take part in a quantitative survey.

Surveys of the public's attitudes to nurse prescribing

3.10   The views of the public on nurse prescribers, and their experience of nurse prescribing, was elicited twice during the project (during September 2004 and February 2007) through a Scottish omnibus survey of adults aged 16 and over. The surveys were conducted across representative sample of Scottish cities, towns and villages

3.11   Questions were commissioned at the start of the project to provide data on public perceptions of current nurse prescribers. The same questions were used again in the second survey (a full copy of the questionnaire can be found in Annex 2). Questions included in the survey examined respondents' experience of nurse prescribing in relation to:

- Location of prescribers;
- Satisfaction of those receiving a prescription from a nurse;
- Reasons for satisfaction and dissatisfaction with nurse prescribing; and
- Benefits of nurse compared to doctor prescribing.

The 2004 sample involved 1,016 respondents, 1,000 of which had had a doctor's prescription and 120 (12%) had had a nurse's prescription. These were stratified by age, sex and socioeconomic group.   The 2007 survey involved 1,007 respondents, 978 (97%) of which had had a doctors prescription and 160 (16%) had received a nurse's prescription. The numbers of respondents in both surveys with experience of nurse prescribing was small therefore findings relating to these surveys must be treated with caution.

Survey of existing nurse prescribers

3.12   A survey (copies of the full questionnaire are available in Annex 1) of nurse prescribers in Scotland on the professional registers in 2003 was carried out and captured:

- Who the nurse prescribers were (geographical location, practice setting age, gender etc);
- Where they were based;
- How long they had been qualified;
- How long they had worked as a nurse prescriber;
- What type of practice they worked in;
- Why they continue/ceased working in the field;
- What their work experiences were; and
- How they worked with colleagues and other health professional groups.

3.13   The questionnaire was despatched to 3,700 nurse prescribers in Scotland at the end of May 2005. A total of 948 completed questionnaires were returned representing a response rate of 26%. This survey provides the best statistical picture of nurse prescribers and their practice in Scotland at a particular time. However the response rate does not allow strong statistically significant results to be drawn from the data set. The responses provide useful information about many aspects of nurse prescribing. The findings informed later stages of the project particularly the case studies e.g. by determining topics to be covered as part of the case studies with staff and patients.

3.14   The survey returns reflected the particular prescribing base at the time: namely community based nurses working in a particular setting with a specific type of role and prescribing training. The nature and number of nurse prescribers now at work has changed substantially but, as later case study materials indicate, many of the attitudes, opinions, opportunities and problems identified by the prescribers in 2005 remained the same throughout the study.

Case studies

3.15   Following on from the survey research came a number of case studies (see Annex 15). The case studies tracked a sample of nurse prescribers, their patients and carers, GPs and pharmacists, other health professionals working with nurse prescribers in a representative range of settings and with a range of prescribers.

3.16   Six case studies were conducted in two NHS Board areas. Each site was chosen as it linked to particular nurse prescribing activity or likely challenges for nurse prescribers in practice. Case study sites included general practice teams, an Accident and Emergency (A&E) centre, a community hospital, nurse specialists e.g. cardiac rehabilitation, and covered primary and secondary care. The general practices were selected from an inner city, a large town in a rural area and a village. General practices included training and non-training practices, large practice teams and single handed GP practices. Key participants in the other case study sites varied. Where necessary carers or relatives could be interviewed instead of or in addition to patients i.e. where patients were unable to give consent or were incapacitated. As the study progressed, additional nurse prescribing groups in mental health and paediatrics were targeted and included in the case studies.

3.17   The case studies provided the principal qualitative means to examine the impact of nurse prescribing on nurses' skills, patient safety, public health, tasks and workload; on patients and their relatives or carers, on other nurses and on GPs, hospital doctors, pharmacists and others. They provide important information and insights into nurse prescribers' roles and impact on such topics as patient empowerment, encouraging patient adherence and wider health promotion matters. They offered insights into some aspects of nurse prescribers' clinical reasoning and decision-making through a number of routes e.g. health professional and patient, to build up a full picture of the prescribing process and outcomes as possible in the practice setting.

Site selection and participant recruitment procedure

3.18   The overall site selection and data collection approach in the case studies within two NHS Boards was in three phases:

- In phase 1 access issues were negotiated with relevant individuals in both of the Board areas e.g. Board Nurse Directors. Following overall governance and ethical approval for each NHS Boards, Directors of Nursing, Leads for Nurse Prescribing and relevant managers were contacted to inform them about the evaluation and to ask for their assistance in phase 2 and 3 of the study.

- Phase 2 involved collection of data on nurse prescribing activity within the two Board areas which culminated in the selection of case study sites. As part of this, a nurse prescribing activity questionnaire and invitation to participate in case studies were sent to all nurse prescribers across the two Board Areas. In order to maximise the response-rate, the activity questionnaire was anonymous and participants were not asked for any personal information. If the nurse prescribers were willing to receive more information and be contacted about taking part in a case study, they were asked to return a reply form. This asked for details relating to their nurse prescribing activity and contact information. The rationale for sending the invitation to all nurse prescribers within the chosen Board area was to 'over-recruit' so that the opportunity for choice in relation to the selection criteria was maximised.

- Phase 3 identified those who had provided details of prescribing activity and individuals who matched the agreed criteria for the case studies and inviting them to participate (see Annex 16).

- Selected nurse prescribers were then contacted, sent the detailed information about the case studies and asked to return a signed consent form if they were willing to take part (see Annex 7 and 10). When a consent form was returned, the researcher contacted the participant to establish their participation. Once nurse prescribers were identified and a case study site agreed other key participants e.g. patients, medical practitioners were identified by the nurse prescriber and invited to take part in the case study by the researcher. Others with indirect involvement in Nurse Prescribing were also identified e.g. non-prescribing nurses, pharmacists, carers, service managers and team leaders along with key stakeholders such as senior managers and nurse prescribing leads.

Methods of data collection

3.19   The case studies involved several methods of data collection including semi structured interviews and activity logs (see Annex 8 to 15).

Semi-Structured interviews

3.20   Semi-structured interviews were used to explore data arising from the activity questionnaires and activity logs. The interview schedule can be found in Annex 12. Interview themes were chosen to represent the main areas of interest to the evaluation and the overall project objectives. Such general themes and questions were adapted and made specific to the different participant groups' involvement with/interest in nurse prescribing.

3.21   Semi structured interviews were also used with patients and stakeholders (see Annex 13). Interviews were conducted with the patients and carers of these independent, extended and developing supplementary prescribers (see table 3.2). Managers, pharmacists and medical staff were also interviewed for the case studies (see table 3.2).

Table 3.2   Interviewee categories and numbers

Interviewee Categories	**Numbers**
Patient (including one who was also a carer)	15
Case study stakeholders	3
Medical staff	6
Managers (one of whom was a doctor)	3
Pharmacists	5

3.22   Patients were recruited from a range of condition categories e.g. Cardiology, Diabetes, Asthma. The nurses interviewed in practices or hospital settings who were not nurse prescribers worked with nurse prescribers. Nurse prescribers, nurses, GPs, pharmacists and practice managers sometimes but not always came from the same team.

3.23   The data analysis of the case studies and other interviews used thematic content analysis. Reliability was maintained by 3 analysts from different disciplines and professional fields reading all the transcripts and carrying out analysis. A modified Delphi approach was used whereby analysts both met and emailed to discuss and prioritise emerging themes.

Activity logs

3.24   Nurse prescribers participating in the cases studies were asked to keep a log of their activities for 2 weeks in order to build a picture of 'real-life' working practice. This provided valuable insight into the nature and overall pattern of nurse prescribing activity, with particular reference to *non-prescribing* outcomes as well as instances when an item had been prescribed (See Annex 8 and 9).

3.25   This type of design was considered to be particularly suited to evaluation of nurse prescribing as the frequency and nature of prescribing activity may vary considerably across different roles and areas of practice.

Evaluation of nurse prescriber education

3.26   When the research was conducted, training in nurse prescribing in Scotland was provided in seven Scottish university schools/departments of nursing and midwifery. The courses were based on a common outline curriculum, including the same set of nurse prescribing competencies and a requirement of 26 days study and 72 hours of supervised learning in practice. All the courses were part-time and blended different modes of learning: attendance at the university, private study, access to e-based materials and supervised learning in practice. However, within this framework the courses were of different lengths (varying from 11 to 23 weeks[4]) and they delivered the 26 days study through different ratios of on-site to off-site learning. These differences reflected the diverse needs of the course members, especially those in remote areas for whom a greater proportion of the course would most appropriately be delivered by distance learning. This part of the study used a variety of methods to determine:

- How effective courses in nurse prescribing education were as a preparation for course members' future roles as nurse prescribers;
- Course member views on the most and least effective aspects of the course;
- In what ways could the provision be improved; and
- What problems course providers faced in bringing course members up to the required level of achievement.

3.27   The evaluation included 97% of the 186 course members who began these courses between 12 January and 26 May 2005. Participants were given information on the project (Annex 4) and asked to complete a consent form (Annex 5). Data were collected by a combination of methods:

- Analysis of course documentation – course programmes and resource materials;
- An initial questionnaire survey of course members to ascertain their professional and educational background, the clinical situations in which they would use their training, the amount of protected study time awarded by employers, etc (See Annex 3);
- Interviews with course providers – this encompassed 10 course leaders/ associate leaders and 10 lecturers in pharmacology, covering all 10 centres (See Annex 6); and
- Group work (including the use of nominative techniques[5]) was conducted with course members at the end of the course to explore the positive and negative aspects of the course in preparing them for future practice.

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[4] This is the time between the first and last weeks of teaching.
[5] The nominal group technique was used for the group meetings with course members. This technique allows the group to share and discuss all the issues to be evaluated, with each group member participating equally in evaluation. The evaluation works with each participant "nominating" his or her priority issues, and then ranking them on a scale of, say, 1 to 10. The rankings allocated by each participant to each issue are added together to give a final ranking for that issue.

3.28   Following data collections outlined above, comparisons were carried out of the provision at the 10 centres. These compared the ratio of on-site to off-site study, the detailed course content, the schedules of assessment, the duration of the courses and the quality assurance procedures using documentary comparison of course documents/timetables. Differences in approach were discussed with the course leaders who have shared best practice and developed their courses further as a result of collaboration within their professional network[6].

3.29   The courses were also then assessed in terms of their fitness for purpose. The purposes of the courses were articulated in relevant policy documents, in the nurse prescribing competencies, in the NHS Education for Scotland guidelines (see http://www.nes.scot.nhs.uk/prescribing/index.html) and in expressions of individual learning needs by the nurses who attended them. The extent to which the courses met these purposes was assessed by a thematic analysis of both the interviews with course providers and the course members' focus groups, triangulated where possible with the results of the initial survey.

3.30   As the University of Stirling Department of Nursing and Midwifery, delivered one of the courses under evaluation, a 'firewall' was constructed between the educational evaluation team (based in the University's Institute of Education) and those members of the Department of Nursing and Midwifery who were involved with the Stirling course: the latter had no access to data collected on the courses. This ensured that the interpretation of the data collected relating to the course was conducted independently of the Stirling course team. Validity checking was however undertaken within the 'firewall' before the final report was generated.

Ethical and governance issues

3.31   The research team worked within the research governance and ethical frameworks of the NHS and Universities that operate in Scotland especially those relating to informed consent. The research recognised the need to have clear boundaries of consent and confidentiality in project work to fulfil all requirements of the 1998 Data Protection Act. Ethical considerations required sensitivity about the concerns and feelings of the nurse prescribers and other stakeholders, timing of interviews, use of logs, and issues of confidentiality in relation to the research. Confidentiality was assured throughout the research process and anonymity was preserved where agreed and appropriate systems put in place to support this e.g. Nurse prescribing leads distributed board level questionnaires and case study reply slips to preserve anonymity of participants. Participation in the study was within the context of informed consent. Appropriate ethical approval, as required, at various stages of the research was obtained through the Central Office for Research Ethics Committee (COREC) (now the National Research Ethics Service NRES) and the University's ethical committees. For reasons relating to complexity and the additional scrutiny required at ethical committees, children under 16 were excluded from the research study.

3.32   The project was overseen by an in-house (University) steering group that met regularly over the life of the project, and involved lay and professional members as

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[6] As the original data would now be out of date, it is not reported here, except where it illustrates general issues of course design.

appropriate to that steering group. This group reported to and consulted at regular intervals throughout the research with a Research Advisory Group established by the Scottish Government.

3.32   Copies of the study instruments, for example forms, information sheets, tools, logs, matrices and questionnaires used are located in the annexes at the end of the report. (See Annex 1 to 17).

**CHAPTER FOUR   NURSE PERSPECTIVES ON NURSE
                       PRESCRIBING**

Introduction

4.1   This chapter provides perspectives on nurse prescribing by nurse prescribers
themselves. It details on the responses to the national questionnaire survey sent to all 3,700
nurse prescribers listed in Scotland in May 2005 (948 completed questionnaires where
returned representing a response rate of 26%), along with nurse prescribers views from case
studies. A profile of nurse prescribers' in terms of age, work environments, prescribing type,
locations and past experience is also presented.

Profile of Nurse Prescribers

4.2   Nurse prescribers work in a wide range of clinical and community settings. Their
profile - in terms of numbers, training, range of practice, and roles - has altered significantly
since the late 1990s and especially between 2003 and 2007.

4.3   The majority of respondents to the survey reported that they were employed as nurses
(64%) or health visitors (35%). Another 4% were employed as midwives. Some respondents
reported that they were working in more than one capacity.

4.4   The majority of nurse prescribers were aged over 40 at the time of the survey (table
4.1).

Table 4.1   Nurse Prescriber age profile 2005

Age	%	N
under 40 years	18	172
40 – 49 years	55	521
50 – 59 years	26	246
60 years or more	1	9
Total	**100**	**948**

* Base: all respondents – 948

4.5   Respondents worked in a range of areas in their practice. Some respondents worked in
more than one area. Overall 44% reported that their practice covered an urban area, 34% a
suburban area and 41% a rural area. 9% of respondents reported that their practice included a
remote area. Nearly three quarters of respondents (71%) were based in health centres or GP
practices, less than 10% were based in acute settings, and the rest were based in a variety of
other setting.

Table 4.2   Prescriber category

Prescriber category	%	N
HV/DN Independent nurse prescribers	70	664
Extended and supplementary prescribers	23	218
Other type of prescriber	7	66
Total	**100**	**948**

*Base: all respondents – 948

4.6   The majority of prescribers (75%) were Grade 7 in their current role with a further 16% in Grade H. A total of 83% of the respondents had been in their current role for more than a year; 39% had 2 to 5 years experience in the post, 18% 6 to 10 years, 20% 11-20 years and 6% had more than 20 years experience in their current post.

4.7   Independent Nurse Prescribers were the most common category of prescriber with just under a quarter of respondents reporting that they were extended and supplementary prescribers (table 4.2).

Past experience and training

4.8   The majority of respondents (89%) had attained a Registered Nurse (RN), Registered General Nurse (RGN) or State Registered Nurse (SRN) adult qualification. A third had also qualified as a Registered Midwife (RM) and a third in district nursing or health visiting. Many of these respondents attained these qualifications before 1991, for example, 79% of those with a RN/RGN/SRN adult qualification received this before 1991.

4.9   Of those who reported the date they attained their qualification, just under a half (48%) had attained their qualification between 2001 and 2005.

4.10   Independent nurse prescribers tended to have been qualified and worked in the role for a longer period of time than extended and supplementary nurse prescribers. For example, 67% of independent prescribers had been in that role for 1-5 years and a further 5% for 5 or more years compared to 40% of extended and supplementary nurse prescribers who had been in their role for a year or less and 60% for 1 to 5 years.

4.11   Independent prescribers were more likely to work in health centres and GP practices, whereas extended and supplementary nurse prescribers were more likely to work in acute hospitals.

Current practice

4.12   The majority of respondents (78%) reported that they prescribed in their current job. The proportion prescribing was higher amongst those working in health centres and GP

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[7] Salaries in the NHS at the time of the research were based on national pay scale and were divided into appropriate Grades. A newly qualified nurse starts on a D-Grade. A more experienced nurse, with several years' post-graduate experience would be on an E-Grade. An F-grade nurse or G-grade nurse carries out a more leading or supervisory role, for example a ward sister or charge nurse.

practices (87%) than in other settings. The majority of nurse prescribers wrote between 2 and 10 prescriptions per week (Table 4.3)

Table 4.3   Level of prescribing by nurse prescribers

Level of Prescribing	%	N*
Between 2 and 10 prescriptions per week	60	443
Less than 2 prescriptions per week	23	170
More than 10 prescriptions per week	16	119
Don't know/Not stated	1	7
Total	**100**	**739**

*Base: all current prescribers - 739

Factors influencing decision to become a Nurse Prescriber

4.13   All respondents were asked to indicate what motivated them to undertake training to become a nurse prescriber. Improvement in patient care and the opportunity for continuing their professional development were very or quite significant factors in their decision for over 90% of respondents. Job satisfaction was also an important factor for many (table 4.4)

Table 4.4   Motivation to undertake training and become a nurse prescriber

Motivation	Very significant	Quite significant
	%	%
Improvement in patient care	69	23
Personal professional development	63	30
Job satisfaction	55	29
Improving job prospects	19	32
Employer pressure	19	21

Base: all respondents 948

4.14   The factors influencing the decision to become a nurse prescriber showed no significant differences across health settings. However, there were variations when these factors were analysed by the number of prescriptions written per week. Those writing one or less prescriptions per week were more likely to say that employer pressure was a factor in undertaking nurse prescriber training than those writing 11-30 prescriptions per week (51% vs. 23%). Improvement in job prospects was more likely to be a motivating factor for nurse prescribers who wrote more than 30 prescriptions per week compared to those writing 1 or less per week (71% vs. 41%). All nurse prescribers writing more than 30 prescriptions per week reported that improving patient care was a significant factor in undertaking nurse prescriber training compared to 82% of those prescribing 1 or more prescriptions per week.

Satisfaction and impact on role

4.15   Overall, 80% of current nurse prescribers were very satisfied or satisfied in their role as nurse prescriber. Extended and supplementary prescribers were more likely to express satisfaction with their role (85%) than other nurse prescriber categories (supplementary prescribers 81%, independent prescribers 79% and extended formulary prescribers 70%).

4.16   The majority of respondents felt that becoming a nurse prescriber had had a positive effect on their role with respect to quality of patient care, in their professional autonomy and in improving job satisfaction (table 4.5). Some respondents felt that becoming a nurse prescriber had had a negative effect on their time (24%) and particularly on the amount of administration (46%) they had to do in their role.

Table 4.5   Impact of becoming a nurse prescriber on role*

Impact of becoming a nurse prescriber	Very positive	Slightly positive
	%	%
Professional autonomy	62	29
Quality of patient care	62	29
Job satisfaction	56	33
Ease of working	38	39
Time	29	26
Administration	8	17

*Base: all current prescribers – 739

4.17   The data suggested there was little difference in the proportions across the various types of nurse prescribers who felt prescribing had had a positive effect with respect to job satisfaction and patient care. The exception was supplementary nurse prescribers. A 100% of this group were felt nurse prescribing had a positive impact on both quality of patient care and job satisfaction compared to 90% of other prescribing nurse types for both factors. However, there were only a few supplementary nurse prescribers in this survey so these comments should be viewed with caution. Looking across the healthcare settings in which nurse prescribers work, 97% of those working in community settings considered nurse prescribing had a impact on patient care compared to 84% working in acute care.

4.18   Nurses who wrote the most prescriptions per week were more likely to report greater job satisfaction as a positive effect of becoming a nurse prescriber. The very positive effect on time varied from a low of 11% among nurses who wrote 1 or less scripts per week to over 68% for those who wrote more than 30. Nearly 90% of those writing more than 30 scripts per week believed their new job had led to a very positive effect on the quality of patient care (in contrast, just over a third of those writing one or less prescription per week felt that their prescribing had a positive effect on patient care). The situation was similar with reference to job satisfaction. The impact on professional autonomy was even higher with nearly 95% of those prescribing 30 or more scripts a week claiming a very positive impact.

Perception of benefits of nurse prescribing to patients

4.19   Nurse prescribers considered the main benefits to patients were in continuity of care (90% strongly or tending to agree), making the pathway of care easier for patients (85%

strongly or tending to agree) and in saving patients' time (83% strongly or tending to agree) (table 4.6).

Table 4.6   Nurse prescriber views of benefits to patients

Perceived benefits to patients	Strongly agree	Tend to agree
	%	%
Continuity of care	53	37
Eases pathway of care	45	40
Saves patients' time	44	39
Provides more information for patients	42	41
Gives patients more time to understand prescriptions/treatments	27	44
More convenient for patients	23	39
Patient sees more appropriate medical professional	20	37

* Base: all nurse prescribers – 739

Location of training

4.20   Respondents completed their training at a variety of institutions in Scotland (Table 4.7) with just under a quarter of all respondents undertaking their training at Glasgow Caledonian University.

Table 4.7   Where nurses completed nurse prescribing training

Higher Education Institute	%	N*
Glasgow Caledonian University	24	228
Queen Margaret University College (now QMU)	17	161
University of Paisley	16	152
Robert Gordons University (Aberdeen)	14	134
Abertay University (Dundee)	9	85
University of Dundee	7	66
University of Stirling	6	57
Others	5	47
Not stated	2	18
	100	948

*Base: all respondents – 948

4.21   Overall, respondents thought the education programme they undertook was effective in helping them adequately prepare for their role. A quarter of respondents (25%) thought it was very effective and 56% thought it was quite effective.

4.22   Analysis of data by institution shows that the proportion of respondents who considered the training they undertook as very or quite effective ranged from 85% to 71%.

4.23   Independent prescribers were more likely to say that the education programme was very/quite effective (84%) than the extended formulary (60%) and extended and supplementary prescribers (74%).

Table 4.8   Effectiveness of training for a variety of areas*

Training effective in helping to:	Very effective	Quite effective
	%	%
Prescribe safely	53	38
Prescribe within relevant legislation	45	45
Make effective use of NP's formulary	45	41
Assist patients to gain faster access to medicines	37	41
Apply knowledge in practical prescribing	34	48
Build on existing skills	33	51
Assess patients needs	27	50
Make effective use of advice from other professions on prescribing	23	47
Critically evaluate social & clinical circumstances that impact on prescriptions	22	48
Work effectively with teams in prescribing	21	40

* Base – All respondents 948

4.24   Training was considered to be most effective in enabling respondents to prescribe safely, prescribe within relevant legislation and in making use of NP's formulary. It was less effective in enabling respondents work with prescribing teams, making effective use of advice from other professions and in evaluating the social and clinical circumstances that impact on prescriptions (Table 4.8).

Factors affecting prescribing work

4.25   Respondents were asked about the factors which had a positive or negative effect on their prescribing work (table 4.9). Being trained or educated and having up to date information were the factors which most respondents mentioned as having a positive effect on their prescribing work. Peer support was considered to have a positive effect on prescribing work by just over half of the respondents.

Table 4.9 Factors affecting prescribing work*

Factors affecting prescribing work	Positive effect	Negative effect
	%	%
Being trained educated	81	4
Availability of up-to-date prescribing information	71	9
Peer support	53	5
Appropriate infrastructure and prescribing systems	48	19
Time schedule	32	26

* Base: all current prescribers 739

4.26   A lower proportion of respondents in remote areas compared to other areas considered that availability of up-to-date prescribing information and peer support had a positive effect on their work.

4.27   A total of 61% respondents working in community hospitals felt that appropriate infrastructure and prescribing systems had a positive effect on their prescribing work compared to 46% in health centres/GPs and 39% in acute hospitals.

Future practice and developments

4.28   A large majority of current prescribers reported that they would definitely (83%) or probably (13%) like to continue nurse prescribing. Very few said they would be unlikely to continue in the role. Half of those respondents who were not prescribing currently said they would definitely or probably look to return to prescribing in the future.

4.29   In remote areas, 67% of nurse prescribers reported that they would definitely continue with prescribing compared to 83% nationally.

4.30   Health centre/GP based staff (95%) were more likely to report that they would definitely or probably continue prescribing than other groups. Community hospital staff were least likely to report that they were likely to continue prescribing (85%).

4.31   All respondents were asked what future developments they would like to see in nurse prescribing (Table 4.10). Two thirds or more of respondents wanted to see a larger nurse prescribing formulary, greater support for nurse prescribers and an increase in professional awareness of the nurse prescribing role.

Table 4.10   Desired future developments in nurse prescribing

Future developments:		
	%	N*
Larger nurse prescribing formulary	72	683
Greater support for nurse prescribers	68	645
Increase in professional awareness of the role	66	626
Increase in public awareness of role	58	550
Greater nurse prescribing powers	46	436
More nurse prescribers	42	398

* Base: all respondents - 948

4.32   There was little difference between respondents in remote, rural, urban or suburban settings in the developments they wanted to see. However, there were some differences across healthcare settings. 59% of staff in acute hospitals wanted to see greater nurse prescribing powers (at other settings the percentage was around 40%) while 79% of community/district nurse wanted to se greater support for NPs. The figure was around 60% in other settings. NPs may be working in more than one setting.

4.33   For all developments, extended and supplementary nurse providers were more likely to state that they wanted to see these developments happen in the future than respondents in other nurse prescribing roles.

4.34   These responses indicate both confidence in the ability of prescribers to undertake new work and the importance these professionals attach to both limited support and greater professional recognition of the role.

Nurse prescriber views from case studies

4.35   In addition to the findings of the survey of nurse prescribers the case studies also shed light on how nurse prescribers themselves viewed nurse prescribing.

Benefits to practice

4.36   Nurse prescribers reported benefits in relation to their personal development and feelings of personal reward, including satisfaction at being able to provide total patient care. Other benefits related to freedom in decision-making and enhancements in responsibility and autonomy. The ability to 'see through' their patients' care from beginning to end was particularly valued in the context of seamless, continued care and more efficient use of time, which was contrasted with previous frustrations of having to provide a more stop-start service and resulting impacts:

> *"It was something that I found really frustrating to be doing…to be making the decisions for patients but having to go to a G.P. and have them sanction it and actually write the prescription, it was really frustrating…I think it's fantastic to be able to go to the patient, talk about what you want to talk about, make the decision and I think the patients really benefit from that and your role is more clarified, rather than you being a middle person otherwise. You know, I feel you are a middle person if you are having to go back to the G.P". (Community Nurse)*

4.37   Nurse prescribers found additional benefits linked to enhanced professional respect and recognition for prescribing work and validation of prescribing work that had been undertaken informally in the past:

> *"I think it's more satisfying that you're able to carry out what you were doing anyway. Before, you were writing a note for a G.P. saying 'can you prescribe something for somebody' actually specifying exactly what it was and they would write it out and sign it without ever having seen the patient so you were more or less doing it. So now you're getting recognised and people are*

acknowledging that it's you that is actually doing that part of their care rather than somebody else who is doing part of their care. So I think that professionally it has aided nurse development". (Community Nurse)

4.38   Nurse prescribers stated that they were able to develop areas of practice that they felt were better run by nurses than GPs, particularly public health initiatives. For example, participants reported that smoking cessation programmes run by some of the community teams had better success with nurse leads when compared to medical leads. Some indicated that nurse prescribing was particularly beneficial to out of hours activity especially in community hospital settings and rural communities. The nurse prescribers stated that potential for the nursing profession to move further on prescribing in some areas, including public health initiatives, trauma care, wound care, palliative care and nurse led-clinics was recognised. There was a view expressed that nurse prescribing expectations were increasing although resource limitations could threaten new professional developments.

4.39   Nurse prescribers found they were able to use their time more effectively since the time spent seeking out or waiting for GP/medical authorisation of prescriptions had been removed:

> *"Because we are getting busier as a service, it does save us a lot of time, which as you know, it means you can devote your time to other things so it has definitely been a positive for the service and has let us expand"(Community Nurse).*

Concerns in practice

4.40   A number of concerns about nurse prescribing were raised by stakeholders during the research. The public sometimes perceived nurses as perhaps less busy than GPs and so expected nurse prescribers to be able to prescribe 'here and now'.

4.41   It was felt that nurse prescribing saved patient and doctor time in relation to decreased workloads. However, it can increase nurse workloads because of the greater number of tasks to be undertaken. On the other hand it can save nurses' time as they no longer have to seek prescription authorisation.

4.42   Nurse prescribers viewed the BNF developments as a positive and largely useful step forward. Despite this there were concerns that the developments were daunting in the sense that further education was required on drugs and products that could now be prescribed. Nurse prescribers recognised, however, that confidence and competence would develop through prescribing experience over time. Some nurse prescribers also discussed hypothetical concerns in relation to other nurse prescribers perhaps not being as 'cautious' as themselves. This was particularly in relation to the formulary opening up and potential pressure on nurse prescribers being expected to prescribe outwith their 'comfort-zone';

> *"I know that I am extremely cautious, probably too cautious, but I think, I would hope nurses all take onboard the accountability thing because that's a wee bit of an issue, if you are very confident and you think you are more competent than you are…and you know I have met nurses in my career who do think they know it all and it's a wee bit of a worry for me but fortunately I*

don't feel that I'm guilty of that. It's about being accountable, we're all accountable for our own practice but I think there is scope there for abuse really". (Nurse prescriber)

4.43   Lack of ongoing education and support: Nurse prescribers noted a lack of continuing education in relation to prescribing practice and suggested different mechanisms to address this. For example, a yearly training course update or a post-qualification mentor was viewed by some as desirable;

> *"There's not a regular meeting and I think there should be and I think a lot of us would say that but we are kind of left to it on our own, you know. You hear changes like being able to prescribe anything through the press rather than from our line management, out own local mechanisms or organisations. And I think for safety, you know, there should be far more support than there is". (Nurse prescriber)*

4.44   The policy to discourage nurse prescribers from receiving information from pharmaceutical representatives because of possible bias in decision-making raised additional questions for nurse prescribers about what alternative sources of information might be available to replace commercial ones. Nurse prescribers did not comment on the commercial self-interest of pharmaceutical companies in selling their products. Pharmacology education often came from drug representatives in the past and this new lack of engagement contributed to perceptions of a lack of ongoing education and development. One nurse prescriber (case study one) for example reported a lack of knowledge around steroid skin preparations and was currently looking at ways of addressing this gap in knowledge;

> *"The lack of continuing education is slightly concerning…they are not keen for us to meet with reps anymore…they used to provide a bit of education for you at lunchtimes, they used to come and do talks and different things, and they're discouraging us from seeing reps as they think it biases our opinion then your education becomes even more limited". (Community nurse)*

4.45   Overall, nurse prescribers saw the lack of continuing education and updates as threats to accurate knowledge and therefore patient safety.

Recognition, rewards and roles

4.46   Nurse prescribers were troubled about their responsibilities and work roles advancing without financial recognition and reward. Some thought that the nursing profession could be exploited because nurses prioritised patient care rather than themselves. Hence nurses have taken on prescribing roles for the benefit of their patients but without receiving benefits in terms of their own job roles. This was contradictory as there was increasing satisfaction and professional recognition as a nurse prescriber, without the financial recognition to go with it. It would appear that 'Agenda for Change' has not yet resolved this matter.

4.47   Changing boundaries of nursing were identified and some participants discussed issues around the need to maintain professional identity and resist a gradual shift towards more medical roles.

Support in practice

4.48   Support and subsequent increases in confidence post-qualification came largely from peer and colleague support during and after training. This particularly related to support from the other nurse prescribers within teams, and participants highlighted the benefits of team-working and discussion around decision-making in prescribing practice. Participants therefore identified such support as contingent on the level of nurse prescribing activity within a team;

> *"We're all prescribers now so generally it's really...sometimes if you've got a decision to make and you are not quite sure about it, you'll run it past each other and it's very good to do that". (Community Nurse)*

4.49   In areas where there was only one nurse prescriber, for example with the community hospital night sister, this support was seen as lacking.

4.50   Nurse prescribers identified support and advice from pharmacists as particularly beneficial to working practice. Following on from pharmacy support during training, the pharmacist was perceived as a source of "best advice";

> *"The pharmacists were really interested in the development of the heart failure service at the beginning and we spoke with them and to them a lot. They were always inviting us to their meetings about the development of the service and they always wanted to be kept involved...you know they've very much said to us 'use us as a link".*

4.51   Pharmacy support was also valuable with regard to patient safety because pharmacists would question and hence 'check' prescriptions NPs were unsure about.

4.52   Some individual teams had set up systems that aided prescribing , for example in case study 1 a log system had been set up which ensured that all prescribers within the team knew the medications and products that had been prescribed for each patient.

4.53   Positive feedback from GP/hospital based medical staff was valued, particularly in areas where there had been initial medical resistance or concern until nurse prescribers were able to demonstrate their competence;

> *"I think when they (G.Ps) are on board it makes a huge difference, you know even just the fact that they've signed the management plan and sent it back to you lets you know that they've got confidence in you to be able to make these changes. So just even then that make things easier".*

4.54   Regular meetings with other members of the clinical team and support with decision-making was reported as useful means of support:

> *"Every 6 weeks we have a case study review where we will review the various different aspects of that patient's monitoring and their medication management and their general condition and we have a consultant who supports these case study reviews. So I would say that in itself is quite good,*

*so if there us something that you wondered about, what you should do, what's
the right course of action...whatever it might be, we've got a good mechanism
to be able to review that".*

4.55   'In house' support from colleagues were contrasted to board level support and nurse
prescribers, in general, felt that more support from managerial and administrative bodies was
required;

> *"Coming out into some of the quite isolated roles that we're working in, I
> would say that the support mechanisms are not there and they definitely need
> to be improved upon".*

4.56   It was felt that better supports from outwith the practice would be beneficial to patient
care. Consequently, some nurse prescribers were in the process of setting up networking
groups and meetings.

Hindrances to practice

4.57   Delays in receiving prescription pads were noted as a major hindrance and frustration,
particularly because it led to decreasing knowledge and confidence around prescribing skills
by the time that pads were received. These issues were particularly highlighted in some case
studies (case study one, case study 4) and were linked to a lack of support and action by
managerial and administrative colleagues:

> *"I'm now 18/19 months after and I don't have my prescription pad and I
> hadn't anticipated this amount of hassle and it would be very easy just to
> throw in the towel and say right I'm not prescribing, I'm not taking that
> responsibility because I don't actually feel anybody else is taking the
> responsibility for taking it forward...I've tried my best to take it, I mean I've
> written about a hundred emails in the time to try and get this moved
> forward...I think if I hadn't done it, it would be very easy to have done the
> course and said, we haven't got prescription pads, we can't do this and it
> would have been very easy for that money to have been completely wasted for
> all of us".*

4.58   Administrative tasks associated with nurse prescribing hindered practice, particularly
when nurse prescribers had to access and update patient records on computer, whilst still
writing the prescription. Two tasks for the nurse prescriber had been created in comparison
with a single task for GPs of simply accessing the prescription and printing it out on their
computer.

4.59   A lack of information and support on current changes in relation to the formulary
hindered practice. Some nurse prescribers were not yet prescribing in the light of the
changes. There were anxieties around a lack of knowledge on advantages and disadvantages
of new drug treatments and a need for some educational updating. This was against a
background of the potential increase in expectations of nurse prescribers, after legislative
changes, from GPs/hospital based medical staffs. The medical staff, some prescribers felt,
might expect nurse prescribers to take on prescribing that they were uncomfortable with.

Public expectations too of nurse prescribers could be raised as nurses might be viewed as even more approachable than before;

> *"My concerns are that people might be expecting, since the BNF has opened up, even more. That people might be expecting more of us than we...because each of us are accountable for what we are prepared to be accountable for".*

Inter relationships between health professionals

4.60   Most nurse prescribers had a good working relationship with GPs and hospital-based medical staff. References were made to an improved relationship post-prescribing qualification and this appeared to occur after a period of 'proving competence' and the realisation of nurse prescribing benefits;

> *"I think it's actually improved maybe a bit of the relationship with G.P.s because I think they can see what we are doing and its obviously having a positive effect. So I think it's actually improved the relationship with G.P.s... and then they can see what you're doing is working when they've obviously got more confidence in us as well".*

4.61   The relationship between nurse prescribers and pharmacists had benefited from closer working and there was increased contact and support from the pharmacists post-nurse prescribing;

> *"The pharmacists in the practices, we've got a sort of healthy relationship with them and a lot of the time that's who, they are our first point of contact rather than the G.P. because they can get things organised. Every time you need a prescription change we always write to the pharmacist to let them know, so I would think it's probably had a positive effect on the pharmacist".*

4.62   One local pharmacist (case study one) had expressed some concern over prescriptions when nurse prescribers changed from independent to extended independent. However, the nurse prescribers found that this was due to misunderstandings. Nurse prescribers valued this element of questioning as it promoted patient safety.

4.63   Nurse prescribers did not report any marked impact on their relationship with non-prescribing colleagues. However, some nurse prescribers perceived the grading system to be unfair and thought that prescribers should be on a higher grade than their non-prescribing counterparts, due to the increased responsibility and time required.

Summary and conclusions

4.64   The picture provided by the nurse prescriber survey indicates that most nurse prescribers were both positive about their work and the future development of prescribing in Scotland. Many felt it gave them a greater degree of professional autonomy and enabled them to offer improved patient care. There was also an improvement in job satisfaction and ease of

working which may be important factors in retaining this group of qualified professional carers.

4.65   The nurse prescribing training undertaken was largely considered to be effective and had a positive impact on nurses' prescribing work. However there were a few areas where the training was felt to be less effective and could be improved. These areas included working effectively with teams in prescribing, supplying and administering medicines.

4.66   There were a small number of problems with some aspects of nurse prescribing. These negative aspects included the negative effect on nurses' time and the amount of administration associated with prescribing. The age profile of the nurse prescribing workforce may prove problematic and may be more difficult to address but that is part of a wider debate about the workforce planning in Scotland.

4.67   Benefits to patients in terms of saving them time, greater continuity of care and greater understanding of the process were also acknowledged.

4.68   The role of nurse prescribing has been successful from the perspective of nurse prescribers with benefits to both the service providers and patients.

CHAPTER FIVE   STAKEHOLDER PERSPECTIVES

Introduction

5.1   This chapter explores stakeholder perspectives on nurse prescribing and draws on the rich qualitative data generated in the stakeholder interviews and case studies.

5.2   The first set of interviews with stakeholders (See Annex 17) provided valuable insights into their views of current nurse prescribers' practice and how this might develop in the future. The challenges and opportunities of nurse prescribing were also explored with interviewees. A second set of stakeholders were interviewed as part of the case studies (See Annex 13) which included a wide range of health professionals including doctors, nurses and pharmacists, groups representing patients and trade unions.

Views from general stakeholders

Administration and IT issues

5.3   Questions were raised about the challenges of operationalising nurse prescribing. Many stakeholders expressed concerns about the infrastructure needed to deliver the type of nurse prescribing they wished to see. These concerns related to IT matters and to the lack of an effective electronic script record system. Some of these concerns, albeit never so strong as to indicate major weaknesses in the whole prescribing process, also emerged in the case studies and have clearly persisted for several years.

Educational needs

5.4   Views about educational needs were implicitly polarised. One school of thought saw nurse prescribing boundaries limited only by the boundaries of competent and effective nursing care. This required nurse prescribers to be drawn from a cadre of nurses with significant knowledge of pharmacology and wide experience who would be trained to take prescribing decisions across the BNF limited only by 'nursing care' boundaries. The other school of thought appeared to focus on breadth and not depth with more nurses taking on 'lower level' nurse prescribing roles.

5.5   A view was expressed that there was a need to have CPD and updating to ensure prescribers' fitness for practice. Contradictory views were expressed about the need for personal formularies and for generic versus specific courses. However, among the stakeholders, the overwhelming consensus was for a generic course with CPD offering an opportunity to focus on specific types of prescribers and their needs at a later date.

Team Working

5.6   Nurse prescribers and indeed all other prescribers rely to a greater or lesser extent on team working. This may be with other non-prescribing nursing colleagues, pharmacists, health service managers and with those operating IT systems. Many professional and patient

group stakeholders noted that nurse prescribing depended on effective team working between health professionals and paradoxically noted that the very act of nurse prescribing would enhance team working between nurses, doctors, pharmacists and other health professionals. Some professional stakeholders advocated wider joint training on prescribing between, for instance, nurse prescribers and pharmacists who would be issuing scripts.

Patient safety

5.7   All stakeholders believed that patient safety was paramount in the introduction and extension of nurse prescribing. How exactly this was to be operationalised and audited was not always clear. However, no general or specific threats to patient safety were identified as long as training, mentoring and good governance were in place. Further exploration of these findings are included in chapter 9.

Impacts on patients

5.8   Stakeholders representing nurse prescribers, non prescribing nurses, medical staff, pharmacists, patient and professional groups all spoke of the benefits that they perceived had flowed, and would flow, from nurse prescribing to patients. These benefits include improved access to a range of health care professionals, continuity of care, rapidity of prescribing, patient education. These data are further detailed in chapter 7 which discusses patient perceptions and benefits.

Impacts on nurses who prescribe

5.9   All stakeholders, from medical, nursing and other health professional groups through to groups representing patients with particular conditions saw benefits for nurses who prescribe through:

- Expanded roles using and extending skills
- Greater variety in jobs
- Improved relationships with doctors and others in medical teams
- Greater awareness of prescribing budgets and value of timely interventions

5.10   Nurse stakeholder groups saw drawbacks linked to the limits in the formulary from which nurses could prescribe. This meant that nurses had to go back to doctors to sign off scripts that they themselves could have safely and competently prescribed.

5.11   All stakeholder groups saw various challenges in:

- CPD within nurse prescribing;
- Mentor and safety net development to support nurse prescribers;
- Resources and time to maintain and expand roles in both the primary and acute sector;
- Equity issues for nurses who prescribe in relation to those who do not - this relates to several Agenda for Change issues with regard to 'specialist' nurses;

- Development of effective protocols to guide prescribers, review systems and audits;
- Risks of nurse becoming mini pharmacists/mini GPs;
- Ending of blame culture with regard to prescribing errors; and
- Inter-professional working with doctors and pharmacists and AHPs - specifically shared patient care responsibility across all the above groups.

Impact on medical staff

5.12   Most medical and nursing stakeholder groups considered that nurse prescribing was of benefit to GPs and would be of greater benefit in the future. This related to 'doctor light' activities which meant that GPs would need to spend less time on 'simpler' cases that would now be tackled by nurse prescribers and so have more time to spend on complex cases. Doctors also considered that prescribing would increase team work in practices and enhance the role of nurses, further drawing on their experience and skills. These elements would again benefit the GP. Some saw an important need for education of GPs on the changing roles of nurses to reduce potential resentment at their expanded prescribing roles. Others flagged the need for effective protocols, administrative and IT controls on prescribing for both doctors and nurses. Several stakeholders feared that prescribing budgets could prove unmanageable without new or better procedures in place to oversee them.

5.13   For hospital doctors, the benefits related to the recognition of nurses' existing role in prescribing, in terms of reducing demands on SHOs when prescribing requirements and practice were well understood by nurses. As protocols were better established in hospitals, several stakeholders saw the extension of nurse prescribing in this sector as less problematic. However, again paradoxically, some saw the current nurse prescribing role in hospitals as limited and less challenging than it should be.

5.14   Certain stakeholders considered that the competence and skills of nurse prescribers were much more likely to be used less well than in primary care: for them it threatened to be a missed opportunity to extend the formulary. Some stakeholders noted possible confusion for patients and carers about who had responsibility for the patient: the doctor or the nurse. Ambiguity about roles was, therefore, an issue.

Health Board Governance

5.15   A range of stakeholders noted the following:

- The patchy geographical or professional implementation of nurse prescribing and the health care equity dimension of this. Specifically nurse prescribing could play a role in addressing the health inequalities experienced by vulnerable and hard to reach groups such as travellers, migrant workers, homeless people and drug users;
- The lack of a coherent, integrated and stable board level infrastructure for prescribers and, in some instances, the slow response of NHS Boards to the prescribing agenda. Each board needed professional and managerial champions for nurse prescribing and local strategies and team working at a lower level on prescribing practice;

- A joined up approach to nurse prescribing was needed involving the Scottish Government, NHS Boards and down to the prescribers themselves. The lead nurse prescriber network was felt to have helped to achieve this and should continue;
- Close collaboration between post holders at NHS Board level, such as medical directors, directors of pharmacy and lead nurse prescribers was felt to be vital but may at times be lacking as were effective management systems. To some, it appeared that nurse prescribing, especially outwith the primary care sector, was still on the margins of the administrative system;
- The fragmentation of nurse prescribing policy, implementation and management was a cause for concern in some NHS Boards although it was gradually being addressed. Some NHS Boards lacked any leads on nurse prescribing policy or had leads only for some sectors;
- The need for board level administration to track nurse prescribing perhaps through a part-time post. If, within NHS Boards, the selection of and support for nurse prescribers was not carefully and properly done, the resource will be wasted and the opportunity to enhance patient care and nurse skills could all too easily be lost. Stakeholders felt that the opportunity provided by the development of the role of Community Health Partnerships should be seized upon to expand the opportunities for nurse prescribing in certain budgetary areas;
- The lack of strategic leadership or champions to carry through prescribing in such areas as midwifery and mental health which were seriously under-developed was a major concern;
- The need for demonstrated and regularly reviewed and monitored good governance to apply to nurse prescribing practice across Scotland. and
- The need for suitable medicines management systems to be put in place to track the costs of prescribing accurately and to document any related benefits.

Views of health staff on nurse prescribing

Nurse/pharmacist interactions

5.16   Pharmacy and nurse stakeholder groups commented on their relationship and the importance of team working. For some, the relationship between the nurse prescriber and pharmacist was critical. This related to information and advice from the pharmacist especially to the novice nurse prescriber, their mutual interest in patient care, the need for or benefits of, joint education programmes for both professional groups who would carry forward prescribing in the future.

5.17   Governance, IT, ethical and audit questions were raised by many pharmacists. A particular issue related to the need for pharmacists to know what prescribing powers a particular nurse prescriber had and hence for pharmacists to understand the different types of nurse prescriber that they would come into contact with.

Stakeholder views from case studies

Benefits to practice

GP/Hospital based medical staff views

5.18   GPs found benefits from nurse prescribing in relation to areas where nurses were knowledgeable and skilled, particularly in the areas of dressings and catheters within general practice. Nurses often had a better understanding of the appropriateness, cost and usefulness of products in these areas and therefore it was sensible and convenient for nurses to prescribe independently without having to seek authority from GPs or hospital based medical staff. In community midwifery too, there were benefits where treatments such as Gaviscon and Iron were well within the nurse prescribers' remit;

> *"Main expectation is that they would prescribe in areas that they have an experience that we don't have in. I mean the classical ones are dressings and catheters. We get asked to prescribe things and we haven't really much knowledge of the different dressings and far less of the costs or usefulness or appropriateness of them and we're, in that respect we're just like monkeys, we just sign a prescription because its 12 dressings and we don't really know if they are appropriate or relevant". (GP)*

5.19   Hospital based medical staff found that nurse prescribing within specific competency areas enhanced care;

> *"My perception in the past is that patients have gone home with medication that hasn't been up-titrated. I've met patients in clinic a month after going home and asked them about medication and it's not changed. I think the real strength of the system is that patients are being assessed in a focused way; the medication is being reviewed and up-titrated appropriately…it's made me feel happier about patients being at home. It's made me feel happier about patients being reviewed regularly with somebody who takes a keen interest in this area". (Hospital Consultant)*

Practice manager views

5.20   Patient care has been maintained and streamlined with nurse prescribing and the quality of patient care was not necessarily affected.

Pharmacist views

5.21   Pharmacists' experiences were largely positive with references made to the demonstrated competence of NPs and their good knowledge base, particularly within areas of expertise;

> *"Nurses have their own area of expertise and they have proven that they know what they are doing. If they have done the appropriate CPD, they have done*

the appropriate training…G.P.s are generalists, they have a lot of different talents. Nurses obviously do as well but they tend to be more specialised".
(Pharmacist)

Recognition, rewards and roles

GP/hospital based medical staff views

5.22   Some nurse prescribers reported initial worries about the legalities of nurse prescribing. For example, in one setting (case study one) GPs wrongly perceived that they would be accountable for nurse prescribing errors in practice. Most of these worries were addressed by a locality manager who was able to 'educate' the GPs on the different issues involved, including the benefits of nurse prescribing to practice, the legalities and requirements for supervision. This suggests that medical concerns may partly be based on a lack of information about nurse prescribing in practice.

5.23   Some GPs predicted increased spending from nurse prescribing. This linked to a general questioning of nurse prescribers' awareness of the budgetary constraints compared to GPs, particularly with the recent development of costly antibiotics. One GP also thought that asthma clinics cost more if run by nurse prescribers rather than GPs.

5.24   Some GPs were also concerned that nurse prescribing would move away from specific areas of competence and into general areas where the GPs believed nurse prescribers were under-trained in diagnostic practice.

5.25   Some GPs were troubled that nurse prescribers would fail to keep up to date with prescribing practice and questioned whether there was any appraisal system for prescribing post-qualification.

Non-prescribing nurse views

5.26   Nurse prescribers may be more likely to make mistakes than GPs because of their relative inexperience in prescribing. In addition, nurse prescribers may not be prescribing regularly and therefore may be more likely to make a mistake or be less aware of side effects than someone who is a regular prescriber of medication.

5.27   Reflecting some nurse prescriber views, non-prescribing nurses were concerned that nurses were taking on more and more roles without getting the appropriate financial recognition for these roles. This was seen as a potential area of exploitation;

> *"I think we're quite good at taking on lots of other roles and they're not always rewarded financially or seen in the same line as a G.P. or doctor or whatever. I think nurses like to see things through, they like to give the best service…There's always a fear that nurses become used because nurses are always keen to extend their knowledge for the benefit of their patients".*
> *(Community Nurse)*

5.28   However, it was acknowledged that this would not deter non-prescribing nurses from taking the prescribing course in the future.

Support in Practice

Pharmacist views

5.29   A few pharmacists described the introduction of systems for auditing and checking prescriptions given by nurse prescribers. For example, a system had been set up to record the prescriptions that had been dispensed and were to be collected by nursing staff for patients, as previously there had been difficulties identifying which nursing team was responsible for collecting individual prescriptions. The new system provided clarity.

5.30   Accident and Emergency had set up their own audit trail with the pharmacist carrying out regular checks of nurse prescribing records and a similar system had been set up with the community hospitals pharmacist. This was helpful to nurse prescribing in the sense that any aspects of practice that could be improved upon were reported back to nurse prescribers and hence practice developed.

Hindrances to practice

GP/hospital based medical staff views

5.31   GPs were aware of the issue of time delays in nurses receiving their prescription pads and reported effects on the nurse prescribers' enthusiasm. One GP (case study 1) also suggested that the potential nurse prescribing benefits for GPs were not fully realised because of prescription pad delays. For example in a recent case of terminal care the nurse prescriber still needed to involve the GP because of the prescription pad issue.

5.32   Some GPs and hospital based medical staff highlighted their ignorance of who was prescribing within the nursing team. Hence skills and areas of expertise in prescribing could be under utilised or missed. It was mooted that nurses and medical staff met up to review who was actively prescribing and the areas of nurse prescriber competence. Mutual benefits could be gained in terms of GPs and hospital based medical staff being able to use nurse prescribing expertise and nurse prescribers being able to utilise medical knowledge in areas of practice that they wished to develop.

Pharmacists' views

5.33   Practice-based pharmacists (case study 3 -case study 3) felt that nurse prescribers were being 'overly cautious' - more so than GPs – because of a lack of confidence. One pharmacist within case study 2 reported that practice nurse prescribers had been more hesitant with prescribing medication such as antibiotics, than they have with products and applications such as dressings;

> *"We're now starting to see the extended part of the nurse prescribing …what
> I'm getting from some of the nurses is that they're a little bit slow at wanting*

*to do antibiotics. They don't mind doing dressings and things but forget
antibiotics and things...but they're starting to come through that now so
we've seen quite a few antibiotics along with the dressings.*

Inter-relationships between Health Professionals

Practice Manager Views

5.34   One practice manager (case study 1) felt that relations between nurses and GPs had
become more distant with the increase in nurse prescriber autonomy. Nurse's reliance on
GPs in the past for authorising prescriptions was viewed as having a positive impact on
relations and team working because daily contact between professions was inevitable;

> *"I think it's maybe changed their relationships a little bit in that they're more,
> I don't know, midwives in particular are very much more independent of the
> GPs than they were a few years ago. You know, it was very much more
> maybe the GPs leading things and the midwives sort of standing beside them
> but now I would say in ante-natal care it is the midwives who are leading the
> care without any question and the GPs are there for backup and I think
> prescribing has probably contributed to that".*

Pharmacist views

5.35   Nurse prescribing has positively helped pharmacist-nurse relations. The introduction
of nurse prescribing heightened the contact that pharmacists have with nurses, which
strengthened working relationships between professions.

5.36   Pharmacists reported that their knowledge was being more widely used with the
introduction of nurse prescribing. Nurse prescribers asked pharmacists' advice within
everyday practice. Pharmacists reported that GPs and hospital based medical staff were less
likely to consult pharmacists when making prescribing decisions;

> *"...I think it's opened up my role whereas a doctor wouldn't come to you for
> advice...but nurses are always open to suggestions because they are now
> learning this new role so they will come and ask...so they are always open to
> more communication than a doctor. A doctor tends to present the
> prescription, that's it done, whereas before some prescriptions are done the
> nurse will phone along to say 'what's available'? 'where's this, where's
> that'"?*

Summary and conclusions

5.37   In general, there was a high degree of concordance and general optimism expressed
by all stakeholder groups and case study participants interviewed about their support both for
current nurse prescribing, its benefits to a wide range of groups and its further development.

A small number of GPs in the case studies expressed far greater reservations about nurse prescribing than the national medical stakeholder groups.

5.38   Significantly, medical groups often fully supported the continued extension of nurse prescribing and the philosophy underpinning that extension whereas some, but not all, nursing stakeholders expressed concern and caution about particular developments and future strategies. These latter concerns related primarily to issues surrounding the resource and funding capacity of the NHS in Scotland and the commitment of health professional groups to roll out nurse prescribing steadily, where competent and experienced nurses were involved, to cover a Nurse Prescribers Formulary (NPF), drawing on all of the British National Formulary (BNF), appropriate to the delivery of high quality nursing care.

5.39   The case studies and linked logs have provided the fullest qualitative picture of nurse and midwifery prescribing at work from the perspective of nurse prescribers, GPs, hospital doctors, pharmacists, non-prescribing nurses, managers, patients and carers.

5.40   The stakeholders and case study participants did identify some problems and some missed opportunities. These related to opportunities to expand the role and skills of nurse prescribers, to offer greater variety in nursing roles, to improve team working among health professionals, to ensure timely interventions and to enhance the quality and speed of the patient journey. A number of relatively simple administrative, budgetary, support and policy changes discussed within the chapter would ensure benefits for all involved in nurse prescribing.

5.41   Perceived benefits to practice of the extension and development of nurse prescribing in Scotland by all groups interviewed in the case studies far outweighed the perceived difficulties. Support in practice for nurse prescribers varied and may play a large or small part in positively or negatively impacting on the implementation and operation of nurse prescribing in the country.

CHAPTER SIX : NURSE PRESCRIBING EDUCATION

Introduction

6.1   This chapter presents the findings from the evaluation of the educational provision for nurse prescribers (termed 'programmes of preparation') in Scotland. This element of the research aimed to describe and evaluate the different approaches to nurse prescribing and examine the learning experience.

6.2   The evaluation involved:
- A description and analysis of the different nurse prescribing courses provided in Scotland;
- A survey of the nurses undertaking the courses to establish a profile of the course members, the clinical situations in which they intended to use their training and the time allowed by employers to undertake the courses;
- Interviews with course providers (See Annex 6); and
- Group meetings with course members to seek their views of the courses.

6.3   The survey of all nurse prescribers in Scotland in 2005 (chapter 4) and stakeholder interviews (chapter 5) both also explored aspects of nurse prescriber education. The case studies (chapter 5) also included interviews with newly qualified nurse prescribers.

6.4   The scope of the evaluation was comprehensive, surveying all 7 courses that commenced in Scotland in the first half of 2005. One university offered the course at 2 locations and another at 3 locations. Therefore a total of 10 centres throughout Scotland were included in the evaluation.[8] Further details of the methodology used in this element of the research is described in chapter 3.

Description of the nurse prescribing courses

6.5   Data for this element of the research were collected from the course documentation and additional information was supplied by the course leaders.

6.6   At the time the research was conducted, nurse prescribing was provided in 7 university schools/departments of nursing and midwifery in Scotland. All courses were based on a common outline curriculum, including the same set of nurse prescribing competencies with a requirement of 26 days study and 72 hours of supervised learning in practice.

6.7   All courses were delivered within the following common framework:
- The NHS Education for Scotland outline curriculum (http://www.nes.scot.nhs.uk/prescribing/index.html) , including a set of competencies;

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[8] In this report, although the official term is 'programme', the provision in each centre is described as a 'course'.

- A quality assurance process operating at 4 levels – NHS Education for Scotland monitoring, university external examining, school/department module appraisal,[9] internal course evaluation;
- 72 hours of learning in practice, in the nurse's own clinical area supervised by a designated medical prescribing practitioner;
- Common reference material on relevant websites such as the National Prescribing Centre site, the British National Formulary site and the NHS Education Scotland site; and
- Competency-based assessment by means of a portfolio in which the nurse evidences practice by reference to the competencies.

6.8   All the courses were part-time and blended different modes of learning: attendance at the university, private study, access to e-based materials and supervised learning in practice.

6.9   However, within this framework the courses differed in terms of length of the course (varying from 11 to 23 weeks[10]) and in the proportion of the 26 days study delivered as on-site to off-site learning.

6.10   The term 'on-site' meant attending the university for a 'contact day[11]' which typically involved a mixture of classroom instruction, tutorial meetings and self-directed study. 'Off-site' meant private study in the workplace or home, using web-based materials, distance learning packs, textbooks, handouts and other materials. Such study was generally supported by ongoing tutorial contact.

6.11   A distinction could be drawn between the courses where the primary mode of delivery was off-site (course members attended the university for 5 or 7 contact days, and spent the remainder learning at a distance) and the courses where the primary mode was on-site (14-25 contact days, with correspondingly fewer days learning at a distance). These were not hard-and-fast categories, because the latter courses differed in the ratio of on-site to off-site study. They also differed by requiring either attendance at blocks of contact days (e.g. 5 consecutive days with several weeks between blocks) or attendance one-day-per-week over a period of several weeks (table 6.1). The courses with a low ratio of on-site to off-site delivery divided into those which relied primarily on web-based materials to deliver instruction off-site and those which relied primarily on hard-copy materials.

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[9] In university jargon, the nurse prescribing course is described as a module.

[10] This is the time between the first and last weeks of teaching – for more details, see Chapter 4.

[11] In this report, 'contact day' means a day when all the members enrolled on a course attended the university site for a scheduled classroom-based meeting. The remainder of the 26 days' study could of course involve tutorial contact at a distance, and provision was also sometimes made for virtual web-based discussion between students.

Table 6.1   Ratios of on-site/off-site study

Courses			
Low ratio of on-site to off-site learning		**High ratio of on-site to off-site learning**	
Web-based distance learning	Distance learning with home study pack	Block attendance for contact days	One-day-per-week attendance for contact days
3 centres, all operated by one university	2 centres, both operated by one university	2 centres	3 centres

6.12   Table 6.1 should not be interpreted as depicting 4 distinct *types of course*, but as different ratios of on- and off-site learning in a range of courses which share certain common features:

- All the courses blended classroom teaching, web-based learning and private study; and
- All the courses were offered on a part-time in-service basis, and so even those nurses taking a course with a high number of on-site contact days had a significant element of 'distance learning' or study undertaken in personal time.

6.13   The ratio of on-site to off-site learning did not appear to have a significant impact on the learning experience. There was virtually no criticism of the paucity of on-site learning experiences, despite the fact that half the courses provided as few as 5 – 7 contact days.[12] Evaluative comments centred instead on the quality of the experience, regardless of whether it was on-site or off-site. Nevertheless, many course members apparently received protected study time only for contact days. Thus a nurse attending a course which required only 7 contact days would have less protected study time than one attending a course which required attendance at the university for 25 days.

6.14   These differences reflected the diverse needs of the course members, especially those in remote areas for whom a greater proportion of the course would most appropriately be delivered by distance learning.

The Course members

6.15   All those who began the nurse prescribing courses in Scotland between 12 January and 26 May 2005 were invited to take part in the survey. The following sections provide a profile of the nurses who took part together with details of the amount of protected time given by their employers to complete the course and training, courses of CPD taken to complement the prescribing course and the clinical duties they envisaged performing as nurse prescribers.

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[12] There was only one focus group comment that criticised lack of face-to-face contact. This was categorised by the focus group concerned as a 'support' issue and was counted as such in the analysis reported in this chapter. It received an importance-rating of 1, about 2% of the importance allocated to the most important criticism of the course (lack of time).

6.16   A total of 186 questionnaires were completed, a participation rate of 97%. A copy of the questionnaire used can be found in Annex 3.

Professional Affiliation

6.17   The course members consisted almost entirely of nurses (94%) but there were a small number of midwives and health visitors (table 6.2).

Table 6.2   The course members' professional affiliations

Professional affiliation		
	%	N
Nurse	92	171
Health Visitor	3	6
Midwife	3	5
Nurse and Midwife	2	4
Total	**100**	**186**

Healthcare setting within which the course members practised

6.18   Course members were asked to indicate the setting in which they practised, more than one option could be chosen. Half of the course members (50%) worked in a health centre/GP practice and just over a quarter in an acute hospital setting (Table 6.3). There were two unanticipated outcomes to this question:

- 14% worked in more than one healthcare setting; and
- many course members selected the 'other' category option.

Table 6.3   Healthcare settings within which the course members were practising* **

Healthcare setting		
	%	N
Acute hospital	28	53
Health centre/GP practice	50	93
Community hospital	10	18
Nursing home	2	3
Other	27	50

* Respondents could choose more than one option.
** Base: All course members 186

6.19   The 'other' categories included: family planning (12), community (11), home visits (4), out of hours service (3) and then one or two individuals for each of 'LCHP', community mental health team harm reduction service, GP lead, hospice, Local Health Care Co-operative, homeless addiction team, community addiction team, patients' homes, substance misuse clinic, District General Hospital, and 'clinics'. One respondent described him/herself as being in '*transition between posts*'.

Anticipated prescribing roles and associated duties

6.20   Course members were asked to state the type of prescribing role(s) and associated duties they expected to perform after completing the course. The results indicate that the cohort was diverse and that many of the anticipated prescribing roles quite narrow.

Geographical area of practice

6.21   Course members were asked about the geographical area they worked in, more than one option could be chosen. About half (51%) of course members worked in urban areas and a third (34%) in rural areas. (Table 6.4). Approximately 23% reported that they worked in more than one geographical setting.

Table 6.4   Geographical areas in which the course members practised*˒**

Area of practice		
	%	**N**
Rural and remote	19	36
Rural	34	63
Urban	51	95
Not stated	4	7

* Respondents could choose more than one option
** Base: All course members 186

Age Profile

6.22   Over two thirds (69%) of nurses being trained as prescribers were over 40 years of age (table 6.5).

Table 6.5   Age distribution of nurses training as nurse prescribers*

Age band		
	%	**N**
20-29	3	6
30-39	27	51
40-49	53	99
50-59	16	29
Not stated	1	1
Total	**100**	**186**

*Base: All course members 186

Academic Qualifications

6.23   Table 6.6 indicates the highest level of non-professional academic qualification achieved by course members. Over 50% of them possessed a first degree and/or higher degree. Almost 83% had achieved the academic level of Highers or above.

Table 6.6   Highest Non-professional academic qualification*

Highest non-professional academic qualification	%	N
Uncertificated IT training	1	1
Standards/GCE/GCSE	9	17
Highers/'A-S' Levels	26	49
Advanced Highers/'A' Levels	3	5
First Degree	42	79
Higher Degree	11	21
Other	1	2
Not stated	6	12
Total	**99**	**186**

 * Totals may not add up to 100 due to rounding

Complementary CPD courses

Table 6.7   Complementary courses being taken

Course Type	No. taking course	
Specialist clinical course	25	Diabetes 9 Cardiovascular diseases 5 Asthma 5 Chronic disease management 3 Acute illness 3
Specialist qualification	6	Nurse Practitioner 5 District Nurse 1
Minor injuries	4	
Minor illness OOH	8	
Community health	9	Family planning/sexual/reproductive health 4 Travel health 2 Acupuncture 1 Smoking cessation 1 COPD 1
Nurse Triage Diploma	6	
Degree in Nursing	8	
TOTAL	**66**	

6.24   A majority of course members (61%) reported that they had already completed, were currently taking or were intending to take other CPD courses which complemented the nurse prescribing course they were undertaking.

6.25   Table 6.7 gives the breakdown of the complementary courses that were cited. Some respondents had taken 2 or 3 courses. However, almost half the respondents who said they were taking complementary courses did not give details of them, so the following breakdown is not comprehensive.
Study time

6.26   Course members were asked how many hours their employer gave them off work per week, so that they could take the nurse prescribing course. The results indicated that a very high percentage had been given no additional time off other than the days needed to attend the course (table 6.8).

Table 6.8   Protected Study Time

Hours off work per week	%	N
None other than the course contact days	27	50
Still being negotiated	18	33
Any amount of study time could be taken at the course member's discretion	5	10
A specified period of protected study time Had been allocated	45	83
Item omitted	5	10
Total	**100**	**186**

6.27   The number of contact days on the different courses varied between 5 and 25 days. Over a quarter (27%) of course members were not given additional protected time for private study to make up the required 26 days. This figure rose to 45% if those who were still negotiating for protected time when the course started were included. Only 50% of the respondents reported that they had been awarded a definite period of study time. This is a significant finding, especially when considered alongside the views of course members who believed that the greatest weakness of the course was lack of time to study (6.79).

6.28   Further interpretation is limited due to the ambiguities in both the question and many of the responses. Although asked to report the number of hours remitted per week, respondents often reported weekly, fortnightly, monthly or whole-course amounts, and others did not specify the units in which they were measuring the remission. Some of the figures cited could not possibly have been the weekly amount the question requested. Consequently, it is not possible to calculate how much time was protected specifically for private study, but it is clear that the amounts varied widely.

6.29   In addition, whilst a small number of course members were apparently permitted to take as much time off for study as they wished, this did not necessarily mean a reduction in their workload;

"As much as I would like but there be no-one doing my work while I am away. I just have to catch up" (Course Member).

6.30   A nil allocation of time off work to study might not mean that the course member had no time to study. Some part-time employees in this category reported that they were studying in their own time. One course member said that he/she was given no study time because it was not possible to reduce the hours worked, but that he/she would be paid for the extra hours of study.

The course providers' perspective of the nurse prescribing courses

6.31   Data for this element of the evaluation was collected via semi structured interviews with course leaders and lecturers. Ten course leaders/associate course leaders and 10 lecturers in pharmacology[13] responsible for delivering the courses at all 10 centres were interviewed. All were sent a list of the issues to be covered in the interviews in advance. In outline, these comprised the following:

- How easy or difficult was it to bring all the course members up to the required standard of competence? The reasons for any difficulties encountered and the actions needed to improve the courses' capacity to bring course members up to the required level;
- The diversity of the intake, how the course was adapted to meet these diversities and the action needed to improve the capacity of the course to accommodate a diverse intake;
- Course members' principal concerns about the course, how the course dealt with them and the action needed to improve the course's capacity to take action; and
- (For course leaders only) The main problems in directing the course, and the action needed to overcome these problems?

6.32   The following themes emerged from analysis of the interviews:

Theme 1: The appropriateness of the generic nature of the outline nurse prescribing curriculum, given the range of nurse specialties now taking the course

Theme 2: Meeting the challenges of teaching pharmacology

Theme 3: Linking the nurse prescribing course with service needs.

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[13] Some lecturers were professionally qualified in pharmacy but for convenience the term pharmacology is used throughout the report.

The appropriateness of the nurse prescribing curriculum

The need for a generic course

6.33   Perhaps the fundamental question about the course structure was that it was a generic form of provision while the course members came increasingly from a range of specialised clinical backgrounds. Course leaders reported that many course members, especially clinical nurse specialists, arrived with an initial expectation that they would be taught about the prescribing practices in their specialty and the specific drugs they would use.

6.34   This expectation was in line with the specific focus frequently found on in-service courses for health professionals. However, none of the courses were narrowly focused in this way. The approach usually adopted involved:

- Teaching a generic model of prescribing, based on the principles of pharmacology, pharmacy, law etc;
- Teaching foundation knowledge of pharmacotherapeutics with reference to a comprehensive range of drugs, including how to access further information from websites, how to use the BNF, etc; and
- Requiring course members to use this knowledge base to construct their own professional prescribing practices by self-directed study and learning-in-practice.

6.35   Course leaders argued that it was undesirable to abandon the generic model for the following reasons:

a) It would require replacing the existing generic courses with many more specialised ones, many of which would be very narrow:

"If we did that, we would have to have about 20 different courses for each different specialism and that is not possible". **Course leader.**

b) Given the move towards integrating different branches of the NHS and encouraging 'joined up working' between specialties, professions and departments, the segmentation would be counter-productive:

"More care is going to be delivered in the community so therefore it's important that hospital based nurses have a true understanding of how prescribing happens in the community and vice versa". **Course leader.**

c) A further argument against highly specialised courses is the incidence of co-morbidity. A safe and competent nurse prescriber needs a broad knowledge of drug treatments:

"… because they may well have a patient that comes to them with multiple conditions and whilst they're going to be focussing on one condition, they've got to be aware of the treatments and how they may impact on each other". **Course leader.**

d) Finally, including nurses from different backgrounds encourages a beneficial cross-fertilisation of ideas.

> *"Some of the students, when they come in, want to have 2 groups, primary care and secondary care ... and they want to learn together [i.e. within those groups]. However, my experience over the last couple of intakes was [that] the cross fertilisation of learning by mixing up these people has been immense".* **Course leader.**

> *"The mental health students we've had have found [the generic nature of the course] a particular problem. However, in the last intake, by the end one particular student really had turned that around and found the advantages of being in the wider group, and there are several who have actually commented on how they have learned from each other, even if it's not their area of practice".* **Course leader.**

6.36   This view was strongly endorsed by the course members (paragraphs 6.81 and 6.82). There was a consensus that the most important outcomes of the course included networking with nurses from different professional backgrounds and acquiring a comprehensive knowledge of pharmacology, both of which were believed to increase professional efficacy, and both of which were due to the generic nature of the course.

6.37   Nevertheless, this leaves the problem of ensuring that employers and course members are fully aware of the rationale of the course before they attend it:

> *"Their expectations of the course are different to what the course delivers. I think that they think we will talk about all of the drugs that they will use and we certainly don't do that".* **Course leader.**

6.38   There thus seems to be a need to improve employers' and course members' awareness of what the course entails, and how it will underpin their future professional development.

Meeting the challenges of teaching pharmacology

6.39   When asked about the course members' concerns, most course leaders said that their greatest concern was the pharmacological content of the course. The pharmacology lecturers agreed with them that the course members found this the most challenging part of the course:

> *"The pharmacology I think certainly has proved to be the part that has proved the most daunting for the students".* **Pharmacology lecturer.**

> *"They struggled to understand the pharmacology".* **Pharmacology lecturer.**

6.40   This view was endorsed by the course members' views. While identifying the acquisition of a knowledge base in pharmacology as one of the most important outcomes of the course, they often described the subject as 'difficult'.

6.41   The difficulty appears to arise from 2 sources. The first is the course members' lack of preparation in basic science - physiology as well as pharmacology:

"I think it reflects that as part of their undergraduate teaching there is not a huge component to pharmacology within that, so they feel themselves that they are at a disadvantage". **Pharmacology lecturer.**

"They don't have a good physiology background in terms of when they come to the course, and you ask them about a cell and cell structures and that, some of them are very good and know what you are talking about, other ones don't". **Pharmacology lecturer.**

"Sometimes, when I am doing my teaching on the individual groups of drugs I have to spend time at the beginning going back and reviewing ... system physiology, just physiology of the body - I have to remind them what is going on so that you can explain to them what the drug is actually doing". **Pharmacology lecturer.**

"We have to constantly readdress the basics in physiology". **Pharmacology lecturer.**

"The volume of work that we have to cover ... they've got to really try and absorb ... the pharmacology of a huge range of drugs in a fairly short space of time and while they probably are much more familiar with the drugs for the area they are working in ... if they are working as a rheumatology specialist nurse and they've not worked with an asthma patient in years, their pharmacology knowledge there is going to be very limited". **Pharmacology lecturer.**

6.42 The other source of the difficulty was the large amount of ground to be covered in a short space of time.

Best practice in teaching pharmacology

6.43 Teaching pharmacology on the nurse prescribing course thus faces at least 2 challenges - accommodating specialists within a generic course, and dealing with the difficulty some course members experience in learning this subject. The evaluation revealed that many of the courses were developing educational approaches which were meeting these challenges successfully. This section will focus on some of the 'best practices' which have been developed or which were suggested to the research team. These deserve to be developed further and shared between universities.

Customising the generic part of the course to accommodate all nurse specialisms

6.44 Some pharmacology lecturers were customising the generic part of the pharmacology course by illustrating the general principles with examples from relevant nurse specialties. As 2 pharmacology lecturers explained:

"The first ... teaching sessions, the pharmacokinetics, the pharmacodynamics are very generic, so they apply to all disciplines. But what I do is I tend to

explain both concepts in terms of a variety of drugs. For example, maybe use central nervous system drugs like the antipsychotics or antibiotics which are more likely to be administered by a nurse in the community for example and I try to use that diversity to try to address everybody's background".
Pharmacology lecturer.

"Comments we've had back from nurses is the drugs we use as examples they might not prescribe …. but I think if we identified the needs of their service and where it was going to go, then we could then work with that to say; OK you are going to work in a cardiovascular hypertension clinic therefore we will give you some examples based on those drugs or if was somebody working in mental health, we could give them mental health examples".
Pharmacology lecturer.

6.45   There is also a move towards 'blended learning' in which classroom instruction is blended with web-based self-directed study, such as the prescribing case studies developed by NES. The latter provide rapid and flexible access to examples of the administration of individual drugs which can be used by course members to contextualise the general principles of pharmacology and observe how they apply in their own areas of practice.

Addressing course members' anxieties and difficulties in approaching pharmacology

6.46   Many of the lecturers had developed pedagogical techniques for addressing the course members' worries about learning pharmacology. This generally involved an interactive style of classroom teaching which drew on the course members' experience of administering medication:

"What is really important with the current students is that their existing practical experience really contributes towards their ability to take on the information within the course and put it in context much more easily…..".
Pharmacology lecturer.

6.47   Lecturers commented that the course members often possessed a deeper knowledge of basic science than they acknowledged, and in consequence some lecturers began the pharmacology course by activating this dormant knowledge before providing new information:

"One of the things … I do … is to pool their reading learning and directed learning together and actually put it into the context of what they have seen in practice and to try and demonstrate that they actually do have an underpinning knowledge base already. And a lot of that is about confidence boosting and trying to put it into context for them". **Pharmacology lecturer.**

6.48   This kind of teaching is face-to-face, 2-way, sensitive to the course members' worries about the subject and adaptive to their current level of understanding:

"There is no set idea of what it is that they are going to get in this module when they see me. I start defining things from the beginning and they realise that they have done some biology and some chemistry before and this comes

together in this area and we talk about pH and most people have done that at school, although a long time ago, but there you do get people bringing the memory back of pH relates to a level of acidity or alkalinity, this thing does relate to how a drug may be absorbed and metabolised in different areas of the body and it comes from there". **Pharmacology lecturer.**

6.49   Similarly, personalised support might also be delivered by distance learning, on-line in discussion sessions or through telephone conferences and tutorials.

Pre-Course Preparation

6.50   A small number of courses provided some form of pre-course preparation. This tended to focus on study skills and a typical approach was to use an existing university module designed for mature 'return to study' learners across all subjects. However, many of the pharmacology lecturers strongly supported the idea of developing a preparatory course to teach pharmacology prerequisites. This might comprise a combination of a pre-course reader and a self-administered test which could be used for diagnostic purposes. The view was expressed that these materials would need to be written specially for this purpose, as existing pharmacology textbooks were not tuned sufficiently closely to the specific needs of this course:

> *"I found that when they have had pre-reading before a session they are at a higher level and they're able to pick things up faster and question things in more depth. That [a pre-course study pack] would probably be beneficial although I don't know work wise that would fit in with their time commitments".* **Pharmacology lecturer.**

6.51   Pre-course preparation would depend on improving the liaison between employers and course providers, as the latter often have very limited notice of which nurses would be attending the course.

Towards a curriculum model for nurse pharmacotherapeutics

6.52   Underlying the diversity of the courses, the research team identified an emerging model of a nurse prescribing curriculum. This was fully consistent with the official outline curriculum, but builds on it by engaging with the problems of its implementation. The 5 stage model is outlined here as a possible starting point for future curriculum development and evaluation.

The Curriculum model

6.53   **Stage 1. Preparation** This stage focuses on prerequisite knowledge of physiology, basic pharmacology and academic study skills. It also involves negotiating with the course members and designated medical prescribing practitioners to establish a shared understanding of the nature, requirements and benefits of the generic nurse prescribing course, and how it

will fit with the nurse's professional development. This requires a personalised approach to deal with the diversity in the course members' professional and educational backgrounds.

6.54   **Stage 2. Introduction to pharmacology** This builds on the course members' previous clinical experience and using personalised, interactive teaching to instil confidence. This stage provides guidance on study strategies, especially how to integrate the generic and specialised parts of the curriculum and how these relate to the assessments. It begins the process of developing skills for carrying out the evidence-based analysis of nurse prescribing practices needed for the portfolio, and ensures that course members are familiar with what the other assessment techniques will expect of them.

6.55   **Stage 3.** Generic model of prescribing

> *"… the skills and knowledge to be able to prescribe in general. So I think what we are giving them is a framework that they can then apply to their own practice rather than intensive study on clinical areas that they think they might need. So it's trying to give them skills that they can then apply to different situations and know how to apply them … how you prescribe an antibiotic is generally the same as how you prescribe a painkiller, there are different things you consider but you are still considering why you are giving them the drug, what's the most appropriate drug, you're still considering what dose you give and how often you give it and any information the patient might need. The choice is obviously different because you've to choose the right painkiller for the right type of pain and the right antibiotic for the right infection, but you can distil that down into one general process that they can then apply". **Pharmacology lecturer.***

6.56   **Stage 4.** A systematic study of a full range of drugs.

6.57   **Stage 5.** Self-directed study to develop a personal **core formulary** alongside a broad understanding of a wide range of drugs. This may run either after stage 4 or in parallel with stages 3 and 4,

> *"A core formulary is where an individual develops a list of drugs that they will use in their practice and there are certain things they need to know about each of those drugs. They need to know what the drug is, how the drug works, what the pharmacological effects of the drug are, what the likely adverse drug reactions might be for that drug, the interactions. Issues like that they explore in detail for each drug that they use. Then they practise the actual practical aspects of delivering drug information about that drug to a patient so that they can tie in theory with actual practice because they need to translate their technical knowledge into something different for the patient, so that the patient can understand that and we try to get them to think about that well before they actually deal with it in practice". **Course leader.***

 6.58   Thus conceptualised, the core formulary would provide underpinning knowledge for the supervised learning in practice. It would not replace the broad study of a range of drugs that the generic model implies; rather, it would enable specialist needs to be met within that generic model.

Linking the nurse prescribing course with service needs

6.59 The third theme to emerge from the interviews centred on the relationship between the courses and service needs. Both the practice of nurse prescribing and the programmes of preparation were in early stages of development. Many course leaders felt that meeting service needs depended on further developments in nurse prescribing itself, as well as on closer links between employers and the course organisers in particular.

6.60 Action is needed at both Scottish Government and Trust level to achieve this. Three main issues were identified in the interviews:

- The need to tighten the links between the employers and the courses
- The need to develop and clarify the procedures and infrastructure for nurse prescribing
- The need to provide some form of post-course support for the newly qualified prescribers

The need to tighten the links between employers and courses

6.61 One problematic area is the admission of nurses to the courses. The standard pattern of recruitment is for a Trust to propose nurses for the course and for the university to then send them application forms. If an applicant is admitted, some pre-course preparation might be attempted. One university asks course members to undertake preparatory studies and uses these to diagnose needs for pre-course study skills training. The possibility of offering pre-course preparation in basic physiology and pharmacology was discussed above. However, because of the loose coupling between the courses and the Trusts, this cannot be implemented for everybody;

> *"We know what will happen is that, maybe three quarters of course members who have applied for and been offered places will come on the course, and then a quarter ... will have fallen by the wayside. And unfortunately some of the course members do give their application form to someone else .... if that person hasn't got funding approved, they will just ditch it up. It is a situation that isn't very tight between the university and the Trust of getting this list of people named to actually commit to actually appearing on the day that the next course starts".* **Course leader.**

> *"Lots of people think that once they have a place in September that it is alright to just say; oh I don't know I think maybe I'll just move to January".* **Course leader.**

> *"The last application I had for the course that started in [date] was [2 days earlier]. So you get your cohort together very late? Very, very late. So it would be difficult to have a pre-course preparation? Yes and in fact one of my cohort didn't start until day 2. ... people genuinely have difficulty deciding whether they're going to be able to accommodate the course until fairly short notice so you couldn't really offer much preparation ... So there is*

*preparation for those who are able to use it but obviously some people are coming to the course very late". **Course leader.***

The need to clarify nurse prescribing structures and procedures

6.62   Another issue was the difficulty of orientating the course to service needs because of the still-evolving structure of nurse prescribing in Scotland;

> *"One of the ... problems with directing courses is the ever moving goal posts of the ...legal issues and the changes to the formularies on medical conditions. I think these are so difficult to determine .... I don't understand how a course member can understand where to ... find out what they can and cannot prescribe ... and there are Scottish legal differences in here that are not well flagged up ... as far as directing courses, that for me is the biggest headache". **Course leader.***

> *"It would be nice if nurses in Scotland had some greater support in relation to the roles and requirements of nurse prescribers ...". **Course leader.***

6.63   A consequence of this was that course members could not evidence all the competencies in the portfolio because the structure of nurse prescribing was still being put into place. Interviewees highlighted 3 areas that were problematic in this respect: working in teams, clinical governance and auditing.

6.64   Many course members were not working within multi-disciplinary teams, so they have difficulty demonstrating this aspect of their competence;

> *"The main competence which we have difficulty with is team work ... when we talk about team work, we're actually talking about active communication between other members and making sure everybody in the team knows what you are doing ... [course members] have difficulty articulating their actual place and demonstrating that they've linked to other members of the team actively to promote good prescribing practice". **Course leader.***

6.65   Similarly, systems for the clinical governance and auditing of nurse prescribing had not been established in all parts of the service, so in these respects too the course members' experience limited opportunities for developing practical competence;

> *"Clinical governance and audit work ... sometimes they have difficulty showing that through their portfolio because ... they're not linking into a structure that's already there". **Course leader.***

Need for post-qualification support

6.66   Course leaders perceived that, on completing the nurse prescribing course, members often lacked confidence and the leaders identified a need for post-qualification support to deal with this;

"I think it would be useful to have a structure for clinical supervision for prescribing aspects of your practice for new practitioners … specific nurse prescribing clinical supervision … there is a definite lack of confidence … there is no point in training people if they don't have the confidence to actually prescribe when they finish". **Course leader.**

6.67   It was pointed also out by some course leaders that currently, there is no funded CPD in Scotland to follow up the nurse prescribing course and this should be an area for future development.

The course members' perspective

6.68   Ten group meetings were conducted with course members, one group in each centre. The groups were held on the last day of each course (or as soon as possible thereafter). A total of 90 course members attended the 10 group meetings (47% of the cohort).

6.69   As described in Chapter 3 the nominal group technique was used for the group meetings with course members. This technique allows the group to share and discuss all the issues to be evaluated, with each group member participating equally in evaluation. The evaluation works with each participant "nominating" his or her priority issues, and then ranking them on a scale of, say, 1 to 10. The rankings allocated by each participant to each issue are added together to give a final ranking for that issue.

6.70   The categories for each group, which were broadly similar, were consolidated by the research team into 23 overall themes and the comments from all the groups were classified according to this schema. The number of importance-ratings allocated to each theme were then added together.

Findings

6.71   There were 11 positive and 12 negative themes (it should be remembered that the particular group method ensures this by eliciting a balance between positive and negative comments). Tables 6.9 and 6.10 list the themes in order of the importance-ratings they received. In the following sections, the 12 themes ranked of highest importance by the group participants are discussed together with opposing views where appropriate. When reading the following, the significance of each theme should be judged according to the overall importance-rating assigned by the course members.

Table 6.9   Summary of positive themes

Importance Rating	Theme	
59[14]	A.[15]	The course contributed significantly to increased professional expertise and standing
55	B.	The course enabled course members to acquire important knowledge, mainly pharmacology
36	D.	The course enabled a beneficial networking with other nurses and professions, both at the university and in the workplace
20	H.	E-learning was helpful
16	K.	Interaction (peer support, group work and interactive teaching) was positive
16	L.	The teaching methods – lectures, assignments, handouts, workbooks, preparation for examinations - were effective
12	P.	The supervised learning in practice was beneficial
12	Q.	The course was well organised – accessible, relevant, flexible
10	S.	There was good tutorial support
7	U.	Study days were well-organised
3	W.	Remission of time from work to enable study was beneficial

Table 6.10   Summary of negative themes

Importance Rating	Theme	
51	C.	Insufficient time
31	E.	Assessment procedures were a source of anxiety
28	F.	The course was poorly organised with regard to the scheduling of sessions, classroom facilities and course arrangements
27	G.	Certain aspects of the course did not contribute to the course members' professional expertise
18	I.	There was inadequate tutorial support
16	J.	The course was not sufficiently tuned to the needs of some specialities
14	M.	Study days at university needed to be better structured
13	N.	Problems were encountered in obtaining supervised clinical practice
13	O.	The pharmacology content was not appropriate
10	R.	Teaching methods were ineffective
8	T.	E-learning was ineffective
4	V.	The interactive aspects of the course were unsatisfactory

6.72   **Theme A (positive).** The course contributed significantly to increased professional expertise and standing.

6.73   The most strongly endorsed opinion in all 10 groups was that the course contributed significantly to increased professional expertise and standing, with an importance-rating of 59. On this basis, the main conclusion of the evaluation must be that overall, the courses were judged by the course members as fit for purpose. The benefits described in individual statements under this heading included:

- Greater professional confidence;

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[14] Figures give the overall importance-rating for each theme
[15] Each theme is prefixed by a letter code for convenience of reference. Alphabetical order indicates descending order of importance

- Empowerment to provide better patient care;
- An expansion of their role as nurses; and
- Improved working relations with other professionals including GPs and pharmacists.

6.74   In the view of the course members these benefits arose from the comprehensiveness and relevance of the course, including its attention to the context and limitations of nurse prescribing, and the expertise it developed in working with the BNF, CMPs and the other resources available for prescribers. In the discussions, members commented that their "professional dignity" was "increased" and that they now had better relations with pharmacists and medical practitioners – "can talk about the pharmacology now".

6.75   **Theme G (negative).** However, there was a contrary view that certain components of the course did not contribute to the course members' professional expertise. This view was allocated an overall importance-rating of 27. In this category 15 of the importance-ratings were awarded because the course members thought that individual sessions were repetitive or not central to the work of a nurse prescriber e.g. consultation skills or the history of nurse prescribing; 7 reflected that there was a need for more emphasis on CMPs and practical experience with the BNF; 4 reflected the view that nurse prescribing did not enhance the course members' existing professional roles (e.g. one was already working with PGDs and saw no benefit from this course). The view that more employer support was needed if the benefits of training nurses in prescribing were to be realised was given an importance rating of 1. While stressing the importance of focussing on key issues, overall, this pattern of comments does not detract from the conclusion that the course significantly improved professional expertise.

6.76   **Theme J (negative),** - the course was not sufficiently tuned to the needs of some specialities. This view attracted 16 importance-ratings – not a major issue, but worthy of note. Two separate points were made within this theme: the course was sometimes perceived as aimed at community nurses rather than hospital nurses, and it was thought to be too generalised with not enough detail on the nurses' specialisms:

> *"a lot was relevant, a lot was not relevant, course needs to catch up with the applicants. A pool of different lecturers should be available to choose from or they could have a CD Rom with the lectures on".*

> *"they wanted some opportunities to focus as a group on particular specialisms".*

> *"it concentrated too heavily on primary care. The group agreed that a better balance was needed, as the class included several nurses from other specialties".*

> *"The course needs to be tailored a bit for specialisms".*

> *"Too generic pharmacology, needs more for specialists".*

> *"The nurse prescribing course is not sufficiently relevant to ward nursing, it is too community based, the course must be more specific, course leaders*

should visit hospital based clinical areas to make sure that the course is more relevant".

6.77   The allocation of an importance-rating of 16 suggests that this perceived weakness in the course was not a major one overall. On the other hand, only 28% of the nurses who began the course described themselves as working in acute hospitals, and it is possible that an importance-rating of 16 underestimates the seriousness of this problem for that sub-group. The problem could be addressed by more widespread adoption of the methods for customising the courses, as described in the previous section.

6.78   **Theme B (positive).** In the view of course members the second most important aspect of the course was that it enabled them to acquire knowledge they valued. This attracted an importance-rating of 55. The knowledge referred to was chiefly a systematic understanding of pharmacology to underpin the course members' practice. This is related to Theme A, but it is listed separately because the groups frequently identified 'knowledge' as a separate theme. Pharmacology was the main constituent of this valued knowledge base with an importance-rating of 37. Course members also mentioned knowledge of legal, ethical and accountability issues, physiology, pathophysiology and anatomy each with an importance-rating of 1 and Information Technology with an importance-rating of 5. 'Knowledge' without further specification attracted an importance-rating of 12.

6.79   Typical statements under this theme included "excellent pharmacology education" and "We have learned basic principles of pharmacology and that is good". There was "more respect from pharmacists" – previously, some group participants said, nurses were "seen as semi-professional" but "now we are professional". In discussions, the groups stressed that the course had enabled them to understand the actions and interactions of the drugs they encountered in their practice. Many reported that the course stimulated critical thinking about medication, and that they valued the increased awareness of adverse drug reactions and contraindications that the course had given them - "it's worrying what you didn't know before". The comments "Now we can talk to doctors about drugs" and "Can join in the conversation" indicates the importance of this knowledge base for facilitating collaborative practice. Many of the course members also felt that they were able to give patients better explanations of the drugs they were taking.

6.80   **Theme C (negative).** The most strongly emphasised negative aspect of the course was that there was insufficient time. This attracted 50 importance-ratings. This might have reflected the overall duration of the course, but other factors were mentioned:

- Many group participants said that they were not given sufficient (or any) study time by their employer (see table 6.8 - as many as 27% of the course members had not been allocated any protected study time other than the university contact days, and if those who were still trying to negotiate study time when the course commenced are included, this figure rises to 45%).
- Even when protected time was allocated, there might not be backfill at work so their professional duties still claimed time that could otherwise have been devoted to study
- The course caused problems of maintaining work/study/home life balance, especially for those with young families
- There were problems fitting in the 72 hours' supervised learning in practice especially if the nurse worked part-time or nights

- If a course ran over the summer holiday period, this time could not be used as productively as the same amount of time at other parts of the year

6.81   Discussion in the groups elaborated on these points;

"The course should be longer for example, 7 months so that it is less concentrated. Management have to recognise the need for time, it is very uneven from nurse to nurse on the course, wide variations on how much time course members are allowed. Funding for protected time not being uniformly utilised".

"It was very stressful trying to work, especially when you have a family and with an exam, and they haven't done an exam for ages".

"This course ran over the summer holidays, but didn't take into account that the workplaces would have reduced staff and also people had children at home".

"The group felt that they needed more study time than the course organisers recommended to them. The course tutors were unsure about what was needed. Initially, they recommended 4 hours' private study per week, then amended this to 7-10 hours per week later.

Group members reported that the real requirement for study time was more than this. One member suggested that a whole day per week should be available for private study, which would need to be augmented by additional study on other days.

6.82   **Theme D (positive).** The fourth most important issue, judged by the group ratings, was that the course enabled a beneficial networking with other nurses and professions. This aspect attracted an importance-rating of 36. The networking occurred both with fellow course members on the university course and with other professions in the workplace (especially with GPs and pharmacists). Statements emphasised the value of this networking for patient care;

"meeting nurses from other areas of practice - now feel can contact them if problems with patients in their area of expertise".

"participation [in the course] encourages more interaction/co-operation with other health professionals".

6.83   In the discussions, course members expressed support for the generic nature of the course, because it enabled them to meet a lot of nurses with different professional backgrounds.

6.84   **Theme E (negative).** Assessment procedures attracted negative comment and were clearly a source of anxiety, with a relatively high importance-rating of 31. Whilst one would not expect course members to vote in favour of assessment, the comments did reveal some particular problems. The main one was the difficulty in understanding what was required for the portfolio, which for many course members was a novel exercise. The view was expressed

that course members should be prepared for this more extensively - and earlier in the course. In fact, inspection of the course timetables shows that all the courses devoted a significant amount of class time to this, although the periods timetabled varied between 2 and 10¾ hours. Clearly, courses offering lesser amounts of time for this need to consider whether it is sufficient. Another point was that some course members had not taken an unseen examination for many years and the examination caused them some stress. Again, some form of preparation would have been welcomed by many. Comments elaborating on this theme included;

> *"the emphasis was on the exam but this wasn't reflected in the sessions, we needed more prior knowledge about the exam"*

> *"The portfolio method was insufficiently explained at the start of the course.*

The group felt that they needed more examples of completed portfolios early on in the course and were concerned that they'd only been given one example.

6.85   The remaining themes in the group deliberations related to overall course organisation and specific teaching and learning methods, such as lectures, tutorial support and opportunities for interaction in the classroom. All these issues attracted both positive and negative comments, reflecting variations in arrangements across and within courses, and no doubt variations in the course members' expectations and preferences. Compared with the themes discussed above, which the groups considered the most important, these carried less weight. They are properly a matter for internal course evaluation, not policy making at national level. Nevertheless, for completeness, and to suggest issues for internal evaluation, they are discussed in the following pages.

6.86   **Theme F (negative).** The next most important issue (importance-rating of 28) was that (some of) the courses were judged to be poorly organised. Comments included a lack of clarity in the course programme, lack of communication between the course organisers and the course members (and sometimes among the course organisers themselves), a poor standard of teaching accommodation, lack of or late distribution of pre-course information and an illogical sequencing of sessions. However, in contrast some groups commented on how well their own particular courses were organised, emphasising in particular their flexibility and accessibility.

6.87   **Theme H (positive).** Many course members found e-learning helpful. This received an importance-rating of 20. In the small number of universities which made significant use of web-based learning, the WebCT platform was commended by course members as accessible, easy to follow on-line, well structured and with very good links.

6.88   **Theme I (negative).** Better tutor support was felt necessary, an opinion that attracted an importance-rating of 18. Comments focused on the lack of accessibility of tutors and limited feedback on work done.

6.89   **Theme K (positive).** Opportunities for interaction through peer support, group work and interactive modes of classroom teaching were commended. This was awarded an importance-rating of 16.

6.90   **Theme L (positive).** This was a compendium of praise for individual lectures, assignments, workbooks and library facilities, with combined importance-ratings totalling 16.

6.91   The remaining themes were judged of less importance overall by group participants and are not discussed here with the exception of Theme N (negative) which was also raised in the case studies. This theme was concerned with the problems in obtaining supervised clinical practice.

6.92   The concern was not the quality of the supervision but the lack of time the designated medical prescribing practitioners were able to devote to it;

> *"The Scottish Government must give time to mentors for mentoring, if this is very important you have to make sure that we have the support. We mentor student nurses - it is mandatory, but it is not mandatory for Doctors to do this".*

> *"The mentors need protected time and a financial carrot"*

6.93   Particular difficulties were reported in the Islands where face to face contact with visiting GPs may be limited and much of the communication was by telephone.

6.94   There was also variability in support from practices. One nurse who worked in 2 separate practices found totally different attitudes to nurse prescribing. One practice had a positive attitude to nurse prescribing while the GP at the other practice suggested the nurse prescriber knocked at his door to have prescriptions signed. There was a view that the system was not ready for nurse prescribers.

Summary and conclusions

6.95   The evaluation covered all 7 courses running in Scotland in the first half of 2005. Data were gathered from nearly all the 192 nurses enrolled, from all the course leaders and from the main lecturers in each course. Data sources included course documentation; an initial questionnaire to course members (participation rate 97%); interviews with course providers; and end-of-course focus groups in which 47% of the course members participated.

6.96   All 7 courses were implementing the NHS Education (Scotland) outline curriculum. However, there were minor differences in the emphasis placed on different objectives and also in the weighting of different elements of the assessment. All the courses blended on-site study days at the university with off-site private study. They differed in the relative weight assigned to these, some courses being predominantly campus-based and others predominantly distance learning. This met the requirements of a diverse user population. Interviews with course providers identified 2 main challenges: configuring the generic course to meet the needs of the range of specialties now taking it; and the task of teaching pharmacology to students with limited preparation for such study. Solutions to these problems were being implemented, but further curriculum development is needed to build on these advances.

6.97   The course-member focus groups had a strongly-felt conviction that the course contributed significantly to their professional expertise; that it provided essential knowledge of pharmacology and that it enabled a beneficial networking with other nurses and

professions. The main difficulty, however, was insufficient time for study. Only 27% of the course members had been allocated any protected study time beyond the timetabled contact days at their university – which in the case of the distance learning courses were as few as 5 or 7 days for the entire 6 month course. Many other students were still trying to negotiate study time at the beginning of the course. Assessment procedures were another source of anxiety, and in some (but not all) centres students felt that the course was poorly organised with regard to the scheduling of sessions and the provision of classroom facilities.

Application of the Findings

6.98   Based on the findings, a number of recommendations have been made about the future development of the courses. These have been considered by the course leaders and by the Research Advisory Group in Scottish Government Health Department (formerly Scottish Executive Health Department) and as a result an extensive programme of course development was begun in 2006.

6.99   The study has described and evaluated different approaches to nurse prescribing training with regard to learning experiences and preparation for practice. This has been nested in the larger studies and was informed by our 2005 nurse prescribing questionnaire.

Implications of this work

6.100   There are difficulties which some course members experience in obtaining protected time for private study in addition to the time they are given for attending course contact days. If employers reviewed their policies for allocating such time and courses made their requirements explicit, especially where the course involves a low ratio of on-site to off-site study, this would be addressed.

6.101   The courses should continue to treat nurse prescribing generically, providing a systematic coverage of pharmacology and a full range of the nurse specialties represented on each course. Best practice in meeting the needs of specialists within the generic framework should be shared between centres.

6.102   Whilst different universities should be free to develop their provision in ways that meet the needs of their particular intakes, curriculum development projects should be undertaken at a national level to create a body of educational practice and curriculum materials on which course leaders could draw as appropriate. These resources could underpin the cumulative development of the courses and guard against the loss of expertise when key members of course teams leave. This work could usefully concentrate on the following:

- Materials for pre-course preparation;
- Ways of customising the course to the needs of different specialities;
- Pedagogic techniques for meeting the learning needs of mature course members who are anxious about the academic study of pharmacology, portfolio writing and formal examinations after a long period away from study;
- Further articulating the generic model of nurse prescribing as the underpinning for all nursing prescribing practice, and as a common reference point for the different parts of the course;

- How to facilitate and assess the compilation of a personal core formulary within a generic course, and how to incorporate this learning experience in a comprehensive nurse prescribing curriculum;
- Course-specific assessment techniques, including the possibility of constructing a question bank for access by all the courses; and
- Course-specific formative evaluation techniques.

6.103   There is a need for closer liaison between NHS Boards and some course providers to ensure that the course rationale is fully understood by the former and a need for a planned admission process with sufficient advance notice to course leaders.

6.104   Services need to ensure that nurse prescribing practices are underpinned by adequate clinical governance and the courses should refer to this.

6.105   The PDPs of nurses who have completed the course in nurse prescribing should include plans for relevant CPD and this should be arranged by the services concerned.

6.106   Internal course evaluations should include anonymous course member evaluation instruments which cover the issues of course quality identified in the focus groups and this should be monitored by NES.

6.107   Mentoring was largely viewed in a positive way. However, nurses sometimes found it extremely difficult to get any allocated time with designated mentors (Designated Medical Practitioner DMP). Mentors themselves highlighted 'finding time' problems and difficulties in understanding their role. One solution proposed related to nurse prescribers in training having 2 mentors: one clinical and one nurse prescriber who had experienced the course.

6.108   Changes in the education of nurse prescribers may impact on service delivery and subsequent uptake of courses. There should be adequate consideration and funding for the backfill of nurses undertaking prescribing training.

CHAPTER SEVEN   PATIENT PERSPECTIVES OF NURSE PRESCRIBING

Introduction

7.1   This chapter reports on patients' perceptions and experiences of nurse prescribing particularly in relation to quality of care and different access routes to health services. The views of other stakeholders, such as patient representative groups and various health professionals, on the benefits of nurse prescribing to patients are also reported

7.2   The main source of information on patients' perceptions comes from a module of questions included in the omnibus survey[16], Scottish Opinion Survey, conducted by TNS with the general public. The module of questions was first included in the September 2004 survey and, using the same questions, was included in the February 2007 survey covering a period of major growth in the extension of nurse prescribing in Scotland.

7.3   The stakeholder views are drawn from other elements of the study including the initial stakeholder interviews and interviews with various stakeholders (including patients and health professionals) from the case studies.

Omnibus survey results

Awareness of Nurse prescribing

7.5   In 2004, just over a third of those sampled (36%) were aware that nurses, health visitors and midwives could prescribe medicines. By 2007, this proportion had risen to over half (52%) of the sample. In both surveys those in the older age groups 55-64 and above 64 had the greatest awareness possibly due to their experiences of the health care system. The least aware were those in the 16-24 age group who would have had least knowledge of the health care system. Men were less likely than women to be aware that nurses etc could prescribe medicines (2004: 34%:38%; 2007: 48%:56%). There were only small differences in awareness between geographical areas.

7.6   Those in the higher socio-economic groups were more likely to be aware of nurse prescribing than those in the lower socio-economic groups. (Table 7.1)   This pattern of awareness of nurse prescribing was apparent in both 2004 and 2007.

Table 7.1   Awareness of nurse prescribing by socioeconomic group

Socioeconomic group	2004			2007		
	%	Unweighted base	Weighted base	%	Unweighted base	Weighted base
AB	45	178	204	59	181	217
C1	34	298	284	55	276	290
C2	31	217	214	50	198	210
DE	36	323	313	47	352	290

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[16] An omnibus survey is a regular (e.g. monthly) survey of the general public run by a research company. Each round of the survey covers a variety of topics commissioned by different clients.

Experience of nurse prescribing

7.7   In 2004, 12% of respondents reported that they had received prescribed medicines from a nurse, health visitor or midwife for themselves (10%) or as a carer (2%). By 2007 the proportion of respondents receiving prescribed medicines from a nurse, health visitor or midwife had risen to 16% (13% for themselves, 4% as a carer) of the sample.

Location of nurse prescribing

7.8   In 2007, the percentage of respondents receiving prescriptions at their GP surgery or health centre from a nurse, health visitor or midwife increased showed the greatest increase (table 7.2). In contrast, prescribing by nurses in hospital wards showed a decline of 1% between 2004 and 2007.

Table 7.2   Location in which patient had received nurse prescription*

Location	2004		2007	
	%	N	%	N
GP surgery or health centre	63	75	78	124
Own home	10	12	11	18
Hospital Ward	8	10	7	11
Outpatients	6	7	6	10
Nursing home	2	2	-	-
A & E	1	1	1	2
Minor injuries clinic	1	1	1	2
Occupational Health Department	-	-	1	2
Community Hospital	-	-	3	4
Pharmacy	-	-	2	3
Others	10	12	1	2

*Base: 2004 120 (103 unweighted), 2007 160 (unweighted 168)

Satisfaction with nurse prescribing

7.9   Of those respondents receiving a nurse, health visitor or midwife prescription in the 2004 survey over two thirds (67%) were satisfied with nurse prescribing. A further 23% were quite satisfied. 5% were quite or very dissatisfied. By 2007, the proportion of those very satisfied with nurse prescribing had risen to 75% and with a further 21% being quite satisfied. Only 2% were quite or very dissatisfied with nurse prescribing.

7.10   Satisfaction with nurse prescribing showed no clear relationship with age. In the 2004 survey, those respondents in age group 45-54 were least likely to be very satisfied (32%) with nurse prescribing whilst those in the 25-34 age group were most likely to be very satisfied (94%). In the 2007 survey there was less variation in the proportion of respondents very satisfied between the age groups.

7.11   There were few respondents in any age group in either the 2004 or 2007 survey who were quite or very dissatisfied with nurse prescribing. However, caution needs to be exercised in relation to these figures, since they are based on small numbers of respondents.

7.12   In both surveys there was an inverse relationship between socio economic group and reported satisfaction with nurse prescribing. Hence a smaller proportion of respondents in group DE reported that they were very or quite satisfied with nurse prescribing compared to those in socioeconomic group AB (2004: 82% vs. 100%: 2007: 84% vs. 100%).

7.13   In the 2004 survey respondents in all areas showed high levels of satisfaction with nurse prescribing however respondents from the West were less likely to be very or quite satisfied with nurse prescribing than respondents from the East/South or the North (86% vs. 96% vs. 93%). There was very little difference between the different areas in the 2007 survey.

7.14   All those respondents who were either satisfied or dissatisfied with nurse prescribing were asked the reasons for their satisfaction or dissatisfaction. These are given in table 7.3 (respondents may have given more than one reason).

Table 7.3   Patient satisfaction with nurse prescribing*

	2004	2007
	%	%
Reasons for satisfaction		
Quicker and easier than going to a doctor	28	22
Saved getting an appointment with the doctor	15	27
Got what they needed/very effective prescription	12	6
Nurse was as good and as convenient as the doctor	9	22
Nurses were trained and qualified	9	12
Trusted the nurse's judgement	9	-
Nurses were easier to talk to than doctors	7	8
Saved the doctor time	3	-
Repeat prescription/didn't need a doctor	2	4
Other	4	7
Reasons for dissatisfaction		
Prefer doctor/doctor better qualified	3	1

*Base: 2004 113 (unweighted 98) and 2007 156 (unweighted 163)

7.15   In both surveys the primary reasons given for satisfaction with nurse prescribing were associated with the ease and rapidity of access to nurses rather than doctors. By the 2007 survey confidence in nurses as prescribers seems to have increased with an increase in the proportion of respondents reporting that nurses were as good and convenient as the doctor and that nurse were trained and qualified.

7.16   Trusting the nurse's judgement did not appear as a category in the 2007 survey and may have accounted for the increase in the proportion of the previous two reasons for satisfaction.

7.17   Only 3% of respondents in the 2004 survey and 1% in the 2007 survey thought they should have received a prescription from a doctor rather than a nurse.

Comparison of nurse and doctor prescribing

7.18   All those surveyed who had been prescribed medicines by a nurse, health visitor or midwife were asked how this compared to being prescribed medicines by a doctor.

Table 7.4   Comparison of nurse/doctor prescribing*

	2004	**2007**
	%	%
Much better	9	16
Bit better	14	12
About the same	72	69
Bit worse	3	2
Much worse	1	-
Don't know	2	1
Total	*101**	*100*

* Base: 2004 120 (unweighted 103) and 2007 160 (unweighted 168)
** Totals may not add up to 100 due to rounding.

7.19   There was little difference in the response between the two surveys. More than two thirds of respondents in both years of survey felt their experience of nurse prescribing was about the same as being prescribed medicines by doctors. Although the proportion who felt the experience was about the same dropped slightly in 2007 compared to 2004 (72% compared with 69%) this was more than compensated for in the increase in proportions who felt the experience was a bit better or much better in the 2007 survey (see table 7.4).

7.20   A quarter of all females (25%) and a fifth (20%) of males who had been prescribed medicines by nurses, health visitors or midwives reported that nurse prescribing was much better or a bit better than being prescribed medicines by doctors. The difference between the sexes with respect to nurse prescribing increased in the 2007 survey with 30% or females and 23% of males reporting that nurse prescribing was much or a bit better than being prescribed medicines by doctors.

7.21   The reasons given for finding nurse prescribing experience better or worse than prescribing by a doctor are given in table 7.5.

7.22   Comparisons of the nurse/doctor prescribing experience were very positive in both surveys. Saving time and convenience were the most frequently reported reasons in both 2004 and 2007 surveys as to why respondents felt the experience of nurse prescribing was better than being prescribed medicines by a doctor. In the 2007 survey, respondents were also reporting that nurse prescribing was as good as doctor prescribing and that nurses were easier to communicate with. These reasons did not appear in the 2004 survey and may be an indication that by 2007 respondents had had more experience of nurse prescribing.

Table 7.5   Reasons for finding nurse prescribing better or worse than GP prescribing*

	2004	2007
	%	**%**
Quicker/easier/saves time	49	32
Nurse has more time than doctor	16	-
Saved getting an appointment with a doctor	0	28
Nurse easier to talk to/communicate with than doctors	0	14
Repeat prescription/don't need doctor	0	2
Convenient/satisfied/as good as a doctor	0	17
Other	15	4
Prefer GP/GP better qualified	10	**7**
Don't know/not stated	10	2

*Base: 2004 32 (unweighted 28) and 2007 48 (unweighted 50)

Benefits of nurse prescribing for patients

7.23   In the 2007 survey respondents identified a number of benefits that had flowed from nurse prescribing in Scotland and listed very few drawbacks. In a number of instances, multiple benefits from nurse prescribing that often were inter-connected were described. Occasionally respondents indicated that nurse prescribers produced a better diagnosis because of the greater time they spent with individual patients. There were contradictory messages too which may have related to the personal contact a patient had with a particular health professional or to the health professionals gender.

7.24   In 2007, respondents reported that the benefits of nurse prescribing related to:

- How the system was able to fulfil patients practical needs – such as the ability to obtain a speedy prescription – not always medication;

  "Because all we have to do is phone and ask - it's not like antibiotics though it's more like creams or pads or things like that for the elderly clients"

- The impression that nurse prescribers would free up doctors' time. The assumption being that doctors would then be able to concentrate on other matters important to patients;

  "Because you're more likely to see a nurse quicker than a doctor especially for meds. It also takes the pressure off the doctor to treat more serious ailments"

- The time spent with a patient and for some the knowledge that the nurse prescriber appeared to possess about the individual patient. This translated into personalised care;

  "You get time to talk over your symptoms more and get the right diagnosis"

  "It was instant. It was more thoughtful, it was helpful"

7.25   As stated previously, the findings presented in the preceding sections must be treated with caution as they are based on a small number of respondents. However, benefits of nurse prescribing have been explored in other elements of the study.

Stakeholder perspectives on patient benefits of nurse prescribing

Initial stakeholder interviews

7.26   Initial stakeholder groups interviewed included some patient advocacy groups. They believed there could be significant benefits to patients accruing from nurse prescribing. All stakeholder groups recognised the potential for a wide range of benefits. These included:

- Patient focus;
- Continuity of care over a longer period linked to better integrated patient journeys and holistic care in some cases;
- Quality of care with more time to inform patients, explain diagnoses and discuss treatments for patients and their carers; and
- Patient time and access were improved to prescribing services/staff. This includes access – in surgeries and in out of hours working – for patients and carers.

7.27   Stakeholders were, however, aware that patients might either view nurse prescribers as second rate doctors or not competent. None of the stakeholders interviewed held these views themselves.

Views of patient representative groups

7.28   Patient groups, especially those for chronic conditions, flagged up time issues with regard to GPs who prescribe for them. One UK wide organisation interviewed reported that in their 2006 patients' 'panel', 52% of panel members said they did not feel they got enough time to talk to GPs about medication and specifically about side effects. They hoped that nurse prescribing would improve this situation. In addition, 84% of panel members said they felt comfortable with nurses being able to prescribe (their) medicines.

7.29   Other information from focus groups and interviews conducted for the study revealed the following;

> *"We think nurse prescribing has the potential to increase accessibility and quality of care with the proviso of appropriate first class training and support, clear lines of clinical accountability and responsibility within health teams, clear lines of communication throughout the health service and equal access to high quality services for all people with (chronic disease condition) and we would want it to be evaluated by clinical outcomes rather than cost effectiveness".(Patient support group)*

7.30   There was a clear vision for nurse prescribing by patient representative groups but it was recognised that it needed to be implemented appropriately;

"We do feel that because most people with (the chronic disease) are in touch with practice nurses, we feel that would be the place - for practice nurses to prescribe and discuss medicines and their side-effects".(Patient support group)

"Too few people have medication reviews with GPs – more reviews might happen if there were more nurse prescribers – and this is linked to valuing self management plans' – teaching medication use is part of this package". (Patient support group)

7.31   Nurse prescribing was thought to be of great benefit in the management of long term conditions within primary care;

"We feel that given appropriate training and scope that there would be a crucial role for nurse prescribers with (-) care packages, self management etc". (Chronic disease support group)

"It would appear that many chronic disease patients attend their practice nurses for review. However no patient has reported a practice nurse being able to prescribe- 'it's great seeing a nurse but if they can't prescribe what is the point". (Chronic disease support group)

7.32   For those with chronic conditions, stakeholder groups generally considered that trained nurse prescribers who specialised in a condition would have much to offer. One stakeholder observed that;

"Some people with (disease) would see that being prescribed drugs by their specialist nurse may be a quicker route than waiting to see a consultant. If nurses were prescribing for patients it would be important that this be the specialist nurse who has an in depth knowledge of the condition and the various symptoms that can be experienced".

7.33   For people with long term conditions time issues with GPs were again raised;

"We are also aware of people being prescribed medication but being unaware of what it does or how to take it. This is probably due to the lack of time available within the GP appointment system, but can lead to people with diabetes taking medication inappropriately or not being aware of possible side effects of medication, especially hypoglycaemia. The same is true of devices and monitoring equipment, where something is prescribed but not explained".

"Research from Tayside has shown that the majority of people with diabetes do not collect enough blood glucose testing strips to test even once a day. Perhaps this is partly due to the fact that they have never been taught the importance of testing, nor how to carry out the test".

7.34   One of the stakeholders interviewed (Diabetes UK) considered that nurse prescribing could overcome some of these issues, making access to much needed medication easier and ensuring that appropriate education was available at the time of prescribing.

Views of case study participants

Patient perspectives on nurse prescribing

7.35   The 6 main case studies explored patient views on nurse prescribing in a wide range of settings: primary and secondary care, rural and urban communities, community hospitals and Accident and Emergency. Patient perceptions of the extension and impact of nurse prescribing were remarkably positive across all case studies (see table 3.2 for more information on interviewees).

Awareness

7.36   Patients within the nurse-led specialist service (case study 4) knew more about nurse prescribing than patients in general practice. Interestingly, those patients interviewed in the rural and remote primary care case study were all unaware of nurse prescribing (case study 2), whereas patients in the urban and semi-rural GP practices (case study 1 & case study 3) had some limited knowledge. Levels of knowledge and awareness of nurse prescribing were linked to greater and relevant patient experience within healthcare, particularly amongst those receiving specialist care and those with complex health needs within primary care.

Patient care benefits

7.37   Patients found quicker and easier access to treatment to be the most beneficial aspect of nurse prescribing. Patients experienced - or hypothesised that - nurse prescribing enabled prescriptions to be received quicker and more easily because there was no need to involve the doctor in issuing the prescription. Most patients valued a complete package of care from their nurse prescriber/s rather than having to access GP services. There was an evident degree of trust in nurse prescribers shown by both patients and carers. Such patients and carers had close relationships with the nurse prescribers, leading, they suggested, to patients having confidence in the prescriptions given.

Patient preferences for care

7.38   Quality of care and access was more important to patients than 'who' provides the care. Patients discussed the benefits of having a 'good relationship' with their doctor or nurse. Consequently, some patients who had an established relationship with their GP, particularly older patients, were more likely to see their GP whereas others had established relationships with nurse prescribers, particularly in midwifery and amongst those who preferred to consult a female health professional. A patient in case study 1 described her preference for a GP for her children's health issues, whereas her nurse prescribing midwife was preferred over her GP for any issues relating to her own pregnancy care. Some patients also preferred to see a GP for what they categorised as more serious health conditions; for

example Alzheimer's disease, heart conditions and chronic conditions. Other patients perceived nurses and doctors differently: doctors broadly being responsible for diagnosis and treatment and nurses for minor injuries and advice. Patients generally reported satisfaction and positive experiences of care from both GPs and nurses and no major preferences were flagged for nurse prescribing or medical prescribing.

Safeguards

7.39   Patients wanted high nurse prescribing standards through training and assessment but identified practice as a necessary aspect of development. Some patients thought only nurses comfortable with prescribing should undertake the training and others suggested a degree of GP checking of nurse prescriber prescriptions;

> "This sounds daft and it's not in relation to me but just in society with so many drug addicts, I think it would have to be very well controlled, you know, checked upon because there are so many devious people nowadays that they could be threatened, just the same as a doctor could but somehow a nurse seems nearer their…you know what I mean"? (patient)

Nurse Prescriber knowledge and training

7.40   Patients were largely positive about nurse prescribing but some questioned whether nurse prescribers had the same level of knowledge as a doctor, particularly on the subject of diagnosis. They emphasised the need for adequate training and supervision. This perspective could be situation dependent and some patients regarded nurses as more knowledgeable in certain areas than doctors and vice versa. Patients were generally more concerned with the health professional's level and area of knowledge with regard to their own medication or condition than they were with job titles. Decisions on whether to consult a nurse or a doctor revolved around perceptions of the health professional's knowledge and expertise in the area;

> "[I mean to me a doctor is more responsible in that they have more medical knowledge of the conditions that people have, than a nurse, you know after all these years of medical school that a nurse wouldn't have but as far as prescribing is concerned if they know basically what the conditions are and know all the backgrounds of the drugs then I'm quite happy and that's what would be the expectation. I don't expect them to have the same knowledge as a doctor but I do as far as treatment is concerned".(patient)

Communication and team-working

7.41   Patients valued team-working within healthcare and were eager for different health professionals to communicate about their care. One patient (case study 4) described his preference for hospital-based medical staff and nurses to make joint decisions on his specialist care.

> "What I would imagine would be that nurses keep in touch with doctors occasionally and discuss patients sort of thing…I think it would be to the

*nurses advantage to consult with the consultant occasionally you
know".(patient)*

7.42   Some patients also discussed the benefit of GPs being able to 'back-up' the
prescribing decisions of nurses so that joint decisions could be reached.

Nurse Prescriber views on benefits to patients

7.43   Although the nurse prescribers interviewed worked in a wide variety of geographical
and clinical settings, there was a high degree of unanimity about the benefits to patients that
they perceived flowed from nurse prescribing activities.

Improvements in patient care

7.44   There was a general view that aspects of care were being carried out better by nurse
prescribers than by GPs, particularly in relation to the specialist nurse-led service and the set-
up of specialist clinics within GP practices. For example, in the specialist service (case study
4), recommendations for long-term medication were not always followed-up and acted upon
in primary care. Nurse prescribing in this area should ensure that patients were up to date
with their medication and in receipt of continued care from the service. Non-prescribing
nurses held the same opinion and felt more confident that their recommendations would be
acted upon because nurse prescribers are able to follow through the full care of their patients.
In the past there had been cases where patients were being 'overlooked' when discharged into
the community.

Quicker and more convenient access to treatment

7.45   Nurse prescribers within both general practice areas and acute settings perceived that
patients would receive prescriptions quicker. Patients did not have to wait either for a
doctor's authorisation or need to make a second appointment with a doctor if a prescription
was required. Prompt and convenient access to care was more important to patients than
'who' provided the care;

> *"I guess most of the patients are completely unaware that we can
> prescribe……they don't actually care who prescribes for them as long as
> somebody does…… I guess the way they would notice it now was if we
> couldn't prescribe and we were saying you are going to have to wait until,
> you know the GPs not here on a Wednesday, so you're going to have to wait
> until tomorrow before we can order anything for you and that means it is
> going to be next week before it gets to you". (Rural nurse prescriber)*

7.46   This was particularly true in the case of home visits in primary care where patients did
not have any contact with the health centre at all when receiving prescriptions. The nurse
prescribers reported that patients were pleased that trips to the health centre were not
required.

7.47   Nurse prescribing had brought time and convenience benefits to patients, particularly in rural and remote areas (case study 1, case study 2 and case study 5) and especially where patients had to travel long distances or for long periods of time to hospital for out of hours care.

Complete package of care

7.48   Patients benefited from a more complete package of care, particularly in respect of carers who could now get everything they needed from the one person;

> *"I think all, all round you'll see that the patients are really happy that nurses can prescribe things, things that they are needing every day to provide, especially carers, to provide that package of care that they need. They're really relieved that nurses can do it. At first, I think they thought it was quite basic but then I think they realised it's really quite important that we can look after all these things".(independent nurse prescriber)*

7.49   Community midwives (case study 1) found similar benefits because pregnant women did not have to see their GP and could get complete care from the community midwives.

7.50   Patients also had more options in relation to care with a nurse prescriber than they would have had with a GP who had greater time constraints. Patients' confidence in their own care would rise because they had contributed to the care decision-making process. Patient knowledge about nurse prescribing had increased and patients were more aware than they used to be that they could access the care that they needed through nurse prescribers as well as GPs.

Approachability

7.51   For midwifery (case study 1), it was believed that the current female prescribing team would be of benefit in relation to female issues, in terms of pregnancy and wider medical matters. For adolescent girls seeking emergency contraception, this might also apply. For example if there was only one GP in the practice who was male.

7.52   Nurse prescribers obtained more information from patients and had more time to spend with them. Hence patients had new or changing expectations of nurses in the sense that they now expect nurses to listen to them and so held them in different "esteem" to doctors;

> *"We do have a bit more time because it you are seeing somebody for wound care or whatever it is, we do have more time with them and patients tend to talk and confide and they just have, I think patients just expect nurses to listen to them. I think their expectations…they hold doctors in a different esteem altogether and they are always aware that every day they are rushed, whereas they don't see us in the same light at all. So I think we get more from patients informally than a doctor would". (Nurse prescriber)*

7.53   This community nurse linked the benefits to the closer non-verbal aspects of nursing care, for example because they are more likely to touch patients during care and are therefore seen to have a more tactile relationship.

Patient education

7.54   Several nurse prescribers considered that they placed greater emphasis on patient education than their medical counterparts and hence would benefit patients further;

> *"Part of our role is for education as well for patients but I think we're at least giving them a bit of education about their tablets and what the effects are, whereas I think a lot of the time when they come into hospital they get started on tablets, nobody tells them what it is, why they are taking it or anything about that and I think you know at least that patient will ask questions and the majority of them know why they are taking these tablets. Before, I don't think they did". (Nurse prescriber)*

Views of other health professionals

7.55   This next section brings together views of several different health professional groups on the benefits of nurse prescribing to patients.

Impact of nurse prescribing

7.56   GPs reported difficulty in assessing nurse prescribing impacts within practice, including effects on patient care because GPs were unaware of how much prescribing was going on and whether it was even being used. One GP reports a "hunch" that catheters were now being prescribed by nurses because he had seen a decrease in his personal prescribing of catheters.

Saving time

7.57   Saving time was mentioned by several groups as a benefit of nurse prescribing. Both GPs and hospital based medical staff reported there may be savings in time waiting for prescriptions for patients in the sense that the time spent waiting for GPs and hospital based medical staff to authorise prescriptions would be taken out of the process. However, some respondents commented that there was a 24 hour turn round of prescriptions within some practice areas.

7.58   Being seen by one professional was also mentioned as a benefit of nurse prescribing by pharmacists. This not only saved time in delivering care but also saved time for both patients and health professionals;

> *"The patients are benefiting more, I mean simply because you're getting, you can short circuit a lot of the decision-making process…so it's short circuited a lot of things so people can make their own decisions but again it's back to*

*just being able to do your job properly with confidence and if you have the
ability to do it, do it".(Pharmacist)*

7.59 Non prescribing nurses also reported that the main benefit to patients of nurse prescribing could be the 'one stop' professional. This view was re-iterated by paediatric nurse prescribers

7.60 Practice managers found nurse prescribing benefits were associated more with time-saving issues than improvement in patient care. Patients received prescriptions more quickly but they felt patient care was not affected. Time issues could be important in for example compliance with treatments.. One practice manager (case study 1) considered that patients may follow through treatment if they received their prescription without having to wait. If patients had to wait for treatment, they were more likely to leave prescriptions.

Appropriate prescribing

7.61 There was a GP perception that nurse prescribing within competency areas, particularly in dressings, meant that patients were more likely to obtain the correct quantity of the prescription that they needed. For example where GPs were unsure of whether requests were in terms of "boxes or pieces". In addition it was felt that there were instances where the nurse prescribers placed more emphasis on appropriateness;

> *"…you are more likely to find nurses are more particular about
> appropriateness than we are…frequently in consultations they (nurses) come
> up with something that you know I haven't heard of. So it's almost getting to
> know that kind of nurse perspective on things". (GP)*

7.62 Non-prescribing nurse were also of the view that in some areas for example, dressings and nurse-led service areas, nurse prescribers' knowledge was superior to that of many doctors so patients would benefit from this expertise.

Summary and conclusions

7.63 Across the 4 data collection sources - case studies, omnibus surveys, nurse prescriber surveys and stakeholder interviews - there was a remarkably high level of concordance relating to the benefits nurse prescribing could deliver for patients and demonstrated some reliability in the project findings. There was also a high level of agreement between patients, the public, nurse prescribers, physicians and other health professionals and health managers about the benefits of nurse prescribing to patients.

7.64 The time benefits were clear, the continuity of care element appeared important, and the thoroughness and patient safety concerns of the nurse prescribing process were suggested. Less clear was the evidence for other factors noted in the chapter. The workload and 'overload' problems of GPs seemed strong in patient and public perceptions and were perhaps accurate in terms of the 10/15 minute consultations that are the norm for GP.

7.65 The 'connected' perception that nurses were less busy and therefore have more time to prescribe was not well evidenced. With the extension of nurse prescribing, patients

assumed that nurses must have more time or have re-allocated their roles to free up time for the new tasks. How exactly this was working and how raised patient expectations of access to nurses for prescribing will impact on nurses in the future is unclear. The perceptions here may not be correct but they are real and they are important influences on patients. As expectations may be raised about both the number and powers of nurse prescribers, it will be necessary for patients to be re-assured that resources are available to maintain if not build on nurse prescribing activity.

7.66   Historically, the 'care' element of nurses' work would have translated into more nurse conversations with patients and hence less 'remoteness' than GPs. This was where the observations about better patient education through nurses and perhaps better prescribing in certain areas may have emerged. Such education can potentially benefit individual patients, contribute to improved public health and reduce the financial burden on primary and secondary care from avoidable or unnecessarily rapid declines in illness conditions. The perceptions here may not have been correct but they were real and they were important influences on patients. As expectations may have been raised about both the number and powers of nurse prescribers, it will be necessary for patients to be re-assured that resources are available to maintain if not build on nurse prescribing activity. The impacts of nurse prescribing on health service organisations are now examined.

CHAPTER EIGHT　　　**NURSE PRESCRIBING IMPACT ON HEALTH SERVICE ORGANISATION**

Introduction

8.1　This chapter looks at the impact of nurse prescribing on health service organisations. It explores the telephone interview with stakeholders from government agencies, NHS Boards, from the case studies, and from the survey of nurse prescribers (2005 detailed in chapter 3 and 4). Anonymised stakeholder responses, where appropriate, are included. The questionnaire, case studies, interviews and educational evaluation provided the means for following up and testing of many of the topics raised in these initial stakeholder interviews. It also draws on the data from ISD outlined in table 1.2.

Impact on workloads

8.2　In all six case studies some GPs and hospital-based doctors reported either reduced workloads or the potential for reduced workloads due to nurse prescribing. Nurse prescribers reported increased satisfaction from prescribing but, in some instances, noted an increased workload and greater pressure. For mental health nurse prescribers, workloads increased at the start of nurse prescribing practice, particularly when setting up clinical management plans. However, it was felt that there had not been any lasting effects on workload.

8.3　Mental health nurse prescribers also considered that nurse prescribing had taken some pressure away from the consultant and perhaps GPs. Some pharmacists also reported increased workload as there was now more dialogue and consultation with nurses about prescribing issues, however these pharmacists considered that relationships had improved and that this was having a positive impact on patient outcomes.

8.4　Nurse prescribers within the case studies completed activity logs for 2 weeks prior to interview. These identified prescribing patterns for each nurse prescriber, and activities related to prescribing. Overall, nurse prescribers took increased opportunities to offer advice on for example, the side effects and correct administration of medication to patients at the same time as prescribing. They were conscious of cost implications, in particular the availability of over the counter medications and advised patients to purchase such medications rather than prescribe for these items. Their prescribing habits demonstrated a breadth of knowledge and skills in consultation, assessment, diagnosis, patient education and writing and revising prescriptions.

8.5　Depending on individual roles, they used their wider prescribing powers to prescribe a range of medications - commonly prescribing analgesics, antimicrobials where appropriate, and items for chronic disease management such as asthma, and health promotion such as smoking cessation. For example, one nurse prescriber in a community setting undertook 186 consultations over a 2 week period, and chose to prescribe in only 76 of these cases, using the opportunity to advise, refer or arrange follow-up in other cases. Another nurse prescriber in a remote and rural community setting undertook 6 consultations and prescribed for 3 - in each case this was for products relating to skin and wound management. Workloads varied but it is clear that nurse prescribers did not always choose to prescribe if medication was not appropriate, instead offering advice or referring on.

8.6   Nurse prescribers reported that GPs and hospital based medical staff had noted that nurse prescribing reduced their own workload but often seemed unaware of how. For example they were unaware of what and how much was being prescribed by nurse prescribers. Others discussed the benefits in relation to their own workloads;

> *"Being a single handed GP it enables me to feel more open to discuss ...the therapeutic management of patients ..... it supports my role in that taking some of the workload off".*

8.7   One GP suggested that nurse prescribing may have impacted on the workload of reception staff in the sense that they may have less work to do in relation to processing prescriptions for GPs to sign. Other GPs and hospital based medical staff felt that workloads could be more effectively distributed amongst nurses in accordance with who can/can't prescribe within the team, rather than having a random distribution of workloads.

8.8   GPs also suggested that nurse prescribing in areas of expertise would lead to more accurate prescriptions from pharmacists because nurse prescribers would be more knowledgeable about the correct amounts or sizes of products needed, this was particularly pertinent for wound dressings. This could reduce returned item numbers for pharmacists. However, there may be increased workload for pharmacists with regard to resolving issues in relation to the way that prescriptions are produced, to ensure that prescriptions are written in such a way that they reflect quantities available. For example 'one box' may be interpreted as one box containing 10 dressings, or maybe one box (or carton) containing ten individual boxes.

8.9   Some practice managers discovered that a "huge volume" of work was taken away from GPs in the health promotion field especially in smoking cessation when nurse prescribers took up this work. Non-prescribing nurses additionally felt that nurse prescribing had increased nurses' approachability and therefore their workloads. This was related to public perceptions of nurses being less busy than GPs and perhaps more approachable for prescriptions;

> *"You know, going to a GP for contraception is maybe that bit more scary than... you know the midwife… at lunchtime the school kids and things used to come to the health centre, so they may ask for contraception".*

8.10   An increase in telephone calls to midwifery for patient advice was also highlighted by non-prescribing nurses (case study 1). Such calls were not always midwifery-related and were becoming more widespread as people realised that there were prescribers within the team.

8.11   The above section illustrates that nurse prescribing has had an impact on workloads across health organisations both in primary and secondary care for the nurse prescribers themselves as well as pharmacists and doctors. This has led to a rebalancing of workload with implications for the staff involved. It has also lead to an increased need for advice and support for those taking on new roles.

Nurse and medical staff views of nurse prescribing

8.12   The overall picture that emerges on staff views of nurse prescribing is one of consensus between the two professional groups around the positive and mutually beneficial development of nurse prescribing in Scotland. Some nurses were threatened by the new developments but most welcomed them. A small number of nurses worried about the training and competence of their nurse prescribing colleagues but most identified benefits to nurses and patients. There were contradictory fears that extensions of nurse prescribing would lead to nurses over-reaching themselves and losing the 'caring' role distinctiveness of nurses by becoming junior doctors. These de-skilling worries were balanced by other groups of nurses and stakeholders who wished to see the extension of nurse prescribing across the formulary with nurses using all their skills to the full that their training and knowledge had equipped them with.

8.13   Most medical practitioners, in primary and secondary care settings, welcomed the development of nurse prescribers and noted benefits to patients and health service benefits in terms of use of time, resources and skills. A small number of GPs were reluctant to act as mentors to nurse prescribing students. An equally small number of physicians doubted the competence of nurse prescribers particularly with regard to 'diagnosis' and in terms of extending the formulary for instance to anti-biotic drugs. Some of these issues are discussed in greater detail in Chapter 9. One specific problem that emerged with regard to the extension of nurse prescribing related to the apparent lack of knowledge that some GPs had about which nurses were prescribers and what they did. Better communication and CPD within practices should remedy this problem relatively easily.

8.14   Findings on inter-professional working have been detailed in earlier chapters and there was a surprisingly high degree of professional agreement about the benefits accruing from inter-professional working. The working relationships between nurse prescribers and pharmacists appeared to be especially good as was the relationship between cardiologists and nurse prescribers. There was some evidence that the relationship between medical consultants and specialist nurses who prescribed was very positive.

8.15   This would suggest that nurses and medics across NHSScotland's organisations have for the most part sees nurse prescribing as a positive step forward. There are however issues which could be addressed such as better communications with GPs regarding nurse prescribing.

Promoters and barriers to change

8.16   Nurse prescribers had been highly motivated to become prescribers because of the activity's contribution to the improvement of patient care (2005 survey of existing nurse prescribers). [This was seen as a 'very' or 'quite' significant factor in their decision to become a nurse prescriber amongst 92% of respondents. Whilst improved patient care was listed as the primary motivator in becoming a nurse prescriber, a large proportion thought that the opportunity for continuing their professional development was a 'very' or 'quite' significant factor influencing their decision. 85% of respondents felt that job satisfaction was a significant factor behind their decision whilst only a half said that an improvement in their job prospects was a significant reason for becoming a nurse prescriber. Employer pressure was the least significant aspect on respondents' decision to become nurse prescribers.

8.17   The snapshots of two NHS Boards in 2005/6 also provided some information about health service organisation issues affecting both the numbers and range of activities of nurse prescribers. Of 14 NP responders in one board, around 80% were prescribing and 20% were not. For whatever reason, this indicates a loss of one fifth of the qualified prescribers in a small cohort of 14. Movement of staff into new posts or other workplaces where prescribing does not occur may explain for instance some of these figures. Better selection of staff for such training and a clearer understanding of where and how they may prescribe might contribute to a reduction in this wastage.

8.18   Numbers of prescriptions issued do not necessarily provide indicators of either the extent or effectiveness of nurse prescribers nor do they indicate consultations where prescribing was not needed. However, in the two NHS Boards, the nurse prescribers who responded to our requests for information indicated the following prescription practices in a typical week in a range of clinical settings (see table 8.1).

**Table 8.1   Prescriptions issued by nurse prescribers per week in 2 NHS Boards**

No. of prescriptions issued per week	NHS Board 1	NHS Board 2
	%	%
Under 5	20	70
6 to 10	20	10
11 to 20	20	10
21 to 40	27	0
41 and over	13	10
Total	**100**	**100**

8.19   The survey of nurse prescribers in 2005 also revealed that 60% of those prescribing wrote between 2 and 10 prescriptions in an average week, with 23% writing less than this and 15% more (See table 4.3 Chapter 4).

8.20   78% of survey respondents said that they prescribe in their current job. This was higher amongst those working in health centres and GP practices (87%) than in other areas.

8.21   Extended and Supplementary Prescribers tended to write more prescriptions on average than Independent Prescribers. 35% of Extended and Supplementary Prescribers wrote 11 or more prescriptions in an average week, compared with 8% of Independent Prescribers.

Chart 8.1   Average number of prescriptions written in a week

Legend:
- ■ All current prescribers
- □ Independent
- □ Extended & Supplementary

%

Category	All current prescribers	Independent	Extended & Supplementary
1 or less	23	26	12
2 to 10	60	65	50
11 to 30	13	7	28
31 +	3	1	7
DK/NS	1	1	2

Base: All current prescribers (730)
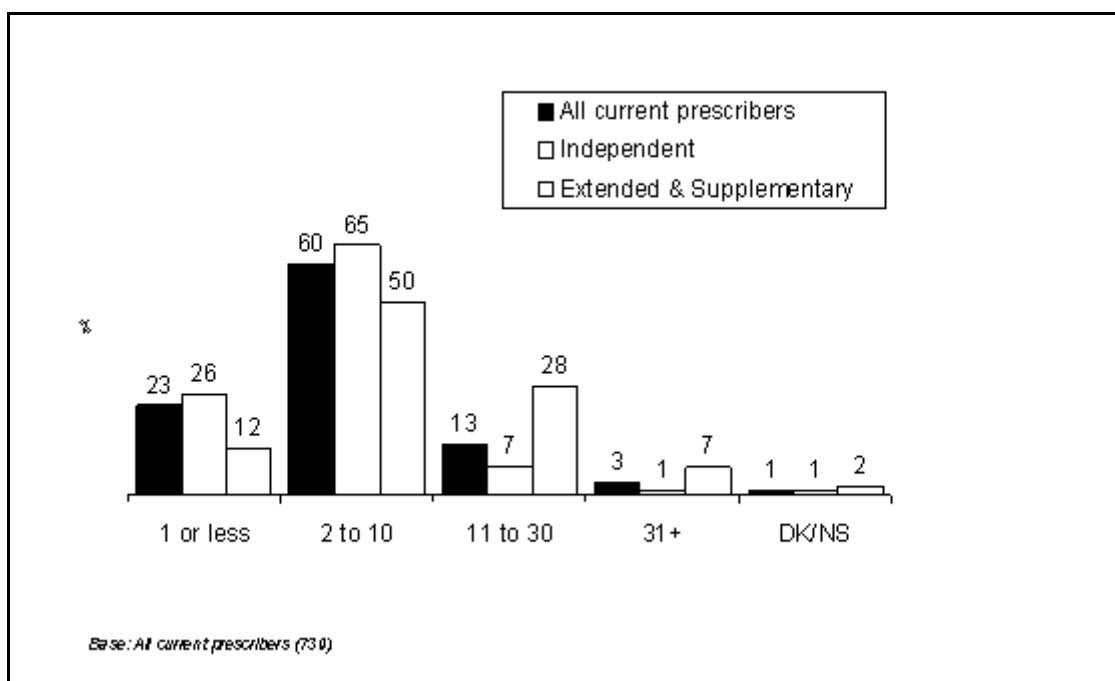
8.22   Peer support and an opportunity for informal discussions about prescribing may be an important factor in maintaining and extending the competence and confidence of nurse prescribers especially new prescribers. Delays in registration as prescribers and delays in receiving prescription pads, has impacted on the confidence of some prescribers and may inhibit future prescribing. Such support could come from day to day contact with colleagues or informal and formal networks. GPs and physicians will also play an important role in such a mentoring process and in maintaining good practice. As the numbers of nurse prescribers increases, these networks and supports within the nursing profession will increase. Data indicate that in many clinical settings, there are currently relatively few nurse prescribers working with more than one other nurse prescriber. Board and division-led networks for prescribers are important in ensuring professional support and development of nurse prescribing and communication linked to the work of 'lead' prescribers'.

Table 8.2   Working pattern of nurse prescribers in 2 NHS Boards

Number of NPs in team	NHS Board 1	NHS Board 2
	%	%
1 to 2 NP's	50	50
2 to 5 NP's	38	36
6 to 10 NP's	12	0
Over 10	0	14
Total	**100**	**100**

8.23   A significant number of nurse prescribers surveyed in these two boards were working alone or with one other colleague. However, almost all these nurse prescribers would have

been working with and been supported by medical and pharmacy colleagues and, as more nurse prescribers qualify, the numbers of nurse prescribers working on their own will diminish further.

8.24   Critical to the effectiveness of nurse prescribing and indeed to the effective use of NHS resources is that trained nurse prescribers do prescribe. A range of reasons for non-prescribing were identified in our national survey of nurse prescribers, stakeholder interviews and case studies. Apparently 'simple' bureaucratic reasons applied in a number of cases. These included;

> *"Hospital trust has still not sorted out prescription pads etc, for supplementary prescribers"*

> *"Awaiting prescription pad". Or "Haven't yet received prescription pad".*

> *"I have been employed in a management position for 4 months therefore don't prescribe"*

> *"Although recently registered with NMC (April 06') have still not received prescription pads and confirmation from manager of agreement to prescribe"*

> *"Hospital protocol not complete"*

> *"Dispensing surgeries until very recently did not have access to patient notes. (Paper or electronic)"*

8.25   Processing the registration and recognition of nurse prescribers rapidly within NHS Boards, statutory and professional bodies should resolve such issues easily.

8.26   There were also a range of clinical and managerial factors at work.

These included;

> *"No patient group directions in our ward and there is only 1 nurse prescriber in our hospital"*

> *"Course provided foundation, and I am now working to develop knowledge i.e. chemotherapy and supportive care"*

> *"Not required in post"*

> *"Lack of experience"*

> *"Dispensing GP practice in this community; surgery staff are reluctant to dispense my prescription – awaiting an update on practice"*

> *"I work 1 day a week and the occasion hardly ever arises where I need to prescribe"*

> *"Prescription pad identifies only GP practice in small area"*

8.27   These raise larger questions about the rationale for health service organisations selection of nurses to attend nurse prescribing courses in terms of what they do, what they could do and what the service wants them to do. The obstacles also raise questions about career developments of nurses and perhaps the capacity and commitment of individual nurse prescribers to take forward their work in this field. Incentives such as recognition through 'Agenda for Change' may also help this.

Summary and conclusions

8.28   The extension of nurse prescribing in Scotland has created new opportunities and challenges not just for the nurse prescribers but also for other in their organisations such as health professionals and managers. Selecting, training, managing and supporting nurse prescribers and responding to changes in clinical practice, pharmaceutical developments and patient and public demands and expectations have all placed demands on health services. Workloads of the key health players have changed because of nurse prescribing although they have not necessarily increased. Patients have experienced better and quicker prescribing but this may have also resulted in increased patient demands and expectations. Better use of staff skills and, often their time, appear to have resulted in improved patient care.

8.29   Evidence suggests that nurse prescribing has been both effective and efficient without any huge surge in drug budgets, unnecessary prescribing or threats to public health or patient safety (discussed in detail in chapter 9). All these elements must benefit health service organisation and are well received by patients and, according to the omnibus surveys, by the public.

8.30   Inter professional collaboration and team working also appears to have been enhanced by the process of nurse prescribing and as the activity is bedded in and rolled out further, any major fears about such prescribing appear to have abated. The operationalisation of nurse prescribing has run into a small number of bureaucratic and attitudinal snags. The former should be easily and quickly addressed within the health service; the latter may take longer to resolve. The network of lead nurse prescribers in the NHS Boards has allowed important support, information and good practice exchanges to operate. At times this has been both formal and informal and there are benefits to be gained for the health service from supporting both networking approaches.

Recommendations

- Further initiatives would develop CPD, support and address time issues, including allocated time for studying, ongoing support and education and budgetary resources

- The potential for and benefits to be gained from the further development and underpinning of appropriate nurse prescribing support and networking groups is considerable

- The delays in receiving prescription pads affect the capacity and confidence of nurse prescribing.

- Difficulties with non-computerisation of prescriptions are critical for some nurse prescribers. These difficulties also potentially adversely affect patient safety linked to the lack of access to a patients prescription records (prescriptions from other healthcare professionals). The causes relate to poor IT provision in areas of the NHS (and do not just apply to nurses).

- Additional information/education for GPs would be beneficial about the particular nature of nurse prescribing in primary care and how it may benefit their practices

- There is patchy geographical and/or professional implementation of nurse prescribing. This has a health care equity dimension. Nurse prescribing could play a role in addressing the health inequalities experienced by vulnerable and hard to reach groups.

- There appears to be a lack of a coherent, integrated and stable board level infrastructure for prescribers. In some instances, there has been a slow response of boards to the prescribing agenda. Boards could identify professional and managerial champions for nurse prescribing and local strategies and team working at a lower level on prescribing practice.

- A joined up approach running from the Executive, through the boards and down to the prescribers themselves would appear to offer many benefits. The lead nurse prescriber network has already helped to achieve some of these benefits.

- Close collaboration between post holders such as the Chief Medical Officers and Chief Pharmacists and lead nurse prescribers is vitally important and could be linked to effective management systems. To some, it appeared that nurse prescribing especially out with the primary care sector is still on the margins of the administrative system.

- The fragmentation of nurse prescribing policy, implementation and management is a cause for concern in some boards although it is gradually being addressed. Some boards lacked any leads or had leads only for some prescribing professional groups.

- Board level administration to track nurse prescribing perhaps through a part-time post would bring benefits. If, within boards, the selection of and support for nurse prescribers is not carefully and properly done, the resource will be wasted and the opportunity to enhance patient care and nurse skills can all too easily be lost. Seizing the opportunity provided by the development of the role of Community Health Partnerships may be critically important in terms of expanding the opportunities for nurse prescribing in certain budgetary areas.

- Further developments of strategic leadership and champions to carry through prescribing in midwifery and mental health which are seriously under-developed would be worthwhile

- Demonstrated and regularly reviewed and monitored good governance related to nurse prescribing practice across Scotland is critical

- Suitable medicines management systems, if they do not already exist and we could identify none in our research, to track the costs of prescribing accurately and document any related benefits would also bring significant benefits

- CPD and updating will ensure prescribers' fitness for practice. Contradictory views were expressed about the need for personal formularies and for generic versus specific courses for particular courses. However, among the stakeholders, the overwhelming consensus was for a generic course with CPD offering an opportunity for focus on specific types of prescribers and their needs at a later date.

CHAPTER NINE : PUBLIC HEALTH AND PATIENT SAFETY IN NURSE PRESCRIBING

Introduction

9.1   This chapter assesses the extent to which public health and public safety are safeguarded in nurse prescribing with particular reference to microbial disease management. A full chapter has been devoted to coverage of this issue because it was a discrete objective of the project, and because nurse prescribing is considered to have definite public health benefits. Indeed nurse prescribing has the capacity for a potentially large impact on public health in almost every part of its practice. The impact may be direct or indirect or both. Hence there is a need, as the project objective identified, to look at the public health impacts of nurse prescribing in general and microbial disease management in particular.

9.2   The public health impacts of nurse prescribing will also be influenced by a number of factors including; good governance, the collection of reliable data on public heath benefits and risks of nurse prescribers. Tools are also needed for assessing and recording the effect of nurse prescribing interventions on microbial disease management, along with high quality prescribing education courses provided by higher education that address public health, continuing professional development and continued mentoring and support of nurse prescribers in practice.

9.3   This chapter presents its own literature review and draws on a range of data primarily from the survey of nurse prescribers, stakeholder interviews and case study sources (see chapters 3). Both broad public health and more narrow microbial safety topics are examined from the perspective of the nurse prescriber, the patient and other stakeholders.

Literature Review

Safeguards for public health and patient safety in nurse prescribing with particular reference to microbial safety

9.4   Relatively little research has been carried out on this subject. The major public health challenge of prescribing for microbial disease control in England has been explored by O'Brien (2005). The House of Lords, on one occasion, specifically debated nurse prescribing extensions in the context of the steps needed to 'guard against an increasing prevalence of antibiotic resistant organisms in the light of the Nurse Prescribing Regulations (UK Parliament 2002 cited by O'Brien 2005). Other public health aspects of nurse prescribing have tended to be neglected.

9.5   The public health benefits from nurse prescribing in dealing with some fungal, bacterial and protozoal infections could be considerable with perhaps a lesser role in dealing with viral infections. No specific evidence exists about the benefits or costs of nurse prescribing activity with regard to reducing infections, illness times, hospital stays and treatment costs. Nurses have always played key roles in infection control and a further extension of their prescribing work and prescribing surveillance might well contribute more to controlling antimicrobial resistance. As 80% of antimicrobial prescribing occurs in primary care, the potential impact of nurse prescribers on appropriate prescribing and no prescribing at all for simple coughs and colds, viral sore throats and uncomplicated cystitis is

considerable. Nurse prescribers may also have an important role in 'managing public expectations' of antimicrobial prescribing' and hence avoiding unnecessary prescriptions (O'Brien 2005).

9.6   There has been recognition that the process of assessing whether to prescribe or not may improve public health by non-prescribing of unnecessary antibiotics (Walsh 2006);

> *"Giving public health advice and support may be of greater value than prescribing. The patient may not require a prescription but may benefit from purchasing an over-the-counter product. Prescription costs may be prohibitive for some patients and giving them a less expensive option should always be considered" (Walsh 2006: S15).*

9.7   Safe nurse prescribing will often operate in similar ways to safe medical prescribing. The role of education, training, supervision, mentoring will be central. In a clinical setting, it will also depend on proper clinical governance (Ryan 2004). Such safe prescribing should contribute to better public health. Nurses have already played a part in monitoring adverse drug reactions (ADRs) since 2002 using the yellow card scheme (Baldridge 2005). Reducing ADRs will automatically improve the nation's health by cutting the admission of ADRs to hospital which currently account for 1 in 16 hospital admissions and 4% of bed occupancy (4%) (see also Harris et al 2004). Prescribing by nurses in family planning should produce a range of direct and indirect benefits for public health (Young 2006). Similar benefits may occur in the substance misuse field especially in primary care settings (Harniman 2006). In 2004, no studies were identified that had looked specifically at safety aspects of nurse prescribing but several studies in 2002 had shown patients and nurses were satisfied with the process and outcome of nurse prescribing (Harris et al 2004: 22-23). However, nurse prescribing education has been built into public health nursing training from 2006/7.

9.8   Ineffective prescribing wastes resources. Incorrect prescribing may threaten individual patient health. Such practices could have major ramifications and contribute either to a less rapid improvement in public health or possibly a decline in public health.

9.9   Data about the direct public health impacts of nurse prescribing are currently sparse and little is known about reckless or dangerous prescribing by nurses and midwives. What evidence does exist indicates that nurses are no more likely to prescribe dangerously than doctors and may prescribe more safely within tighter boundaries. There are several possible reasons why they may be much less likely to over prescribe, prescribe dangerously or inappropriately. These relate to such things as greater information available about past medical failures in over or wrongly prescribing antibiotics, and the greater caution of nurse prescribers who are especially concerned to work well within the limits of their knowledge and experience as our case study accounts recorded. A wide range of stakeholders indicated that they were aware of such matters (see below).

Microbial Disease Management

9.10   Nurse prescribers will impact upon microbial diseases in several ways. Inappropriate prescribing of antibiotics by the medical profession is now well recognised as a factor in contributing to antibiotic resistance of bacteria in the UK population. This recognition is

therefore less likely to lead to over-prescribing by nurses who will be better informed about such problems (Price et al 2004).

9.11   The importance of antimicrobial resistance issues to nurse prescribing and public health has also been clearly recognised in recent years as has the problems of 'sub-optimal prescribing and poor adherence to prescribed regimes (McKinnon 2006). Nurses may sometime be best placed to spend more time with patients and hence could contribute to optimal prescribing and good adherence to prescribed regimes. Hospitals are responsible for prescribing only 10% of all anti-microbials but do so where there is a large and vulnerable patient population (McKinnon 2006).

9.12   The threats of microbial resistance to a range of control measures including therapeutic agents such as antibiotics has been recognised for over sixty years and has grow rapidly in the last 15 years. Some of the key and complex factors that singly or together may explain some of the major causes of such resistance have been described (McKinnon 2006). Until relatively recently, evidence about the effectiveness and cost effectiveness of 'strategies to contain the emergence of antimicrobial resistance' did not exist and the contribution that nurse prescribers could or did play was almost entirely neglected (Wilton et al 2002).

9.13   Several of our case studies indicate that nurses may be well placed or better placed than most health professional groups to address problems of sub-optimal prescribing and poor adherence to prescribing regimes. This relates to the greater time and, in some instances knowledge of patients that nurse prescribers may have. Nurses may also be best placed to reach vulnerable groups such as travellers, homeless people, asylum seekers and other transient populations because they were more accessible in clinics both in terms of numbers and location. Such groups often accessed clinics rather than GP surgeries.

9.14   GPs would often have to prescribe, in the field of tissue viability, without seeing the patient because they could not visualise the wound through bandages etc - and because they were prescribing on request of nurses who were undertaking the wound management (Walsh 2006). An example of how nurse prescribing could bring added benefits is outlined in the scenario below where nurses may take more time to explain possible side-effects of medicines as well as discussing appropriate administration of the medicine. It could well be that nurse prescribers in primary care may spend far more time prescribing and workloads may increase and nurse in secondary and tertiary care could benefit from such effective early interventions with lower case loads in their own sectors.

A patient scenario. A patient is visited at home by the local district nurse (DN) for management of a leg ulcer. The nurse assessed the ulcer and identified venous disease which requires compression therapy. As she cannot prescribe she asks the GP to write a prescription for dressings and bandages. The GP is not sure what these dressings and bandages are, but comply with the request as is usual practice. The DN takes the prescription to the pharmacist who dispenses 6 weeks worth of dressings and bandages. After 2 weeks the DN suspects that the patient is developing a wound infection. The DN takes a wound swab and returns to the GP and requests antibiotics for the patient. The GP visits the patient at home and agrees with the DN's diagnosis of an infected ulcer and prescribes antibiotics, however the infection has become worse. The DN thinks that the patient also requires topical therapy so returns to the GP once more for a prescription for antimicrobial silver dressings. Previous dressings lie unused in the patient's cupboard. Once the ulcer heals the DN measures the patient for compression hosiery and writes a note to the GP to prescribe hosiery. The GP writes a prescription for '2 pairs of compression stockings'. The DN then receives a call from the pharmacist asking for the size, class, length, type and colour of stockings that are required. Eventually the DN collects the prescriptions and fits the hosiery for the patient. Much time is spent as a messenger.

As a nurse prescriber the DN would assess and manage the patient as before, but now does not need to return to the GP frequently for prescriptions for dressings or bandages. The DN also does not need to request large quantities at a time so can prescribe more cost-effectively. Once the possibility of infection becomes apparent, a topical antimicrobial dressing may be prescribed, without waiting for either swab results or a GP visit, for antibiotics. Therefore appropriate treatment may be achieved earlier on the care pathway, when required, possibly even preventing the need for systemic antibiotics. Once the ulcer heals the DN is able to measure, prescribe and fit compression hosiery to prevent recurrence of the ulcer.

9.15   Some GPs in rural areas were concerned about possible adverse effects of nurse prescribing;

> *"Maybe start to use an awful lot more and it cause all sorts of problems with MRSA and things like that. So I would think antibiotics should be restricted and maybe discussed with others around or bacteriologists or someone like that, there's a danger that might take off" (Rural GP)*

Stakeholder perspectives

Ensuring patient safety as a contribution to public health

9.16   Stakeholders at the beginning of the project all re-iterated the belief that patient safety was paramount in the introduction and extension of nurse prescribing (Refer back to chapters where this is stated). How exactly this was to be operationalised and audited was not always clear. However, the greater the number of nurse prescribers there are prescribing safely in Scotland, the more patients and carers will be covered by their practice and hence there will be a community and public health impact as well as individual benefits.

9.17   For some stakeholders, ensuring patient safety of nurse prescribing related to careful selection of competent and experienced nurses who would then be trained in prescribing decision-making whilst for others it related to high quality courses to train prescribers. For yet others ensuring patient safety related to appropriate mentoring and support and advice of novice nurse prescribers working in a supportive 'team'.

9.18   Many viewed appropriate IT and electronic scripts as critical to patient safety to identify allergies, previous prescribing history and to prevent multiple prescribing that failed to take note of such matters as self-medication. Several stakeholders commented on studies from other countries showing nurse prescribers had lower rates of prescribing errors than medical colleagues but the literature review did not uncover these studies.

9.19   Some stakeholders flagged potential problems of de-regulated drugs which patients could receive over the counter but for which the nurse prescriber could not write a script. The need to evaluate the impact of de-regulated drugs was flagged as an important step to inform future nurse prescribing work.

9.20   Others recognised that new nurse prescribers who lacked experience might not identify signs and symptoms of serious illnesses which were similar to symptoms of common illnesses.

9.21   Stakeholders from patient groups perceived the complexity of the care process and the role that nurse prescribing played in that process. They recognised that a multitude of factors came into play affecting public health and patient safety. For example;

> *'We think nurse prescribing has the potential to increase accessibility and quality of care with the proviso of appropriate first class training and support, clear lines of clinical accountability and responsibility within health teams, clear lines of communication throughout the health service and equal access to high quality services for all people with (chronic disease condition) and we would want it to be evaluated by clinical outcomes rather than cost effectiveness' (Long-term conditions patient's group).*

Case study findings

9.22   The case studies were specifically set up to explore several aspects of nurse prescribing practices and perceptions including views on public health. The public health and patient safety elements of the project research were explored through using the methods already outlined above: surveys, case studies, interviews and focus groups. This is because official statistical data availability are sparse or currently non-existent on these and related subjects. The objective, however, was researched by the various data collection methods used in the study and validated to some extent by cross referencing assessments by the prescribers themselves against that of non-nurse prescribers, doctors, pharmacists, health service managers and patients.

The nurse prescriber perspective

9.23   There is great potential for a range of 'nurse prescribing interventions' by nurses and midwives to impact on public health as data collected from the case studies demonstrates. Such interventions could relate to upstream health promotion, disease prevention and early diagnosis. The potential also applies to more downstream treatment, such as continued high quality care of long term or recurring conditions linked to such areas as tissue viability with non-pharmaceutical as well as pharmaceutical interventions playing a critical role.

9.24   In rural primary care and in a nurse-led specialist unit for instance, nurse prescribers identified public health benefits of nurse prescribing and showed they fully understood the considerable potential contribution that their work could make in this field;

> *"Public health, we're now involved in a lot of things that we weren't doing before, like smoking cessation clinics and things like that. We now take them; we share them with the health visitors, so we are doing a lot of prescribing there, a lot of nicotine replacement and stuff like that for them. And yes, I think that's somewhere where nursing is going to be expanding into public health because of the Cowie report and everything else, what they want is a sort of, you know proactive health service where you, its more to do with prevention than it is to sort of mopping up illness once it occurs and I think we are going to be involved in lots of other things there as well and it's a good chance for nursing to expand into these places, where they didn't before. ….The cumulative impact of clinical skills and knowledge is also important to the bigger public health picture as well as to individual patients and community health.* (Rural nurse 2)

> *"I think if I was to show you the evaluation where we can see the impact that we've had on the improvement in the prescribing, in levels of prescribing, improvement in up-titration, improvement of use of medication and improvement of medication, the management of, of the medications that we're prescribing within the heart failure service, the benefits to public health are huge in the fact that we've reduced readmission and improved symptom control. We also, you know part of our role as well as nurses in the heart failure nurse liaison service is education, so you are continually trying to improve. So I would say you know the likes of where we are try, we try and have an impact on the patients to stop smoking for example, which is the part, a big part of the public health agenda".* (Specialist unit nurse)

9.25   Another nurse prescriber in a rural setting did not at first recognise that her work was relevant to public health but went on to observe;

> *"Public health. No just really raising awareness as well you know what I mean. Like part of our role is for education as well for patients but I think we're at least giving them a bit of education about their tablets and what the effects are, whereas I think a lot of the time when they come into hospital they get started on tablets, nobody tells them what it is, why they are taking it or anything about that and I think you know at least that patient will ask question by then, now the majority of them know why they are taking these tablets whereas before I don't think they did. (Rural nurse prescriber)*

"The fact that they're, you know, there's regular contact with them and what we're also trying to do by doing this and by prescribing them, getting them on optimum [medication] is ideally to try and keep them out of hospital and get on top of problems quickly" (Cardiac nurse practitioner).

9.26   This indicates that better and quicker treatment will reduce hospital admissions, increase care in the community setting and so contribute to the general public health of the country.

9.27   Mental health nurses did not perceive any public health benefits as particularly relevant to nurse prescribing in mental health. This does not correspond to the public's perceptions of major public health threats from mental health patients who fail to take prescribed products for a variety of reasons. There were some specific comments on aspects of patient safety and some nurse prescribers within mental health areas believed they had more specialised knowledge than non-prescribers and GPs. Hence nurse prescribing of medication would potentially be a) more accurate and b) the most appropriate type for patients with metal illnesses. Related to this was an observation about nurse prescribers having more time than GPs to discuss and decide on other forms of non-medication treatment, for example Cognitive Behavioural Therapy and anxiety management programmes. It was felt that nurse prescribers in mental health may be less likely to prescribe medication than a GP.

The GP Perspective

9.28   In a rural practice, one GP thought nurses needed more training on the safety aspects of prescribing to protect public health. Another observed;

"I would be worried if they had access to oodles of antibiotics. Because I think the danger that, I'm not being anti-nurse or anything like that but the danger that we could end up in trying to chase our tails on infections, specifically things like Fusidic acid which is an oral medication for Staph aureus and that's one we use very, very rarely and it was a danger that maybe, that would be an example some would……. And I would be worried if they had access to a lot of stronger pain killers because there's the risk of misuse and things like that, which we are probably better at policing. Its difficult for us to police that and I think it would be best if they kept out of that area, it would be another soft avenue for some patients to use and, so I think there's some areas that they should, they should not get involved in for the benefit of everyone else" (Rural GP).

9.29   The sound evidence base for such an opinion does not yet exist and, as the introductory section suggests, may relate more to a perceived threat to the medical role rather than the established limits of the nurse prescriber.

Hospital doctors' perspectives on the Public Health contribution of Nurse Prescribing

9.30 There was a wide range of medical opinions about nurse prescribers amongst hospital doctors. Some were very positive. One doctor, for example, had a very clear view of the public health benefits of nurse prescribing;

> *"Very positive about benefits in terms of morbidity and mortality. Through better patient care down the line in my view. Hence there will be public health benefits because of better care. Also the [doctor] noted that it would probably take pressure off GPs too. They do have an educational part to their role and I think it's more an individual benefit rather than a sort of community benefit. Its good for the individuals and their family and it keeps people out of hospital, it supports them at home and yeah I see these benefits from a greater public health, the remits not to educate or look at prevention, they do individual support but it's not [a] wider". (Consultant)*

9.31 Others, probably partly dependent on their clinical location saw a narrower range of public health benefits. For instance, one junior doctor in an A&E setting saw value in nurse prescribers perhaps dealing with things like;

> *...tetanus immunisation, a couple of them in their nurse prescribing portfolios went and ...looked in-depth at tetanus immunisation in the UK and that was quite interesting and I think.... from that point of view, ... the thing that we use here and I'm sure it's in all of Scotland, the tetanus booster comes with Polio and Diphtheria. And I think its been good for the nurses because nurses give tetanus, you know the nurse prescribers sort of explain to the patients why, from a public health point of view, why they're having these extra 2 injections. .. I think educating people, you know, educating the patients about use of antibiotics, I think that's come into it as well. You know the nurse prescribers are very aware that we shouldn't be sort of giving everybody antibiotics for like wound, you know everybody for wound infection and stuff like that...... (Junior A and E Doctor)*

Conclusion

9.32 Nowhere in the survey, case studies or stakeholder interviews were any nurse prescribing incidents or problems reported that affected patient safety. However, stakeholder groups, the health professionals themselves and their managers at national, board and local levels all identified the need for effective education, supervision and auditing of nurse prescribing work. For senior managers, this was viewed as an essential part of effective clinical governance. How extensive and exactly how effective such governance of nurse prescribers is may require further research. The capacity to demonstrate good governance at all levels and locations of nurse prescribing will provide important and necessary re-assurance for the prescribers themselves, the other health professionals they work with, the patients and public at large, user stakeholder groups and the Scottish Government.

9.33 The benefits to public health of nurse prescribing and its extension are potentially considerable and appear to be recognised by all parties.

Recommendations.

9.34   The contributions that nurse prescribers could make to public health were recognised by medical and nursing staff. The benefits to control of infections and the better treatment of conditions without the use of anti-microbial drugs or with more careful targeting of microbial drugs were also recognised albeit with some qualifications by some GPs. Nurse prescribers were generally believed to be competent and confident in relation to their prescribing areas. The public showed very considerable confidence in the nurse prescribing processes that they either experienced or hypothesised about. Such findings support the nation-wide omnibus study results.

9.35   Some nurse prescribers considered that elements of medical over-prescribing had been addressed by nurse prescribers who were more likely to know the appropriate amounts of products and medications within their competency areas. In addition, their training was said to have increased awareness about both budgetary constraints and holistic care. Hence some nurse prescribers believed they were less likely to prescribe unnecessary medication than GPs. Some GPs, however, expressed concern that nurse prescribers would not be as aware of the budgetary aspects of prescribing or the dangers of over-use of certain medications.

9.36   Nurse prescribers noted benefits in relation to patient safety because new prescribers were likely to be more cautious than those who have been prescribing longer. Patient safety and accountability for decision-making, well covered on the training courses, contributed to a cautious approach.

9.37   Public health benefits in relation to nurse prescribing emerged in areas where nurses had taken on further and more expanded roles, for example in smoking cessation and sexual health areas. Although public health benefits in primary care were widely recognised in primary care, they were also noted in relation to specialist nurse-led services with one recent audit showing reduced mortality, morbidity and re-admission rates linked to nurse prescribing.

CHAPTER TEN CONCLUSIONS AND RECOMMENDATIONS

Introduction

10.1   This study provided an evaluation of the extension of nurse prescribing following the introduction of new legislation on 2001, as well as touching upon the opening up of the BNF formulary in 2006. The evaluation used surveys, case study and other approaches with nurse prescribers, students on nurse prescribing courses, other health professionals, stakeholders, course tutors and the public. It analysed a wide range of data that provided, within various limits, a significant and at times in depth insight into the development and working of nurse prescribing in Scotland.

10.2   The study clearly shows that the development of nurse prescribing in Scotland since 2002 has been a positive one in a wide range of respects. From the data analysed as part of the study, nurse prescribing expansion has benefited patients, the public and health care professionals in many ways. These benefits include improving patient access to treatment, enhancing patient care, maintaining and improving patient experiences, enhancing professional satisfaction and application of nurse skills, building inter-professional working, enabling effective use of medical staff time, and maintaining public health standards.

10.3   The study showed that for nurse prescribers, regardless of their setting, the expansion appears to have succeeded. However, the depth and breadth of that success varies and the study identified some obstacles that may restrict the successes of nurse prescribing in the future. Such variations may partly relate to institutional and resource factors and partly to personal and professional attitudes and organisational factors. The evidence indicates that in some settings, nurse prescribing could be rolled out even further and have a greater beneficial impact on patients, their carers and health professional and administrative teams if some of the obstacles were removed, if best practice could be more readily exchanged and if communications and support networks could be further facilitated.

Findings: Nurse Prescribing in Practice

Patient Care
10.4   Patient care had been improved by nurse prescribing, particularly in specialist areas and areas of particular competence. The public generally showed considerable confidence in the nurse prescribing processes that they experienced.

10.5   Nurse prescribing made patient care both quicker and easier. Patients placed more value on getting appropriate and effective care than on the qualifications of the person providing the care. Patients also found benefits through better inter-professional liaison about their care and tended to prefer team working rather than autonomous practice. Patients receiving 'complete packages' of care, particularly patients with complex health needs who required daily care, found additional benefit from nurses prescribing. This also benefited carers.

10.6   Respondents felt that patients benefited when nurses' skills in assessment, observation and diagnosis were improved as a result of learning to prescribe.

10.7   Nurse prescribers identified improved consultation skills and contact opportunities to educate patients and promote health as well as to discuss aspects of medication such as side effects and correct administration of treatments like asthma inhalers. This it was felt contributed to improved patient self-care abilities especially in mental health. Nurses' familiarity with medication developed through more careful use of the BNF together with practice in writing prescriptions.

10.8   Nurse prescribers' public health contributions were recognised by medical and nursing staff. The benefits to infection control and better treatment of conditions without the use of anti-microbial drugs or with more careful targeting of microbial drugs were also recognised. Nurses felt that they had further and more expanded roles, for example in smoking cessation and sexual health areas.

10.9   The evaluation found that there was however patchy geographical or professional implementation of nurse prescribing.

Professional impacts of nurse prescribing

10.10   The professional benefits associated with nurse prescribing related to increased satisfaction, improved professional development and a related increase in professional recognition and respect. Benefits were seen to be contingent on CPD, support and resources, including allocated time for studying, ongoing support and education and budgetary resources.

10.11   Effective support for nurse prescribers included informal colleague support, information from and close working with pharmacists, and positive GP/medical feedback. Pharmacists and health service managers generally found nurse prescribing of benefit to practices and patients. Respondents felt that it ensured a more rapid accessible service for patients with certain conditions.

10.12   Some hospital doctors and GPs championed both current nurse prescribing and its extension because of benefits for the public, the NHS, application of nurse skills and workloads across several groups. Rural GPs found major benefits to manageable workloads through the expansion of nurse prescribing.

10.13   Hindrances to nurse prescribing practice often centred on administrative issues, including budget and budgetary allocation issues which resulted in major delays in receiving prescription pads and difficulties with prescriptions not being computerised.

10.14   The medical profession generally found the extension of nurse prescribing to be safe, of benefit to patients and to themselves.

10.15   Nurse prescribers reported that their work had reduced doctor's workloads, but at the same time concerns were expressed about increased workloads for nurse prescribers.

10.16   Nurse prescribers had some fears about nurse prescribing becoming 'overly medicalised' and felt it important to retain traditional nursing roles in future prescribing developments.

Management and co-ordination of nurse prescribing

10.17   There sometimes appeared to be a lack of a coherent, integrated and stable Board level infrastructure for prescribers. In some instances, it was felt that this demonstrated a slow response to the prescribing agenda. Linked to this, some stakeholders perceived a lack of a joined up approach running from the Scottish Government, through NHS Boards and down to the prescribers themselves. Some NHS Boards lacked any leads or had leads only for some sectors. Some stakeholders identified a lack of strategic leadership to carry through prescribing in under-developed midwifery and mental health areas.

10.18   The collaboration between post holders at NHS board level, such as medical directors, directors of pharmacy and lead nurse prescribers was vital, but at times it was felt this was lacking. To some, it appeared that nurse prescribing especially outwith the primary care sector was still on the margins of the administrative system.

10.19   Systems for reviewing and monitoring prescribing practice across Scotland appeared to be assumed, but not always tested. In addition, there was no obvious and suitable medicines management system in place to track the costs of prescribing accurately and document any related benefits.

10.20   The need to have CPD to ensure prescribers' fitness for practice was identified by respondents. Contradictory views were expressed about the need for personal formularies and for generic versus specific courses for particular courses. However, among the stakeholders, the overwhelming consensus was for a generic course supplemented with CPD opportunities at key intervals.

Findings: Nurse prescribing Education

10.21   The most important aspect of the courses according to the focus group participants, was that it enhanced the course members' professional knowledge and expertise. The second most important feature of the courses was that it enabled them to acquire a systematic understanding of pharmacology. This it was felt, increased patient safety and facilitated communication with doctors and pharmacists. Thus, based on the course members' point of view, the courses was felt to be 'fit for purpose'.

10.22   The courses presented a generic model of nurse prescribing and taught a broad underpinning knowledge of pharmacology. Whilst there was evidence that some nurses expected a much narrower course of training, focused on the contexts in which they worked and limited to the actual drugs they would be prescribing, the evaluation found strong reasons for retaining the generic structure. These included preparing nurses to deal with patients with multiple illnesses and supporting the trend towards collaborative practice. Additionally, course members valued the opportunity provided by the generic nature of the course to network with nurses from other specialties, which enhanced their capacity to work collaboratively.

10.23   Mentoring was largely viewed positively, however there were cases of both nurses and mentors who found it extremely difficult to get any allocated time for mentoring. Mentors also reported difficulties in knowing what was expected of their role. Suggested

solutions included the use of two mentors: one clinical and one nurse prescriber who had experienced the prescribing course.

NURSE PRESCRIBING POSITIVES AND CHALLENGES

The Positives

10.24   The research indicates that nurse prescribing and the extension of nurse prescribing are working well in a range of settings with regard to a number of factors:

- Nurse prescribers themselves found the educational preparation for the role demanding but effective and fit for purpose.
- The benefits of mentoring, formal and informal, were very positively viewed in the case studies.
- Nurse prescribers found their prescribing work made them more effective as nurses, utilises their skills, enhanced team working and assists patients to obtain more rapid treatment along with high quality care.
- The majority of views expressed by non-prescribing nurses were in favour of nurse prescribing.
- An incidental benefit of nurse prescribing was that it fostered greater collaborative working between professions, and there was a close working relationship between nurses and pharmacists.
- Pharmacists and health service managers generally found nurse prescribing of benefit to practices and patients and ensured a more rapid accessible service for patients with certain conditions.
- The contributions that nurse prescribers could make to public health were recognised by medical and nursing staff. The benefits to control of infections and the better treatment of conditions without the use of anti-microbial drugs or with more careful targeting of microbial drugs were also recognised albeit with some qualifications by some GPs.
- The medical profession generally found the extension of prescribing to be safe, of benefit to patients and to themselves in terms of making their own workloads more manageable. Some hospital doctors and GPs were strong champions both of current nurse prescribing and of nurses developing further in this field in the future. They saw a whole range of benefits for the public, the NHS, application of nurse skills and workloads across several groups.
- Rural GPs found major benefits in managing high workloads through the expansion of nurse prescribing. The nurse prescribers reduced the GP prescribing workload.
- The public generally showed considerable confidence in the nurse prescribing processes that they experienced. Such findings have been born out by the nation-wide omnibus studies.

The Challenges

10.25   The research indicates that nurse prescribing and the extension of nurse prescribing are working well in a range of settings however there are a series of challenges including:

- The administrative delays in processing prescription pads immediately post qualifying for nurses resulted in some unnecessary long delays in enabling nurse prescribers to prescribe.
- Concerns about increased workloads on nurse prescribers exist. This was linked to the phenomenon of potentially moving high caseloads around from one professional group to another without addressing underlying staffing issues.
- A small number of non-prescribing nurses expressed concerns about the risk of potential errors because of relative inexperience of nurse prescribers compared with GPs and medics.
- There has been patchy geographical or professional implementation of nurse prescribing and this has a health care equity dimension.
- The informal networks to support nurse prescribers through nursing, medical and pharmacy colleagues worked well. However, the perceived wishes of nurse prescribers for continuing professional development and ongoing support need to be addressed in some way.
- In addition, the value of internal local, regional and cross-Scotland networks for exchanging information about best practice and remedies to professional, administrative, budgetary and other issues is substantial. As nurse prescribers grow both in numbers and activity, the need for such effective infra-structures will be sharpened.
- With the expansion of prescribing not only to nurses but other allied health professionals, the 'mentoring needs' will grow and mechanisms should be put in place that recognise and reward these roles and ensure they are fit for purpose.
- There appears to be a lack of a coherent, integrated and stable board level infrastructure for prescribers and, in some instances, there have been slow response of NHS Boards to the prescribing agenda.
- Linked to this, various stakeholders perceived a lack of a joined up approach running from the Scottish Government, through the NHS Boards and down to the prescribers themselves.
- There appears in part to be a fragmentation of nurse prescribing policy, implementation and management is a cause for concern in some NHS Boards although it is gradually being addressed. Some NHS Boards lacked any leads or had leads only for some sectors.
- Some stakeholders identified a lack of strategic leadership or champions to carry through prescribing in such areas as midwifery and mental health, which are seriously under-developed.
- Demonstrated and regularly reviewed and monitored good governance applied to nurse prescribing practice across Scotland appeared to be assumed and not tested.
- The collaboration between post holders at NHS board level, such as medical directors, directors of pharmacy and lead nurse prescribers is vital, but may at times be lacking as may be effective management systems. To some, it appeared that nurse prescribing especially outwith the primary care sector is still on the margins of the administrative system.
- There was no obvious and suitable medicines management system in place to track the costs of prescribing accurately and document any related benefits.
- Access to detailed and specific data related to numbers, location and type of prescribers and activity levels is either currently limited or lacking.

RECOMMENDATIONS AND SUGGESTIONS FOR FUTHER RESEARCH

10.26   The research team suggest the following recommendations around nurse prescribing in practice:

- Further development and underpinning of appropriate nurse prescribing support and networking groups is needed;
- Prescription pads should be made available to nurse prescribers in a timely manual and delays in issuing replacement pads should be addressed;
- Computerisation of prescriptions, lack of access to a patients prescription records (prescriptions from other healthcare professionals) and poor IT provision in areas of the NHS (and do not just apply to nurses) could be addressed;
- Additional information/education for GPs about the particular nature of nurse prescribing in primary care and how it may benefit their practices could be provided;
- Where appropriate, patchy geographical and/or professional implementation of nurse prescribing should be addressed;
- Coherent, integrated and stable board level infrastructure for prescribers could be implemented in all Board areas.
- Boards could identify professional and managerial champions for nurse prescribing and local strategies and team working at a lower level on prescribing practice;
- A joined up approach running from the Scottish Government, through the boards and down to the prescribers themselves would offer many benefits;
- Close collaboration between post holders such as the Chief Medical Officers and Chief Pharmacists and lead nurse prescribers should be encouraged and linked to effective management systems;
- Nurse prescribing especially out with the primary care sector should be fully supported by administrative systems;
- Fragmentation of nurse prescribing policy, implementation and management in some boards should be addressed including ensuring leads are in place for all prescribing professional groups;
- Board level administration to track nurse prescribing perhaps through a part-time post would bring benefits.
- The role of Community Health Partnerships could be enhanced as it may be critically important in terms of expanding the opportunities for nurse prescribing in certain budgetary areas;
- Further developments of strategic leadership and champions to carry through prescribing in midwifery and mental health which are seriously under-developed would be worthwhile;
- Demonstrated and regularly reviewed and monitored good governance related to nurse prescribing practice across Scotland is needed; and
- Suitable medicines management systems, if they do not already exist, to track the costs of prescribing accurately and document any related benefits would also bring significant benefits.

10.27 The research team also suggest the following recommendations following the research around the nurse prescribing courses of preparation:

- Courses should make their requirements explicit to students, especially where the course involves a low ratio of on-site to off-site study;
- The courses should continue to treat nurse prescribing generically, providing a systematic coverage of pharmacology and a full range of the nurse specialties represented on each course. Best practice in meeting the needs of specialists within the generic framework should be shared between centres.
- Whilst different universities should be free to develop their provision in ways that meet the needs of their particular intakes, curriculum development projects should be undertaken at a national level to create a body of educational practice and curriculum materials on which course leaders could draw as appropriate. These resources could underpin the cumulative development of the courses and guard against the loss of expertise when key members of course teams leave. This work could usefully concentrate on the following:
  - Materials for pre-course preparation;
  - Ways of customising the course to the needs of different specialities;
  - Pedagogic techniques for meeting the learning needs of mature course members who are anxious about the academic study of pharmacology, portfolio writing and formal examinations after a long period away from study;
  - Further articulating the generic model of nurse prescribing as the underpinning for all nursing prescribing practice, and as a common reference point for the different parts of the course;
  - How to facilitate and assess the compilation of a personal core formulary within a generic course, and how to incorporate this learning experience in a comprehensive nurse prescribing curriculum;
  - Course-specific assessment techniques, including the possibility of constructing a question bank for access by all the courses; and
  - Course-specific formative evaluation techniques.
- Internal course evaluations should include anonymous course member evaluation instruments which cover the issues of course quality identified in the focus groups and this should be monitored by NES.
- Closer liaison is needed between NHS Boards and some course providers to ensure that the course rationale is fully understood by the former and a need for a planned admission process with sufficient advance notice to course leaders;
- Services need to ensure that nurse prescribing practices are underpinned by adequate clinical governance and the courses should refer to this;
- The PDPs of nurses who have completed the course in nurse prescribing should include plans for relevant CPD and this should be arranged by the services concerned;
- Nurse prescribing training, CPD and updating should be enhanced and include protected time for private study in addition to the time they are given for attending course contact days, ongoing support and education, and budgetary resources be made available;
- The issue of allocated time with designated mentors needs to be addressed (Designated Medical Practitioner DMP). One solution proposed related to nurse prescribers in training having two mentors: one clinical and one nurse prescriber who had experienced the course; and

- Changes in the education of nurse prescribers may impact on service delivery and subsequent uptake of courses. There should be adequate consideration and funding for the backfill of nurses undertaking prescribing training.

10.28   The following areas, in the opinion of the research team, are worthy of further and fuller or new investigation.

- Further research would enhance the evidence base and ensure better informed decision-making, review and policy development in the prescribing field;
- Further detailed analysis of nurse prescribing in Scotland from a health economics perspective to identify what is being prescribed, where and at what cost;
- Analysis of the scope of competence of individual nurse prescribers;
- Nurse prescribing errors should be investigated in the context of how all health professionals are now prescribing;
- How nurses assess and use information on pharmaceutical products and where they obtain such information merits investigation in terms of impacts on practice;
- 'Patient education' by nurse prescribers about drug usage and management of conditions should be investigated and compared with medical practices and case studies of outcomes from the 2 groups if they work in different ways;
- A number of nurse prescribers saw benefits in relation to patient safety because they believed newer prescribers would perhaps be more cautious than those who have been prescribing for lengthy periods. This should be researched; and
- Self-prescribing and internet prescribing by patients should be reviewed in the context of their impact on all prescribers' practices (medical, pharmacist and nurse), public health and patient safety.

10.29   There is a high level of agreement between patients, the public, nurse prescribers, physicians and other health professionals and health managers about the benefits of nurse prescribing to patients. However, some organisational and procedural challenges remain to ensure the maximum effectiveness of prescribing is fully achieved. Evidence indicates that in some settings nurse prescribing could be rolled out even further and have a greater beneficial impact if some of the obstacles were removed, if best practice could be more readily exchanged, and if communication and support networks could be further facilitated.

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ANNEX 1   NATIONAL QUESTIONNAIRE

+   +

EVALUATION OF THE EXTENSION OF INDEPENDENT NURSE PRESCRIBING IN SCOTLAND

CURRENT WORK-RELATED INFORMATION

Q.1   Which of the following best describes your geographical area/areas of practice   (PLEASE CROSS ALL BOXES THAT APPLY)

(12)

Remote.... ☐ 1
Rural.... ☐ 2
Suburban.... ☐ 3
Urban.... ☐ 4

Q.2   Please give the postal code(s) of your work address(es) – please note that this information will only be used by the survey company for classification purposes and is not reported back to the research team.

1 [   ]   2 [   ]   3 [   ]
(13-19)   (20-26)   (27-33)

Q.3   Which of the following describe the healthcare setting within which you work? (PLEASE CROSS ONE BOX)

(34)

Acute Hospital.... ☐ 1
Community Hospital.... ☐ 2
Health Centre/GP Practice.... ☐ 3
Nursing Home.... ☐ 4

Other PLEASE SPECIFY.. ☐ 5

Q.4   Please list your current and previous two posts within nursing and midwifery, their band/grade and the number of years spent in each post *(most recent first)*

	Job Title		Band/Grade		Years in Post	
Current				(37)		(38)
Previous (1)				(41)		(42)
Previous (2)				(45)		(46)

Q5   a) Please specify the type of Nurse Prescriber that you are currently, or were most recently. (PLEASE CROSS ONE BOX)

(47)

Independent Prescriber – HV or DN.... ☐ 1

Extended Formulary Nurse Prescriber..... ☐ 2

Extended & Supplementary Nurse Prescriber..... ☐ 3

Supplementary Nurse Prescriber..... ☐ 4

+   1   10/5/2005 FV   +

b) Were you previously a District Nurse or Health Visitor Prescriber?

	Yes	No
District Nurse Prescriber	☐ 1	☐ 2 (48)
Health Visitor Prescriber	☐ 1	☐ 2 (49)

Q.6 How long have you been, or were you, a Nurse Prescriber in each of the following categories?

	Never	0-12 months	1-5 years	More than 5 years (please specify in years and months)		
Independent Prescriber – HV or DN	☐ 1	☐ 2	☐ 3 (50)	Years	Months	(51-52)
Extended Formulary Nurse Prescriber	☐ 1	☐ 2	☐ 3 (53)	Years	Months	(54-55)
Extended & Supplementary Nurse Prescriber	☐ 1	☐ 2	☐ 3 (56)	Years	Months	(57-58)
Supplementary Prescriber	☐ 1	☐ 2	☐ 3 (59)	Years	Months	(60-61)

PAST EXPERIENCE AND TRAINING

Q.7 How significant (if at all) were the following factors in influencing your decision to become a Nurse Prescriber. (PLEASE CROSS ONE BOX FOR EACH FACTOR)

	Very significant	Quite significant	Not very significant	Not at all significant	
Employer pressure	☐ 1	☐ 2	☐ 3	☐ 4	(62)
Improvement in job prospects	☐ 1	☐ 2	☐ 3	☐ 4	(63)
Improvement in patient care	☐ 1	☐ 2	☐ 3	☐ 4	(64)
Job satisfaction	☐ 1	☐ 2	☐ 3	☐ 4	(65)
Continuing professional development	☐ 1	☐ 2	☐ 3	☐ 4	(66)

Q.8 Where did you *complete* your Nurse Prescribing training? (PLEASE CROSS ONE BOX)

(67)

Abertay..... ☐ 1
Paisley..... ☐ 2
Robert Gordon..... ☐ 3
Dundee..... ☐ 4
Stirling..... ☐ 5
Queen Margaret University College..... ☐ 6
Glasgow Caledonian..... ☐ 7
Napier..... ☐ 8

Other PLEASE SPECIFY..(68) ☐ 1

Please enter the date on which you completed the course Month [   ] (69) Year [   ] (70)

+ +

Q9 Overall, how effective was the education programme in adequately preparing you for your role (PLEASE CROSS ONE BOX)

(71)

Very effective ☐ 1

Quite effective ☐ 2

Not very effective ☐ 3

Not at all effective ☐ 4

Don't know ☐ 5

Card 2
1-10 Repeat
11 (2)

Q.10 Please rate how effective your nurse prescribing education/training was in enabling you to... (PLEASE CROSS ALL THE RELEVANT BOXES)

	Very effective	Quite effective	Not very effective	Not at all effective	Don't know	
Assist patients to gain faster access to medicines	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(12)
Build on your existing skills (e.g. clinical knowledge, professional autonomy, communication skills)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(13)
Assess patients' needs in consultation with patients and carers	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(14)
Prescribe within relevant legislation	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(15)
Prescribe safely	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(16)
Make effective use of the Nurse Prescriber's Formulary	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(17)
Make effective use of advice from other professions on appropriate prescribing	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(18)
Critically evaluate the social and clinical circumstances that impact on how medicines should be prescribed	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(19)
Apply your knowledge in practical prescribing	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(20)
Work effectively with teams in prescribing, supplying and administering medicines	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(21)

CURRENT PRACTICE

Q.11 Do you prescribe within your current job? (PLEASE CROSS ONE BOX)

(22)

Yes.... ☐ 1

No.... ☐ 2

Unable to.... ☐ 3

+ 3 10/5/2005 FV +

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Q.12 On average, how many prescriptions do you write each week?(PLEASE CROSS ONE BOX)

(23)

1 or less..... ☐ 1
2-10..... ☐ 2
11-30..... ☐ 3
31+..... ☐ 4

Q.13 What impact has becoming a Nurse Prescriber had on the following aspects of your role? (PLEASE CROSS ALL THE RELEVANT BOXES)

	Very positive effect	Slightly positive effect	Made no difference	Slightly negative effect	Very negative effect	
Your time	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(24)
Ease of working	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(25)
Amount of administration	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(26)
Quality of patient care	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(27)
Professional autonomy	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(28)
Job satisfaction	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(29)
Other (please specify)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	(30)

Q.14 Overall, how satisfied or dissatisfied are you with being a Nurse Prescriber?

(31)

Very satisfied..... ☐ 1
Satisfied..... ☐ 2
Neither satisfied nor dissatisfied..... ☐ 3
Dissatisfied..... ☐ 4
Very dissatisfied..... ☐ 5

Q.15 Would you say that the following have had a positive or negative effect on your prescribing work? (PLEASE CROSS ALL RELEVANT BOXES)

	Positive	Negative	Neither	
Your time schedule	☐ 1	☐ 2	☐ 3	(32)
Peer support, e.g. support from colleagues	☐ 1	☐ 2	☐ 3	(33)
Availability of up-to-date prescribing information	☐ 1	☐ 2	☐ 3	(34)
Being trained/educated	☐ 1	☐ 2	☐ 3	(35)
Appropriate infrastructure and prescribing systems	☐ 1	☐ 2	☐ 3	(36)
Other (please specify)	☐ 1	☐ 2	☐ 3	(37-38)

....

Q.16 To what extent do you agree with the following? (PLEASE CROSS ALL RELEVANT BOXES)

	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree
Being a nurse prescriber allows me to save patient's time	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5 (40)
As a nurse prescriber, it is more convenient for the patient to see me rather than the medical practitioner	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5 (41)
Being a nurse prescriber ensures that the patient sees the most appropriate medical professional	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5 (42)
Being a nurse prescriber provides patients with more time to understand prescriptions and treatment	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5 (43)
Being a nurse prescriber allows me to provide continued care to patients	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5 (44)
Being a nurse prescriber allows me to provide more information to patients	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5 (45)
Being a nurse prescriber eases patient pathway of care	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5 (46)
Other (please specify)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5 (47-48)

....

Q.17 How likely is it that you will carry on with Nurse Prescribing? (PLEASE CROSS ONE BOX)

(49)

Definitely.... ☐ 1
Probably.... ☐ 2
Possibly.... ☐ 3
Unlikely.... ☐ 4
Don't know...... ☐ 5

Q.18 What prescribing developments would you like to see in the future?
(PLEASE CROSS ALL RELEVANT BOXES)

(50)

More Nurse Prescribers..... ☐ 1
Larger Nurse Prescribing Formulary..... ☐ 2
Greater Nurse Prescribing Powers..... ☐ 3
Greater support for Nurse Prescribers..... ☐ 4
Increase public awareness of role..... ☐ 5
Increase professional awareness of the impact of nurse prescribing..... ☐ 6
Don't wish to see any future developments in nurse prescribing.... ☐ 7

Other (please specify).. ☐ 8

Q.19 If you are not currently prescribing, do you intend to return to Nurse Prescribing?
(PLEASE CROSS ONE BOX IF APPLICABLE)

(54)

Definitely.... ☐ 1
Probably.... ☐ 2
Possibly.... ☐ 3
Unlikely.... ☐ 4
No...... ☐ 5
Don't know...... ☐ 6

BIOGRAPHICAL AND GENERAL INFORMATION

Q.20 Please CROSS the relevant box to indicate your age. (PLEASE CROSS ONE BOX)

(55)

20-29..... ☐ 1
30-39..... ☐ 2
40-49..... ☐ 3
50-59..... ☐ 4
60+..... ☐ 5

Q.21 What is your current occupation(s)? (PLEASE CROSS ALL RELEVANT BOXES)

(56)

Nurse..... ☐ 1
Health Visitor..... ☐ 2
Midwife..... ☐ 3

Card 3
1-10 Repeat
11 (3)

Q.22 Please indicate all your professional registered qualifications and the dates you qualified
(PLEASE CROSS ALL THAT APPLY)

	CROSS	Date of Qualification (MM/YYYY)	
RN/RGN/SRN Adult	☐ 12		13-18
RN/RMN Mental Health	☐ 19		20-25
RN/RSCN Children	☐ 26		27-32
RN/RNMH Learning Disabilities	☐ 33		34-39
RM Midwifery	☐ 40		41-46
EN/SEN	☐ 47		48-53
DN Qualification	☐ 54		55-60
HV Qualification	☐ 61		62-67
Practice Nurse Qualification	☐ 68		69-74

Card 4 1-10 Repeat 11(4)

Recordable Qualifications - Teaching	☐ 12		13-18
Recordable Qualifications - Nurse Prescribing	☐ 19		20-25
Recordable Qualifications - Specialist Practice	☐ 26		27-32

(state category)..

6   10/5/2005.FV

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I'd like to ask you some questions about who can prescribe medication

1   Have you ever received a prescription written by a doctor? Y/N (ask Q7 after Q3-6)

2   Nowadays, nurses, health visitors and midwives in Scotland can prescribe medication. Previously only doctors could. Before today, were you aware of this? Y/N

3   Have you ever received a prescription yourself or as a carer of someone else written by a nurse, health visitor or midwife? Y (Self) Y (Carer) /N/don't know. If yes to Q3, continue. Others skip to QX (next section on Omnibus)

4   Thinking about when you **received a prescription written by a nurse, health visitor or midwife,** where were you prescribed? (SHOW CARD) CODE ALL THAT APPLY

   GP or Health Centre
   Nursing Home
   Your own home
   Outpatient clinic
   Hospital Ward
   Occupational Health Department
   Accident and Emergency
   Minor Injuries Unit
   Community Hospital
   Somewhere else – please specify

5.   And, overall, how satisfied or dissatisfied were you with being prescribed medicines by a nurse/health visitor/midwife?
(5 point scale from very satisfied to very dissatisfied)

6.   (Ask all except those with no opinion/neither/nor.) Why was that? (PROBE FULLY, RECORD VERBATIM)

   Ask if Q3=Y
   How did being prescribed by a nurse/health visitor/midwife compare with being prescribed medicines by a doctor? (Please think about the **last time** you were prescribes by a nurse/health visitor/midwife and by a Doctor)

   Was it …. (READ OUT) Much better, a bit better, about the same, a bit worse or much worse? 5 point Likert scale?

7.   (ASK ALL EXCEPT 'ABOUT THE SAME') Why do you say that? (PROBE FULLY, RECORD VERBATIM)

UNIVERSITY OF STIRLING

DEPARTMENT
OF NURSING AND MIDWIFERY
AND
INSTITUTE OF EDUCATION

Extended and Supplementary Nurse Prescribers' Course

1) What is your current post?

Nurse	Health Visitor	Midwife

2) Please tick all boxes that *best* describe your geographical area(s) of practice

Rural and remote	Rural	Suburban	Urban

3) Please tick the box(es) describing the healthcare setting within which you work

Acute Hospital	Community Hospital	Health Centre/ GP Practice	Nursing Home	Other (please specify)

4) Please list the type of prescribing role(s) and associated duties you expect to perform after completing the course..

…………………………………………………………………………….................
…………………………………………………………………………………………..
…………………………………………………………………………………………..
…………………………………………………………………………………………..
…………………………………………………………………………………………..

5) Does the nurse prescribing course complement any other Continuing Professional Development course(s) you have already completed, and/or that you intend to do?

Yes	No

If yes, please name the other course(s) and explain how this course you are undertaking now will complement the other(s)..
....
.
………………………………………………………………...
.
……………………………………………………………………………………………..
.

6) How many hours off work per week has your employer given, so that you can take

this course?...

……………………………………………………………………………………………..

7) Please indicate all your professional registered qualifications

	Tick	Date of Qualification
RN/RGN/SRN Adult		
RN/RMN Mental Health		
RN/RSCN Children		
RN/RNMH Learning Disabilities		
RM Midwifery		
EN/SEN		
DN Qualification		
HV Qualification		
Practice Nurse Qualification		
Recordable Qualifications – Specialist Practice		
Recordable Qualifications - Teaching		
Recordable Qualifications – Nurse Prescribing		

8) What other education have you had to date, including Information Technology/
   Computing? Please see list below and tick where relevant.

Standards/GCE/GCSE	
Highers/'A/S' levels	
Advanced Highers/'A' levels	
First degree	
Higher degree	
Previous Information Technology/ computer training e.g. NHS	If yes, please also give course name(s) and level:
Information Technology/computing qualification e.g. ECDL	If yes, please also give course name(s) and level:
Other	

9) What is your age? (Please tick one box)

20-29	30-39	40-49	50-59	60+

THANK YOU

SAMPLE PARTICIPANT INFORMATION SHEET AND COURSE MEMBER CONSENT FORM

Evaluation of Programmes of Preparation for the Extension of Independent Nurse Prescribing in Scotland

We would like to invite you to take part in this research study. Before you decide whether to participate, it is important that you understand why the research is being done and what your participation would involve. Please take time to read the following information and let us know if you have any questions that have not been answered here.

What is the purpose of the project?
Although the recent expansion of nurse prescribing in Scotland is the subject of much discussion, there has been little detailed evaluation of its practice and effects to date. This project will evaluate the programmes of preparation for nurse prescribing ('courses') currently provided by seven institutions of higher education in Scotland. Future developments in education and training for nurse prescribing might benefit from a fuller understanding of the issues surrounding the existing courses and those others involved in or affected by them.

Why have I been chosen?
We would like to conduct short interviews with individuals who are associated with (or affected by) nurse prescribing education and training within their NHS role. As an NHS stakeholder, you have been chosen because it is thought that you may be able to contribute a perspective on this topic, based on your experience and opinions.

Do I have to take part?
Your decision to participate in this project is entirely voluntary and will not affect you or your work in any way. This sheet will hopefully answer any questions that you might have and the attached interview schedule will give you some insight into the issues/topics that we would like to cover. You are also welcome to contact us should you have any queries about participating that have not been addressed by this information.

What will I have to do if I agree to take part?
If you agree to take part, we ask that you reply to this invitation via e-mail or letter, stating that you give consent to being contacted and interviewed. We require this consent from you in writing and will keep a copy of it in our confidential records as part of the research protocol. The research fellow will then contact you in due course to arrange a suitable time for you to take part in one semi-structured interview.
By agreement with you, this will be carried out either by the telephone or in your office. If you agree, the interview will be tape-recorded. The duration of the interview will be agreed with you in advance.

What are the possible benefits of taking part?
Your participation might help to advance others' understanding about nurse prescribing education issues from an NHS perspective. You might also find it valuable to have the opportunity to contribute your opinions and information to this evaluation.

What are the possible disadvantages and risks of taking part?
This part of the study is solely designed to obtain information from you about your views of nurse prescribing education and we do not envisage any disadvantages or risks associated with taking part in the research.

Will my taking part in this study be kept confidential?
Your tape recorded and transcribed responses to the interview questions will be handled confidentially at all times and will be viewed or listened to only by the researchers on the project. Although the general findings of the interviews will be published as part of an overall report to the Scottish Executive, individual sources of information will *not* be identifiable. If we wish to use any direct quotes relating to something you have told us, you will be consulted first and the quote only used with your approval. We also aim to ensure your anonymity in the research by replacing names with code numbers.

What will happen to the results of the research study?
The data obtained from this study will be analysed and the main findings will be written up as a general report. This report will be submitted to the Scottish Executive in 2007 and may also eventually be published within academic and nursing journals that will be available to you. All data will be stored securely and will be destroyed after a suitable period of time.

Who is funding and organising the research?
The project is being funded by the Scottish Executive Department of Health and the evaluation of the courses in nurse prescribing is being carried out by the University of Stirling's Institute of Education.

Who has reviewed the study?
The study has been reviewed and given a favourable opinion by Fife & Forth Valley Research Ethics Committee and the University of Stirling's Nursing and Midwifery and Institute of Education Departmental Research Ethics Committees.

Contact for Further Information
If you have any further questions about the study, please do not hesitate to contact Dr Lesley Doyle, Research Fellow, Institute of Education, University of Stirling on 01786 466132 or e-mail l.e.doyle@stir.ac.uk.

Thank you for taking the time to consider our request for your participation in this research.

Dr Lesley Doyle

UNIVERSITY OF STIRLING

DEPARTMENT OF
NURSING AND MIDWIFERY
AND
INSTITUTE OF EDUCATION

Evaluation of Extended and Supplementary

Nurse Prescribers' Course

CONSENT FORM

This study aims to evaluate all courses of preparation for nurse prescribing in Scotland. The intended outcomes are to improve the provision of nurse prescribing courses throughout Scotland as well as the learning experience for all nurse prescribers who participate in them.

I consent to:

complete the anonymous
questionnaire   yes/no

be interviewed during
the course   yes/no

take part in a focus group
discussion on the evaluation day   yes/no

I understand that I will be free to withdraw from the project at any time.

I understand that any information I give will be anonymised.

I understand that I am free to consent to some, all or none of the above.

NAME ……………………..   SIGNED ……………
                                        DATE …………….…

ANNEX 6 **INTERVIEW SCHEDULE FOR COURSE LEADERS AND LECTURERS IN PHARMACOLOGY**

1. Preamble

The researcher explained the aims and methods of the evaluation project, and how it is progressing.

2. Bringing students to the required level of competence

2.1   How easy or difficult is it to bring all the students up to the standard required?
2.2   Here is a list of the nurse prescribing competencies – can you mark the ones where you have the most difficulty in bringing students up to the required standard?
2.3   With reference to all the problematic competencies:
    2.3.1   Why is it difficult to bring students up to this level of competence?
    2.3.2   What action is needed to improve your capacity to bring students up to the required level of competence?

3. Dealing with diversity in the student intake

3.1   How diverse is your intake?
3.2   How is the course adapted to meet these diversities?
3.3   What action is needed to improve the course's capacity to deal with these diversities?

At the:
    NHS level
    NES level
    Nurse profession level
    Trust level
    Employer level
    University level
    Faculty/ department level
    Course level
    Individual staff level
    Individual student level

4. Dealing with students' concerns

4.1   What are your students' main concerns?
4.2   How does the course deal with these?
4.3   What action is needed to improve the course's capacity to deal with these concerns?

At the:
NHS level
NES level
Nurse profession level
Trust level
Employer level
University level
Faculty/ department level
Course level
Individual staff level
Individual student level

5. Directing the course

5.1   What are the main problems in directing this course?
5.2   What action is needed to overcome these problems?

At the:
NHS level
NES level
Nurse profession level
Trust level
Employer level
University level
Faculty/ department level
Course level
Individual staff level
Individual student level

6. Other information

6.1   Is there any other information you would like to give us in relation to the course evaluation?

National Evaluation of Nurse Prescribing in Scotland   UNIVERSITY OF
STIRLING

Nurse Prescriber; Case Study Information Sheet   DEPARTMENT OF
NURSING AND MIDWIFERY

What is the purpose of the project?
Although the recent expansion of nurse prescribing in Scotland is the subject of much
discussion, there has been little evaluation of its practice and effects to date. The purpose of
this project is, therefore, to identify any benefits and challenges of nurse prescribing in
Scotland so that the impact on nurse prescribers, patients, healthcare staff and health services
can be assessed. In turn, this evaluation will provide evidence to inform recommendations for
the future of Nurse Prescribing in Scotland.

What will I have to do if I agree to take part?
We would now like to move onto this next stage of the project by gathering information on
the views and opinions of nurse prescribing from a range of health professionals, patients and
stakeholders. This will take the form of in-depth case studies, within a variety of different
healthcare settings. Key to this stage of the research is the participation of nurse prescribers in
the following two activities -

1) Nurse Prescribing Log - the log is designed to reflect your prescribing activity within a
short period of time and it is a matter of filling in a brief record of your
engagement/assessments with patients. There is a *blue* instruction sheet for completion of the
log and we would ask that you read this carefully – this will give you the details about what is
involved.

2) One-to-one interview - the researcher will ask you some open-ended questions about your
views on nurse prescribing. This will be a one-to one interview with the researcher and it is
estimated to take no longer than an hour of your time. In order to allow analysis of data,
interviews will be tape-recorded and then transcribed. As you will read below, your interview
responses will be anonymised and handled confidentially at all times.

In addition to your own participation, the nature of the case studies means that we would also
invite other health professionals, patients and stakeholders within your practice area to take
part in a short interview. The purpose of this is to evaluate nurse prescribing from a range of
perspectives.

What happens next?
If you decide that you would be willing to participate in a case study, we ask that you read, sign and return the enclosed *green* consent form as soon as possible in the prepaid envelope provided (you do not need a stamp). When this consent has been received by us, we will contact you to discuss your nurse prescribing log and arrange an interview time and date that is suitable for you. We will then arrange to contact other health professionals, stakeholders and patients within your practice area and invite them to take part in an interview about nurse prescribing.

Why have I been chosen?
You recently returned a reply form indicating that you might be interested in taking part in a nurse prescribing case study. In order for you to now decide whether you would like to participate, we have sent you this more detailed information.

Will my taking part in these activities be kept confidential?
Your decision about whether to participate in this project will only be known by the research team. Your log and responses to the interview questions will be handled confidentially at all times and will only be viewed or listened to by the researchers on the project. If we wish to use any quotes relating to something you have told us, you will be consulted first and the quote only used with your approval. We also aim to ensure your anonymity in the research by storing your interview data by anonymous code, i.e. not your name, and by replacing the name of your healthcare setting with a general description, e.g. 'a GP practice within a rural community.' Every effort will be made to protect the identity of individual respondents but there may be some situations where it possible for others to identify likely respondents due to the nature of you role, e.g. if your job title is exclusive.

Why should I take part?
The results of this evaluation will be returned to the Scottish Executive where they could be used to influence future developments in nurse prescribing. Your participation at this stage of the project may therefore help to contribute important opinions and information from a nurse prescriber's point of view.

Do I have to take part?
Your decision to participate in this project is entirely voluntary and will not affect you or your work in any way. If you decide to take part, the other health professionals, stakeholders and patients that we contact within your area are also under no obligation to participate; their decision about whether to take part in an interview is also entirely voluntary. If you have further concerns or queries that have not been addressed within this information however, you are welcome to contact us - details are provided below.

Are there any disadvantages to taking part?
This part of the study is solely designed to obtain information from you about your views of nurse prescribing and we do not envisage any disadvantages or risks associated with taking part in the research. The only aspect of the research that you may feel inconvenienced by is the time involved in participating. You are, however, free to withdraw from the study at any time and without giving a reason.

What will happen to the results of the research study?
The data obtained from this study will be analysed and the main findings will be written up as a general report. This report will be submitted to the Scottish Executive and may also eventually be published within academic and nursing journals. An individual copy of this report can also be sent to you on request. All data will be stored securely and will be destroyed after a suitable period of time.

Who is funding and organising the research?
The project is commissioned by the Scottish Executive Department of Health and is being organised by the University of Stirling's Department of Nursing and Midwifery. An evaluation of nurse prescribing education and training is also being carried out by the University of Stirling's Institute of Education.

Who has reviewed the study?
The study has been reviewed and given a favourable ethical opinion by the NHS COREC system. In addition, the research approach has been approved by the Nursing and Midwifery and Institute of Education Departmental Research and Ethics committees.

Reply contact details
If you have any further questions about the study at this time, please contact;
Fiona Turner, Research Fellow, Department of Nursing and Midwifery, University of Stirling on 01786 466280 or e-mail fiona.turner@stir.ac.uk. Should you wish to speak to someone who knows about the study but is independent of the research team, please contact; Jen Shearer, Research Services Manager, Research Office, University of Stirling on 01786 466692 or e-mail j.m.shearer@stir.ac.uk.

Please remember to return the *green* consent form if you would like to take part. Thank you for taking the time to consider our request for your participation in this research.

Professor Andrew Watterson   **Fiona Turner**
Professor in Health Effectiveness   Research Fellow

ANNEX 8   **NURSE PRESCRIBING LOG INSTRUCTIONS**

National Evaluation of Nurse Prescribing in Scotland

Nurse Prescribing Log: Instructions for completion

(Please read this information before filling in your log)

➢   The enclosed nurse prescribing log is designed to give the project some information about your daily work, including the times that you *do not* prescribe for a patient as well as the times that you do. We would like you to fill it in after each time you carry out a patient assessment/consultation for a period of two weeks.

➢   It is important that you fill in the log after each time that you engage with a patient, **even in cases where you have not given the patient a prescription.** You will see that there is a specific column that applies to the times when you do not prescribe anything.

➢   It may be that you do not prescribe at all over the two-week period. If this happens, this information is still very important to us. You should still return the log to us indicating on it that you did not prescribe anything during the two weeks.

Please ensure that you are the only person who fills in your log – we are interested in your own work, even if you do not prescribe anything within the 2 weeks.

➢   Most of the columns give you a choice of answers by using a numerical key; this key is on page 2 of your logbook so that you can refer to it when filling in your log.

➢   Please fill in all code numbers that apply for each patient assessment that you do. (e.g. see the examples on page 3). For any columns that do not apply, just enter N/A.

➢   If you are nearing the end of your log and think you might need more pages to complete your entries, please contact Fiona Turner (see details below.)

➢   Don't worry if you make mistakes – Simply score them out and use another row if necessary.

➢   **If you have any problems with filling in any part of the Log or require more pages, then please do not hesitate to ask for help from Fiona Turner on 01786-466280 or fiona.turner@stir.ac.uk**

To help you understand how your Nurse Prescribing Log should be completed, please now read the following scenarios which relate to the examples on page 2 of the log.

<u>**Nurse Prescribing Log: Scenarios**</u>

*Please note, these scenarios should be **r**ead in conjunction with the examples on page 3 of your Nurse Prescribing log.*

Scenario 1 – (see 1ˢᵗ example on page 2 of your log) You carry out a consultation with a female who requires a repeat prescription of her contraceptive pill. On examination, her blood pressure is elevated; you decide to stop her contraceptive pill and refer her to a GP. You also give her advice about alternative methods of contraception.

Scenario 2 – (see 2ⁿᵈ example on page 2 of your log) You prescribe an antibiotic for a diabetic patient with a urinary tract infection within your health centre. As a result of the infection, the patient is also experiencing elevated blood glucose levels; you therefore refer him to a diabetes specialist nurse and make a follow-up appointment with him to ensure that the infection has cleared.

Scenario 3 – (see 3rd example on page 2 of your log) A patient on your ward asks you whether you could prescribe him antibiotics to alleviate his flu-type symptoms. After an assessment confirming a viral illness, you explain that antibiotics are not suitable. Instead, you give him advice and information about ways of managing his symptoms.

ANNEX 9 **NURSE PRESCRIBING LOG**

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DEPARTMENT OF
NURSING AND MIDWIFERY

National Evaluation of Nurse Prescribing in Scotland

NURSE PRESCRIBING LOG

Case Study reference no – CS **Participant no-** **Date of completion………………………..**

Fiona Turner, Nursing & Midwifery, University of Stirling, 01786-466280

NURSE PRESCRIBING LOG

Key for Completion of the Nurse Prescribing Log				
1 **Prescribing outcome**	**2** **Other action**	**3** **If prescription given:**		**4** **If *no* prescription given:**
		Prescribing Type	**Prescription & Condition**	
1 = Prescription given *If applicable, also complete* *columns 2 & 3* 2 = Existing prescription revised (e.g. dose altered or stopped) *If applicable, also complete column 2* 3 = No prescription given *If applicable, also complete columns 2 & 4*	*Enter all codes that apply* 1 = GP referral 2 = Other referral 3 = Advice given 4 = Follow-up appointment made	1 = Independent 2 = Extended Independent 3 = Supplementary	*No code – please write in whatever medication/s or product that you prescribed and the condition/s that you prescribed it for.*	*Please enter code or give reason in log.* 1 = No prescription required 2 = Prescription required was not listed for nurse prescribing. 3 = Other reason *(please specify reason in log)*

Case Study reference no – CS   **Participant no-**   **Date of completion………………………..**
Fiona Turner, Nursing & Midwifery, University of Stirling, 01786-466280

	1	2	3		4	
Date	**Prescribing outcome**	**Other action**	**If prescription given:**		**If *no* prescription given:**	**Additional Comments**
			Prescribing Type	**Prescription & Condition**		
Enter date prescription Given	*Enter code & complete relevant columns using key*	*Enter all codes that apply using key*	*Enter code using key*	*No code – please write in whatever medication/s or product that you prescribed and the condition/s that you prescribed it for.*	*Enter code using key. Specify reason if code 3 'other.'*	*Use this column for any additional comments that you might want to make. (Extra space also at end of log for notes.)*
(Example 1) 14.03.06	2	1, 3	N/A	N/A	N/A	
(Example 2) 14.03.06	1	2, 4	2	Trimethoprim for UTI	N/A	
(Example 3) 15.03.06	3	3	N/A	N/A	1	

Example **of how a Nurse Prescriber could complete the Log – completed in relation to scenarios provided in blue instruction sheet.**

Case Study reference no – CS   **Participant no-**   ….e of completion………………………..
                      Fiona Turner, Nursing & Midwife   …of Stirling, 01786-466280

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Date	1 **Prescribing outcome**	2 **Other action**	3 **If prescription given:**		4 **If *no* prescription given:**	**Additional Comments**
			Prescribing Type	**Prescription & Condition**		
Enter date prescription Given	*Enter code & complete relevant columns using key*	*Enter all codes that apply using key*	*Enter code using key*	*No code – please write in whatever medication/s or product that you prescribed and the condition/s that you prescribed it for.*	*Enter code using key. Specify reason if code 3 'other.'*	*Use this column for any additional comments that you might want to make. (Extra space also at end of log for notes)*

Nurse Prescribing Log – to be filled in over a two week period by Nurse Prescriber.

Nurse Prescribing Log – to be filled in over a two week period by Nurse Prescriber.

Case Study reference no – CS   **Participant no-**   Date of completion………………………..
                    Fiona Turner, Nursing & Midwife   y of Stirling, 01786-466280

Date	1 Prescribing outcome	2 Other action	3 If prescription given:		4 If *no* prescription given:	Additional Comments
			Prescribing Type	Prescription & Condition		
Enter date prescription Given	*Enter code & complete relevant columns using key*	*Enter all codes that apply using key*	*Enter code using key*	*No code – please write in whatever medication/s or product that you prescribed and the condition/s that you prescribed it for.*	*Enter code using key. Specify reason if code 3 'other.'*	*Use this column for any additional comments that you might want to make. (Extra space also at end of log for notes)*

Nurse Prescribing Log – to be filled in over a two week period by Nurse Prescriber.

Case Study reference no – CS   **Participant no-**   **Date of completion………………………..**
Fiona Turner, Nursing & Midwife   y of Stirling, 01786-466280

Date	1 **Prescribing outcome**	2 **Other action**	3 **If prescription given:**		4 **If *no* prescription given:**	**Additional Comments**
			Prescribing Type	**Prescription & Condition**		
Enter date prescription Given	*Enter code & complete relevant columns using key*	*Enter all codes that apply using key*	*Enter code using key*	*No code – please write in whatever medication/s or product that you prescribed and the condition/s that you prescribed it for.*	*Enter code using key. Specify reason if code 3 'other.'*	*Use this column for any additional comments that you might want to make. (Extra space also at end of log for notes)*
Nurse Prescribing Log – to be filled in over a two week period by Nurse Prescriber.						
Date	1 **Prescribing**	2 **Other action**	3 **If prescription given:**		4 **If *no* prescription**	**Additional**

Case Study reference no – CS   **Participant no-**   **Date of completion………………………..**

Fiona Turner, Nursing & Midwifery, University of Stirling, 01786-466280

Date	1 Prescribing outcome	2 Other action	3 If prescription given:		4 If no prescription given:	Additional Comments
	outcome				**given:**	**Comments**
			Prescribing Type	**Prescription & Condition**		
Enter date prescription Given	*Enter code & complete relevant columns using key*	*Enter all codes that apply using key*	*Enter code using key*	*No code – please write in whatever medication/s or product that you prescribed and the condition/s that you prescribed it for.*	*Enter code using key. Specify reason if code 3 'other.'*	*Use this column for any additional comments that you might want to make. (Extra space also at end of log for notes)*

If you are nearing the end of the log and require more pages, please contact; Fiona Turner, Dept of Nursing & Midwifery, University of Stirling on 01786-466280 or fiona.turner@stir.ac.uk

Nurse Prescribing Log – to be filled in over a two week period by Nurse Prescriber.

Date	1 Prescribing outcome	2 Other action	3 If prescription given:	4 If no prescription given:	Additional Comments

			Prescribing Type	Prescription & Condition		
Enter date prescription Given	*Enter code & complete relevant columns using key*	*Enter all codes that apply using key*	*Enter code using key*	*No code – please write in whatever medication/s or product that you prescribed and the condition/s that you prescribed it for.*	*Enter code using key. Specify reason if code 3 'other.'*	*Use this column for any additional comments that you might want to make. (Extra space also at end of log for notes)*
Please return your Log in the prepaid envelope to: **Fiona Turner, Dept of Nursing & Midwifery, University of Stirling**						

Notes/Feedback

(Please use this page for any notes that you might want to make or any feedback on your log that you would like to give to the research team.)

Case Study reference no – CS   **Participant no-**   **Date of completion………………………..**
Fiona Turner, Nursing & Midwifery, University of Stirling, 01786-466280

National Evaluation of Nurse Prescribing in Scotland

Information sheet – Nurse Prescribing Activity; Questionnaire

What is the purpose of the project?

Although the recent expansion of nurse prescribing in Scotland is the subject of much discussion, there has been little evaluation of its practice and effects to date. The purpose of this project is, therefore, to identify any benefits and challenges of nurse prescribing in Scotland so that the impact on nurse prescribers, patients, healthcare staff and health services can be assessed. In turn, this evaluation will provide evidence to inform recommendations for the future of Nurse Prescribing in Scotland.

Why should I take part?

The results of this evaluation will be returned to the Scottish Executive where they will be used to influence future developments in nurse prescribing. Your participation at this stage of the project will therefore help to contribute important information about nurse prescribing in practice, even if you are not actively prescribing at present.

Why have I been chosen?

The Lead Nurse Prescriber for your NHS Board was given this questionnaire to distribute to Nurse Prescribers within their area. You have therefore received a project pack because you fall into this category.

What is the information to be used for?

By completing the enclosed questionnaire, your information will enable us to build a picture of local variations in nurse prescribing activity across different prescribing roles and healthcare settings. The findings will also inform our next project stage of selecting healthcare settings to conduct more in-depth case study research. Case studies will take the form of interviews and, as you will read below, we are also looking for nurse prescribers who would be interested in taking part in this next research stage.

What will I have to do if I agree to take part?

Your participation at this stage of the study would involve you filling in the enclosed *nurse prescribing activity questionnaire*, which we estimate should only take around ten minutes of your time. If you fill this in, we ask that you return it to us in the large prepaid envelope provided. Returning a completed questionnaire means that you give consent for us to use the information within this project.

Additionally, we would like you to read the blue invitation form, which indicates to us whether you would be interested in participating in a case study for the final stage of the project. If you decide that you would like to be considered for a case study, please complete and return this form in the smaller prepaid envelope provided.

Will my taking part in this study be kept confidential?

Your decision about whether to take part in this project is voluntary and is only known by the research team. All data that we receive from you is stored confidentially and is only viewed by the research team. To ensure your confidentiality, if you fill in your contact details on the blue reply form, please return it in the separate (small) envelope.

Do I have to take part?

Your decision to participate in this project is entirely voluntary and will not affect you or your work in any way. If you have further concerns or queries that have not been addressed within this information however, you are welcome to contact us – details below.

Are there any disadvantages to taking part?

This part of the study is solely designed to obtain information from you about your nurse prescribing activities and we do not envisage any disadvantages or risks associated with taking part in the research. The only inconvenience may be the time taken to fill in the information, however we do not expect this to take any longer than fifteen minutes.

What will happen to the results of the research study?

Data obtained from this study will be analysed and the main findings will be written up as a general report. This report will be submitted to the Scottish Executive in 2007 and may also eventually be published within academic and nursing journals. All data will be stored securely and will be destroyed after a suitable period of time.

Who is funding and organising the research?

The project is commissioned by the Scottish Executive Department of Health and is being organised by the University of Stirling's Department of Nursing and Midwifery. An evaluation of nurse prescribing education and training is also being carried out by the University of Stirling's Institute of Education.

Who has reviewed the study?

The study has been reviewed and given a favourable ethical opinion by the NHS COREC system. In addition, the research approach has been approved by the Nursing and Midwifery and Institute of Education Departmental Research Ethics committees.

Contact details

If you have any further questions about the study at this time, please contact;
Fiona Turner, Research Fellow, Department of Nursing and Midwifery, University of Stirling on 01786 466280 or e-mail fiona.turner@stir.ac.uk. Should you wish to speak to someone who knows about the study but is independent of the research team, please contact; Jen Shearer, Research Services Manager, Research Office, University of Stirling on 01786 466692 or e-mail j.m.shearer@stir.ac.uk.

If you would like to take part, please remember to return your questionnaire and blue reply form in the separate envelopes. The cut-off date for return is 14th July 2006, however we would appreciate your information as soon as possible.

Thank you for taking the time to consider our request for your participation in this research.

AE Watterson

Professor Andrew Watterson   **Fiona Turner**
Professor in Health Effectiveness   Research Fellow

National Evaluation of Nurse Prescribing in Scotland
Nurse Prescribing Activity; Questionnaire

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DEPARTMENT OF
NURSING AND MIDWIFERY
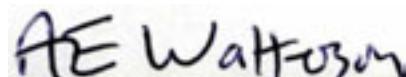
1. Which type of Nurse Prescriber are you qualified as? *(Please tick one box)*

HV or DN	Independent Prescriber –	☐
Nurse Prescriber	Extended Formulary	☐
Supplementary Nurse Prescriber	Extended &	☐

2. Which type of prescribing do you carry out most often in your daily work?
(Please tick one box)

Independent Prescribing – HV or DN	☐
Extended Independent prescribing	☐
Supplementary Nurse Prescribing	☐

3. Which of the healthcare settings below best describes the area of practice that you normally work in? *(Please tick all that apply)*

Primary Care		☐	In-
patient Mental Health	☐		
Acute In-patient Care		☐	
	Community Mental Health	☐	
Accident & Emergency	☐	Older	
people's in-patient	☐		
Minor Injuries/Out of Hours	☐	Chronic	
disease specialism	☐		
Out-patient Clinic		☐	
	Paediatric setting	☐	
Palliative Care/Cancer Care	☐	Other (please	

specify)………………

…………………………………………………………………………………………………

4. Which of the following best describes your role? *(Please tick one box)*

Health Visitor		☐	Midwife	☐
	Nurse	☐		

5. How many patients do you see/care for within a typical week?
(Please tick one box)

Less than 5 ☐   6-10   ☐   11-20 ☐   21-30   ☐   31-
40 ☐   41-50 ☐   51+ ☐

6. Which age groups of patients do you see within a typical week?

Place a number from 1 to 4 in each of the boxes using the following key:

0 = never   1 = hardly ever   2 = sometimes 3 = frequently 4 =
very frequently

0 – 16   ☐   17 – 30 ☐   31 – 50 ☐   50 – 65 ☐   65-75 ☐   75+
              ☐

7. **Do you prescribe at present? (i.e. even although you are qualified to prescribe, are you actually prescribing at present?)**

Yes   ☐   **(Please go to Question 9)**   No   ☐   **(Please continue to Question 8)**

8. Please outline any reasons why you are not prescribing at present.
………………………………………………………………………………………………………
………………………………………………………………………………………………………

If you are not currently prescribing, please go to question 11

9. If you are actively prescribing at present, how many items do you personally prescribe in a *typical* week? (Please tick one box only)

Less than 5 ☐   6-10 ☐   11-20 ☐   21-30 ☐   31-40 ☐   41-50 ☐   51+ ☐

10.   From which of the following categories do you *most commonly* prescribe?
(Please select a maximum of three categories from the list below by placing a '1' for your most common category, a '2' for your next most common and a '3' for the next.)

Gastro-intestinal   ☐   Musculoskeletal & Joint disease   ☐
Cardiovascular system   ☐   Eye   ☐
Respiratory system   ☐   Ear, nose and oropharynx   ☐
Central Nervous system   ☐   Skin   ☐
Infection   ☐   Malignant disease/immunosuppressant   ☐
Endocrine   ☐   Appliances/reagents/wound management   ☐
Immunological/vaccines   ☐   Nutrition/blood   ☐
Other ☐   (Please list) …………………………………………………………......………

11. How long you have been qualified as a nurse prescriber? *(Please tick one box)*

Less than 1 year   ☐   1 - 2 years   ☐   2 - 5 years   ☐   5 years + ☐

12. Where did you complete your most recent nurse prescribing training?

…………………………………………………………………………………………………

13. Please state your gender: Male ☐   Female ☐

14. What age group are you in? *(Please tick a box)*

20 – 29 ☐   30 - 39 ☐   40 – 49   ☐   50 – 59 ☐   60+ ☐

Please return your completed questionnaire in the large pre-paid envelope to Fiona Turner, Research Fellow, Dept of Nursing & Midwifery, University of Stirling, FK9 4LA. Please return as soon as possible and by week ending 14th July 2006 at the latest.

Thank-you for your time

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DEPARTMENT OF
NURSING AND MIDWIFERY

National Evaluation of Nurse Prescribing in Scotland
Nurse Prescriber Interviews

Section 1: Background Information

1. Job title……………………………….

2. Working Hours
      Part-time   ☐
      Full-time   ☐

3. Nurse Prescriber type:
      Independent Prescriber – HV or DN……………   ☐
      Extended Formulary Nurse Prescriber………….   ☐
      Extended & Supplementary Nurse Prescriber…..   ☐
      Supplementary Nurse Prescriber………………..   ☐

4. Area of practice
……………………………………………………………………………

5. How long have you been a nurse prescriber?

      - When did you do your nurse prescribing training
      - How long have you been prescribing in practice
      - Motivation for doing course

Section 2: Prescribing practice – discussion of log

6. Do you prescribe within your current job? (i.e. even although you are qualified to prescribe, are you actually prescribing at present?) *If no - explore*

7. How many items on NHS prescription do you personally prescribe in a *typical* week? *(Discussion of log)*

8. How many patients do you see in a typical week*?*

(Wording for the following questions depends on the participant's answers above.)

Section 3: Current perceptions

9. How do you feel about nurse prescribing?

- Personally
- Professionally
- Inter-professionally

10. What kinds of expectations, if any, did you have before undertaking your nurse prescribing training?

11. Now that you are a nurse prescriber, what is your experience of the role?
- Personally
- Professionally
- Inter-professionally

12. In what ways, if any, has your role as a nurse prescriber affected the care that patients receive within your ……. (relevant healthcare setting, e.g. GP practice)?

13. Has your role as a nurse prescriber affected the relationship that you have with colleagues? *If yes* - in what way?
- Non-prescribing nurses
- Doctors
- Managers
- Pharmacists
- Others – depending on case study setting e.g. mental health services.

14. What kinds of things, if any, support you in your work as a nurse prescriber?
- Time
- Studying time when in training
- Colleague support e.g. other NPs, GPs
- Mentoring
- Administrative resources

15. What kinds of things, if any, hinder your work as a nurse prescriber?
- Time
- Studying time when in training
- Colleague support e.g. other NPs, GPs
- Mentoring
- Administrative resources

16. Do you have any concerns about nurse prescribing? *If yes* – can you tell me a bit about your concerns?
- Personally
- Professionally
- Inter-professionally

17. Do you think that nurse prescribing brings any benefits? *If yes*, what kinds of benefits do you think there might be?
- Patient benefits
- Professional benefits
- Own role
- Public health
- Inter-professional benefits

Section 3: Education

Now that you have been prescribing for a while…

18. How do you feel about your nurse prescribing training?
- Structure
- Relevance of content – pharmacology and governance sessions
- Workload
- Protected time
- How well did it equip you for prescribing in practice?

19. How do you feel about your nurse prescribing mentoring and support?
- During training
- Support after qualified
- CPD

Section 4: Future direction

20. What do you think that the future holds for nurse prescribing?

21. Is there anything that you would like to see happen with nurse prescribing in the future?

22. Is there anything that you would like to not see happen with nurse prescribing in the future?

Section 5:

Do you have any other comments or suggestions about nurse prescribing?
- Generally?
- In your practice area?

Thank you for your participation in this project.

National Evaluation of Nurse Prescribing in Scotland
Professional/Stakeholder Interviews

Section 1: Background Information

1. Job title…………………………….

2. Area of practice (e.g. GP practice, community hospital, mental health etc).

…………………………………………………………………………………………

3. How long have you worked in this role?

4. In what ways are you associated with nurse prescribing?

Section 2: Current perceptions

(Exact wording for the following questions depends on the participant's answers above.)

5. How do you feel about nurse prescribing?
   -personally
   -professionally
   - inter-professionally

6. What are your expectations, if any, of nurse prescribing?

7. What has your experience of nurse prescribing been so far?
   - professionally
   - personally
   - inter-professionally

8. In what ways, if any, do you think that nurse prescribing has affected the care that patients receive within you're ……. (relevant healthcare setting, e.g. GP practice)?

9. In what ways, if any, has nurse prescribing affected your role as a……..?

10. Have changes to nurse's roles within your practice affected the relationship that you have with your nurse prescribing colleagues? *If yes* **-** in what way? (*This question may not be applicable if participant is not in direct contact with NPs.*)

11. Do you think that nurse prescribing has affected the roles of other colleagues?
    thinking about groups such as:
    - Non-prescribing nurses
    - Doctors
    - Managers
    - Pharmacists

- Others – depending on case study setting e.g. mental health services.

12. Do you have any concerns about nurse prescribing? *If yes* – can you tell me a bit about your concerns?

  - professionally
  - personally
  - inter-professionally

13. Do you think that nurse prescribing brings any benefits? *If yes*, what kinds of benefits do you think there might be?

  - Patient benefits
  - Professional benefits
  - Own role
  - Public health
  - Inter-professional benefits

Section 3: Future direction

What do you think that the future holds for nurse prescribing?

Is there anything that would like to see happen with nurse prescribing in the future?

Is there anything that you would not like to see happen with nurse prescribing in the future?

Additional questions from emergent design insights

Do you have any thoughts on patient safety in relation to nurse prescribing?
  - Antibiotic prescribing

Has nurse prescribing affected the budget for…..?

If relevant – any thoughts in relation to nurse prescribing within mental health?

If relevant – any thoughts in relation to nurse prescribing for children?

Section 4:

➢ Do you have any other comments or suggestions about nurse prescribing?

- In general
- In this practice

Thank you for your participation in this project.

ANNEX 14   PATIENT INTERVIEW QUESTIONS

National Evaluation of Nurse Prescribing in Scotland
Patient Interviews

Section 1: Background knowledge/views about treatment and nurse prescribing

1. When you see a doctor or a nurse, what is your view of 'good' treatment?

2. Before participating in this interview, did you know that some nurses could prescribe medication independently from a doctor – that is, they can write out and sign the prescription without the doctor being involved? *If yes*, what kinds of things did you know about nurse prescribing?

3. Have you ever had a prescription from a nurse who was able to prescribe you what you needed without the doctor being involved? *If yes*, can you tell me about your experience of getting a prescription from a nurse?

   - Probe whether they receive prescriptions regularly e.g. a chronic condition or whether this experience was a 'one off' – if not already answered.

Section 2: Current perceptions

(Wording for the following questions depends on the participant's answers above.)

4. How did/do you think you would you feel about the experience of getting your medication/products *(or whatever relevant to patient experience)* from a nurse rather than a doctor?

5. How did/would the experience of getting a prescription from a nurse differ/might differ from the experience of getting prescriptions from a doctor?

6. What kinds of expectations, if any, would/ did you have when receiving your prescription from a nurse? *If expectations talked about* - Do you think that these expectations would differ from the expectations you might have when getting a prescription from a doctor?

   - Time issues
   - Communication style
   - Ease of access to treatment

7. Do you/would you have any concerns about getting a prescription from a nurse? *If yes* – can you tell me a bit about your concerns?

8. Do you think that nurse prescribing brings any benefits for patients? *If yes*, what kinds of benefits do you think there might be?

Section 3: Future direction

9. Would you go to a nurse in the future for them to prescribe you're your medication/products? *(Or whatever relevant to patient) Explore answer.* If yes, why. If no, why?

10. At the moment, only some nurses can independently prescribe e.g. ………….. Do you think that nurse prescribing should be extended so that more nurses are able to prescribe? *If yes, explore.*

1
- Should all nurses be able to prescribe or only some?

11.At the moment, nurse prescribers can only prescribe a limited range of products and medicines e.g. ………..Do you think that nurse prescribers should be able to prescribe more products and medicines than at present? *If yes, explore.*

- Anything that they should/should not be able to give you?

12. Is there anything else that you would like to see happen with nurse prescribing in the future?

13. Is there anything that you would not like to see happen with nurse prescribing in the future?

Section 4:

15. Do you have any other comments or suggestions about nurse prescribing?

- In general?
- In this practice/ward/unit (whatever setting relevant)?

Thank you for your participation in this project.

ANNEX 15   **CASE STUDY CRITERIA MATRICES**

Primary Care settings – GP practices

CS1 – Rural town   CS2 – rural/remote   CS3 – city
(case study numbers relate to case study key at start of report)

		CS 1	CS 2	CS 3
Setting factors	Midwifery			
	Mental Health			
	Paediatric			
Geographical Setting	Rural			
	Remote			
	Urban			
	Town			
	City			
	Suburban			
	Small population			
	Large population			
Practice Type	Single-handed			
	Training			
	Non-training			
	Innovative			
	Non-innovative			
NP type	Independent			
	Ext. independent			
	Supplementary			
	One NP			
	More than one NP			
	Experienced NP			
	New NP			
Patient Categories	Older population			
	Young population			
	Mental Health			
Specialist patient groups	Substance abusers			
	Asylum seekers			
	Travellers			
Other professions	GP			
	Non-NP nurse			
	Pharmacist			
	Practice manager			
Other participants	Carer			
	Voluntary patient group			
	Stakeholders			

Acute Care settings

CS4 = Nurse-Led Specialist Service within city
CS5 = Community Hospital/ Out of Hours/ minor injuries. Within rural town
CS6 = A & E – hospital within city

		CS 1	CS 2	CS 3
1. Setting	A & E (tender)			
	Hospice (tender)			
	Community Hospital (tender)			
	Midwifery (extra)			
	Mental Health (extra)			
	Paediatric (extra)			
2. Geographical setting	Rural			
	Remote			
	Village			
	Urban			
	Town			
	City			
	Suburban			
	Small population			
	Large population			
3. NP activity/type	High NP activity			
	Independent			
	Ext. independent			
	Supplementary			
	Low NP activity			
	Experienced NPs			
	New NPs			
4. Patient Categories	Older population			
	Young population			
	Mental Health			
5. Other professions	Doctor/Consultant			
	Non-NP nurse			
	Pharmacy link			
	Service Manager			
	Stakeholders			

ANNEX 16   CASE STUDY SETTINGS & PARTICIPANTS

1. Case Study settings and participants

The table below outlines the case study settings, which were chosen from self-selecting Nurse Prescribers and matched against the project criteria.

Consistent with our protocol on the targeted participant groups, the following people agreed to take part in the case studies and were interviewed at each site.

Primary Care settings

CS1 - GP practice within semi-rural setting

Role	Type
Nurse Prescriber 1	Community Midwife
Nurse Prescriber 2/Team Leader	Integrated Team Leader/District Nursing Sister
Nurse Prescriber 3	Community Nurse
Nurse Prescriber 4	Treatment room/ community Nurse
Non-prescribing Nurse	Community Midwife
GP	GP principal trainer – NP mentor
GP	GP principal – NP mentor
Manager	Practice Manager
Pharmacist	Pharmacy Manager (local pharmacy) (on pharmacy prescribing course)
Patient 1	Prescribing experience through pregnancy – under care of Nurse Prescriber 1
Patient 2	Complex health needs – paralysis. Experience of Nurse prescribing through community nursing (Nurse Prescribers 2-4)
Carer	Linked to patient 2 – husband.

CS 2 - GP practice within rural & remote setting

Role	Type
Nurse Prescriber 1	District Nurse & Midwife
Nurse Prescriber 2/ Manager	District Nurse/Midwife/Family Planning Nurse/Team Leader
Non-prescribing Nurse	Community Staff Nurse
GP	Single-handed practice GP – NP mentor
Pharmacist	Retail Pharmacy – proprietor
Patient & Carer (dual role)	Complex health needs – recent Myocardial Infarction and carer for husband with diabetes and recent stroke.
Patient 2	Routine contact with Nurse Prescribers for contraception
Patient 3	Routine contact with GP for anti-hypertensive & thyroid medication

CS 3 - *GP practice within city*

Role	Type
Nurse Prescriber 1	Nurse Practitioner
Nurse Prescriber 2	Practice Nursing Sister/Respiratory Nurse Specialist
Non-prescribing Nurse	Practice Nurse
GP	GP
Pharmacist	Practice Pharmacist (on pharmacy prescribing course)
Manager	Practice Manager
Patient 1	Asthmatic
Patient 2	Practice patient
Patient 3	Practice patient

Acute Care settings

CS4 - *Nurse-Led Specialist Service within City*

Role	Type
Nurse Prescriber 1/Team Leader	Team Leader for the service
Nurse Prescriber 2	Nurse specialist
Non-prescribing Nurse	Rehabilitation Nurse
Hospital based medical staff	Consultant
Stakeholder	Managed Clinical Network Manager
Pharmacist	Practice pharmacist associated with service patients (on pharmacy prescribing course) – same pharmacist as in case study 3.
Patient 1	Patient under care of Service
Patient 2	Patient under care of Service

CS5 - *Community Hospital within rural & remote setting*

Role	Type
Nurse Prescriber 1	Staff Nurse
Nurse Prescriber 2 (awaiting course result – not yet qualified)	Staff Nurse
Nurse Prescriber 3	Night Sister
Nurse Prescriber 4/ Manager	Charge Nurse
Non-prescribing Nurse	Staff Nurse
GP/Stakeholder	GP (mentor) and clinical director for CHP
Pharmacist	Community Hospitals Pharmacist
Patient 1	In-patient – arthritic & associated complications
Patient 2	In patient – motor neurone disease
Carer	Linked to patient 2 – wife

CS 6 - A & E department within city

Role	Type
Nurse Prescriber 1	Emergency Nurse Practitioner/Charge Nurse
Nurse Prescriber 2/team leader	Senior Charge Nurse/Lead Emergency Nurse Practitioner
Nurse Prescriber 3	Charge Nurse/Emergency Nurse Practitioner
Non-prescribing Nurse	Senior Staff Nurse
Hospital based medical staff	A&E consultant
Pharmacist	Principle Pharmacist for A&E and Musculo-Skeletal
Patient 1	A&E patient
Patient 2	A&E patient
Patient 3	A&E patient

ANNEX 17   **NURSE PRESCRIBING STAKEHOLDER GROUPS -**
                                POLICY AND NHS

SEMI-STRUCTURED INTERVIEWS FRAMEWORK

The following six sections will guide the semi-structured interview with NHS stakeholders:

1: Personal Details – will include basic information, for example coded name, job title, organisation.

2: Background information – information will be gathered on the interviewee's role or involvement in Nurse Prescribing within their organisation's activity

3: Current status of Nurse Prescribing – An exploration of the interviewee's opinions on whether there are benefits /drawbacks to Nurse Prescribing at present. Information will be gathered on issues such as cost, safety aspects, professional roles etc.

4. Future Developments of Nurse Prescribing – An exploration of the interviewees opinions on the future direction of Nurse Prescribing, with regard to such issues such as patient numbers, cost and the Extended Formulary.

5. Future Impact of Nurse Prescribing – Stakeholders views on the future benefits/challenges of Nurse Prescribing will be sought, with particular relevance to the different parties involved or affected by the activity, i.e. patients, health professionals and the NHS as a whole.

6. General Comments – any further comment that the interviewee wishes to make on the topic of Nurse Prescribing.

GSR

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