

An Evaluation of Extended Formulary Independent Nurse Prescribing

Executive Summary of Final Report

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Summary of key points

Aim of the study

To provide an evaluation of the expansion of independent nurse prescribing to inform future developments for prescribing in nursing and other health professions.

Phase 1

A national survey of 246 nurse prescribers.

Phase 2

An in-depth evaluation of ten case studies of practice settings in which nurse prescribers were working involving observation of prescribing nurses' practice and investigating the views of a range of stakeholders in local practice contexts.

Findings

Prescribing practice

- Most nurses were prescribing relatively frequently, with 42% prescribing between 11 and 30 items per week and 22% prescribing over 30 items per week.
- The most common conditions prescribed for were skin conditions, family planning and soft tissue injuries.
- Medical experts' ratings of nurse prescribing consultations indicated that nurses were generally prescribing medicines clinically appropriately on a range of clinical dimensions. Experts made a small number of comments about possible limitations in nurses' history taking, assessment and diagnostic skills.
- Nurses were generally consistently writing a full range of relevant details on their prescription scripts for patients.
- Whilst nurses were very consistent in recording some essential details of their prescribing consultations in patient records, there is scope for them to improve the frequency with which a full range of details are recorded in patient notes about both the consultation and the prescription issued.
- The majority of nurses reported that they were confident in their prescribing practice. A minority of the sample expressed less confidence in their ability to make a correct diagnosis and in some of the knowledge and issues underpinning their prescribing practice.

Impact of prescribing on practice

- The majority of nurses felt strongly that extended independent prescribing had had a positive impact on quality of patient care, patient access to medicines and had enabled them to make better use of their skills. The vast majority of nurses also considered that extended independent prescribing had made them less dependent on doctors.

Influences on practice

- The vast majority of nurses considered that there were unhelpful limitations on their practice imposed by the limited formulary (NPEF) from which they were currently prescribing. The most common additions to the formulary desired by nurses were a greater number of antibiotics.
- Factors viewed as facilitative of prescribing in practice were peer support and access to an up-to-date British National Formulary (BNF). Factors considered to make prescribing difficult were the limitations of the formulary and lack of computer-generated prescriptions.

Education and training

- The majority of nurses considered that their educational preparation for nurse prescribing had fully or partly met their needs and were generally satisfied and positive about the support they had received from their supervising medical practitioner.
- Post-qualification, the majority of nurses considered that they had been able to maintain a wide range of National Prescribing Centre competencies and two thirds reported that they were currently receiving support or supervision for their prescribing role. However, only half of the sample reported that they had undertaken some formal Continuing Professional Development (CPD) since qualifying as a nurse prescriber, and just over half of the sample reported that they had CPD needs in relation to nurse prescribing.

Stakeholder views about nurse prescribing

- Patients surveyed were generally positive about their experiences of nurse prescribing. The majority did not express a preference for seeing either a nurse or a doctor for the prescription of medicines. Ease of access to obtain their prescribed medicine from a nurse rather than a doctor was considered to be a major advantage of nurse prescribing.
- Patients were also generally satisfied with the information given to them about their medicines by nurses, although information on a number of aspects of medicines was not routinely given to all patients.
- All groups of health care professionals interviewed at the case study sites considered that nurse prescribing was a positive development. Nurses considered that it had had an impact on their ability to deliver a complete episode of care independently. Doctors were positive about the development of nurse prescribers in their teams, although were not able to unequivocally conclude that it had reduced their workload.

Conclusion

The findings indicate that nurses are prescribing frequently and clinically appropriately in a range of practice settings and that the expansion of independent nurse prescribing is largely viewed as successful on a range of policy and practice dimensions. The findings also highlight a number of education and practice issues that will warrant on-going attention as the expansion of non-medical prescribing continues.

Introduction

Recent government policy directives are focused on modernisation of the NHS to ensure its capacity to deliver accessible and quality care to patients. The extension of independent prescribing by nurses is one route to modernising the NHS through developing and enhancing the role of health care professionals and increasing patient access to medicines. The extension of prescribing is intended to provide patients with quicker and more efficient access to medicines and to make the best use of nursing skills whilst ensuring that patient safety is paramount (DH 2002). Since early 2002, nurses have been undertaking training to independently prescribe medicines; the numbers of nurses qualified to prescribe a range of medicines independently from the Nurse Prescribers' Extended Formulary (NPEF) has been rising steadily since then.

This research was commissioned to provide a national evaluation of this important development to inform future policy, education and practice.

Aims and objectives

The aim of the research study was to provide an evaluation of the expansion of independent nurse prescribing to inform future developments for prescribing in nursing and other health professions. Specific objectives included:

1. To evaluate the effectiveness and efficiency of nurse prescribing training programmes, focusing on selection processes and training programme content and processes.
2. To provide a national perspective on current independent nurse prescribing practice, including data on: prescribing patterns and practices, use and adequacy of knowledge in practice, prescribing within a team context, continuing professional development (CPD) opportunities, and factors facilitating and inhibiting effective prescribing in practice.
3. To assess whether and how local developments in nurse prescribing in a range of practice contexts have benefited patients, health professionals and the NHS, with reference to quality of care, safeguarding public health through appropriate antimicrobial prescribing, and value for money.
4. To obtain the views of nurse prescribers, and other health care professionals, including doctors, on the form and detail that further development of nurse prescribing should take, including further expansion of independent nurse prescribing and the introduction of supplementary prescribing for nurses and other health care professionals.
5. To identify good practice in nurse prescribing, together with the contextual and other influences that facilitate this, to enable recommendations for future practice.

Research Design

The research was conducted in two distinct but related sequential phases:

- Phase 1 comprised a national survey of 246 nurse prescribers who had undertaken the extended formulary independent nurse prescribing (EFINP) course.
- Phase 2 comprised ten case studies of practice settings where EFINP worked, using multiple methods which included non-participant observation, in-depth interviews with nurses and other health care professionals, post-observation and postal questionnaires to patients, and analysis of patient records and

prescriptions generated by EFINP. A sample of observed nurse prescribing consultations was also sent to a panel of medical prescribing experts in order to evaluate the clinical appropriateness of nurse prescribing.

Findings

Phase 1: National Survey

The survey elicited a response rate of 71% and completed questionnaires were received from a national sample of 246 nurses qualified and practising as extended formulary independent nurse prescribers in England.

Sample characteristics

- The majority of the sample were working in senior nursing roles such as nurse practitioner, nurse specialist or nurse manager. A large proportion of the sample (approximately two thirds) were working in general practice or other clinical settings located in primary care. Over half of the sample held a first degree level qualification, and one fifth were in possession of a Masters' degree.

Experiences prior to the course

- Prior to undertaking the EFINP course, most nurses were working in treatment areas that commonly covered the originally-specified NPEF treatment categories of minor ailments, minor injuries and health promotion. A smaller proportion of respondents were working in the field of palliative care.
- The most common selection process for embarking on the course was via a discussion with a manager.

Evaluation of educational preparation

- The majority of nurses considered that the prescribing course met their needs to some extent, with approximately a quarter indicating that the course completely met their needs. However, a significant minority (14%) considered that the course had only met their needs to a limited extent. Most frequently cited comments about the course limitations were: a) that some elements were repetitive, especially for those at degree level or above and those who had undertaken a nurse practitioner course, and b) that the pharmacology component of the course was limited or rushed. Pharmacology was the subject most frequently studied during private / self-directed study.
- Over three quarters of the sample had received at least the 12 days statutory medical practitioner support during the course, with nearly half of the sample stating that they had received more than this. Respondents were generally satisfied or very satisfied with the amount of medical practitioner support received, and many made positive comments about the quality of mentorship they had been given. However, a significant minority (17%) were not satisfied with their medical practitioner support due to reasons such as lack of support or limited teaching skills.
- Safe prescribing decisions and history taking, examination and diagnostic skills were the most frequently cited topics covered as part of medical practitioner support received during the course.
- Forty two per cent of the sample also reported receiving support from pharmacists during the course, and approximately one third cited other nurses as sources of support.

- Just over half of the sample considered that the course had covered the skills and knowledge that was required for practice; pharmacology and advanced clinical skills were the skill / knowledge areas most frequently cited by a significant minority of the sample as those needed for practice not sufficiently covered by the course.

Prescribing patterns and practices

- Most of the qualified EFINPs in the survey were using a range of methods to prescribe and supply medicines to patients in practice, including Patient Group Directions (PGDs), supplementary prescribing and asking doctors to sign scripts.
- Most nurses were frequently exercising their prescribing powers as EFINPs, with 42 % prescribing between 11 and 30 items per week, and 22% reporting that they were prescribing over 30 items per week. However, 19% of the sample reported prescribing less than five items per week; the most commonly cited reason for this being the limitations of the current formulary.
- Skin conditions, family planning and soft tissue injuries were the most common conditions for which EFINPs were independently prescribing.
- The majority of the sample were prescribing antibiotics, and over one third reported prescribing them frequently. Antibiotics were most commonly being prescribed for urinary tract infections and skin conditions.
- Only 5% were able to prescribe using computer-generated scripts; over half of the sample considered that access to computerised scripts would improve their prescribing practice.
- The majority of the sample reported that they were either confident or very confident in their prescribing practice. However, when asked, over one quarter of the sample agreed with the statement 'I fear making an incorrect diagnosis'.
- Approximately three quarters of the sample reported that they were confident prescribing antibiotics, and considered that they had adequate knowledge and training to do so. However, a significant minority disagreed with these statements.
- The majority of the sample also reported that they would be happy prescribing a greater range of antibiotics and agreed or strongly agreed that they were 'aware of the issues associated with the development of resistance to antibiotics'; however, a significant minority (18%) disagreed with this statement.
- Nurses' access to Prescription Analysis and Cost Trends (PACT) data was varied; only 20% reported that they always had access on a monthly basis. Of those with irregular or no access, most felt access would be useful. PACT data was reported to enable greater cost effectiveness in their prescribing by 43% of respondents who had access to it.
- Over three quarters of the sample reported that they always considered the cost of the items that they prescribed.

Impact of prescribing and influences on practice

- The majority of respondents felt strongly that extended independent prescribing had had a positive impact on quality of patient care, patient access to medicines and had enabled them to make better use of their skills.

- The vast majority of nurses also considered that extended independent prescribing had made them less dependent on doctors and had given them greater satisfaction and autonomy. The vast majority of nurses also reported that doctors were supportive of their prescribing role.
- The majority of respondents felt that there were no disadvantages to their prescribing role; of the minority who reported disadvantages, time taken for longer consultations and other nurses' misunderstanding of the role were the most frequently cited drawbacks.
- The vast majority of respondents considered that there were unhelpful limitations on their practice imposed by the limited formulary (NPEF) from which they were currently prescribing. The most common additions to the formulary desired by nurses were a greater number of antibiotics. A wide range of other medicines were cited as desired additions to the NPEF, with asthma and respiratory medicines the second most frequently cited group of medicines.
- When asked about factors that were facilitative of prescribing in practice, peer support and access to an up-to-date British National Formulary (BNF) were the most frequently cited factors.
- When asked about factors that make prescribing difficult, the limitations of the formulary and lack of computer-generated prescriptions were the most frequently cited factors.

Continuing professional development (CPD) and support for prescribing practice

- The majority of respondents agreed or strongly agreed that, since qualifying as an EFINP, they had been able to maintain a wide range of National Prescribing Centre-specified competencies that were outlined in the questionnaire.
- The overwhelming majority of respondents agreed or strongly agreed that: they had up-to-date clinical knowledge, they had up-to-date pharmacological knowledge, and were able to make a diagnosis and generate treatment options.
- Similarly, virtually all of the sample agreed or strongly agreed that they: applied the principles of concordance, established a relationship with patients based on trust and mutual respect, and viewed patients as partners in the consultation.
- Approximately two thirds of the sample reported that they were currently receiving support or supervision for their role as an extended formulary independent nurse prescriber; one third stated that this was not the case.
- Just under half of the sample reported that this support / supervision was provided by medical colleagues, with approximately one quarter reporting that support and supervision were received from nursing colleagues. Smaller proportions reported receiving support from other EFINPs and / or pharmacists. For just under two thirds of the sample, this support / supervision was received at least monthly, and often more frequently for a significant number of respondents.
- Approximately half of the sample reported that they had undertaken some form of formal CPD since qualifying as a nurse prescriber; half of the sample reported that they had not. Most commonly, CPD had taken the form of supplementary prescribing training, or other relevant workshops, conferences,

updates or study days. However, nearly all respondents reported that they had been able to undertake informal CPD such as private study or regular journal reading.

- Just over half of the sample reported that they had CPD needs in relation to nurse prescribing. These were most frequently cited as 'regular updates'.

Phase 2: Case Studies of Practice

The ten sites evaluated as case studies of practice included a representative range of settings in which extended formulary independent nurse prescribers are practising. Cases included nurse practitioners and practice nurses in general practice, a palliative care nurse specialist, community midwives and a senior nurse prescribing in a walk-in centre.

Observation and evaluation of nurses' prescribing consultations

- Observation of prescribing practice indicated that nurses are using a range of assessment and diagnosis competencies in practice when independently prescribing medicines. In the vast majority of consultations, nurses identified a chief complaint from the patient and explored the patient's presenting symptoms. A physical examination was performed in the majority of consultations. There was evidence of the nurse exploring the patient's current prescribed medication in approximately three quarters of consultations observed. However, nurses were less frequently asking about over-the-counter medicines being taken by the patient, about allergies to medicines, family history and psychosocial history / life events.
- The findings also indicate that nurses were regularly communicating some information details about medicines and the diagnosis to patients as well as listening to patients' beliefs and checking their understanding and commitment to treatment. However, they were less frequently communicating about other dimensions of medicines - side effects, risks and benefits and informed choices - that may have contributed to patients making informed decisions about medicines management.
- The expert panel's ratings of nurse prescribing consultations indicated that nurses were generally prescribing medicines clinically appropriately. On a range of clinical dimensions - for example, whether the medicine was indicated for the condition, whether the medicine was effective, dosage and duration of the medicine prescribed - nurses' practice was on the whole deemed satisfactory. Experts made a small number of comments about possible limitations in nurses' history taking, assessment and diagnostic skills.
- Nurses are generally consistently writing a full range of relevant details on their prescription scripts for patients.
- With regard to documenting and recording of their prescribing consultations, whilst nurses were very consistent in recording some essential details of their prescribing consultations, there is scope for them to improve the frequency with which a full range of details are recorded in patient notes about both the consultation and the prescription issued.

Patients' evaluations of nurse prescribing

- Patients who completed a post-consultation questionnaire were generally positive about a number of dimensions of their experiences of the nurse prescribing consultation. The majority of patients did not express a preference

for seeing either a nurse or a doctor for the prescription of medicines, and patients expressed positive views generally about nurse prescribing. Patients reported positively on the dimensions of quality that are targeted by policy on non-medical prescribing. Nevertheless, it should be noted that nearly half of patients who completed a questionnaire reported that there were some conditions that they would prefer to see a doctor about, and a small proportion expressed a preference for seeing a doctor for the prescription of medicines.

- Patients were also generally satisfied with the information given to them about their medicines by nurses, although information on a number of aspects of medicines was not routinely given to all patients. Although this latter finding needs to be considered in light of the medicines currently prescribable within the NPEF, it does also suggest that nurses need to be mindful of offering a full range of information about medicines to patients to maximise the full therapeutic potential of their prescribing role.
- Findings from the patient postal questionnaires also showed that patients viewed nurse prescribing as a largely positive experience. Dimensions favoured by patients largely substantiate many of the views of the patients who completed post-consultation questionnaires. Patients were generally in favour of nurse prescribing, were confident in nurses' ability to prescribe for them, and ease of access to obtain their prescribed medicine from a nurse rather than a doctor was considered to be a major advantage of nurse prescribing.
- The views of patients completing postal questionnaires about the information given to them about their prescribed medicines supports the findings from the observation data and the post-consultation patient questionnaires and suggests that whilst nurses are consistently giving information about some aspects of medicines they are prescribing, they may be less consistent at information-giving about other aspects.

Health care professionals' views of nurse prescribing

- All groups of health care professionals interviewed considered that nurse prescribing was a positive development. Nurses felt that it had an impact on their ability to deliver a whole episode of care. Doctors were also positive about the advent of nurse prescribing, although linked their views to the skills and experiences of the nurses that they personally worked with and / or had mentored, with some reserving comment about nurses more generally.
- Doctors were positive in their evaluations of nurses' knowledge for prescribing, but highlighted the importance of not under-estimating the clinical skills that are required to underpin prescribing. Medical mentorship for nurse prescribing was well evaluated by nurses and doctors. Doctors considered that the clinical experience of doctors was necessary to provide adequate mentorship, but some difficulties were expressed about finding time together for mentorship and the lack of financial recompense received by doctors was perceived as a potential constraining factor on the provision of mentorship.
- Experiences of CPD were mixed: some nurses were receiving this locally, and others were not. CPD was felt to be important for *all* prescribers.
- Prescribing was considered to work well when it occurred within a team context. Other factors considered supportive of good nurse prescribing practice were the knowledge and experience of the prescribing nurses, team

support, and a supportive infrastructure that included access to the internet, to PACT data and to computer-generated scripts.

- Factors that imposed limits on good nurse prescribing practice were identified as: the limited range of conditions / medicines in the current NPEF, the lack of a supportive infrastructure (computer-generated scripts, PACT data access, and access to the BNF). Some difficulties in communication between pharmacists and primary health care team members were also identified as problematic in the development of non-medical prescribing.
- Doctors held mixed views on the local impact of nurse prescribing on their own workload; they were not clearly able to identify that it reduced their workload, when seen in the context of other policy and practice developments. Whilst they were largely positive about the advent of nurse prescribing for the NHS generally, they also highlighted that nurses tend to be slower and more protocol-driven in their consultations.
- Views on the impact of nurse prescribing on safeguarding public health through appropriate antibiotic prescribing gave no cause for concern. Both nurses and doctors interviewed considered that nurses are aware of resistance issues and are not over-prescribing antibiotics.
- The doctors interviewed viewed the further development of nurse prescribing as beneficial, but suggested that there may be concerns, albeit diminishing, amongst the medical community about issues such as role erosion. Nurses welcomed further expansion of nurse prescribing. Doctors expressed some reservations about prescribing by pharmacists, and the degree of administration associated with PGDs and supplementary prescribing were also viewed with some degree of negativity.

Conclusion

Overall the findings indicate that this model of non-medical prescribing is generally operating safely, clinically appropriately, and effectively in practice, in terms of the modernisation indicators of increased patient access to quality care through increased use of nursing skills. Nurses are generally satisfied with their education and training for their prescribing role and nurses and doctors are working well together in mentorships and support for nurses' independent extended formulary prescribing practice. Nurses, patients and doctors all viewed the processes and outcomes of independent nurse prescribing largely positively.

However, the findings also highlight a number of education and practice issues that will warrant on-going attention as the expansion of non-medical prescribing continues.

An electronic copy of the full Final Report may be obtained by contacting Dr Sue Latter sml@soton.ac.uk or Sonia Bryant, Research Support Office sb13@soton.ac.uk