Factors influencing nurse and pharmacist willingness to take or not take responsibility for non-medical prescribing

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Abstract

Background: In the UK, the majority of non-medical prescribers (NMPs) are nurses or pharmacists working in community or primary care. However, little is known about what influences their decisions to prescribe, unlike with medical prescribing. It is also unclear whether the medical findings can be extrapolated, given their very different prescribing training.

Objectives: To explore the factors influencing whether nurse and pharmacist NMPs in community and primary care settings take responsibility for prescribing.

Methods: Initially, 20 NMPs (15 nurses and 5 pharmacists) were purposively selected and interviewed using the critical incident technique about situations where they felt it was inappropriate for them to take responsibility for prescribing or where they were uneasy about doing so. In addition, more general factors influencing their decision to take or not take prescribing responsibility were discussed. Subsequently, the themes from the interview analysis were validated in three focus groups with a total of 10 nurse NMPs. All data were analyzed using a constant comparison approach.

Results: Fifty-two critical incidents were recorded—12 from pharmacist NMPs and 40 from nurse NMPs. Participants experienced situations where they were reluctant to accept responsibility for prescribing. Perceptions of competency, role and risk influenced their decision to prescribe. Workarounds such as delaying the prescribing decision or refer the patient to a doctor were used.

Conclusions: For NMPs to feel more confident about taking responsibility for prescribing, these issues of competency, role and perceived risk need to be addressed. Roles of NMPs must be clear to colleagues, doctors and patients. Training and support must be provided to enable professional development and increasing competence of NMPs.

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Introduction

Patients are seen and cared for by a range of health care professionals. Yet, until recently in the UK, if a prescription was required, only doctors or dentists were authorized to prescribe. Patients could be assessed, for example, by a nurse but...
then would wait for their prescription to be written by the doctor. Patient access to medicines in a timely manner was therefore reduced. Moreover, given the lack of clarity in the division of assessment and prescribing processes, patient safety was possibly at risk. To gain a better understanding of this practice, a report commissioned by the British government recommended extending prescribing authority to other health care professionals, termed non-medical prescribers (NMPs). The report anticipated that, by better utilizing health professionals' skills, the new prescribing framework would offer a more flexible health service for patients by improving their care and access to medicines without compromising their safety.

An independent prescriber in the UK is described as a professional who is responsible for the initial assessment of the patient and for devising the broad treatment plan, with the authority to prescribe as part of that plan. They are nurses, pharmacists or optometrists who have passed a part-time postgraduate certificate course and who can prescribe any medicine within their sphere of competency, either as a new treatment or as a repeat prescription. Independent prescribers can also be community practitioner nurse prescribers, such as district nurses or health visitors, who can prescribe from a limited formulary called the Nurse Prescribers Formulary for Community Practitioners, which is found in the British National Formulary (BNF).

In the UK, pharmacist and nurse NMPs work in a variety of settings. The General Pharmaceutical Council register records that pharmacist NMPs work in secondary care, primary care and the community pharmacy settings. Recent research has reported that primary care is the predominant setting for pharmacist prescribing. The Nursing and Midwifery Council does not produce a breakdown of the care settings where nurse prescribers work. However, surveys report that 67% work in primary care and 33% in acute trusts, mental health trusts or other settings. As with pharmacists, nurse prescribing operates predominantly within the primary care setting. Thus, a wide variety of patients have access to care from nurses and pharmacists who are NMPs. However, nurse and pharmacist prescribing is low in comparison with overall prescribing. At the time this study was conducted (2010), only 1.6% of all prescriptions written in general practice (family physicians' offices) in England were written by NMPs.

Previous research focusing on the prescribing decisions of doctors has found a wide range of influencing factors, including regulatory factors (for example, guidelines, formularies, health care managers and organizations), cost, patient factors, colleagues, professional and personal experience, others’ prescribing behavior and prescribing culture, research findings, logistical factors, diagnostic uncertainty and the pharmaceutical industry. However, it is unknown how applicable these findings are to NMPs. Their training is different, both in terms of prescribing training and professional training. In the UK system, NMPs are required to have several years of professional practice (a minimum of two for pharmacists and three for nurses) before they may train as a prescriber and they are often specialists in their area of practice. Therefore, it is important to address this current gap in research to understand the influences on NMP behavior when prescribing.

As most NMPs work in community and primary care, this study aimed to explore the factors influencing how nurse and pharmacist NMPs working in the community and in primary care settings choose whether or not to take responsibility for making a prescribing decision.

### Methods

Twenty-five nurse and five pharmacist NMPs working in primary and community care across England were purposively sampled (Table 1). The participants were working in a variety of settings. Nine nurse NMPs were working in the community, eight in general practitioner (GP) practices, three in nursing homes and five in a variety of other settings. Three pharmacist NMPs were working in GP practices and two in community pharmacies. Fewer

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pharmacist NMPs could be recruited due to their lower numbers in comparison to nurse NMPs. At the time of the study, 2009–2010, there were over 23,000 nurse and just over 1200 pharmacist NMPs in Great Britain. Participants were considered to be appropriate for inclusion if they were a registered nurse or pharmacist working in primary or community care, qualified as an independent prescriber and were prescribing as part of their role. Potential participants were provided with the study details by the NMP lead in their primary care trust and asked to contact the researcher if they were interested in taking part. At the time of the study, primary care trusts were the statutory bodies in the National Health Services that purchased primary care and community health care services on behalf of the local population. Passive snowball sampling was also used to recruit a further three participants, where initial respondents were asked to suggest to others, whom they knew were in the target group, that they contact the researcher. The latter could then invite them to take part. Attempts to recruit participants to the study ceased when it was felt that ‘saturation’ of the core themes emerging from the data analysis had been reached. The study was approved by the University Research Ethics Committee.

Initially, 20 NMPs took part in interviews (15 nurses and five pharmacists), which were conducted either face-to-face (15) or by telephone (5), depending on the geographical location of the participant. The interviews used a combination of the critical incident technique (CIT) and open questions. The former discussed specific incidents of prescribing, as described below, and the latter discussed other factors influencing whether or not the prescriber took responsibility for prescribing more generally.

Pilot interviews found that NMPs had struggled to provide concrete examples of relevant prescribing situations when asked ‘cold’ during the interviews. Instead, they had talked about generalities. Therefore, we chose to use the CIT in subsequent interviews. This technique requires participants to have previously identified specific examples of their experiences, known as ‘critical incidents,’ prior to the interview so they can be discussed in-depth. Critical incidents do not necessarily have to be good or bad situations, but are detailed accounts of the participant’s experiences that address the research question. CIT ‘does not collect opinions, hunches and estimates but obtains a record of specific behaviors’ and had been used in similar research with medical prescribers.

Participants were provided with details of the interview topics, and asked to be ready to discuss two critical incidents related to their own prescribing in the interview. More specifically, these were examples of situations where they felt for reasons other than clinical ones, it had been inappropriate for them to take responsibility and situations where they felt uneasy about taking responsibility, either for making a prescribing decision, or for issuing a prescription. The incidents could relate to a new prescription or a repeat prescription. Our previous studies with doctors found that using the CIT to discuss specific incidents also allowed participants to reflect on factors affecting prescribing in general. Difficult decisions, unlike routine ones, are memorable and therefore more suitable for discussion. A brief form was provided that participants brought with them to the interview, which reminded them about the types of incidents that they were to discuss and where they could note the details of the incidents they had chosen. The term ‘critical incident’ was not used with participants, but rather ‘examples of prescribing,’ to avoid confusion with its use in clinical governance for patients suffering severe harm.

Interviews lasted between 30 and 70 min. During the interviews, participants were asked to describe the incidents and to reflect on the factors involved and their feelings about the incidents. They were then asked more general questions about taking or not taking responsibility for prescribing (see Appendix). Most were audiotaped and transcribed; one nurse did not want the interview recorded but allowed the researcher to take notes.

In the second part of the study, three focus groups with 10 nurses in total, lasting 50–100 min and recorded with permission, were held once interviews had been completed. To mitigate the risk that the critical incidents were unusual in some way, each set of focus group participants were presented with up to five anonymized critical incidents from the interviews, selected to represent the key themes emerging from the initial analysis of the critical incidents. Participants were asked whether they had experienced a similar situation and, if so, to describe it or, if not, to reflect on reasons why not. Focus group participants were also asked to reflect on any factors influencing whether they would or would not take responsibility for prescribing, at the beginning of each meeting, to reduce participants being biased by the examples discussed later (see Appendix).
Data were analyzed alongside data collection. When it was felt there were enough data to build a comprehensive and convincing theory, \textsuperscript{13} data saturation was considered to have been reached. The initial thematic framework was developed with the help of NVivo\textsuperscript{9} software, applied to the entire data set (descriptions of the critical incidents, responses to general interview questions and focus group conversations) and continually refined in light of subsequent data collection and rereading of earlier transcripts. Broader themes and issues were generated and reviewed frequently, in comparison with the data from participants that supported the themes and while looking for explanations of any differences of viewpoints within the data.

Trustworthiness of the data analysis was insured in a number of ways. \textsuperscript{17} The main researcher (CM) kept an audit trail which detailed how the data were collected, how the themes emerging from the data were formed and how any other decisions were made during the research process. The initial interpretation of the data was discussed in detail with two of the co-authors (JH and MPT), who reflected on the plausibility and breath of the analysis. Cycles of reflection, analysis and discussion were repeated until all were satisfied with the data analysis. The focus groups enabled member checking, \textsuperscript{18} to allow the analysis of the critical incidents and the interview data to be explored and checked for credibility. The consideration of the effect of the research team on the analysis forms part of the discussions, allowing the researchers to consider the impact of their professional backgrounds (CM is a psychology graduate, JH and MPT are pharmacists; none are prescribers) on the iterations of data analysis.

**Results**

In the interviews, the 20 NMPs described 52 critical incidents, 12 from pharmacists and 40 from nurse prescribers (Fig. 1). There were only a few areas of difference between nurses and...
pharmacists (which are highlighted in the text); therefore, the data from both professions were analyzed together. In 24 incidents, the NMPs had decided not to take responsibility for prescribing and in 13 incidents, the NMP had taken responsibility for prescribing in conjunction with another health care professional. Six incidents related to a scenario where the NMP had felt uneasy or uncertain about taking responsibility for prescribing. The remaining incidents related to issues around repeat prescribing. The discussions about the critical incidents produced rich descriptions of how the participants chose whether or not to take responsibility on those occasions. The follow-up discussions in the interviews, and the discussions during the focus groups, then covered more general issues regarding taking or not take responsibility beyond those specific instances.

NMPs made two key decisions in relation to prescribing: firstly, whether they should take responsibility for prescribing and secondly, the actual prescribing decision which included the choice of medicine, dose, formulation and so on. Although it is recognized that there is interdependence between these two decisions, this paper focuses on the former. Key influencers on NMPs’ decisions to take responsibility for prescribing were found to be underpinned by a feeling of cautiousness and included the NMP’s perception of: their competency, their role and the perceived level of risk.

Underpinning cautiousness

From the outset, it was evident that most NMPs adopted a cautious approach to taking responsibility for issuing a prescription. Some were very worried about professional consequences of any errors (such as being reprimanded by the regulator) whereas others were concerned about personal criticism by other health care professionals. The first participant in the study, a pharmacist working in a GP practice, said, “If I am in any whatsoever doubt then I just buzz through to the GP (family physician)”. (Pharmacist 001, Interview)

When describing why they did not want to take responsibility for some prescriptions, the risk of making errors was often discussed. Some nurse prescribers doubted they would be supported by their regulator if they did make an error and would be handled differently than if the prescriber was a doctor who made a similar error. They felt they would be much more likely to be “struck-off” their professional register than doctors. Other nurses felt that if a nurse made a prescribing error it would be highlighted, whereas, prescribing errors made by doctors would be “concealed”. Yet pharmacist and a minority of nurse participants had a different view. They did not spontaneously raise the issue of professional support and when probed on the issue, pharmacists described feeling they had the necessary support from their regulator. Similarly a few nurse prescribers also felt they had the necessary support from their regulator:

“I think you’ve got to, as long as you feel confident that you can justify your actions, and that you behaved in a competent manner, then, you know, you’re as protected as anybody else” (Nurse 027, Focus Group)

Participants also felt particularly vulnerable to exposure and criticism. The quote below illustrates this community matron’s fear of the consequences of making a serious prescribing error:

“... you’re very much aware of I don’t want to make a decision, I don’t want to be the first nurse that’s across the Daily Mail [national newspaper] for killing a patient, type of thing, and I think, we’re very, very good at looking at what we don’t know, and saying I don’t know enough about that” (Nurse 004, Interview)

A small number of nurse prescribers believed an error made by an NMP would attract strong criticism from the media and medical professionals. In this quote below, two nurses in a focus group discuss how errors from nurses would be exaggerated by the media. Similar sentiments were repeated by two other nurse prescribers throughout the course of the discussions.

Participant 1: “I have that paranoia anyway, if you do something wrong, you will be absolutely, you know, it’s supposed to be about learning and no blame culture but, there is, and, the worrying thing is about prescribing is that they do say, you know, the first thing that goes wrong, potentially serious will be blown up” (Nurse 001, Focus Group)

Participant 2: “Well it will definitely for nurses, they’ll love it, the papers will have a field day” (Nurse 004, Focus Group)

One nurse felt there was much criticism in the broader medical profession about non-medical prescribing. She had personally experienced negativity from some doctors and felt that non-medical
prescribing had to be "cherished" and "protected" (Nurse 010). Similar sentiments were repeated by other nurse prescribers but again, as with their views on professional support, such concerns were not voiced by pharmacist prescribers. Worries about the risk of such personal criticism underpinned much of the cautiousness to take responsibility.

Participants were aware of deficits in their knowledge and skills. A community matron (nurse) stated that the course had outlined the legal and ethical aspects of prescribing issues which she had considered less before the course, thus suggesting the prescribing training course encourages cautiousness amongst NMPs with regards to taking prescribing responsibility. Exactly how long this cautiousness lasts was not discussed.

“When you’ve done the course, you lose a lot of confidence, because you learn a lot more about, you know the dilemmas and the ethics of prescribing, and that you’ve got to know a lot more about that drug before you prescribe it, so, then, it’s actually harder to prescribe it independently” (Nurse 017 Interview)

Competency

This cautiousness to take responsibility for prescribing was influenced by the participants’ perceptions of their competency levels in certain areas. It was clear that nurse and pharmacist prescribers felt that, if they were not competent, then they should not take responsibility for prescribing, and this attitude is reflected in the quote below from a nurse practitioner working in a GP practice:

“Well if you’re not competent you don’t do it basically, you get the GP to do it instead” (Nurse 027, Focus Group)

When NMPs did not feel competent to take responsibility for prescribing, they described seeking information and guidance from GPs and other pharmacists. Participants suggested that over time, this support contributed to their increasing competence and confidence in prescribing, leading them to eventually take full responsibility for more prescribing decisions.

The supportive clinical supervision that they received informally from colleagues was crucial for some people and, when not available, participants became reluctant to take responsibility for prescribing. This had consequences for future prescribing decisions. For instance, the continence specialist nurse felt her confidence to prescribe was diminishing because of this lack of support, as she was the sole NMP and did not have a ‘mentoring’ relationship with the GP. She described how some of her prescribing decisions had led to negative outcomes, such as patients experiencing side effects with anticholinergics. As she had no one to talk through these situations with, her confidence waned and she chose not to take responsibility for prescribing in some subsequent similar situations. Instead, she now asked the GP to issue prescriptions even though the GP merely followed her instructions without examining the patient. When probed on why it was better for the GP to do the prescribing she said “just because of the responsibility”. This example illustrates that insufficient clinical support can mean that competence does not increase, which may have a direct influence on whether an NMP takes responsibility for prescribing in a given situation.

Participants suggested that training opportunities enhanced their competence. However, two pharmacist NMPs felt that opportunities to expand their prescribing practice were restricted by the lack of training courses and material targeted at the appropriate level for pharmacist prescribers. This quote below illustrates this view:

“Expanding your prescribing may be difficult, not because of your knowledge of the drugs, but because there’s no training at a good enough level for the other stuff, you know, how do you become competent to … treat osteoporosis, there are no courses” (Pharmacist 003, Interview)

Role

Participants suggested they would not take responsibility for prescribing if it was outside their role. The factors contributing to participants’ self-definition of their role included: the NMPs’ role in general; as well as at individual level, their main medical specialty and agreements with colleagues. Most participants suggested their role was to add to existing services rather than to replace them. They believed that medical prescribers, rather than NMPs should assume “risk” in relation to prescribing, and their role should include altering medication for existing conditions while the GP, as the traditional providers of long-term patient care, should continue to issue repeat prescriptions, as illustrated in the following example:
“I think you’ve got to have your standard, you’ve got to say to yourself whether it’s A, B or C, the repeat comes from a GP. Even if it is something that you use regularly, you’re not there to take over their treatment, you’re there to supplement” (Nurse 029, Focus Group)

NMPs wanted to withstand pressures to issue repeat prescriptions so the boundaries of their role would be protected. One advanced practitioner for nursing homes felt that if they made one exception to prescribe outside their scope of practice, then in the future staff would rely on her to prescribe in these situations rather than contacting GPs.

“You see the more we do it to me the more reliant the nursing home become and don’t bother to contact the GP” (Nurse 001, Interview)

However, participants working in GP practices qualified this view and suggested that they did consider issuing repeat prescriptions as part of their role, but only under certain conditions, such as being competent to do so and having physically seen the patient. Their role, however, excluded signing patients’ routine monthly repeat requests.

“I don’t go to the repeat box in the morning and take out a pile an’ sign them like doctors do” (Nurse 012, Interview)

While participants spoke of role in general terms, they also described the boundaries of their individual roles. Some nurse prescribers described being unwilling to take responsibility for prescribing decisions that fell outside their medical specialty. The consequence of this role definition, though, was that it was less likely that NMPs would expand their competency outside their main medical specialty:

“I don’t see how I would develop a competency in heart disease, because it’s not my specialty, so I wouldn’t, I wouldn’t be attempting to, there’s not an expectation either” (Nurse 018, Interview)

NMPs working in more general roles did not have a main medical specialty and therefore based their role definition on other factors. Some described agreements with their GP colleagues about the clinical areas they could operate within, what the practice pharmacist described as “rules of engagement”. It is noteworthy, that despite perceiving himself competent to prescribe for musculoskeletal problems, the pharmacist believed he was still expected to refer these patients to GPs as being outside the “rules”. This suggests that other HCPs have a role in defining NMPs’ roles. It also suggests that both competence and role can be separate, and therefore both must be considered.

“When I start working in a practice, I tend to try and agree ground rules, or, rules of engagement, call it what you will, about what it is they want me to do, and if they’re fairly broad, then that’s okay, in some cases they’re fairly narrow and say, outside these, we prefer you to pass them over to us, which is also okay, so if I get people with musculoskeletal problems, which I’m not too bad on, but generally I pass them over in that they expect me to just sort of stay within my boundaries” (Pharmacist 005, Interview)

Participants’ perception of the boundaries of their role led to their feeling pressured when they were asked to take responsibility for prescribing outside it. Walk-in-center nurses described instances where other non-prescribing nurses had asked them to provide a prescription for patients they had not personally examined, and for medicines outside their competency or scope of practice. It was suggested that non-prescribing colleagues perceived the NMPs’ role to be one of convenience, to be accessed when they required a prescription.

Despite this pressure, the nurses said they would not issue a prescription in these circumstances:

“When I am in the walk-in-center, obviously they’re asking all the time, ‘can you do this?’ No, because it’s not within your remit is it? We might have the BNF [British National Formulary] that we can prescribe from, but we’re not competent in all that BNF are we? So basically our p-formulary [personal formulary] has to match up with what we’re doing, and then, that’s when you say, ‘actually no, I’m not prescribing tramadol or I am not prescribing whatever they’re asking for’” (Nurse 030, Focus Group)

Another walk-in-center nurse described mechanisms she had put in place to address such pressure, and hence making her role explicit to her non-prescribing colleagues. She explained that other nurses were asked not to request a prescription, but rather an opinion for a patient.

“I mean it is a difficult scenario, and we’ve actually got around this now, and it doesn’t happen anymore, a colleague will never come in and ask for a prescription, they will ask for an opinion” (Nurse 009, Interview)
Risk

Risks to patient safety and legal considerations were also strong influencers, and when the risk was perceived to be high, participants did not take responsibility for making the prescribing decision but instead, either referred the patient to another HCP or prescribed in conjunction with a doctor. NMPs perceived risk when faced with prescribing outside guidelines, off-label (outside the medicine’s license), “high risk” medicines, for a patient at higher risk of medicines-related morbidity or having insufficient patient information to prescribe safely.

A nurse practitioner in a GP practice (Nurse 018) felt “uneasy”, “vulnerable” and “uncertain” about her use of antibiotics as she was unsure which guidance to follow. The discomfort with prescribing outside guidelines is illustrated below, along with the pharmacist’s reasons for not accepting responsibility transferred from a hospital consultant:

“I didn’t think it was my place to … initiate a very high dose script of benzodiazepines, although it does mention it on the clinical management plan, I really didn’t want to go against all local protocols and guidelines by reissuing a script [prescription] for a client at high doses” (Pharmacist 020, Interview)

Prescribing “off-label” was also perceived to be an area of risk. Despite being legally allowed to do this, participants had concerns about prescribing this way in practice. This was apparent from two critical incidents and was also supported by comments from nurse prescribers in the focus groups. The nurse prescriber below explains how she always gets a second opinion if using melatonin off-label for children:

“You know it’s just one of those things that, and I do always speak to our consultant before I prescribe it, so I do get a second opinion …” (Nurse 031, Focus Group)

The type of medicine and degree of risk associated with it also affected the NMP participants’ likelihood for taking responsibility for prescribing. Medicines were considered to be high risk if they had potentially severe side effects, were prescribed at high doses, or could have serious interactions with others. In the quote below, this nurse practitioner describes her feelings about prescribing steroids:

“I think it’s a very big decision to give someone oral steroids, because it’s not like giving someone a course of antibiotics, it’s a big whacking dose of steroids, that I have to be absolutely sure in my own (mind) that the patient needs it” (Nurse 002, Interview)

The above example is also linked to the amount of information available about the patient to inform the NMP’s decision-making. Advanced nurse practitioners working for nursing homes highlighted difficulties with obtaining such information, either because the elderly patient did not know the information themselves or the nursing home did not keep such records. Similar difficulties were faced by NMPs working in community pharmacies, walk-in-centers, clinics and the community, but less often mentioned by those in GP practices with access to patient records.

Discussion

Non-medical prescribing is intended to offer a more flexible health care system for patients by improving access to medicines whilst maintaining or improving patient safety. The wider program of work, of which this is a part, found that NMPs made two key decisions in relation to prescribing, the first of which was whether to take actual responsibility for prescribing. This study found that this decision was underpinned by a feeling of cautiousness, which was influenced by their perceptions of their competency and role, and the level of risk.

This study has some limitations. Data collection relied on self-reports, hence accuracy may have been limited by participants’ ability to recall scenarios or reasons for taking responsibility for prescribing. There may have been factors influencing their decision-making that they forgot or chose not to disclose. However, this effect was reduced by using the CIT method, which allowed an in-depth examination of actual prescribing events rather than relying on generalizations and hunches. The nature of the incidents participants were asked to bring to interview – regarding the appropriateness of them taking responsibility for prescribing and feeling uneasy about prescribing— may have encouraged discussions about their cautiousness. Therefore, the focus groups were particularly useful in validating the themes emerging from the critical incidents, as the larger numbers of participants in the group settings facilitated debate and further reflection. However, the validation process was only undertaken by groups of nurse prescribers, due to
difficulties recruiting large numbers of pharmacist prescribers. It is therefore unknown whether the latter would have had differing views on the validity of the themes and further exploration of the influencers of caution for pharmacists may be an area for further research.

This study found that participants tried to meet the competency frameworks developed by their regulatory bodies and emphasized in their initial training. However, some NMPs were frustrated by the lack of learning opportunities to maintain or improve their competence once they began to use their authority to prescribe. Training courses in specialist areas of practice for NMPs appeared to be very hard to find, possibly because the population for which they would provide training would be very small. This lack of training opportunities was particularly felt by those participants who were unable to discuss prescribing issues and errors with colleagues and have reflective debriefings. They then lost confidence in their abilities and sometimes became reluctant to prescribe. They employed strategies, such as patient referral or seeking advice, for situations where they used to prescribe previously. Appropriate referral is clearly a core competency for good prescribing, and is also used by doctors when experiencing prescribing uncertainties or dilemmas. However, it could be hypothesized that excessive or unnecessary referral can also become a strategy to deal with lost confidence, preventing NMPs from growing in competence and taking greater responsibility.

Echoing previous research, this study suggests that one way to improve NMPs’ competence may be to improve clinical support, opportunities to prescribe and cohesive supportive teams. We found that clinical support was provided not only by doctors, but also by other health care professionals within the broader team. This finding is not unusual, since Fisher and colleagues found community pharmacists providing guidance to NMPs, thus reinforcing the idea that support for NMPs could come from additional avenues. Proactively including these other types of clinicians in their support teams could be part of an overall strategy to improve NMP access to training opportunities, clinical supervision and professional guidance. Mentoring by experienced NMPs, especially after graduating from the prescribing course, may help support new NMPs to implement their prescribing skills in practice. Otherwise, as Hall and colleagues stated, NMPs may not overcome confidence issues about their competence and will continue to be low volume prescribers. Online courses, or access to specialist training alongside doctors, may help both to maintain existing and to extend further competence. However, extension of competence to areas outside those that the NMP has been employed to deliver (what they consider to be their “role”) would require renegotiation of those boundaries with their employer, which none of the NMPs mentioned as being an option.

The language used to describe the relationship between the NMPs and patients’ GPs (such as needing “ground rules” as to what they could do, despite the GPs’ willingness to accept many of the decisions made by the NMPs) is a possible reflection of the NMPs’ self-perceived low status in the health care system. This is consistent with other research where, for instance, despite having prescribing authority, pharmacists viewed themselves as subordinates to doctors whom they require to provide final authorization for prescribing decisions. NMPs’ overall approach to taking or refusing responsibility for prescribing decisions may reflect deeply rooted professional boundaries in the UK health care system. Their perceptions of their role in the health care system has been discussed briefly here but, given that it may impact how NMPs use their prescribing authority, further research is warranted.

This study found that NMPs sometimes did not want to take full prescribing responsibility for patients. This finding concurs with previous research suggesting that NMPs were uncomfortable prescribing for “high risk” patients at either end of the age spectrum when they had insufficient information, and when departing from protocols, guidelines, formularies and agreed management plans. NMPs, additionally, felt uncomfortable prescribing for patients with complex poly-pharmacy and those with comorbidities. The risk of prescribing without the necessary information about the patient led to a reluctance to prescribe. For example, nurse prescribers based in the community reported difficulties with accessing patients’ records since these were kept in the patient’s GP practice. In earlier research, a lack of access to patients’ notes was found to be a barrier to community nurse prescribing. Insufficient information about the patient is a risk factor for prescribing errors and therefore must be addressed. Remote access to the patients’ electronic health records
may reduce the perceived risk and give them the confidence that they could prescribe safely in this range of situations.

The NMPs identified this range of situations as being risky, and to ensure these patients were able to access prescriptions safely and to reduce the risk of consequences to themselves, they readily sought doctors’ advice, or asked the doctor to issue the prescription on their behalf. Latter and colleagues found similar behavior in both nurse and pharmacist NMPs who, when deviating from protocols, guidelines or formularies, sought colleagues’ advice.3 Similarly, Lewis and Tully found that junior doctors also sought advice from their colleagues when faced with a difficult prescribing decision, in order to reduce the discomfort they felt.16 One possible solution to this problem might be to encourage NMPs to take responsibility initially for prescribing for less complex patients and gradually gain the competence to take responsibility for increasingly complex patients. This could enable NMPs to move towards substituting for medical prescribers in a broader set of circumstances. Novice nurse NMPs, for example, have been reported as engaging in ‘permission seeking’ with their medical colleagues during the first 18 months after graduating as a prescriber, but not thereafter.33

Further complexity to role, competency and risk assessment was seen when NMPs felt coerced to take responsibility for prescribing because of the failure of other services, or pressure from non-prescribing colleagues and patients. Nurse prescribers in GP practices, in particular, felt pressured to sign repeat prescriptions as there was limited support from managers to adhere to agreed guidelines around responsibilities for repeat prescribing. Previous research has suggested that patients sometimes have concerns about non-medical prescribing.54–56 Instead, this study agrees with Latter and colleagues’ findings3 and found patients actually welcome NMPs prescribing for them and even pressurize them to prescribe beyond the boundaries of their scope of practice. Patient pressure may arise from their trust that NMPs can meet all prescribing needs. It is therefore important that patients’ understanding of NMPs’ role is improved. As Stenner and colleagues recommend, it is important they acknowledge patient and colleague views37 and communicate their competencies and role. This could maintain the confidence of their colleagues and patients and sustain good working relationships.

Conclusion

If the benefits of non-medical prescribing through NMPs are to be realized, the issues of competency, role and perceived level of risk need to be addressed. NMPs require improved access to continuing professional development, clinical support and a cohesive team culture for guidance, whilst they continually review and improve their own competencies. Their role and remit must be made explicit to colleagues who are not NMPs, as well as to patients, as this may help to explain their prescribing decisions. Risk could be reduced by enabling easier access to electronic records for patients in their care. Given its impact on their use of their prescribing authority, further research is warranted on NMPs’ perceptions of their position in the overall health care system.

Acknowledgments

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References

Appendix

Semi-structured interview discussion guide

Interviewer preamble: As a non-medical prescriber you are able to prescribe any licensed medicine out of the British National Formulary (as well as some controlled drugs – nurse only). However, in reality you are unlikely to prescribe the entire range of products out of the BNF. This means therefore, that there will be instances where you have to decide whether or not to issue a prescription or take responsibility for making a prescribing decision for a patient.

The purpose of this interview is to understand more about the factors that you take into consideration when deciding whether or not to issue a prescription or take responsibility for making a prescribing decision for a patient. I would like to do this through reflecting on two prescribing scenarios, the first where you felt that it was not appropriate for you to issue a prescription or make a prescribing decision for a patient, secondly, where you felt uncertain or uneasy about issuing a prescription or making a prescribing decision for a patient.

Confidentiality is assured at all times and information analyzed or reported from this interview will not enable anyone to recognize you. Patient information is not required; if however patients are mentioned during the interview their details will be immediately removed from all records.

The interview will last approximately 1 h and the topics to be covered include a few questions about your role and use of prescribing and also discussion of the two types of prescribing scenarios I outlined above.

Do you have any questions before starting the discussion?

Section one: current role and use of prescribing

• Please tell me about your current role(s)?

Prompts to be used where appropriate:
⇒ Where are you based (GP practice, walk-in-centre, hospital)?
⇒ By what method do you see patients (pre-arranged appointments, house visit, same-day appointments etc ...)?
⇒ What type of conditions/symptoms do you treat?
⇒ How do patients get referred to you?
⇒ How long have you been in your current post for? How long have you worked in the field you are now prescribing in?
⇒ How many patients do you see per week/session? How many patients for each condition?

• Please tell me about your use of prescribing in your current role?

Prompts to be used where appropriate:
⇒ How many prescriptions do you write per week/session?
⇒ What type/class of medicine do you often prescribe?
⇒ What types of prescriptions do you usually give to your patients (e.g. Acute vs. repeat)?
⇒ What type of prescribing are you operating under (e.g. independent, supplementary, patient group directives)?

Section two: discussion of prescribing decisions

Interviewer: In the letter I sent you, I asked you to make a note of two prescribing scenarios, firstly a situation where you felt that it was not appropriate for you to issue a prescription or take responsibility for making a prescribing decision for a patient, secondly, where you felt uncertain or uneasy about issuing a prescription or taking responsibility for making a prescribing decision for a patient.

Interviewer: I would initially like to talk about the first prescribing decision you thought about (where you did not feel it was appropriate). I would like to remind you that you do not need to mention the patient’s name or names of your colleagues.

• Could you please tell me about this prescribing decision?

Prompts to be used where appropriate:
⇒ Why did you feel it was not appropriate for you to issue the prescription or make the prescribing decision for the patient?
⇒ What were the factors involved in this decision?
⇒ What was the condition(s) or symptom(s) involved?
⇒ What was the drug(s) involved?
⇒ On reflection, would you do the same thing again?
How did you feel about making the decision not to prescribe?

What happened to the patient? Did this involve another health care professional? Who was this?

How do you perceive the patient felt about your decision? How did this make you feel?

How do you think your medical colleagues would behave in a similar situation?

What leads you to think that you should not prescribe in situations such as these?
- Guidance/protocols. If so, who from?
- Any individual(s). If so, what did they say?
- Training. If so, what did it say?

Has this happened before?

Interviewer: I would now like to talk about the second prescribing decision you thought about (where you were uncertain or uneasy).

• Could you please tell me about this prescribing decision?

Prompts to be used where appropriate:
⇒ Why were you uncertain or uneasy about issuing a prescription or making the prescribing decision for the patient?
⇒ What were the factors involved in this uncertainty?
⇒ What was the condition(s) or symptom(s) involved?
⇒ What was the drug(s) involved?
⇒ What was the final decision you made?
⇒ Do you think the final decision you made was appropriate? Why was it appropriate/not appropriate?
⇒ How did this situation make you feel?
⇒ What happened to the patient? Did this involve another health care professional? Who was this?
⇒ How do you perceive the patient felt about your decision? How did this make you feel?
⇒ What does guidance/protocols/other individuals/training say about what you should do in this situation?
⇒ What would help you address this uncertainty or unease in situations such as these?
⇒ Has this happened before? What did you do then?

⇒ Are there any prescribing situations where you did not feel it was appropriate for you to issue a prescription or take responsibility for making a prescribing decision for a patient? Could you please tell me about this/these prescribing decision(s)?
⇒ Use prompts above.

⇒ Are there any prescribing situations where you where uncertain or uneasy about issuing a prescription or taking responsibility for making a prescribing decision for a patient? Could you please tell me about this/these prescribing decision(s)?
⇒ Use prompts above.

Section three: general discussion (If section two was very brief or not covered at all ask the following)

• What factors do you take into consideration when deciding whether you should issue a prescription or take responsibility for making a prescribing decision for a patient?
• Are there any situations where you do not feel that you should prescribe? What situations?
• What do you consider a high risk situation?
• Are there any situations that you cannot prescribe in? What prevents you from prescribing?
• In which situations do you feel very confident to prescribe in? Why?
• Has anyone ever asked you not to prescribe in a certain situation? Did you do this?
• Have you received guidance which has directed you not to prescribe in certain situations?
• Are there any situations where you feel unsure whether you should be prescribing or not?
⇒ Why?

Section four: competency and competency framework

• What does the word ‘competency’ in relation to prescribing mean to you?
• Do you believe your competency levels differ according to the:
⇒ Patient’s age
⇒ Patient’s condition/symptoms
⇒ Severity of the patient’s symptoms
⇒ Drug or likely drug required by the patient
• In situations where you do not feel competent enough to prescribe what do you do?
• Have you heard of the ‘competency framework’ specifically for prescribing?
If relevant:
When and where were you first introduced to the competency framework?
How do you use the competency framework?

Conclusion
Is there anything else you would like to talk about?
Is there anything that you would like to go back to?

Switch off the recorder

Discussion guide focus groups.

Interviewer preamble: As a non-medical prescriber you are able to prescribe any licensed medicine out of the British National Formulary (as well as some controlled drugs – nurse only). However, in reality you are unlikely to prescribe the entire range of products out of the BNF. This means therefore, that there will be instances where you have to decide whether or not to issue a prescription or take responsibility for making a prescribing decision for a patient.

The purpose of this group discussion is to understand more about the factors that you take into consideration when deciding whether or not to issue a prescription or take responsibility for making a prescribing decision for a patient. The topics to be covered include a few questions about each your role and use of prescribing. We will then begin to talk about the factors that influence whether or not you decide to prescribe. I would firstly like to get each of your individual opinions on the factors you take into consideration before showing you some examples of prescribing scenarios which I would like you to talk about through your own experiences.

Confidentiality is assured at all times and information analyzed or reported from this group discussion will not enable anyone to recognize you.

Patient information is not required; if however patients are mentioned during the interview their details will be immediately removed from all records.

The discussion will be audio recorded unless anyone opposes to this? The recordings will be kept securely until publication of the findings.

Does anyone have any questions before starting the discussion?

Section one: current role and use of prescribing

Interviewer instruction: ask each participant.

- Please tell me about your current role(s)?

Probes to be used where appropriate:
- What is your first name?
- Where are you based (GP practice, walk-in-centre, hospital)?
- By what method do you see patients (pre-arranged appointments, house visit, same-day appointments etc ...)?
- What type of conditions/symptoms do you treat?
- How do patients get referred to you?
- How long have you been in your current post for? How long have you worked in the field you are now prescribing in?
- How many patients do you see per week/session? How many patients for each condition?

Please tell me about your use of prescribing in your current role?

Prompts to be used where appropriate:
- How many prescriptions do you write per week/session?
- What type/class of medicine do you often prescribe?
- What types of prescriptions do you usually give to your patients (e.g. Acute vs. repeat)?
- What type of prescribing are you operating under (e.g. independent, supplementary, patient group directives)?

Section two: general discussion

- What factors do you take into consideration when deciding whether you should issue a prescription or take responsibility for making a prescribing decision for a patient?
- What do you consider a high risk situation?
- Are there any situations where you do not feel that you should prescribe? What situations?
- Are there any situations that you cannot prescribe in? What prevents you from prescribing?
- In which situations do you feel very confident to prescribe in? Why?
- Has anyone ever asked you not to prescribe in a certain situation? Did you do this?
- Have you received guidance which has directed you not to prescribe in certain situations?
- Are there any situations where you feel unsure whether you should be prescribing or not? Why?

Section three: examples of prescribing scenarios

Instruction: show or read example 1 of prescribing scenario to participants and ask:
• Is this something that you have experienced yourself?
  If yes:
  ⇒ Please describe when it happened to you?
  ⇒ In what ways was it similar or different?
  ⇒ What was the condition/symptom or drug involved?
  ⇒ Is this something that happens frequently?
      How frequently?
  ⇒ How did this prescribing situation make you feel?

If no:
  ⇒ Has anything similar happened to you?
      Please describe this situation.
  ⇒ Why do you think this example is not relevant to you?

*Instruction: repeat above with any further examples of prescribing scenarios.*

Section four: competency and competency framework

• What does the word ‘competency’ in relation to prescribing mean to you?
• Do you believe your competency levels differ according to the:
  ⇒ Patient’s age
  ⇒ Patient’s condition/symptoms
  ⇒ Severity of the patient’s symptoms
  ⇒ Drug or likely drug required by the patient

• In situations where you do not feel competent enough to prescribe what do you do?
• Have you heard of the ‘competency framework’ specifically for prescribing?
  If relevant:
  ⇒ When were you first introduced to the competency framework?
  ⇒ How do you use the competency framework?

Conclusion

⇒ Is there anything else you would like to talk about?
⇒ Is there anything that you would like to go back to?

*Switch off the recorder*

I would like to thank you for your time. This interview has been extremely useful to the research. If desired a copy of the interview transcript can be posted on to you. When the study is completed a summary of the findings will be sent to you if you wish. In the meantime please feel free to contact me if you have any questions or other issues you would like to discuss.