

TITLE: The prescribing needs of community practitioner nurse prescribers: A qualitative investigation using the Theoretical Domains Framework and COM-B

RUNNING TITLE: Nurse prescriber behaviour

^{1,2}Angel Marie CHATER (PhD, MSc, CPsychol), ¹Jane WILLIAMS (MSc) & ²Molly COURTENAY (PhD, MSc, BSc, RGN, CertEd)*

¹University of Bedfordshire, Bedford, MK419EA, UK, ²University College London School of Pharmacy, London, WC1H 9JP, UK, ³Cardiff University, Cardiff, CF24 OAB, UK,

***Corresponding author:**

Molly Courtenay

Email: courtenaym@cardiff.ac.uk

Tel: 02920688566

ACKNOWLEDGEMENTS

We would like to thank all of the community nurse practitioner prescribers who generously gave up their time to participate in this study. We would also like to thank members of the Nurse Prescribers Advisory Group for their assistance with member validation of the findings.

CONFLICT OF INTEREST STATEMENT

No conflict of interest has been declared by the authors.

FUNDING

This work was funded by the Royal Pharmaceutical Society.

AUTHOR CONTRIBUTIONS

Criteria	Author Initials
Made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data;	MC, AC, JW
Involved in drafting the manuscript or revising it critically for important intellectual content;	MC, AV, JW
Given final approval of the version to be published. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content;	MC, AC, JW
Agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.	MC, AC, JW

ABSTRACT

Aim: With a number of qualified community practitioner nurse prescribers not prescribing, this research aimed to understand what influences this behaviour. **Design:** A qualitative research design. **Methods:** Semi-structured interviews, based on the Theoretical Domains Framework were conducted with twenty qualified community practitioner nurse prescribers. Data collection took place between March-July 2018 and continued until data saturation was reached. **Results:** Nine themes inductively explained prescribing behaviour: 1) *'Knowledge and experience'*; 2) *'Consultation and communication skills'*; 3) *'Professional confidence and identity'*; 4) *'Wanting the best outcome'*; 5) *'NHS vs patient cost'*; 6) *'Emotion-led decisions'*; 7) *'Time allocation'*; 8) *'Formulary access'* and 9) *'Supporting environment for patient-centred care'*. Themes were then deductively mapped to the Theoretical Domains Framework and COM-B. **Conclusion:** There is an ongoing need to support community practitioner nurse prescribers' 'Capability' to prescribe in terms of knowledge and acquired skills; 'Opportunity' to make prescribing easier, such as access to a wider and up-to-date nurse formulary alongside effective clinical support; and 'Motivation' to feel confident in prescribing behaviour, highlighting positive patient outcomes while reducing perceived issues such as cost and non-adherence. **Impact:** Findings show that Capability, Opportunity and Motivation all influence the decision to prescribe. Those responsible for professional regulation and training should ensure community practitioner nurse prescribers have access to the relevant knowledge, skills and formulary to facilitate their prescribing behaviour. Professional confidence and identity as a prescriber should be encouraged, with acknowledgment of influences such as cost and emotion. An environment that allows for patient-centred care and the best outcome should be supported, this may mean increasing time allocated to consultations.

Keywords: Prescribing behaviour, Community Practitioner Nurse Prescribers, Nurse Prescribers' Formulary, Theoretical Domains Framework, COM-B

INTRODUCTION

Nurses are able to prescribe in several countries, including Ireland, Australia, Canada, New Zealand, Netherlands, Sweden, the United States, and the United Kingdom (UK) (Weeks et al., 2016; Kroezen et al., 2011; Ball et al., 2009). Doctor shortages, the need to improve access to medicines, the development of advanced practitioner roles and a need to make better use of nurses' skills, are each drivers for this role (Weeks et al., 2016; Kroezen et al., 2011).

In the UK, legislative changes in 1992, enabled nurses to undertake training to prescribe from a limited range of items included in the Nurse Prescribers' Formulary (NPF) for Community Practitioners (V100: Nursing and Midwifery Council (NMC) 2018). This training (typically 4 days in duration) is now integrated into the qualifying programme for Specialist Community Practitioners. Training to prescribe from this formulary (a 10 day stand alone course) is also available for community staff nurses without a specialist qualification in community nursing (NMC, 2018). There are now around 38,000 qualified community practitioner nurse prescribers (CPNPs) working in the UK (M.Courtenay, personal communication, 2018) who are able to prescribe from this formulary.

Independent prescribing rights (i.e. where the prescriber is responsible for the assessment, diagnosis, and decisions about the clinical management required in patients with diagnosed or undiagnosed conditions) (Department of Health, 2001) were extended in 2001 in the UK to include other groups of registered nurses, with three years qualified experience (Department of Health, 2001). Nurse independent prescribers (NIPs) have undertaken an additional regulated post-registration prescribing programme (V300), typically 6 months in length (NMC, 2006, NMC, 2018), and can prescribe any medicine within their area of competence independently. Recent changes in prescribing standards means that prescribing competencies have been integrated into nurse undergraduate education, and training to become a NIP can now be accessed by registered nurses with one years qualified experience (NMC 2018).

Despite the increased investment in the UK in the skills of community nurses, including prescribing (Health Education England (HEE) 2016, NHS England 2014), and the belief by CPNPs that prescribing is a key component of their role (Downer & Shepherd 2010; Young, 2009), there has been a decline in the number of community practitioners who actively prescribe (Drennan et al., 2014). This is wasteful in terms of the time and expenses incurred for training and failure to deliver an improved service to patients. Although there is some evidence available that has explored the prescribing behaviour of NIPs, there is no evidence available that has attempted to understand the prescribing behaviour of CPNPs.

BACKGROUND

A review of 18 studies (Latter & Courtenay, 2004), reported that prescribing by CPNPs had been largely successful, enabling faster treatment for patients. Factors influencing prescribing behaviour across the studies reviewed, included confidence, the cost of products, prescribing up-dates, peer support, clinical supervision, informal peer support. The restrictive nature of the formulary, was described as acting as a barrier to prescribing, preventing nurses from prescribing medicines for the patients they managed (Latter & Courtenay, 2004).

A small number of studies are available that have explored factors influencing NIPs prescribing behaviour. However, these studies have focused upon antibiotic prescribing behaviour. Relationships with other prescribers and knowledge of current guidelines (Williams et al., 2018; Rowbotham et al., 2012), diagnostic uncertainty and the clinical condition of the patient (Abbo et al., 2012; Rowbotham et al., 2012; Adorka et al., 2013), in addition to patient expectations for a medicine (Rowbotham et al., 2012; Adorka et al., 2013), evidenced based guidelines, experience, and clinical complications (Philp & Winfield 2010), peer and organisational support and patient contact (Offredy et al., 2008) have each been reported as important influences.

Given the investment in the prescribing skills of community nurses, and the belief by these nurses that prescribing is an important element of their role, it is important to understand the influences on their prescribing behaviour. Research suggests the use of theoretical frameworks can be most effective when understanding behaviour, with the Behaviour Change Wheel (BCW) being a recommended approach (Michie et al., 2011). At the centre of the BCW is COM-B, a system designed to understand the Capability (i.e. knowledge and skill), Opportunity (i.e. social and environmental influence) and Motivation (i.e. confidence and identity) to engage in Behaviour (Michie et al., 2011) through a behavioural diagnosis. The Theoretical Domains Framework (TDF) (Cane et al., 2012) unpacks COM-B further to highlight in greater detail the influences on behaviour. This helps separate potential ambiguity when attempting to contextualise the determinants of COM-B. For example, a Psychological Capability barrier could be both a lack of Knowledge (TDF domain) or poor Memory (TDF domain); each of which would require a different Intervention Function; e.g. Education to increase Knowledge or Enablement to enhance Memory, and in turn different Behaviour Change Techniques (BCT) from the taxonomy (BCT Taxonomy v1: Michie et al., 2013) e.g. giving information to increase knowledge; using prompts and cues to enhance memory. There is no known research that has attempted to understand the prescribing behaviour of CPNPs using these frameworks.

THE STUDY

Aim

- To understand factors that influence CPNPs prescribing behaviour.

Design

A qualitative approach utilising semi-structured interviews to gain in-depth insight into factors that influence prescribing behaviour.

Sample/Participants

All individuals (n=89) who had recently participated as a member of an expert Delphi panel designed to provide national consensus on the range of conditions managed by these nurses (Courtenay et al 2018), were contacted via an email describing the study and inviting interested participants to contact the researchers.

Data collection

Alongside an information sheet and consent form, an interview schedule was developed based on the 14 domains of the TDF namely; Knowledge, Skills, Social/professional role and identity, Beliefs about capabilities, Optimism, Beliefs about consequences, Reinforcement, Intentions, Goals, Memory, attention and decision processes, Environmental context and resources, Social influences, Emotions, and Behavioural regulation (see Table 1). This sought to ask questions related to 1) the factors that influence CPNPs decision to prescribe for the conditions they manage, and whether to expand their prescribing competencies to new areas of practice; 2) whether the content and presentation of information in the NPF meets nurse's needs, and how (if at all), this information might be presented more effectively; and 3) the barriers faced by CPNPs with regards to their ability to access relevant and up-to-date prescribing information at the point of care. The TDF was used rather than the simpler COM-B framework, as it allowed for a more detailed investigation of the determinants of behaviour. The interview schedule was developed and piloted for use with two nurse prescribers. Interviews were audio-recorded on two dictaphones to reduce the risk of data corruption or loss.

A participant information sheet and consent form were sent by email to all those interested in participating who had contacted the researchers (MC), at which point they were given the opportunity to ask questions prior to consenting to take part. Written consent was obtained prior to each interview. Semi-structured telephone interviews were conducted and audio-recorded by a research assistant with experience of qualitative methodologies (JW). Data collection took place between March-July 2018 and continued until data saturation was

evident. Mean interview time was 42.46 minutes (range 29.59- 67.26 minutes). Interviews were transcribed verbatim (by JW) and checked (by AC and MC) for accuracy.

Ethical consideration

Ethical approval for the study was sought by MC and provided by the School of Healthcare Sciences Research Governance and Ethics Committee, Cardiff University (Reference: 427SREC)

Data analysis

Drawing from thematic analysis (Braun & Clarke, 2006) data was initially coded inductively, assisted by the aid of computer software (NVivo 11). Two researchers (JW/AC) independently immersed themselves in the data and began assigning initial codes. Codes and emerging themes were then reviewed and discussed with a third qualitative researcher (MC). The themes were then deductively mapped to the relevant domains within the TDF and COM-B and agreed within the team. Using the BCT Taxonomy v1 (Michie et al., 2013), quotes used were then coded by AC for the BCTs that the population had described when discussing what influences their behaviour, and subsequently checked by MC and JW.

Validity and reliability/rigour

Saturation was reached in the last few interviews, whereby data was not highlighting the need for any further themes. Themes were also subject to validation with members of the Nurse Prescribers Advisory Group (the group responsible for advising Ministers on nurse prescribing including products to be 'included in' or 'added to' the NPF), where the relevance and validity of the findings were confirmed by the group.

Results

Participants

Twenty nurse prescribers (2 males; 18 females), with between 2.5-20 years experience as a qualified prescriber (mean = 10.3 years, [standard deviation = 6.4 years]) took part. This represented 22.47% of the total population invited. Table 2 provides further details and pseudonyms. All respondents worked in the community and reported that their consultations lasted around 42 minutes (between 5-120 minutes).

Inductive themes

Nine themes inductively arose from the data as factors that influence community practitioner prescribing behaviour, namely: 1) '*Knowledge and experience*'; 2) '*Consultation and*

communication skills'; 3) 'Professional confidence and identity'; 4) 'Wanting the best outcome'; 5) 'NHS vs patient cost'; 6) 'Emotion-led decisions'; 7) 'Time allocation'; 8) 'Formulary access' and 9) 'Supporting environment for patient-centred care'.

To link the naturally occurring themes to theoretical approaches, themes were then deductively mapped to the 14 TDF domains, and situated in the overarching COM-B model (as suggested by Cane et al., 2012) with BCTs allocated to enable future intervention design using the Behaviour Change Wheel and BCT Taxonomy v1 (see Table 3 for additional qualitative content linked to TDF/COM-B/BCTs).

Data is presented below under the COM-B constructs, with the inductive codes presented in ***italics underlined***, highlighting the **TDF domains** in bold with the COM-B constructs in **[brackets]**.

Capability [COM-B]

The Capability component of the COM-B consists of Psychological Capability (TDF domains: Knowledge, Skills, Memory and decision processes, Behavioural regulation) and Physical Capability (TDF domain: Skills), all of which were identified as important within the data.

Theme 1: 'Knowledge and experience'

Knowledge [Psychological Capability]

Prescribers highlighted the importance of ensuring accurate knowledge of when to appropriately prescribe, current guidelines, and available products.

"There are so many products on the market, so many manufacturers that produce certain types of dressing, but they are all different. So, it's having that knowledge... Keeping up to date with products and things like that." (Alice, Wound Care, V150 – 7-8 years)

"... having that knowledge of the product, so you can actually explain to the patient what product you are putting on and why." (Tom, District Nurse, V100 – 14 years)

Behavioural Regulation [Psychological Capability]

The importance of keeping up to date with relevant prescribing knowledge by attending training and conferences was emphasised. There was a common feeling for a need to develop mechanisms to enable this and that there was a lack of current training in this area, or advice on prescribing updates to facilitate prescribing knowledge.

“We are not great at ongoing training... that we have had to go and research a lot of that ourselves unfortunately.” (Jill, Health Visitor, V100 – 3.5 years)

“... we should be asking for mandatory training for practitioners”. (Jess, Health Visitor, V100 – 16 years)

The knowledge that comes from past experience with conditions, patients and products positively influenced prescribing behaviour, showing that nurses felt more comfortable prescribing for conditions that they were familiar with, and less for products that they had not used before. Self-reflection of limitations was seen to be important.

“It doesn’t matter how experienced you are, there is always something out there that you haven’t come across... but it’s recognising that limitation and your own scope of abilities.” (Emily, Clinical Lead [community], V100 and V300 – 10 years)

Theme 2: ‘Consultation and communication skills’

Memory, attention and decision processes [Psychological Capability]

Prescribers noted a variety of factors which influenced their decision to prescribe based on their assessment, clinical judgement, the concordance of a patient and any risks that may be involved. Some highlighted how they manage their time during consultations and how other responsibilities may influence their decision processes to prescribe.

“There’s a risk if you prescribe and there’s a risk if you don’t prescribe isn’t there. So, you have to weigh that up individually for each patient that you see.” (Ailsa, District Nurse, V100 and V300 – 3.5 years)

“What their needs are, based on your clinical judgment of how they have presented on that day with their symptoms and what they are telling you will kind of guide your decision. What you choose to or what you choose not to prescribe.” (Emily, Clinical Lead, community, V100 and V300 – 10 years)

Skills [Physical capability]

A range of skills that were needed to effectively manage each consultation were described. Interpersonal communication skills were deemed important to help communicate their decisions to prescribe or not with patients and their families.

“You need communication skills just to tell the family why you can’t prescribe, but also it’s because your V100 limits you.” (Fiona, Community Children’s Nurse, V100 – 5 years)

“It’s really important just to listen to the history just to understand if they have used any creams before that have been effective... and then quite often just finding out about the environment.” (Jill, Health Visitor, V100 – 3.5 years)

Motivation [COM-B]

The Motivation component of the COM-B consists of Reflective Motivation (TDF domains: Beliefs about capabilities, Optimism, Beliefs about consequences, Intentions, Goals, Social/Professional role and identity) and Automatic Motivation (TDF domains: Social/Professional role and identity, Optimism, Reinforcement, Emotion), both of which were identified as important within the data.

Theme 3: ‘Professional confidence and identity’

Beliefs about capabilities [Reflective Motivation]

Some prescribers reported a lack in confidence immediately after gaining their prescribing qualification, exacerbated by delays in receiving their prescribing pad and not being able to use their skills straight away. However others, often with more experience, indicated that they were confident in their decision-making abilities, while recognising the limits of their training and their role, referring to others when needed.

“I know with colleagues there’s been a big problem in accessing prescription pads... Once they get their prescription pad they don’t feel confident to prescribe so I tend to do a lot of work with them ... in updating their prescribing knowledge.” (Kate, Health Visitor, V150 – 17 years; V300 – 10 years)

“I’ve been working in the job for nearly 14 years. I’m quite confident, particularly in wound care and that kind of thing and if I weren’t sure I would seek specialist advice which we’ve got a lot of.” (Elle, District Nurse, V100 – 3 years)

Social/professional role and identity [Reflective Motivation/ Automatic Motivation]

Prescribers believed being able to prescribe was a key component of their current role which they valued, and they wouldn’t be able to complete their job to a high standard without being able to provide a prescription to patients. Providing the full consultation from start to finish

was felt to be important to both the patient and the prescriber as it saves time and other resources, and provided a level of satisfaction, linked to the practitioner's professional identity.

"I prescribe for most of my patients and without being able to do that I don't think I would be able to do my job as efficiently." (Stephanie, Tissue Viability Nurse, V150 – 5 years)

"It's (prescribing) very much part of my role ... I think it completes the picture and the care that I give to some of the families that I see, I think it makes their lives easier if I can give them a prescription there and then." (Fiona, Community Children's Nurse, V100 – 5 years)

Beliefs about consequences [Reflective motivation]

Interviewees highlighted concern if they were not able to prescribe and reported factors which influence their decisions to write a prescription related to outcome expectancies. This included managing risk and the hope that someone else would prescribe if they were unable to.

"If we didn't prescribe, hopefully somebody else would prescribe in our absence, but if we weren't able to prescribe at all then that risk to that patients' life is significant." (Stephanie, Tissue Viability Nurse, V150 – 5 years)

"If I am able to identify that someone needs that prescription, for example, if a child has oral thrush, and as part of my assessment I am able to identify that and then I am not able to prescribe, then you rely on them to go to their GP to do that." (Jess, Health Visitor, V100 – 16 years)

Theme 4: 'Wanting the best outcome'

Intentions [Reflective Motivation] and Goals [Reflective Motivation]

Prescribers wanted the best outcome for their patients, highlighting their intention to look after their physical and mental health. They reported a variety of goals which they aimed to achieve when prescribing for patients that all align with wanting the best outcome.

"Although we want to heal all wounds we are aware that all wounds won't heal, so in those instances we need to look at the patient and see what their best hopes are for the wound." (Stephanie, Tissue Viability Nurse, V150 – 5 years)

"It's to improve their outcomes and to get them as symptom free as possible..."
(Emily, Clinical Lead, community, V100 and V300 – 10 years)

Theme 5: NHS vs patient cost

Beliefs about Consequences [Reflective motivation]

Prescribers mentioned two key considerations which influenced their prescribing decision in regards to cost: the NHS and the patient. Prescribers were aware of the cost of products to the NHS, and if it was cheaper to buy this over the counter, they were more reluctant to prescribe. However, they also considered the cost of a prescription to the patient, and would take into account whether the patient could afford the prescription or to go and buy medicine over the counter, weighing up who would have to pay (e.g. the NHS or the patient).

"I am also very conscious about patients that pay for their prescriptions because its £8.80 per item and I've got a dressing that might need a minimum of 3 items...and if they are daily [it adds up]." (Alice, Wound Care, V150 – 7-8 years)

"This very vulnerable family who were very poor didn't have access to money and were really struggling financially, and I had to prescribe them paracetamol. It's very cheap, you can buy over the counter, you can get paracetamol for 25p instead of writing a prescription that would cost the NHS more, especially a prescription for a child, so I felt I had to do that cos when I asked the mum to go and buy paracetamol she looked at me and said 'I don't even have a pound', she had to use that pound to eat rather than to buy paracetamol." (Jess, Health Visitor, V100 – 16 years)

"...If they were not going to concord to that treatment then you would consider a less expensive option." (Julie, District Nurse, V150 – 2.5 years)

Theme 6: Emotion-led decisions

Emotion [Automatic Motivation]

While prescribers were aware that their practice shouldn't be influenced by their emotions, it often was, impacting on how they interacted with patients and made decisions to prescribe.

"For the positive outcomes you get a positive feeling a positive reinforcement for the decisions that you've made." (Stephanie, Tissue Viability Nurse, V150 – 5 years)

“When you tell a patient, they are at their maximum dosage and you can’t give them any further cos of side effects or whatever, sometimes can be quite emotive.”
(Emily, Clinical Lead, community, V100 and V300 – 10 years)

Reinforcement (Automatic motivation)

Past experiences were seen to reinforce prescribing behaviour. This reinforcement could lead to non-prescribing if there has been a negative experience with a product.

“What you’ve done in the past will help reinforce your decisions really.” (Alice, Wound Care, V150 – 7-8 years)

“If I have had a negative experience with somebody, I might avoid using it again.”
(Ailsa, District Nurse, V100 and V300 – 3.5 years)

Opportunity [COM-B]

The Opportunity component of the COM-B consists of Physical Opportunity (TDF domains: Environmental context and resources) and Social Opportunity (TDF domains: Social influences), both of which were identified as important within the data.

Theme 7: ‘Time allocation’

Environmental context and resources [Physical Opportunity]

Time and workload pressures had a clear influence on prescribing decisions. Prescribers highlighted that being able to prescribe enabled the patient to receive treatment at that point of care, making it a faster process. However, with increasing clinic workloads and the reporting responsibilities associated with writing a prescription, this was often hindered by a lack of time.

“The biggest thing that hinders me in my decision process to actually write a prescription is the fact that I am going to have to spend blooming hours notifying people and going on SystemOne to write it and it’s a whole process around writing a prescription which takes forever.” (Melissa, Health Visitor, V100 – 11 years)

“It’s [being able to prescribe] brilliant for timesaving and I think it really increases their confidence in your knowledge and professionalism.” (Jill, Health Visitor, V100 – 3.5 years)

Theme 8: ‘Formulary Access’

Environmental context and resources [Physical Opportunity]

Many CPNPs expressed concerns over a limited formulary (V100) and how it can hinder their prescribing abilities by having to go to a GP. They acknowledged the fact that they would have to increase their qualification to be able to prescribe more from the V300. However, the majority mentioned that they did not want to be able to prescribe from the full BNF, but just wanted to be able to increase their prescribing power by a few items such as steroid creams or vitamin D, which were regular prescriptions needed for their patients.

“Ideally we would be able to prescribe a little bit more... I think the remit could be altered to suit the role that you are doing, so definitely a bit more scope for me in terms of wound care and like I said, steroid creams and potentially antibiotics...” (Elle, District Nurse, V100 – 3 years)

“So, they [GPs] are questioning me, like why can't you prescribe that... [i.e.] Steroid creams, which we use quite a lot in wound care and leg ulcer management, emollients with anti-bacterial properties in... but I can't prescribe dermol because it has anti-bacterial in it. But I could prescribe an anti-bacterial dressing.” (Alice, Wound Care, V150 – 7-8 years)

While not being able to prescribe from the full BNF, being able to have access to both the hard copy and the app was deemed beneficial. Those who used the app still had a hard copy, some preferred this, but for others their copy was often outdated as some trusts did not have enough for all prescribers. Despite support for the BNF, some prescribers found fault with the layout, suggesting areas for change to maximise its use. Constant updates on the app allowed them to provide the best care possible for their patients which was deemed important.

“I have got a hard copy but that was very fortunate for me because I think in our trust we were only provided with something like four BNF and NPFs but we actually have something like seven prescribers...” (Elle, District Nurse, V100 – 3 years)

“I don't use it that much now because I can never find what I'm looking for in it. And it's very unprofessional because you are always flicking through desperately looking for the pages...” (Jill, Health Visitor, V100 – 3.5 years)

“I'd say I'd think by having pictures, yeah pictures would help to see... When you're prescribing, it's different from like prescribing tablets... when your prescribing a device actually, I just need a picture in my mind to what this is and I can match it

to the patient and the problem that I'm trying to help with.” (Julie, Health Visitor, V150 – 2.5 years)

“One of the other advantages of the app is that there is a constant updating which the hard copy doesn't...” (Tom, District Nurse, V100 – 14 years)

While there was support for the BNF app, there were some perceived barriers to using it and issues that would need remedying in relation to mobile phone compatibility and internet connectivity.

“I understand now that it can be accessed without a data connection as well for access, I'm pretty certain it can be, so I think that has progressed....” (Tom, District Nurse, V100 – 14 years)

“On my phone, I find it quite difficult because it's small. So, it's scrolling to find the right thing... So, I think that's an issue as well.” (Eve, District Nurse, V150 – 3 years)

“It's just whether I can get reception, but I should maybe have it downloaded on to my laptop and I think I would use it more.” (Eve, District Nurse, V150 – 3 years)

Community nurse prescribers highlighted a desire to have the NPF on an app like the BNF and were asked what their thoughts were on this. The majority believed that an NPF app would be beneficial to prescribing, however, the issue of not being able to prescribe due to lack of internet connection was voiced.

“That would be brilliant if we could have the NPF [on an app], then we could just double check that yeah that dose is the same or hasn't changed.” (Jill, Health Visitor, V100 – 3.5 years)

“I know we've been in places where the reception is not great, and you can't get on to the BNF, so I would always want a hard copy. I would hate for technology to be the reason I can't prescribe” (Fiona, Community Children's Nurse, V100 – 5 years)

Theme 9: 'Supporting environment for patient-centred care'

Social Influences [Social Opportunity]

Good rapport with patients and a trusting relationship was important in being able to make and communicate a 'no prescribing' decision that patients would trust. Listening to their patients were key factors in relation to their prescribing behaviour. Taking on board whether they would be concordant with the product, taking into consideration any allergies or preferences to products. Most importantly it was mentioned that prescribing was a partnership with the patient, with a need to ensure that they know what is going on and how to use the prescription.

"It's a 2-way thing, asking if they (patient) have used it before, asking if they are happy with these products. Sometimes they have a product they have always used, and if that's the case we can override our guidance. So, it's done in discussion with the patients." (Jill, Health Visitor, V100 – 3.5 years)

"Everything is in partnership with that person, how you speak to them, the relationship you have with them, their understanding." (Louise, Operations Manager for Community Nursing, V100 – 12 years)

Having confidence from the patient in terms of knowing what they were doing and trusting that they were prescribing the best course of action to treat them was also important.

"If we didn't have that sort of cycle, because somebody else is writing the prescription, then we wouldn't necessarily get that rapport with the patient we might be waiting too long for the dressing and by that point the patient has almost lost a bit of confidence in the service, so it definitely affects the outcome." (Stephanie, Tissue Viability Nurse, V150 – 5 years)

Prescribers mentioned the support they gain from their colleagues, whom they would use to discuss patient cases and prescribing decisions, taking on board their comments and ideas with new products. Colleague's knowledge and experience with products influenced some prescribers' decisions, while others mentioned that their colleagues do not influence their prescribing decisions but they feel supported should they need to discuss options.

"We always got that communication between us and the other professionals that are involved in the care. So if, after say a couple of days, that product isn't working or the wound is deteriorating, it will always have that feedback from the other health professionals, so we can go in and review that patient sooner if we need to." (Stephanie, Tissue Viability Nurse, V150 – 5 years)

“We’ve got really good skill remit within our team, you know you might have a staff nurse who is really up on a particular product and we have sort of champions for this sort of stuff. And obviously when new products come on the formulary’s, I might task one of my staff nurse who is trialling a particular product and I’ll take their feedback...” (Elle, District Nurse, V100 – 3 years)

Community nurse prescribers reported that having clinical supervision was beneficial in building confidence in prescribing decisions. However, that this was not always a formalised process. Both receiving clinical support and providing support to others were influential ways to inform prescribing decisions.

“Good supportive clinical lead in the organisation who I have regular discussions with regarding anything to do with prescribing.” (Susie, District Nurse, V150 – 15 years)

“I used to mentor student district nurses so again what I would teach them is to have that courage of their own conviction.” (Tom, District Nurse, V100 – 14 years)

DISCUSSION

With previous evidence (Drennan et al., 2014) highlighting that not all CPNPs are actively prescribing, research was needed to gain insight into this behaviour. Findings revealed that CPNPs are *motivated* to prescribe, regarding it as an important part of their identity and something they value. This aligns with the literature which has reported that CPNPs value prescribing as an important element of their role (Herklotts et al., 2015; Daughtry and Hayter, 2010; Downer and Shepherd, 2010; Young, 2009; While & Biggs, 2004). Additionally, they believed prescribing leads to positive patient outcomes in terms of streamlining the patient journey and speeding up treatment, supporting evidence from previous work (Downer & Shepherd, 2010; Latter & Courtenay, 2004; Young, 2009). While some were confident in their prescribing behaviour, others may benefit from support to build their confidence, especially when newly qualified or if there is a delay between qualification and having the tools (i.e. prescription pad) to use the knowledge and skills acquired. This lack of opportunity to rehearse prescribing once qualified, has been reported previously in the CPNP literature as slowing down the development of confidence to prescribe with increased confidence associated with higher prescribing rates (While, Luker et al., 1998; Sodha et al., 2002). Motivation to prescribe was influenced by cost to the NHS, with CPNPs using their prescribing skills to recommend over-the-counter (OTC) medicines to patients with minor illnesses. Our findings concur with

early evidence, reporting that nurses elected to prescribe less expensive products where this did not compromise quality (Luker et al., 1997), and more recently, that prescribing knowledge and skills is used in other ways than physically writing a prescription (Courtenay et al., 2018). Our findings also align with current prescribing guidance (NHS England, 2018), which recommends that prescribing for minor illnesses should be restricted, with medicines purchased OTC. However, although this is cheaper for the NHS, this may be counter-productive to individuals receiving state benefits who are entitled to free prescriptions. This was recognised by nurses in our sample, with decisions to prescribe influenced by whether or not the patient could afford the prescription and would buy the medicine. The cost to the NHS also influenced nurses motivation to prescribe with regard to adherence. If they believe a patient is unlikely to be concordant, they would be less likely to prescribe something expensive.

There is a desire by CPNPs to ensure their *capability* to prescribe is kept up to date, both in terms of their knowledge and skills. In line with early research (Humphries and Green, 2000), nurses were of the view that such training should be mandatory, in order to facilitate prescribing knowledge. However, participants also highlighted that there was a lack of such training. Guidance stipulates that the employer should ensure that practitioners have access to relevant continuing education and training provision (NMC 2018), therefore in order to positively influence prescribing behaviour, education providers should consider developing the content of CPD programmes to meet these needs.

CPNPs also believed and that they should be kept routinely updated on products available and their use. An online app, similar to the BNF app, was suggested as a means by which to keep updated, future work should consider the benefits of this, which would be especially important as the formulary is updated. Although the BNF app can be downloaded onto a mobile device, and the internet is not required to use it, there were uncertainties amongst participants as to whether or not an internet connection is needed for such a resource. Furthermore, the ability to download the app onto personal and often old mobile phones with small screens, was raised as an issue that required consideration.

Extending the *opportunity* to prescribe further items, especially in relation to steroid creams and vitamins was desirable. CPNPs highlighted the frustration of being restricted on what they could prescribe for patients due to the limited formulary. These frustrations have been highlighted previously (Latter & Courtenay, 2004). Although V100 qualified nurses can increase their prescribing capability by undertaking training to become a V300 prescriber, this requires attending the 6 month V300 programme. However, in-line with the literature, which

describes how only small numbers of CPNP access V300 prescribing training (Courtenay et al., 2017), nurses reported a reluctance to do this with constraints including cost and time to train. In order to prepare nurses for the prescribing role, prescribing competencies are now integrated within undergraduate nurse education programmes (NMC 2018) and nurses are able to access shortened prescribing courses with lesser qualified experience. Strengthening undergraduate programmes in this way may help to ensure identity as a prescriber, and encourage community nurses to access V300 training. Shortened prescribing programmes may also encourage educators to integrate V300 training into qualifying programme for Specialist Community Practitioners.

Strengthening nurses' capacity to include prescribing improves nurses ability to reach more people with quality health services (Weeks et al., 2016). Given the need to address health service demands in low-, middle- and high-income countries, our research should be of international interest. Our findings can be used as the basis for development of a theoretically informed intervention to support prescribing by community nurses. This has the potential to lead to improved patient experience and cost savings. This will be of interest to those countries in which prescribing by community and public health nurses is established, and for those countries wishing to establish prescribing by these nurses.

Limitations

Using an established framework to explore the theoretical mechanisms of action and mechanisms of change to understand the factors that influence CPNPs prescribing behaviour is a key strength. By using the TDF, COM-B and the BCTTv1 we have identified core ingredients that can be used in interventions to support prescribing by these nurses. Interviews were undertaken iteratively, with no new data relevant to the topic of interest generated in the latter interviews, suggesting data saturation. However, participants were determined through our approach to sampling, and only included CPNPs who prescribed. There may be additional factors that influence the prescribing behaviour of CPNPs who choose not to use their prescribing skills that may not have been uncovered in this research and would benefit from future investigation with a wider sample. Furthermore, four of the participants also held the V300 prescribing qualification which could have affected influences on behaviour.

CONCLUSION

This research highlights the factors which influence CPNPs decisions to prescribe, and factors to consider to enable this behaviour. Expanding the prescribing skills of these nurses, creating

digital access and further training would be welcomed, and future intervention should consider intervention functions such as Education and Training and ensure CPNPs Capability, Opportunity and Motivation are addressed. This will ensure that nurse prescribers fully utilise their prescribing skills, and are able to prescribe medicines for the patients they manage, this has the potential to lead to improved patient experience and cost savings for the NHS.

CONTRIBUTORSHIP STATEMENT

MC made a substantial contribution to the conception of the work, recruitment of participants and interpretation of data. AC made a substantial contribution to the design of the work, the analysis and interpretation of data, and drafting of the work. JW made a substantial contribution to the acquisition and interpretation of data and drafting of the work. All authors approved the final version to be published.

REFERENCES

- Abbo L, Smith L, Pereyra M, Wyckoff M, Hooton TM. Nurse practitioners' attitudes, perceptions, and knowledge about antimicrobial stewardship. *The Journal for Nurse Practitioners*. 2012, **8**(5): 370-376
- Adorka M, Dikokole M, Mitonga KH et al. Healthcare providers' attitudes and perceptions in infection diagnosis and antibiotic prescribing in public health institutions in Lesotho: a cross sectional survey. *Afr Health Sci*. 2013; **13**: 344-350.
- Ball, J., Barker, G., Buchanan., J. (2009). Implementing nurse prescribing. Geneva: International Council of Nurses, Geneva.
- British Medical Association and the Royal Pharmaceutical Society: British National Formulary. (2012). London: British Medical Association and the Royal Pharmaceutical Society, [<http://www.bnf.org/bnf/index.htm>]
- Cane, J., O'Connor, D., & Michie, S. (2012). Validation of the theoretical domains framework for use in behaviour change and implementation research. *Implementation science*, **7**(1), 37.
- Courtenay, M., Carey, N., Stenner, K. (2012). An overview of non medical prescribing across one strategic health authority: a questionnaire survey. *BMC Health Services Research*. **12**:138 doi:10.1186/1472-6963-12-138
- Courtenay, M, Griffiths, M., Hall, T., MacAngus, J., Myers, J., Peniston-Bird, F., Radley, K (2018). Establishing priorities on the range of conditions managed by UK community practitioner nurse prescribers: A modified Delphi consensus study. *Journal of Advanced Nursing* **74**(8), pp. 1863-1874. (10.1111/jan.13584)

- Courtenay, M. et al. 2017. Overview of the uptake and implementation of non-medical prescribing in Wales: a national survey. *BMJ Open* 7(9), article number: e015313. ([10.1136/bmjopen-2016-015313](https://doi.org/10.1136/bmjopen-2016-015313))
- Department of Health (2001). Patients to get quicker access to medicines (Press Release). London: DH;
- Downer, F., Shepherd, C. (2010). District nurses prescribing as nurse independent prescribers. *Br J Community Nurs* 15(7): 348-52.
- Drennan, VM., Grant, RL., Harris, R. (2014). Trends over time in prescribing by English primary care nurses: a secondary analysis of a national prescription database. *BMC Health Serv Res.* 14: 54
- Humphries J.L. & Green E. (2000) Nurse prescribers: infrastructures required to support their role. *Nursing Standard* 14, 35–39
- Hall*, J., Cantrill, J., Noyce, P. (2006). Why don't trained community nurse prescribers prescribe? *J Clin Nurs* 15(4):403-12
- HEE. (2016). Primary Care Workforce Commission, 2016 <https://hee.nhs.uk/our-work/hospitals-primary-community-care/primary-community-care/primary-care-workforce-commission>
- Kroezen, M., Van Dijk, L., Groenewegen, PP., et al. (2011). Nurse prescribing of medicines in Western European and Anglo-Saxon, countries: a systematic review of the literature. *BMC Health Serv Res* 11(127);11-27
- Latter, S., Blenkinsopp, A., Smith, A., Chapma, S., Tinelli, M., Gerard, L., Little, P., Celino, N., Granby, T., Nicholls, P., Dorer, G. (2010). Evaluation of nurse and pharmacist independent prescribing. University of Southampton and University of Keele on behalf of the DoH.
- Luker K.A., Austin L., Hogg C., Ferguson B. & Smith K. (1998) Nurse–patient relationships: the context of nurse prescribing. *Journal of Advanced Nursing* 28, 235–242.
- Luker K., Austin L., Ferguson B. & Smith K. (1997) Nurse prescribing: the views of nurses and other health care professionals. *British Journal of Community Health Nursing* 2, 69–74.
- McIntosh, T, Stewart, D, McCaig, D, Cunningham, S (2016). Influences on prescribing decision-making among non-medical prescribers in the United Kingdom: systematic review. *Family Practice*, Volume 33, Issue 6, 1 December 2016, Pages 572–579, <https://doi.org/10.1093/fampra/cmw085>
- Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., ... & Wood, C. E. (2013). The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the

- reporting of behavior change interventions. *Annals of behavioral medicine*, 46(1), 81-95.
- Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation science : IS*, 6, 42. doi:10.1186/1748-5908-6-42
- NHS England (2014). Five year forward view, NHS England, London (<https://www.england.nhs.uk/ourwork/futurenhs/>).
- NHS England (2018). <https://www.england.nhs.uk/medicines/conditions-for-which-over-the-counter-items-should-not-routinely-be-prescribed/>
- NMC (2009). Standards of educational preparation for prescribing from the Nurse Prescribers Formulary for Community Practitioners for nurses without a specialist practitioner qualification - introducing code V15. NMC, London
- NMC (2018). Standards for prescribing programmes. London: NMC
- Offredy M, Kendall S, Goodman C. The use of cognitive continuum theory and patient scenarios to explore nurse prescribers' pharmacological knowledge and decision-making. *Int J Nurs Stud*. 2008 Jun;45(6):855-68. Epub 2007 Mar 23.
- Philp, A, Winfield, L (2010). Why prescribe antibiotics for otitis media in children? Nurse Prescribing
- Rowbotham S, Chisholm A, Moschogianis S, Chew-Graham C, Cordingley L, Wearden A, Peters S. Challenges to nurse prescribers of a no-antibiotic prescribing strategy for managing self-limiting respiratory tract infections. *J Adv Nurs*. 2012. Dec;68(12):2622-32.
- Sodha M., McLaughlin M., Williams G. & Dhillon S. (2002a) Nurses' confidence and pharmacological knowledge: a study. *British Journal of Community Nursing* 7, 309–315.
- Weeks, G., George, J., Maclure, K., et al. (2016). Non-medical prescribing versus medical prescribing for acute and chronic disease management in primary and secondary care. *Cochrane Database Syst Rev* 11: CD011227.
- Williams SJ., Halss AV, Moore, MV, Latter SE, Postle K, Leydon GM. General practitioner and nurse prescriber experiences of prescribing antibiotics for respiratory tract infections in UK primary care out-of-hours services (the UNITE study). *Journal of Antimicrobial Chemotherapy*. 2017. Volume 73, Issue 3, 1 March 2018, Pages 795–803,
- Young, D. (2009). Nurse prescribing: an interpretative phenomenological analysis. *Primary Health Care* 19(7): 32-6

Table 1: Interview schedule using the Theoretical Domains Framework

TDF Domain	Interview questions
Knowledge	What knowledge do you draw upon when managing patient consultations for whom you prescribe medicines?
	What, if any, recommendations/guidelines or protocols are you aware of?
Skills	What skills do you think are needed/helpful in managing the consultations for which you prescribe?
	If you have decided not to prescribe what skills are needed to help manage that consultation (<i>e.g. patient education to self-manage</i>)?
Social/professional role and identity	To what extent do you see prescribing as part of your role?
Beliefs about capability	How confident do you feel in your prescribing decisions?
	What if you are unsure about a diagnosis?
Optimism	How confident are you that your consultations will have a positive outcome?
	How is this affected by whether you have prescribed a medicine?
Beliefs about consequences	What factors influence your decision to prescribe? <i>Prompt - patient expectations and effect on relationship</i> <i>Prompt - the risks of not prescribing?</i>
Reinforcement	What factors may reinforce your decision to prescribe?
	What factors hinder this decision process?
Intentions	What motivates you to prescribe or not?
Goals	What are your goals when you prescribe for patients?
Memory, attention and decision process	How do you decide whether or not to prescribe?
	What processes do you usually follow when you prescribe?
Environmental context and resources	What factors support or hinder your prescribing?
	How do systems in place support you to prescribe appropriately?
	How do you think you compare with other prescribers?
	Do you use BNF hard copy/BNF app?
	How does this content/presentation meet your needs? How it be presented more effectively?
Emotion	How do consultations with patients make you feel?
	What emotional responses have you experienced in these consultations?
	What consultations are most difficult or uncomfortable?
	How do your feelings (mood, fatigue) affect whether or not you prescribe?
Behavioural regulation	What factors may support you to prescribe more satisfactorily for the patients you see so that care is more seamless or of better quality?
	How do you ensure that your prescribing is appropriate to the situation?
Closing questions	What support would help you increase the range of medicines that you prescribe and increase your confidence in prescribing?

Table 2: Participant demographics

Interviewee	Role	Clinical Setting	Qualification (time held)	Number of items prescribed per Month	Average Length of consultations
Scott	Health Visitor	Community Setting	V100 (20 years)	5x per year	Approx. 1 hour
Stephanie	Tissue Viability Nurse	Community Setting	V150 (5 years)	50	1 .5 hours
Melissa	Health Visitor Practice Teacher, Professional Lead for health visiting	Community Setting	V100 (11 years)	Don't prescribe at moment	30 – 45 minutes (home visit) 5- 10 minutes (clinic)
Lynn	Community Integrated localities senior sister	Community Setting	V100 (4 years) and v300 (<1year)	20+	1 – 2 hours
Louise	Operations manager for community nursing, Non-medical prescribing lead	District Setting	V100 (12 years)	Don't prescribe a huge amount	1 hour
Kate	Health Visitor and Practice Teacher	Community Setting	V150 (17 years) and v300 (10 years)	5	5 minutes – 1 hour
Julie	District Nurse Team Lead	Community Setting	V150 (2.5 years)	20	15 – 30 minutes
Jodie	Health Visitor and Practice Teacher	Community Setting	V100 (14 years)	1-5	1 hour (home visit) 10- 20 minutes (clinic)
Joan	Specialist Practitioner district Nurse and Oblique practice educator	Community Setting	V100 (21 years)	4-20	30 mins- 1 hour
Jill	Public Health Visitor	Community setting	V100 (3.5 years)	2-3	15-70 minutes (avg 30 minutes)
Jess	Health Visitor and Lecturer Practitioner	Community Setting	V100 (16 years)	1 every 2 months	30 minutes
Jade	Lead practitioner clinic support nurse	Community setting	V100 (19 years)	150-200	20-45 minutes

Fiona	Community Children's Nurse	Community setting	V100 (5 years)	5-8	30 minutes
Eve	Assistant team leader (District Nurse)	Community setting	V150 (3 years)	8	20 minutes – 2 hours (average 30 minutes)
Emily	Clinical lead for community adult services	Community setting	V100 and V300 (10 years)	20-30	30 minutes – 1 hour
Elle	District Nurse and Practice Development Nurse	Community setting	V150 (3 years)	10 items per day	1 hour
Alice	Wound Care and Leg ulcer specialist	Community and Walk in centre	V150 (7-8 years)	50	20 minutes
Ailsa	District Nurse	Community setting	V100 and V300 (3.5 years)	10 per week	20 – 30 minutes
Tom	District Nurse and Lecturer in adult nursing	District setting	V100 (14 years)	1-2	15 minutes – 1.5 hours
Susie	District nurse and practice teacher	Community setting	V150 (15 years)	6-8	45 minutes – 1 hour

Table 3: Qualitative quotes and inductive themes linked to the Theoretical Domains Framework and COM-B

COM-B constructs	Theoretical Domain	<u>Themes</u> and examples of interview quotes	Behaviour Change Techniques (BCTs)	Intervention functions
CAPABILITY (Psychological)	Knowledge An awareness of the existence of something	<u>'Knowledge and experience'</u> <i>"There are so many products on the market, so many manufacturers that produce certain types of dressing, but they are all different. So, it's having that knowledge... Keeping up to date with products and things like that." (Alice)</i> <i>"You don't want to make anything worse by prescribing the wrong thing so it's much better to stand back and take all your information." (Joan)</i> <i>"It's the ability to ... having that knowledge of the product, so you can actually explain to the patient what product you are putting on and why." (Tom)</i>	4.1 Instruction on how to perform the behaviour 5.1 Information about health consequences	Education Training
CAPABILITY (Psychological)	Behavioural regulation Anything aimed at managing or changing objectively observed or measured actions	<u>'Knowledge and experience'</u> <i>"We are not great at ongoing training... we have asked for that and also for specific conditions like eczema... we don't have a huge amount of training on that we have had to go and research a lot of that ourselves unfortunately." (Jill)</i> <i>"Non-medical prescribing updates are quite limited in our organisations and I do think that it would be good to have more." (Fiona)</i> <i>"... we should be asking for mandatory training for practitioners". (Jess)</i>	8.1 Behavioural practice/ rehearsal 2.3 Self-monitoring of behaviour	Education Training

		<p><i>"It comes down to experience as well and for some people that might be more difficult, ...especially with maybe someone who might be a newly qualified prescriber." (Tom)</i></p> <p><i>"It doesn't matter how experienced you are, there is always something out there that you haven't come across... but it's recognising that limitation and your own scope of abilities." (Emily)</i></p>		
<p>CAPABILITY (Psychological)</p>	<p>Memory, attention and decision processes</p> <p>The ability to retain information, focus selectively on aspects of the environment and choose between two or more alternatives</p>	<p><u>'Consultation and communication skills'</u></p> <p><i>"There's a risk if you prescribe and there's a risk if you don't prescribe isn't there. So, you have to weigh that up individually for each patient that you see." (Ailsa)</i></p> <p><i>"What their needs are, based on your clinical judgment of how they have presented on that day with their symptoms and what they are telling you will kind of guide your decision. What you choose to or what you choose not to prescribe." (Emily)</i></p> <p><i>"We will try and choose a product where you can see the results and the patient can see the results as well." (Stephanie)</i></p>	<p>1.2 Problem solving</p> <p>5.1 Information about health consequences</p>	<p>Education</p> <p>Training</p>
<p>CAPABILITY (Physical)</p>	<p>Skills</p> <p>An ability or proficiency acquired through practice</p>	<p><u>'Consultation and communication skills'</u></p> <p><i>"You need communication skills just to tell the family why you can't prescribe, but also it's because your v100 limits you." (Fiona)</i></p> <p><i>"It's really important just to listen to the history just to understand if they have used any creams before that have been effective... and then quite often just finding out about the environment." (Jill)</i></p>	<p>4.1 Instruction on how to perform behaviour</p> <p>6.3 Information about others approval</p>	<p>Education</p> <p>Training</p>

<p>MOTIVATION (Reflective)</p>	<p>Beliefs about capabilities</p> <p>Acceptance of the truth, reality, or validity about an ability, talent, or facility that a person can put to constructive use</p>	<p><u>'Professional confidence and identity'</u></p> <p><i>"I know with colleagues there's been a big problem in accessing prescription pads... Once they get their prescription pad they don't feel confident to prescribe so I tend to do a lot of work with them ... in updating their prescribing knowledge."</i> (Kate)</p> <p><i>"I think you can't be extremely confident. I think you've got to be cautious when you are writing a prescription, it's your responsibility when you are writing that prescription, having that knowledge and skills, I think you can't be over-confident."</i> (Alice)</p> <p><i>"I've been working in the job for nearly 14 years. I'm quite confident, particularly in wound care and that kind of thing and if I weren't sure I would seek specialist advice which we've got a lot of."</i> (Elle)</p>	<p>3.1 Social support (unspecified)</p> <p>9.1 Credible source</p> <p>15.1 Verbal persuasion about capability</p>	<p>Education</p> <p>Training</p> <p>Modelling</p>
<p>MOTIVATION (Reflective/ Automatic)</p>	<p>Social/ professional role and identity</p> <p>A coherent set of behaviours and displayed personal qualities of an individual in a social or work setting</p>	<p><u>'Professional confidence and identity'</u></p> <p><i>"I prescribe for most of my patients and without being able to do that I don't think I would be able to do my job as efficiently."</i> (Stephanie)</p> <p><i>"So, you felt like you've done a full circle consultation. You felt you weren't just doing part of the job, you feel like you've completed the full consultation with the patient which felt good."</i> (Emily)</p> <p><i>"I love prescribing, I think it's very much part of my role ... I think it completes the picture and the care that I give to some of the families that I see, I think it makes their lives easier if I can give them a prescription there and then."</i> (Fiona)</p>	<p>13.4 Valued self-identity</p>	<p>Education</p> <p>Training</p> <p>Modelling</p> <p>Persuasion</p>

<p>MOTIVATION (Reflective)</p>	<p>Beliefs about consequences</p> <p>Acceptance of the truth, reality, or validity about outcomes of a behaviour in a given situation</p>	<p><u>'Professional confidence and identity'</u></p> <p><i>"So, if we didn't prescribe, hopefully somebody else would prescribe in our absence, but if we weren't able to prescribe at all then that risk to that patients' life is significant." (Stephanie)</i></p> <p><i>"If I am able to identify that someone needs that prescription, for example, if a child has oral thrush, and as part of my assessment I am able to identify that and then I am not able to prescribe, then you rely on them to go to their GP to do that." (Jess)</i></p>	<p>12.1 Restructuring the physical environment</p> <p>12.2 Restructuring the social environment</p>	
<p>MOTIVATION (Reflective)</p>	<p>Intentions</p> <p>A conscious decision to perform a behaviour or a resolve to act in a certain way</p>	<p><u>'Wanting the best outcome'</u></p> <p><i>"Although we want to heal all wounds we are aware that all wounds won't heal, so in those instances we need to look at the patient and see what their best hopes are for the wound." (Stephanie)</i></p>	<p>1.3 Goal setting (outcome)</p>	<p>Education</p> <p>Training</p>
<p>MOTIVATION (Reflective)</p>	<p>Goals</p> <p>Mental representations of outcomes or end states that an individual wants to achieve</p>	<p><u>'Wanting the best outcome'</u></p> <p><i>"It's to improve their outcomes and to get them as symptom free as possible ..." (Emily)</i></p>	<p>1.3 Goal setting (outcome)</p>	<p>Education</p> <p>Training</p>
<p>MOTIVATION (Reflective)</p>	<p>Beliefs about Consequences</p> <p>Acceptance of the truth, reality, or</p>	<p><u>NHS vs patient cost</u></p> <p><i>"I am also very conscious about patients that pay for their prescriptions because its £8.80 per item and I've got a dressing that might need a minimum of 3 items, dressing</i></p>	<p>1.2 Problem solving</p>	<p>Education</p>

	<p>validity about outcomes of a behaviour in a given situation</p>	<p><i>packs, 2 dressings that I might need... and if they are daily [it adds up].” (Alice)</i></p> <p><i>“This very vulnerable family who were very poor didn’t have access to money and were really struggling financially, and I had to prescribe them paracetamol. It’s very cheap, you can buy over the counter, you can get paracetamol for 25p instead of writing a prescription that would cost the NHS more, especially a prescription for a child, so I felt I had to do that cos when I asked the mum to go and buy paracetamol she looked at me and said ‘I don’t even have a pound’, she had to use that pound to eat rather than to buy paracetamol.” (Jess)</i></p> <p><i>“For dry skin, you know what Department of Health are now saying... they can use Vaseline petroleum jelly. Now you can get a big tub of that out of the pound shop, for a pound, you know in comparison for the cost of a prescription. So in those cases, unless somebody was on benefits, I wouldn’t issue a prescription.” (Scott)</i></p> <p><i>“If I am getting pressure from the levels above me that we need to cut costs in your prescribing, its costing us too much money, I think it doesn’t stop me from prescribing, but it makes me pause and think is this the best decision for the family. Is this the best decision for the service.” (Fiona)</i></p> <p><i>“...If they were not going to concord to that treatment then you would consider a less expensive option.” (Julie)</i></p>		
<p>MOTIVATION (Automatic)</p>	<p>Emotion</p> <p>A complex reaction pattern, involving experiential, behavioural, and</p>	<p><u>Emotion-led decisions</u></p> <p><i>“For the positive outcomes you get a positive feeling a positive reinforcement for the decisions that you’ve made.” (Stephanie)</i></p>	<p>11.2 Reduce negative emotions</p>	<p>Enablement Persuasion</p>

	physiological elements, by which the individual attempts to deal with a personally significant matter or event	<p><i>"We are giving bad news and talking about people at the end of life, so it can be quite emotional." (Eve)</i></p> <p><i>"When you tell a patient, they are at their maximum dosage and you can't give them any further cos of side effects or whatever, sometimes can be quite emotive." (Emily)</i></p>		
MOTIVATION (Automatic)	<p>Reinforcement</p> <p>Increasing the probability of a response by arranging a dependent relationship, or contingency, between the response and a given stimulus</p>	<p><u>Emotion-led decisions</u></p> <p><i>"What you've done in the past will help reinforce your decisions really." (Alice)</i></p> <p><i>"If I have had a negative experience with somebody, I might avoid using it again." (Ailsa)</i></p>	15.3 Focus on past success	Enablement
OPPORTUNITY (Physical)	<p>Environmental context and resources</p> <p>Any circumstance of a person's situation or environment that discourages or encourages the development of skills and abilities, independence, social competence and adaptive behaviour</p>	<p><u>'Time allocation'</u></p> <p><i>"The biggest thing that hinders me in my decision process to actually write a prescription is the fact that I am going to have to spend blooming hours notifying people and going on System 1 to write it and it's a whole process around writing a prescription which takes forever." (Melissa)</i></p> <p><i>"Make their treatment efficient for them so they are not waiting, waiting for a GP to prescribe for them..." (Lynn)</i></p> <p><i>"It's brilliant for timesaving and I think it really increases their confidence in your knowledge and professionalism." (Jill)</i></p>	<p>12.1 Restructuring the physical environment</p> <p>12.2 Restructuring the social environment</p>	Environmental restructuring

		<p><i>"I still want to take my time, so for me if I have to write a prescription during a busy clinic, then it's going to disrupt the baby clinic, so the waiting time would be longer and I don't want to make mistakes..." (Jess)</i></p>		
<p>OPPORTUNITY (Physical)</p>	<p>Environmental context and resources</p> <p>Any circumstance of a person's situation or environment that discourages or encourages the development of skills and abilities, independence, social competence, and adaptive behaviour</p>	<p><u>'Formulary Access'</u></p> <p><i>"Ideally we would be able to prescribe a little bit more... I think the remit could be altered to suit the role that you are doing, so defiantly a bit more scope for me in terms of wound care and like I said, steroid creams and potentially antibiotics..." (Elle)</i></p> <p><i>"So, they [GPs] are questioning me, like why can't you prescribe that... [i.e.] Steroid creams, which we use quite a lot in wound care and leg ulcer management, emollients with anti-bacterial properties in... but I can't prescribe dermol because it has anti-bacterial in it. But I could prescribe an anti-bacterial dressing." (Alice)</i></p> <p><i>"We are no longer able to prescribe vitamins... breast feeding mums and breast-feeding babies now are required to have vitamin D, but we are not allowed to prescribe it." (Melissa)</i></p> <p><i>"I have got a hard copy but that was very fortunate for me because I think in our trust we were only provided with something like four BNF and NPFs but we actually have something like seven prescribers..." (Elle)</i></p> <p><i>"I think it's a little bit intimidating when you're first using it... but for me personally I quite like it cos it gives me all the information I need in terms of what I am prescribing, what the contraindications are...." (Elle)</i></p> <p><i>"I don't use it that much now because I can never find what I'm looking for in it. And it's very unprofessional because you are</i></p>	<p>12.1 Restructuring the physical environment</p> <p>12.2 Restructuring the social environment</p>	<p>Environmental restructuring</p>

		<p><i>always flicking through desperately looking for the pages and they [patients] begin to think does she really know what she is looking for.” (Jill)</i></p> <p><i>“Maybe having colour coded tabs on it might help... I do that so it would make it easier for me to navigate it myself.” (Joan)</i></p> <p><i>“I’d say I’d think by having pictures, yeah pictures would help to see... When you’re prescribing, it’s different from like prescribing tablets... when your prescribing a device actually, I just need a picture in my mind to what this is and I can match it to the patient and the problem that I’m trying to help with.” (Julie)</i></p> <p><i>“One of the other advantages of the app is that there is a constant updating which the hard copy doesn’t...” (Tom)</i></p> <p><i>“I understand now that it can be accessed without a data connection as well for access, I’m pretty certain it can be, so I think that has progressed and I think probably there is further work that can be done cos it doesn’t absolutely replicate, it’s not a mirror image of the of the hard copy of the BNF.” (Tom)</i></p> <p><i>“On my phone, I find it quite difficult because it’s small. So, it’s scrolling to find the right thing... So, I think that’s an issue as well.” (Eve)</i></p> <p><i>“It’s just whether I can get reception, but I should maybe have it downloaded on to my laptop and I think I would use it more.” (Eve)</i></p> <p><i>“It’s a shame we haven’t got the NPF on an app.” (Susie)</i></p> <p><i>“That would be brilliant if we could have the NPF [on an app], then we could just double check that yeah that dose is the same or hasn’t changed.” (Jill)</i></p>		
--	--	--	--	--

		<p><i>“Yes, I think it would be more useful actually. Rather than getting bogged down within the BNF actually having the NPF separate does clarify things.” (Jade)</i></p> <p><i>“I know we’ve been in places where the reception is not great, and you can’t get on to the BNF, so I would always want a hard copy. I would hate for technology to be the reason I can’t prescribe.” (Fiona)</i></p>		
<p>OPPORTUNITY (Social)</p>	<p>Social Influences</p> <p>Those interpersonal processes that can cause individuals to change their thoughts, feelings, or behaviours</p>	<p><u>‘Supporting environment for patient-centred care’</u></p> <p><i>“If you explain to your patient what is happening, what is going on, and why you are prescribing what you are prescribing. I think they work with you quite well... I will always try to say to them, explain it in very simple terms.” (Alice)</i></p> <p><i>“It’s a 2-way thing, asking if they have used it before, asking if they are happy with these products. Sometimes they have a product they have always used, and if that’s the case we can override our guidance. So, it’s done in discussion with the patients.” (Jill)</i></p> <p><i>“Everything is in partnership with that person, how you speak to them, the relationship you have with them, their understanding.” (Louise)</i></p> <p><i>“They get that confidence in us. Yeah that’s fine and I have that ‘I have full confidence in “Emily” she knows what she is doing. I’ve seen her work, she justifies her reasons’ and so it gives them the confidence that we know what we are doing.” (Emily)</i></p> <p><i>“If we didn’t have that sort of cycle, because somebody else is writing the prescription, then we wouldn’t necessarily get that</i></p>	<p>3.1 Social support (unspecified)</p>	<p>Modelling</p>

		<p><i>rapport with the patient we might be waiting too long for the dressing and by that point the patient has almost lost a bit of confidence in the service, so it definitely affects the outcome.” (Stephanie)</i></p> <p><i>“We always got that communication between us and the other professionals that are involved in the care. So if, after say a couple of days, that product isn’t working or the wound is deteriorating, it will always have that feedback from the other health professionals, so we can go in and review that patient sooner if we need to.” (Stephanie)</i></p> <p><i>“We’ve got really good skill remit within our team, you know you might have a staff nurse who is really up on a particular product and we have sort of champions for this sort of stuff. And obviously when new products come on the formulary’s, I might task one of my staff nurse who is trialling a particular product and I’ll take their feedback...” (Elle)</i></p> <p><i>“Yes, sometimes they can influence or give you some advice on what to try.” (Emily)</i></p> <p><i>“Good supportive clinical lead in the organisation who I have regular discussions with regarding anything to do with prescribing.” (Susie)</i></p> <p><i>“I used to mentor student district nurses so again what I would teach them is to have that courage of their own conviction.” (Tom)</i></p>		
--	--	---	--	--