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Supplementary File 3 – Analytical themes and sub-themes showing link of indicative quotations to barriers and facilitators

Analytical Theme	Descriptive Theme	Data theme	Indicative quotations	Barriers/facilitators
Analytical theme 1: Preparation – organisational readiness for implementation	Theme 1.1: Clarifying need & advantage of independent prescribing	Clarifying clinical/service need for IP	•*"You're not waiting for medics to .. do your prescribing, you can do it as an autonomous practitioner …the most crucial aspect of it—continuity of care."*(1) •*"I'm not sure that the qualification would improve my level of patient care [Doctors] sign scripts as required."* (2)	F - Clinical/service advantage of IP. B - Lack of clinical/service advantage of IP.
		Establishing service pathway gaps	•*"Because I have to write, send it to the GP, it has to land on the GP's desk, then the patient has gotta make an appointment to see that GP, then the prescription comes from the GP, and then they go and fulfil that prescription, and then make an appointment to come back and see me."*(3) •*"I feel reasonably comfortable that we can manage them ..by directing them to the pharmacist or the GP. I don't feel that it's particularly hampering my treatment...."* (3) •*" "A viable (pharmacist) IP service would depend on successfully addressing the many points in the circuit of prescribing where it can go wrong."*(4)	F- Identified service pathway gaps. B - Expedient medicines pathways
		Role clarity	•*"When I start working in a practice, I tend to try and agree ground rules, or, rules of engagement….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.."*(5) •*" So basically our p-formulary [personal formulary] has to match up with what we're doing, and .. that's when you say, 'actually no, I'm not prescribing tramadol 'or I am not prescribing whatever they're asking for."(5)* •*"I don't think all our colleagues are clear about non-medical prescribing."*(6) •*"I think as soon as they* (reception staff) *realize you can prescribe they expect you to be able to do exactly what doctors can do. They don't understand your limitations…."* (7)	F- IP role clarity F- Team understanding of IP B - Lack of IP role clarity B - Lack of team understanding of IP
	Theme 1.2: Managerial leadership and support	Role of managers	•*"I phoned up for advice...but she (manager) really didn't know… Anything I knew, I knew myself."* (8) •*"I've had nothing but support. They created a consulting room for me, put all the systems in place, the diagnostics, even putting notices in the notice-board for the first year or two so the patients were aware. And the staff were all made aware of it, we have practice meetings, the practice nurse was consulted.""*(9) •*"I know I wouldn't get the support from work for their funding…I would do it, but it's funding"*(3) •*" "I was challenged the other day … to ask why I hadn't written end of life charts …and I wouldn't do it because I did not have enough medical information about that patient."*(10)	F – Medical/managerial support/leadership. F - Stakeholder consultation F - Clinical record/IT access B - Lack of medical/managerial support/leadership. B – Lack of course funding. B - Lack of clinical record/IT access
		Recognising value	•*"We probably weren't prepared to remunerate her* [nurse prescriber] *as much as she thought she should be, because partly in our eyes she wasn't going to be doing that much extra."*(9) •*"It's just like having another partner who can deal with certain conditions,*	F - Medical/managerial support/leadership.

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			and who also works as a nurse within the practice."[9]	B - Lack Medical/managerial support/leadership.
		Culture	•*" 'I can't imagine how anyone can do our jobs without being a prescriber now … it has given me another layer of knowledge and, the other side of it is, if you're advising people, you should have that knowledge."(1)'* •*"… I mean if you want to be a doctor, be a doctor, if you want to be a nurse, be a nurse, but if you're a nurse you can't do nice bits of doctoring that you feel…."*[9] •*"In some surgeries generally the nursing team can feel a bit threatened by having pharmacist prescribers, …. It's about identifying our different areas of expertise and.. working together."*[9]	F - Prescribing integral to advanced practice. B - Prescribing considered outside professional practice scope
	Theme 1.3: Inter-professional environment	Inter-professional relationships	•*"… they've got a good skill mix, so everyone's got their slightly different areas of expertise..." So quite often the doctors will still ring me and say – or pop in and say – what do you recommend for this, what are we supposed to be prescribing for this?"(9)* •" …the engagement from Doctor… as the sort of the overall lead GP for that care home, was very disappointing".[11] •*"It was building that trust that you could do it, and you...were competent…you observed safety aspects."*[12]	F - Established physician relationships. F - Good inter-professional relationships B - Poor/absent physician relationships
		Communication & collaboration	•*"We have regular clinical meetings as a practice – myself, the GPs and the nurse. And then we also have multidisciplinary meetings every 6–8 weeks. "(9)* •*"I don't really feel they'd (*GPs*) listen to me…they'd be like, well, we're GPs, we're the partners here, we make the decisions and that's final really. I do feel it's a fait accompli here…this is the way this place has been run for a long, long time."*[9]	F - Inter-professional collaboration/communication networks. B - Lack of inter-professional collaboration/communication networks.
Analytical theme 2: Training – optimising practitioner readiness for independent prescribing	Theme 2.1: Selecting the right practitioners	Selection	•*" I presume I need to do a minor illness course first, which my GP has not agreed to for last three years."(2)* •*"I wanted to do the nurse prescribing course for two years .. my employing GPs will not support me, even though all my work is in extended or advanced role."*[2]	B - Inconsistent selection policies B - Lack of workforce planning.
		Skills & aptitudes	•*"You have to be competent, not only with your history taking… but examination skills; you have to be able to relate those findings… to the patient in a language that they can understand."*[13] •*"I think that is very important that they don't skimp. When I come in she'll take my weight, do my feet, do my blood pressure, want to know when I last had my eyes checked. .. I have all the blood tests done, and we go through those, what's wrong, what's right."*[14] •*" I would definitely come back to see the nurse prescriber again; I don't*	F - Practitioner specialist skills F - Service user acceptance of IP. B - Lack of practitioner specialist skills.

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Analytical Theme	Descriptive Theme	Data theme	Indicative quotations	Barriers/facilitators
			see that there's any difference really between seeing the doctor or the nurse prescriber. The nurse prescriber seems to have just as much knowledge as the doctor…"[15]	
		Motivation & commitment	•*"I don't think we get paid enough to make those decisions."*[3] •*"I have undertaken a large amount of further training ..with very little financial remuneration.. in my leisure time, to the exclusion of leisure activities. Eventually, one would hope for some incentive beyond job satisfaction."* [2] •*"The patients are aware of your skills and they know you're making decisions and prescribing for them. It gives you a sense of satisfaction."*[6] •*"For me prescribing right does carry a lot of accountability and responsibility and .. I'm not sure that's something I'd want to take on board."*[3]	F - Professional/personal adoption incentive B - Lack of professional/personal adoption incentive B - Fear of responsibility/accountability/error
	Theme 2.2: Preparing and supporting practitioners during training	Expectations of training	•*"Reassurance that I could do [the course] with present qualifications or what I need to do to obtain these before I do the prescriber's course."* [2] •*"Nurses that have done course say [very] intense and difficult.*[2] •*"Need info about what it involves, assessment, funding etc. Also general career advice."*[2]	B - Lack of course information.
		Study leave	•*"As much as I would like but there be no-one doing my work while I am* •*away...have to catch up."*[16] •*"I plan to do asthma training and then like to do minor illness training, but when I do I will have to do most of it in my own time – this puts me off nurse prescribing."*[2]	B - Lack of backfill/protected/study time
		Designated Medical Practitioners	•*"I think when we did our prescribing training … some of us had a lot of very .. proactive support from the medical mentors and some of us had less than that."*[10] •*"I had to educate (DMP).. on how the course works."*[17] •*"…I think the two of us were kind of floundering a bit … we still had slightly differing ideas as to what competency meant."*[17]	F - DMP role clarity/good DMP supervision. B - Lack of DMP role clarity/supervision/availability.
Analytical theme 3: Transition - ensuring early prescribing support	Theme 3.1: Transition as a point of vulnerability	Self-confidence	•*"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… so, then, it's actually harder to prescribe (it) independently."*[5] •*"In some ways, it's like motherhood I think, you feel adequately prepared and then it happens and I think oh my goodness, this is bigger than I thought…"*[1] •*"I think they* [doctors] *sort of assume sometimes that we know more than we do, and I think they assume we have huge confidence in our skills when we don't…"*[12]	F - Prescribing confidence/competence. B - Lack of prescribing confidence/ competence.
	Theme 3.2: Nurturing confidence	Minimum competence	•*" I have quite a limited range that I feel confident doing, using and I haven't gone outside it…"*[12] •*"I think you have got to realize your limitations and put a stop on it when you feel your skills aren't adequate."*[7]	F - Delineated scope of prescribing competence F - Clinical/professional protocols/guidelines.

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Analytical Theme	Descriptive Theme	Data theme	Indicative quotations	Barriers/facilitators
	and competence		•*"I do know where my competencies are and where my weaknesses are, and I don't sort of go beyond my scope of practice."*[9] •"*I suppose virtually everything that I see and talk about is influenced by NICE in the first instance, and the relevant NICE guidance, whatever it might be."*[18] •*'I'm happy with exacerbations and chest infections, so, like UTIs* [urinary tract infections] *and wound infections, but anything that's going beyond that I just don't feel confident in myself to be going out and doing that."*[12]	F- Adequate formulary B - Inappropriate patient/team pressure for prescribing B – Unclear/absent clinical protocols/ guidelines
		Experience & exposure	•*"The first time I had to ask the GP if I was actually on the right lines.. It's not as difficult the second and the third and the fourth time."*[8] •*"It's like learning to drive and then the first time you actually go out without someone sat by you …"*[1] •*"Most of my colleagues have stuck with their original prescribing competence. I reacted to questions that were being asked – could you do X? So I thought, well, could I do X? And I've then made myself competent in that particular area."*[9] *". . .as I've become more experienced. . .I'm more aware now, I suppose, of the – the complexities of certain patients."*[19]	F - Exposure to prescribing opportunity B - Delayed registration post qualification
	Theme 3.3: Transition support needs	Informal & formal support systems	•*"I suppose the bottom line is I don't get any formal support. I mean, I get support in an informal way from GPs and the consultant and my colleagues."*[12] •*"There are times when .. it's slightly more complex, so .. I'll go and get some advice.. I think it's really important to function in this way."*[9] •*"If I am in any whatsoever doubt then I just buzz through to the GP (family physician)."*[5]	F – Medical supervision. B – Lack of medical supervision.
Analytical theme 4: Sustainment - maximising and developing independent prescribing	Theme 4.1: Service delivery	Impact on workload	•*"A big disadvantage is that a lot of doctors have offloaded their work on to us. Workload has increased so much and you have to go to a lot of meetings, often in your own time".*[7] •*"We're really, really fortunate here. . .our appointment times, if you're booked into the nurse clinic, they're half-hour appointments, so we can really spend time providing the education and explaining why we're not giving antibiotics."*[19] •*"Oh, it has changed dramatically. Workload had trebled. We see most of the minor ailments. We have taken a lot more on—the more knowledge you get the higher the workload. We do all medication reviews and all hypertension reviews."* [7] •*"Non-medical prescribing consultations—the time tends to be much longer."*[20]	F - Consultation time. B - Time/workload constraints.
	Theme 4.2: Supporting IP role development	Role/service expansion	•*"I don't see how that* (mental health NMP scope extension for benzodiazepine management) *could happen with the QOF (Quality and Outcomes Framework) targets ... For* (mental health) *there's not a target ... so I genuinely don't think it's going to become part of the practice nurses remit."*[20] •*"I'd like to put my name somewhere regularly along with the doctors.., so*	F – Employment model. F - National incentives/policy initiatives for IP B – Employment model. B - IP Role isolation.

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			I'm there...part of the surgery. But because … I'm not employed by the surgery, other than being extra, additional help occasionally… it kind of leaves me in a bit of no-man's land."[9] •*"It's altered my role quite in depth … We see anything from an ingrown toenail to somebody with chest pain. In the afternoon we work on an appointment basis, running chronic disease .. and weight management clinics."*[7] •*"I found myself being given referrals for much more complex problems than perhaps I had been given before. I found myself in the position where GPs were actually expecting me to initiate treatment or to suggest what treatment they might give."*[8] •*"I have learnt over the years… extending my scope of practice as I felt more confident, and then went and sort of commissioned training or shadowed somebody, just so that I can improve my competencies and take on more of the long-term conditions and manage them in general practice."*[9]	B – Lack of national incentives/policy initiatives for IP B - Lack of local policies for IP
		Continued professional development	•*"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, .. how do you become competent to treat osteoporosis, there are no courses."*[5] •*"I don't think I have increased my scope over the years; to be frank."*[12] •*"Most of my colleagues have stuck with their original prescribing competence. I reacted to questions … could you do X?... And I've then made myself competent..."*[9] •*" ..what I would love is to sort of have a week or two a year when I was buddied up with a doctor, and he/she made me do all the prescribing. It would be terrifying but it would really make me learn."*[12] •*"We take group learning very seriously, we have clinical catch up … where if anyone has found any new exciting evidence or guidelines or examples of good practice we do tend to talk inter-professionally."*[18]	F - CPD/supervision B - Lack of CPD/supervision
		Evaluation & Reflection	•*". . .it's something that's a .. priority.. for me and my team here, so we're doing a lot of work .., both in terms of auditing, so we understand how much prescribing's going on. We also are looking at appropriateness of prescribing, so auditing case notes against the local guidelines and providing feedback to prescribers…So it's high up on our agenda."*[19] •*"No. I haven't had a prescribing update. Even trying to get an update on how to use your British National Formulary, any new drugs, is difficult."*[6] •*"[W]e have a training session, like an audit with the local CCG team, in relation to our practices antibiotic prescribing and comparing it to the area in the north west… so that kind of helped influence .. my antibiotic prescribing."* [13] •*"…we don't as a group kind of get together… as clinicians and feeding*	F - Audit/feedback on prescribing practice. B - Governance/accountability structures B - Lack of governance/accountability structures

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Analytical Theme	Descriptive Theme	Data theme	Indicative quotations	Barriers/facilitators
			back information, events that have happened … significant events … we don't have joint CPD."[18]	

CCG – clinical commissioning group, CFIR – Consolidated Framework for Implementation Research, CPD – continued professional development, DMP – designated medical practitioner, DOI – Diffusion of Innovations, IP – independent prescribing.

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