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To cite this article: Yngvild Kristine Rochette Bergsholm, Marte Feiring, Colin Charnock, Tonje Krogstad & Lene Berge Holm (2023): Positioning of community pharmacists in interactions with general practitioners and patients regarding prescribing and using antibiotics, Journal of Interprofessional Care, DOI: [10.1080/13561820.2023.2203698](https://doi.org/10.1080/13561820.2023.2203698)

To link to this article: <https://doi.org/10.1080/13561820.2023.2203698>



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Published online: 10 May 2023.



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Positioning of community pharmacists in interactions with general practitioners and patients regarding prescribing and using antibiotics

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ABSTRACT

Interprofessional collaboration between general practitioners (GPs) and community pharmacists (CPs) is important for ensuring antibiotics are used correctly and combating antibiotic resistance. The study's main objective was to investigate how CPs, GPs and patients, respectively, position CPs in their interactions with patients on antibiotic-related matters in Norwegian pharmacies. Seven focus-group interviews were performed. Data were analyzed using systematic text condensation. Positioning theory was used to identify positions assigned to CPs by themselves, by GPs and by patients. CPs position themselves as helpful, accessible drug specialists responsible for advising on antibiotic use, but also consider themselves dependent on GP-supplied information to do so. GPs position CPs as helpful, responsible business-people who, however, lack clinical experience and are overzealous gatekeepers. Patients position CPs as helpful people who supply information in "everyday language" and as the GP's extended arm. Patients utter they are best served when GPs and CPs collaborate. This discrepancy is a barrier to optimal service to patients in general, and to proper antibiotic use in particular.

ARTICLE HISTORY

Received 28 March 2022
Revised 12 January 2023
Accepted 6 April 2023

KEYWORDS

Antibiotics; community pharmacists; general practitioners; patients; positioning theory

Introduction

Increasing antimicrobial resistance (AMR) and shortages of effective new antibiotics threaten global public health (Gulland, 2016). The Norwegian National Strategy Against Antibiotic Resistance emphasizes the need to reduce antibiotic consumption. A concerted effort is required, involving General Practitioners (GPs), Community Pharmacists (CPs), and patients.

In Norway, primary healthcare accounts for 84% of antibiotics prescribed (Simonsen et al., 2020). Bungau et al (Bungau et al., 2021) found a correlation between excessive antibiotic consumption and the occurrence of AMR, and suggested that initiatives across multiple disciplines should be implemented (Bungau et al., 2021). Since pharmacists are usually the last healthcare providers patients meet before starting their medications, this contact point is critically important in ensuring antibiotics are used correctly.

Background

According to Waaseth et al. (2019), public knowledge of antibiotics and AMR is limited in places, and increasing patients' knowledge of antibiotics is important. Although they showed that public knowledge about antibiotics and AMR is relatively high, they also point to a gap concerning understanding the causes of AMR.

More work is necessary to investigate if better collaboration between GPs, CPs and patients can increase patient awareness

that using antibiotics correctly can combat AMR. Previous research has investigated collaborations between CPs and GPs. Bollen et al. and Bardet et al. focused on identifying and understanding factors that shape these collaborations and how this can translate to providing better public service (Bardet et al., 2015; Bollen et al., 2019). Other researchers describe barriers to collaboration and recommend initiatives focusing on developing, advancing and evaluating approaches to overcome these barriers, thereby increasing interprofessional collaboration (Löffler et al., 2017; Rubio-Valera et al., 2012; Weissenborn et al., 2017). These studies are qualitative with descriptive aspects (Löffler et al., 2017; Rubio-Valera et al., 2012; Weissenborn et al., 2017).

One quantitative study by Saha et al (2021) examines the attitudes and views of GPs and CPs in collaborative implementation of Australian antimicrobial stewardship (AMS) programs. This study demonstrates the importance of professionals to recognize their interprofessional roles in order to ensure optimal collaboration around antibiotic treatment. The same authors report in another study that most GPs support GP-CP collaboration on AMS approaches (Saha et al., 2020). Also, in Ashiru-Oredupe et al (2016) CPs are described as having a key role in implementation of AMS interventions and that a multidisciplinary collaboration is beneficial for AMS interventions. A central factor for successful collaboration between CPs and other health professionals is the perception of the CPs role. Taylor et al (2020) describes that the lack of understanding of the expanding role of the CP contributes to role conflict and is a barrier to collaboration. However, Bishop

et al (2019) show that since CPs are one of the most accessible health professionals, they can, and should, play a central role in reducing antibiotic resistance through CP-led intervention strategies. This would require support by health care leaders at the system level.

Some studies describe collaboration between GPs and CPs through the lens of positioning theory (Rakvaag, Søreide, & Kjome, 2020; Rakvaag, Søreide, Meland, et al., 2020). These studies show that strengthening interprofessional knowledge may improve interprofessional collaboration. Rakvaag et al (Rakvaag, Søreide, & Kjome, 2020; Rakvaag, Søreide, Meland, et al., 2020), focus on GPs and CPs, while the present study includes a third dimension, namely the patient's perspective. To our knowledge, no previous studies have investigated the triangular relationship between GPs, CPs and patients regarding information provided by GPs and CPs concerning antibiotic use.

This paper addresses chiefly the following research questions: How do CPs, GPs and patients position the CPs in their interactions with patients regarding antibiotic-related matters in Norwegian pharmacies? Additionally, we look at how the positioning of CPs impact on the nature of their communication with patients undergoing antibiotic therapy: How does the manner in which information is imparted to, and received and understood by patients, impact on patient satisfaction with health care professionals?

Theory

To follow up Rakvaag et al.'s studies (Rakvaag, Søreide, & Kjome, 2020; Rakvaag, Søreide, Meland, et al., 2020), positioning theory was used to answer the research questions. This framework focuses on dynamic interactions and relations between the content of group interviews (storylines about antibiotic use), how participants' meanings were uttered (speech acts) and what they reveal about participants' status and power (their positions) regarding antibiotic use (Davies & Harre, 2007; Harré & Langenhove, 1999; Harré & Moghaddam, 2003). The idea of the "position" was first outlined by Davies and Harré (Davies & Harre, 2007). "Position" is an analytical term for being either reflexive, meaning one's own position, or interactive, meaning the position of others (Harré & Moghaddam, 2003). "Speech acts" are statements or utterances, while a "storyline" summarizes a speech act belonging to positions in a particular social episode. Position, speech act, and storyline are analytical concepts in positioning theory linked to a particular social episode. A "social episode" in our study is the interaction between CPs and patients when CPs deliver GP-prescribed antibiotics. When reflecting on this social episode, CPs, patients and GPs may have different views, and comments made reflecting these differences may differ at both the individual and the group levels. Positions are relative to other positions. If someone is positioned as a pharmacist, someone else must be positioned as a patient or physician, with associated clusters of rights, duties and obligations. A position is a dynamic

relation between participants in a social episode (Harré & Langenhove, 1999; Harré & Moghaddam, 2003).

Methods

A qualitative study using focus groups was performed. Data collection occurred between October 2020 and January 2021. Because of the pandemic, three interviews were completed using the video-conferencing system Zoom, version 1.6.1 (Lobe et al., 2020). The COREQ checklist was used (supplementary materials) (Tong et al., 2007). This study uses focus-group interviews to investigate this relationship, and pinpoints areas where improved collaboration could reduce unnecessary antibiotic use, thus aiding the battle against AMR. Positioning theory is applied as an analytical lens to explore how the three groups position CPs regarding antibiotic use.

Recruitment

Participants in the patient groups were selected through open invitations, advertisements and social media. Inclusion criteria were: Patients had to be at least 18 and have used antibiotics at least twice over a two-year period. GPs should have had experience prescribing antibiotics and CPs should have had experience with antibiotic encounters in pharmacies. GPs were recruited through The Antibiotic Centre for Primary Care, which is a national center that works toward promoting a rational and restricted use of antibiotic in primary care with respect to combating development of antibiotic resistance in Norway. CPs were recruited through managers of pharmacy chains, social media and through acquaintances. Thirty-two participants were recruited. None refused to participate or dropped out. See Table 1: Focus group participants.

Data collection

In focus groups, it is crucial that participants be comfortable with each other. Otherwise, participants might not discuss opinions and feelings openly (Merriam & Tisdell, 2015; Morgan, 1997). Since interactions and discussions within groups are important, recruiting participants who were previously acquainted was considered. We chose to use homogeneous groups to ensure the relational dynamics.

Before focus-group interviews, information about the study's purpose, what participation entailed, and the right to withdraw at any time was given. Three focus groups were conducted with CPs, two with GPs and two with patients. The first author (pharmacist without experience in qualitative studies) moderated all interviews. Assistant moderators were present (experienced in qualitative studies). The interviewer had no former relationship with participants. Each focus-group interview lasted approximately 1–1.5 hours. Discussions were conducted using a semi-structured guideline with open-ended questions.

Although data saturation was not measured, the material's richness and the evolvment of topics during discussions indicated sufficient data saturation. In the three CP groups, no new topics were addressed in the last focus-group interview. The two groups of GPs had the most participants and the same

Table 1. Focus group participants.

Participants	CP1 N = 3	CP2 N = 4	CP3 N = 4	GP1 N = 3	GP2 N = 10	P1 N = 4	P2 N = 4
Male	0	1	3	0	5		1
Female	3	3	1	3	5	4	3
Age	26–32	23–35	29–62	50–58	37–72	19–65	20–77
Years as GP/CP, educational level for patients	1–4	0–10	6–41	15–21	10–45	3 with a high school diploma 1 with a master's degree	3 with a high school diploma 1 with a bachelor's degree
Ethnic Norwegian	0	2	4	3	10	4	4
Live/Zoom	Live	Live	Live	Live	Zoom	Zoom	Zoom
Intra-group acquaintances	3	4	2	3	10	0	0

topics evolved in both groups, leading us to conclude that data were of sufficient quality and quantity. Data from the two patient groups were very rich. Participating patients had extensive experience with antibiotic use, which ensures data saturation. A pilot focus-group interview was conducted. It was included in the study, because major changes to the interview guideline were unnecessary (see supplementary material).

Data analysis

The focus-group interviews were recorded and transcribed verbatim immediately. To strengthen the data's credibility and trustworthiness, findings were summarized immediately after focus-group interviews. All authors read and analyzed the transcripts using reflexive systematic text condensation (Malterud, 2012). Three authors were pharmacists, one was a biologist and one was a sociologist. They had different levels of experience in qualitative studies and social science. First, all authors read the transcripts and identified preliminary themes. The authors then coded the transcripts independently. Meaning units were identified and themes were adjusted. Subsequently, meaning units were arranged into themes. In the fourth step, data were reconceptualized and synthesized into condensates, which are short, new descriptions of the thematic meaning units (Malterud, 2012).

When position theory was introduced in the analysis, themes were revised again and a text based on three new themes was identified. These new themes (helpfulness, responsibility and competence) form the core of the Results section. All authors participated in the above-mentioned procedures to ensure trustworthiness. The reflexive analysis was performed manually using numbered lines, tables and color codes.

Ethical issues

The Regional Committee for Medical and Health Research Ethics (99284) and the Norwegian Centre for Research Data (807056) approved the study.

Results

The different positions identified were organized into three themes: 1) helpfulness to the public, 2) responsibility regarding providing information, and 3) key competencies. Table 2 shows how the seven positions can be grouped into one of these three themes. The following sections present each theme in detail.

Results from focus-group interviews are presented through the lens of positioning theory, with CPs as the central element. Each position is presented below with corresponding storylines (the plot of the utterance) and speech acts (the utterance or quote). The code after each quote indicates whether the quote is from a patient (P), a GP, or a CP. The use of m or f indicates male/female and the number indicates age. Speech acts and storylines were analyzed in the original language and translated into English for publication.

CPs' self-positioning

We are helpful and accessible

CPs positioned themselves as helpful and accessible and saw themselves as assisting both patients and GPs. They considered themselves often to be the first point of contact for those seeking help for a health issue:

There's an overuse of antibiotics for conditions which disappear on their own, sore throat maybe, I don't know. Perhaps patients could get at least some general advice on how long to wait before seeing the doctor. Because they often seek our advice anyway before that. [...] If we were to say: 'You should see the doctor, because maybe it's a bacterial infection' then we encourage them to see the doctor, which quickly leads to an expectation of getting an antibiotic prescription, which might be unnecessary, and which is difficult for the doctor to refuse. Because it's the doctor's job to be a 'gate keeper.' But this might be avoided, and this would decrease unnecessary antibiotic use. But then there's a need for a kind of common standard for us to follow. Pharmacists shouldn't have to rely solely on their own instincts when giving advice on choosing over-the-counter treatments (CPm39).

The utterance's beginning indicates that the CP positioned himself as someone who helps the public solve medical

Table 2. Overview of positions and themes.

THEMES	CPs' SELF-POSITIONING	GPs' POSITIONING OF CPs	PATIENTS' POSITIONING OF CP
Helpfulness	We are helpful and accessible	CPs are helpful businesspeople	CPs are helpful and use everyday language
Responsibility Competence: Specialists/ expertise/profession	We are responsible for correct antibiotic use We are specialists in drug treatment, but depend on access to medical information	CPs are responsible and overzealous, but their expertise is unknown	CPs are professional and act as the GP's extended arm

problems at the lowest level. He saw himself as having a social mandate to prevent AMR's development. In being the first point of contact with healthcare services for those with mild symptoms, the CP assumed a key role in providing patients advice on self-care, with the intention of making a visit to the GP unnecessary. Notwithstanding, the CP also expressed a need for a standard to follow when providing advice. He was uncomfortable trusting his instincts. In a societal perspective, a standard could contribute to avoiding the unnecessary prescription of antibiotics, while in a socioeconomic perspective, the CP services help reserve medical care for those really needing it.

We are responsible for correct antibiotic use

CPs positioned themselves as responsible providers of counseling at the final checkpoint before antibiotics are delivered. They saw themselves as responsible for ensuring that patients receive the correct antibiotic, at the right dose and time and with the correct dosing interval. They viewed themselves as a link between patients and GPs, which is vital for ensuring proper antibiotic use. If information from GPs were understood by patients and if what patients retold made sense, CPs would confirm and sup:

I feel it's a good way to convey your message. When you ask them questions, they must think 'What exactly was I told to do?' (...), then they try to retell, thereby providing you with *their* starting point: the patient's perspective (CPm43).

One CP focused on clarifying misunderstandings that might arise between GPs and patients. He claimed: "This gives you the chance to correct a misunderstanding or the like. Provide some additional information" (CPm43). Here, the CP corrected the patient's perception of the GP's advice. When the CP asked what advice the patient believed the doctor had provided during their consultation, the patient's perception was exposed, - possibly causing the patient to reflect and become aware of his/her own understanding of the advice. Open-ended questions encouraged patients to present the information they received.

When CPs and patients agreed on why antibiotics should be taken as specified, CPs experienced that it was easier for the person to follow the doctor's instructions:

Many customers are receptive for information: a simple example of this is the dosing intervals for penicillin treatment. For many, taking a double dose seems logical: it works longer; you know, to merge things. But you must convey the point simply, explaining that the body just pees the extra straight out, and when you get more in, the body just excretes more (CPm39).

The same CP continues on how to communicate clearly when information provided is more complex:

We must be able to give some advice: explain why we think probiotics might work despite existing controversy surrounding their use. One is often very positively surprised because people are curious; so just by telling them a bit more about the research background motivates them to take their medicine (CPm39).

By positioning themselves in a service relationship, CPs got to know the person's history of illness when the patient retold it at the pharmacy. CPs saw it as their main task to give patients

clear and comprehensible information so that prescriptions were adhered to.

When CPs dispensed antibiotics or gave medical advice, they positioned themselves as being in charge of managing the patient's illness. This sense of responsibility, related to the social episode, is short compared with the long-term responsibility GPs have for patients. However, CPs stated that they supplement GP-provided information, thus providing patients a wider perspective.

Aware of their responsibility in the social episode of counseling, a CP explained: "I mainly use 'Antibiotics in General Practice' [see ref ([Helsedirektoriatet](#))] to check treatment duration and dosage, the dosage for children, and such things regarding antibiotics" (CPf23). Further, CPs were afraid of making mistakes. One CP noted: "When we call the doctor, we should be 'up to date' and the tone should be cordial and respectful and not: 'This is wrong'" (CPm39). This statement indicates that CPs are aware of their responsibility, and also afraid of making mistakes in dealing with both patients and GPs, and therefore often must double-check their recommendations.

We are specialists in drug treatment but depend on access to medical information.

CPs claimed to have knowledge about antibiotic treatment that complements that of GPs. Consequently, CPs positioned themselves as competent in drug treatment:

In some cases, it's actually a bit crucial to act, so you must do something; you can get by with a bit of professional knowledge and convince the patient. [...] The doctor stood by the prescription; and here I'm with a patient who doesn't want the medicine because he knows it's not the correct treatment (CPm39).

In the above, the pharmacist listened to the patient's history, trusting his own judgment and knowledge. Their positioning as drug specialists empowered CPs in relation to GPs and encouraged them in their own decision-making. In the above, the pharmacist took medical responsibility for the treatment's outcome.

According to CPs, the lack of access to patients' medical records made it impossible for CPs to position themselves as fully autonomous from GPs regarding treating and managing patients' conditions. This intermediate positioning gave CPs less room for maneuver. The only medical information available to CPs was GPs' prescriptions and/or information obtained through dialogs with patients:

I consider the indication and that's what makes things tricky, because it's very, very rare that the doctor lists the indication on the label (...) and based on available information, informs them about the usual treatment length, adding that 'you should contact your doctor if you haven't noticed any improvement.' A common challenge we face daily is that we don't know the indication (CPf32).

For CPs to be able to provide patient-centered care as described in the Regulations on requisitioning and dispensing medicines from pharmacies (Ministry of Health and Care Services, 1998), they depend on GPs to provide sufficient medical information. The same applied when doctors prescribed antibiotics for untraditional use or at a nonstandard dosage. GPs should ensure that this information was marked

on the prescription. One CP stated: “In my opinion, the doctor should add a comment by way of explanation when the prescription is untraditional. I know this is an untraditional view” (CPm43).

Another example is that of wait-and-see prescriptions (WASPs). WASPs are an intermediate solution between not giving antibiotics and asking patients to start medication only if the condition does not improve. The quotes below demonstrated a mismatch in interactions between GPs and CPs about WASPs.

Although CPs considered an interprofessional collaboration as expedient, they often experienced that this view was not shared by GPs.

I think it's good when the doctor puts it down in black and white on labels and in notes, because that's the only way we know the doctor is actually advocating the use of a wait-and-see prescription. Then it feels more right and less presumptive of us to recommend wait-and-see (CPf31).

On the contrary, when GPs were asked about whether WASPs should be communicated to pharmacists on the prescription, one GP explained: “Wait and see’ is essentially a discussion concerning therapy between the doctor and the patient, so I don’t think the pharmacist has anything to do with that part at all” (GPm69).

However, patients acknowledge the benefits that arise when CPs collaborate with GPs in providing information to patients:

(...) But if you kind of get the same information from the pharmacist, like I can see that the doctor has given you a ‘wait and see prescription,’ then I would think: ‘Yes, that’s correct. I should wait a little longer then.’ So that would be useful, yes (Pf34).

GPs’ positioning of CPs

CPs are helpful businesspeople

GPs mainly positioned CPs as helpful in checking that patients received correct dosages of the correct medication. However, GPs tended to view CPs as being inconsistent in performing their role. On one hand, GPs position CPs as health professionals. On the other hand, they think CPs behave like businesspeople. Generally, GPs were not pleased when CPs advised patients to buy additional products which CPs meant could be useful for alleviating their condition:

“I’ve experienced that the patient has reacted to being told that they must buy ‘this or that’ because it’s important to take with your antibiotic. That I don’t like at all, and I’ve been told by patients that they don’t like it either. I don’t think pharmacists should engage in such things: the ‘you should buy this as well’ pitch” (GPf50).

The commercial aspect of pharmacies could make GPs doubt if CPs are primarily concerned with improving patient health or, if in fact, economic benefits are the driving force. CPs were often not regarded by GPs as being part of the professional healthcare team. In the following GP quote, it is indicated that CPs should not get involved in clinical discussions with patients: “I wouldn’t expect the pharmacist to ask a control question, because I’ve already made it clear when the antibiotics should be used” (GPf54).

CPs are responsible and overzealous

GPs described the CP profession as being based on extensive education and training. However, GPs were uncertain if CPs are qualified for counseling patients on matters related to prescribed treatments. They were unsure about the CP’s tasks and formal responsibilities. Despite these uncertainties, GPs positioned CPs as knowledgeable, but considered their knowledge and areas of responsibility as different from their own. They considered themselves to be the ones who know patients best and what was best for patients. Therefore, according to the GPs, it was undesirable that CPs provided patient-centered care. One GP explained: “Because when I advise my patients I know the person, I know the whole clinical picture, but the pharmacist gives general advice which applies to all patients: and that’s OK regarding the sun, dairy products, alcohol, etc.” (GPf50). GPs claimed CPs were too theoretical when counseling patients. Therefore, GPs believed that CPs were often to blame for lower adherence to antibiotics:

(...) that we had to use a broad spectrum or macrolides, and in several instances, this got stopped because there were interactions. But he wouldn’t have survived if he’d not gotten his antibiotics (...) in these cases it’s pretty bad if the pharmacist stops it due to interactions. We had factored in everything before we started (GPm72).

The general experience was that pharmacists did not inform patients about clinically relevant issues, but instead provided unvarnished information about all possible side effects and interactions. This information led to patients becoming anxious about the possibility that they could stop taking their antibiotics. One GP said: “My experience is that pharmacists are generous with their information about side effects; more so than we are. This can lead to the patient worrying unnecessarily” (GPm43). Another GP agreed: “And that kind of thing creates an awful lot of anxiety for the patient and a lot of extra work for us” (GPf56).

GPs seemed to think that their profession benefits minimally by collaborating with CPs. Since GPs, were at the top of the healthcare hierarchy, they were independent. GPs viewed CPs as overzealous in their counseling and suggested that CPs’ patient-centered services were misplaced. One GP said: “I’m not really sure the patient would want the information repeated if the doctor has already mapped it out. It could be a bit irritating. ‘I’m just here to pick up my medicines; can’t I just get them and go?’” (GPf50).

Generally, GPs believed CPs should concentrate on counseling patients about general tasks such as correct antibiotic use in relation to food intake and dosage times.

Patients’ positioning of CPs

CPs are helpful and use everyday language

Patients positioned CPs as helpful and, compared with other healthcare professionals, they represented very accessible information sources. They positioned CPs as trustworthy, down-to-earth and providers of easily comprehensible information:

While pharmacists, they talk to everyone don't they? So, they use everyday language, making it much easier to understand. Even if they're sometimes short of time, they still put the message across in language we can follow (Pf20).

Patients said they often use the pharmacy to get first-hand advice when they are ill. A specific wish expressed by several patients was for an area in pharmacies dedicated to conversations of a sensitive nature about their medical treatments, and one declared: "Actually quite a few people who are so embarrassed by their faults and shortcomings and chronic diseases that they don't want a discussion in an open space" (Pf65). Therefore, they are often more comfortable with raising sensitive issues in GPs' offices.

CPs are professional and act as the GP's extended arm

Patients positioned CPs as the GP's extended arm. They trust both professions, but they described a more paternalistic relationship with their GPs than with their CPs. In their consultation with GPs, they felt submissive. One patient explained: "Because she makes me feel like a burden, and I can't stop her either, that's what's so incredibly sad" (Pf31). Several patients said they were less receptive to information given during consultations with their GPs. The reason: They felt vulnerable during consultations. Patients' primary focus was on being believed and making their symptoms understood. One woman said about her experience: "I'm not sure the GP's aware that one should ensure that the patient has actually understood. We're all very vulnerable in the patient role. That vulnerability isn't there when we're customers at a pharmacy" (Pf34). Patients felt strengthened after their consultation with their GP, when they felt they had been heard and been prescribed an antibiotic treatment. Patients reported they then felt empowered with a hope of achieving a rapid recovery and were more motivated to receive information at the pharmacy.

Patients said they were satisfied with CP-provided information, but not necessarily with how it was given. When patients positioned CPs as the GP's extended arm, it was because they saw it as the pharmacist's position to make the doctor's information understandable. They felt the pharmacist's task was to act as a link in doctor – patient communication. Thus, patients wish CPs to use more open-ended questions. This change would greatly improve the current practice where CPs often start with a closed question, such as, "Have you used this antibiotic before?"

But I must say that the experience for me has usually been: 'Have you used this drug before? Yes or no?' These questions confirm your history with the medicine, but not whether you've taken it correctly, or if there's any more information you might like to have about it (Pf34).

Although patients have used a medication previously, there remains a risk that it was used incorrectly. Patients experienced that when they answered, "Yes, I've used it before," no further information was offered, and the dialogue was closed. When they said, "No, I've never used it before," standard information might be presented in rote fashion, almost as a monologue. The use of more open-ended questions is seen as a way to improve the situation.

A young woman told how she was received at the pharmacy when picking up her antibiotics:

But I think she does it very nicely because she starts by saying: 'What information have you received from the doctor regarding this medicine?' I explain, and then she says: 'That's right, but it's also important that you . . .' She ends by saying, 'You understand what to do, don't you?' (Pf20).

Patients wished for CPs who follow up and expand on GPs' information, and who strive to make information given in consultations more understandable. All this should be included in a framework where patients' individual needs were primary. Preferably, CPs should start with the following question in meetings with patients: What information has the GP given about the antibiotic treatment? During social episodes at pharmacies, CPs should seek to understand what patients have understood from consultations with GPs. Ascertaining what must be supplemented or explained would help ensure correct use. Such an approach would make pharmacists appear more proactive and patient-centered:

When the GP has prescribed a treatment, I don't experience [at the pharmacy] that anyone questions the need for an extra round of information to ensure that I understand the consequences and the side effects and such (. . .). But all feedback on side-effects and such is given to the doctor. So, there is no triangular dialogue in a way, which could have strengthened the role of the pharmacist in providing more information or to stress 'do you understand these things?' (Pf34).

According to patients, WASPs constitute situations where CPs could be more proactive. One woman said: "I get the impression that the pharmacist hasn't been told it's a wait-and-see prescription" (Pf34). Due to the patient role's vulnerability, which might make it more difficult to remember her GP's advice, she wants the CP to confirm that advice.

Discussion

CPs, GPs and patients agree that CPs are helpful when delivering GP-prescribed antibiotics. GPs indicate that CPs sometimes are too helpful, especially when they do patient-centered counseling. GPs are suspicious about the CP's counseling being possibly profit-driven. CPs position themselves as responsible health professionals with sufficient experience to act as pharmaceutical experts. Patients position the CP as the GP's extended arm and would like them to provide more patient-centered care. Below, the main results are discussed, answering three questions based on positioning of CPs, regarding the key elements helpfulness, responsibility, and expertise.

Are CPs helpful providers of healthcare information or businesspeople?

In this study, CPs positioned themselves as helpful advisors to the public on issues of medical self-care. They saw themselves as providers of information on a wide range of issues, which translates to reduced antibiotic prescribing. CPs feel their position as "a final checkpoint" in dispensing antibiotics is

important to ensure correct antibiotic use. They even see their role as information providers as a moral duty on society's behalf.

Some argued that pharmacies' retail environment destroys the impression of pharmacists as serious providers of extended healthcare (Horsfield et al., 2011; Michie et al., 2015; Morton et al., 2015). Due to this commercial aspect of the profession, GPs become ambivalent about CPs' position; is the service offered motivated by their own economic benefits more than by patients' needs? (Löffler et al., 2017; Rieck, 2014; Rubio-Valera et al., 2012). GPs, therefore, position CPs as helpful businesspeople.

Patients perceive both GPs and CPs as knowledgeable and useful and they have confidence in both. CPs' services, including advice on medical issues, are considered low-threshold services to the public. CPs contribute to reducing antibiotic use through self-care advice and by preventing antibiotic use for treating minor infections (Peiffer-Smadja et al., 2020). The public find getting information from pharmacists easier because they use everyday language without complicated medical terminology. Apparently, when in pharmacies, patients have an "informal relationship" with CPs but experience a subordinate position in GPs' offices. The patient – doctor relationship seems more paternalistic.

Are CPs positioned as responsible in patient-centered information tasks?

CPs' main task in connection with, and with relevance for, correct use of prescribed antibiotics is to clarify potential misunderstandings in GP – patient communication. According to Norwegian legislation, CPs are obligated to ensure correct use of medications (Ministry of Health and Care Services, 1998). CPs themselves regard this as a social obligation. The positioning posited in the present work concurs with that reported in previous literature, where educating patients seems to be one of the CP's key tasks in antimicrobial stewardship (Saha et al., 2020, 2021; Saha, Hawes, et al., 2019, 2019). Contrastingly, most GPs in our study agree that clinical information should not be given to patients by pharmacists. Instead, they suggest that all medical information be provided by GPs, since they have the main responsibility for patients. They see this task as part of the doctor's responsibility and thus a social obligation. GPs wish CPs to focus on general information and tasks, such as delivering what GPs have prescribed. GPs position CPs as responsible for decision-making connected only to over-the-counter medications. Similar positioning of CPs by GPs was reported in previous studies (Blondal et al., 2017; Rakvaag, Søreide, & Kjome, 2020; Rakvaag, Søreide, Meland, et al., 2020).

The hierarchical mindset of healthcare professionals influences interprofessional collaboration. Two studies (Thomas et al., 2021; Weaver et al., 2011) explore how professional hierarchies and power differentials shape interprofessional interactions between pharmacy and medical students. Medical students' attitude toward pharmacy students is that

the medical profession is superior (Thomas et al., 2021). They point out that students are aware that power differentials and professional stereotypes can negatively influence the collaborative practice of healthcare professionals (Thomas et al., 2021; Weaver et al., 2011).

In our study, it became clear that GPs are not acquainted with CPs' responsibilities and areas of competence. GPs know little about CPs' tasks, obligations and knowledge. Knowledge about each other's professional duties is important for successful collaboration between CPs and GPs (Gregory & Austin, 2016; Rieck, 2014). Knowledge builds trust, which is crucial in interprofessional collaborations (Gregory & Austin, 2016). In Norway, where a small population is spread over a large land-mass, community GPs and CPs may interact less than their counterparts at hospitals.

In our study, patients position CPs as the GP's extended arm and prefer to have information presented in consultations with GPs repeated by CPs at pharmacies. This finding is reinforced by other studies (Svensberg et al., 2015). One major reason is that patients feel vulnerable during consultations, a feeling which is related to their compromised health status (Ferreira et al., 2021). When patients feel seen and understood, and have been offered treatment, they are empowered in decision-making and self-management, and become receptive to information from CPs at pharmacies (Rognan et al., 2021).

Do CPs lack access to medical information necessary to perform their expert/specialist tasks?

In Norway, CPs do not have access to patients' medical records. CPs depend on GPs' making medical information available. Rakvaag et al (Rakvaag, Søreide, Meland, et al., 2020), concluded that Norwegian CPs tend to interpret their own position as health professionals in relation to GPs' profession. CPs have little professional autonomy. In contrast, GPs are not dependent on CPs to define their position. CPs are concerned with proving their rights and duties regarding patient-centered care with respect to antimicrobial stewardship, and thereby gaining acceptance as professional partners. They wish for greater responsibility to ensure correct antibiotic use, aiding in the fight against increasing AMR. To do their tasks, CPs in this study asked for a guideline to ensure that advice they provide be "according to the book," in line with Rakvaag et al (Rakvaag, Søreide, Meland, et al., 2020).

Svensberg et al (Svensberg et al., 2015), identified a discrepancy between more patient-centered care, as expressed by pharmacists, and what CPs say they are engaged in their daily work. It seems difficult for CPs to renegotiate their positions to achieve a more autonomous, patient-centered care because their profession is not independent. Lack of independent access to medical information makes this challenging. In our study, CPs expressed general frustration over their position in the healthcare hierarchy, and some used words like "powerless" and "paralyzed" when discussing how their profession might help combat AMR. Frankel et al (Frankel & Austin, 2013), performed an exploratory study that supports this finding. They mentioned that CPs' position in

the healthcare hierarchy makes them dependent and insecure when making medical-care decisions.

CPs' positioning as drug specialist seems to be rejected by GPs in this study, perhaps because GPs are more comfortable with collaboration that involves CPs' being subordinate to them. GPs regard CPs as non-clinicians without responsibility for patients, and consequently they should also not interfere with GP-prescribed medical regimens. They do not appreciate that CPs extend their services and prefer medical information to come from them. This finding is in line with studies from the USA (Ranelli & Biss, 2000) and Canada (Howard et al., 2003) reporting that almost no physicians were comfortable with CPs' being involved in medical issues. However, a new survey from New Zealand (Bidwell & Thompson, 2015) shows that both groups generally supported collaboration, but emphasized that patience is needed because establishing interdisciplinary trust takes time.

Strengths and limitations

Three of the authors are pharmacists, one is a biologist and one is a sociologist. This diversity strengthens the study's credibility and confirmability because their perspectives were used to avoid taken-for-granted interpretations. A limitation is that no GPs were included in the data analysis. In the patient groups, there were more female participants than male participants, which might lead to volunteer bias and decreased credibility. Six pharmacists were from minority ethnic groups, while all other participants were ethnic Norwegians. All participants represented urban area. Other detailed sociodemographic information was not systematically collected which could influence transferability. However, we ensured that participants had different backgrounds and experiences.

Positioning theory was the framework applied in the analysis. According to works by Harré (Davies & Harre, 2007; Harré & Langenhove, 1999; Harré & Moghaddam, 2003), this approach deals with how people use language in reflecting on their own and others' positions. The strength of positioning theory is that it questions the legitimacy and the allocation of rights and duties of participants in a social episode (Davies & Harre, 2007; Harré & Langenhove, 1999; Harré & Moghaddam, 2003; Wise, 2019). In positioning theory, individual meanings of participants are not the main focus. However, since this study's aim was to investigate the triangular relationship between GPs, CPs and patients in order to improve collaboration and thereby reduce unnecessary antibiotic use, using this theory is appropriate. Another reason for choosing this framework: it was already used on CPs' and GPs' interactions in Rakvaag et al (Rakvaag, Søreide, & Kjome, 2020; Rakvaag, Søreide, Meland, et al., 2020). This expands the confirmability of our findings. Additionally, we included patients' which adds new knowledge to the field.

Conclusion

In this study, position theory is used to investigate the research questions. The study shows a potential mismatch between CP, GP and patient perceptions of pharmacists' position regarding prescribing and dispensing antibiotics at the pharmacy. While

CPs and patients say that information given by pharmacists is helpful and necessary to promote correct antibiotic use, GPs claim that CPs need not be involved in clinical aspects of choices made by doctors and their patients. This discrepancy is a barrier to optimal service to the public. Patients say they are best served when GPs and CPs collaborate, and they wish for a triangular dialogue. An appropriate step to contribute to correct use of antibiotics and thereby reducing the risk of AMR, would be to ensure that GPs and CPs share an understanding of each other's tasks, duties, rights and responsibilities. A proposal from this study is to formalize increased collaboration between CPs and GPs where the two professions can exchange information on their respective areas of expertise and daily tasks. The CP –GP collaboration barrier observed in this study should be addressed in the future to meet patients' desires for a more cooperative healthcare, where information provided by CPs and GPs is harmonized.

Acknowledgments

The project team thanks all focus-group interview participants who gave their time willingly.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

The Foundation for the Promotion of Norwegian Pharmacy funded this study.

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