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Patient–provider communication about medication use at the community pharmacy counter

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ABSTRACT

Objective The objectives of this study were to, first, describe the information exchanged between pharmacy staff and patients about prescribed medication at the community pharmacy counter, and second, to investigate to what extent this met professional medication counselling guidelines.

Methods Pharmaceutical encounters were videotaped in four community pharmacies in the Netherlands. Patients were included if they collected a prescription for their own use. An observation protocol, including the MEDICODE checklist, was used to analyse the video recordings. Adistinction was made between first and repeat prescriptions.

Key findings One hundred fifty-three encounters were videotaped. When dispensing first prescriptions, pharmacy staff provided most information on instructions how to use the medication (83.3%), form of the medication (71.4%) and treatment duration (42.9%). Topics for repeat prescriptions (such as the effects of the medication and the incidence of observed adverse effects) were rarely discussed. Pharmacy staff rarely encouraged patients to ask questions.

Conclusions Pharmacy staff members provided little medication-related information at the counter, especially for repeat prescriptions, did not encourage active patient participation, and thereby did not adhere to the guidelines of their professional organisation. Further research is needed to understand the reasons for this.

INTRODUCTION

Pharmacy staff members are important health-care providers in medication-related encounters as virtually all patients regularly visit the pharmacy to collect their prescribed medication.

In the Netherlands, their role was strengthened in 2007 when the ‘Dutch Medical Treatment Act’ (WGBO) became applicable to the community pharmacy. This meant

that pharmacists are legally identified as health-care providers and are responsible for the result of their patients' medical treatment.[1] In the Netherlands, a community pharmacy team comprises pharmacy technicians and pharmacists, who supervise the pharmacy technicians. Pharmacy technicians have completed a 3-year post high school training. Their activities in the pharmacy consist of preparing medications, informing patients about their medications and controlling the stock of the pharmacy. Pharmacy technicians are the staff members who interact most with patients at the counter.

They are usually the last health-care professionals patients meet before they use their prescribed medication, and therefore have good opportunities to inform and counsel patients;[2,3] so effective communication during these encounters is essential.[4–6] Good communication between health-care providers and patients is associated with better patient satisfaction, recall of information and health status.[6,7] It has been demonstrated that patients who are better informed about their treatment, its risks and benefits and understand how to use it, are more likely to adhere to their medication.[8–11] Information is especially effective when it is accompanied with affective communication, such as showing empathy and encouraging patients to express their perceptions on medication.[12–15] Effective and efficient patient-centred encounter depends on both the pharmacy staff and the patient having an active role. The pharmacy staff need to explore patient's preferences and to provide the patient with medical information that would help the patient make the right decisions.[16–21] The patient should be honest about their needs and concerns. A patient-centred encounter in the pharmacy contributes to the patients' trust in the pharmacy and increases adherence.[18] In the Netherlands, the professional organisation of pharmacists, the 'Royal Dutch Association Pharmacists Society' (KNMP), developed guidelines to support pharmacy staff in medication counselling at the pharmacy counter. These guidelines include descriptions of the information that pharmacy staff members have to provide, and also a short description of the required communication style. For first prescription encounters, the guidelines advise that there should be an explanation about how to use the medication, the mechanism of action of the medication, its intended effect and potential adverse effects. The pharmacy staff also need to check whether the patient understands the information. For repeat prescription encounters the guidelines advise that the patient should be asked about experiences with the medication and, if necessary, over- or underuse. In any encounter, the pharmacy staff have to check whether the patients themselves have any further questions, and adapt their communication style and the information to the needs and preferences of individual patients (KNMP guideline Pharmaceutical Care and Services, 2006).

The pharmacist should supervise pharmacy technicians in complying with these guidelines.

Little is currently known about the content of pharmaceutical encounters at the pharmacy counter, which verbal information is transmitted and whether the information provided meets the guidelines of their professional organisation. Moreover, it is not known who takes initiatives in these encounters: the patient or the pharmacy staff member. Thus, the aim of this observational study was to describe the information that is exchanged between pharmacy staff and patients about prescribed medication at the pharmacy counter and the extent to which this meets the professional guidelines. Elements studied included the information provided, who

initiated the provision of information and the communication style. As guidelines differ between first prescription and repeat prescription encounters, a distinction was made between these two types of encounters.

METHODS

Design

An observational study in four community pharmacies was conducted using videotaped encounters at the pharmacy counter. Data were collected with the help of the Utrecht University pharmacy practice research network (UPPER), and the study protocol was reviewed and approved by the UPPER institutional review board of the Department of Pharmacoepidemiology and Pharmacotherapy (http://www.uu.nl/vkc/upper).

Setting

Community pharmacies belonging to the UPPER network were invited to participate in the study. The UPPER network consists of approximately 1200 community pharmacies spread over the Netherlands regularly participating in research.[22] The study was undertaken in four community pharmacies in the north-west of the Netherlands, selected on the basis of their previous interest in projects about patient care. Informed consent was obtained from the pharmacists of the four pharmacies. Two of these pharmacies were relatively small with little privacy for patients, and two were more spacious and provided more privacy. In the remainder of this paper, the term 'pharmacy staff' will be used, which will mostly refer to the pharmacy technician, although the pharmacist may also interact with patients at the counter.

Study population

Patients aged 18 years or older who visited the pharmacy to collect prescribed medication for themselves were invited to participate in the study. Patients received an information letter and leaflet about the study and were asked to sign an informed consent form. Patients were excluded when they met one or more of the following criteria: (1) people who visited the pharmacy to collect only over-the-counter medication or medical devices; (2) people who only collected prescribed medication for others; (3) people who did not receive their medication during the encounter; and (4) people who could not fill out the questionnaire (because of intellectual disability or limited grasp of the Dutch language).

As patients had to sign an informed consent form in the pharmacy, the time to consider participation in the study for patients was short. Therefore, patients were provided with a withdrawal of consent form, which they could return to the research team should they subsequently change their mind about participation. In two of the pharmacies, a log was kept of those ineligible or declining to participate.

Measurements

There was *a priori* per pharmacy target of 40–50 observations over 3 days. When patients agreed to participate, they were directed to the pharmacy counter where the video recorder was located. Video recording was performed with a camera positioned at the patient's back, such that the pharmacy staff member was identifiable from the front, but the patient was not. The recorded encounters were coded with an observation protocol including the MEDICODE,[23,24] a research tool focusing specifically on the description of medical encounter content that deals with

medication. The MEDICODE includes four categories: (1) general information about the medication (e.g. name of the medication); (2) additional information about the medication (e.g. possible adverse effects); (3) explanation of prescription (e.g. instructions for use of the medication); and (4) patients' perceived effects of the medication (e.g. observed effects on symptoms). In order to observe participation of patients and pharmacy staff during encounters, an extra element was added to the protocol, as it was also coded who initiated the discussion (pharmacy staff or patient). The MEDICODE instrument was originally developed for physician–patient consultations; it was tailored to the pharmacy setting by, for example, removing items like 'physician recommends medication only if needed' and 'physician asks for patient's commitment'.

The observation protocol characterised the communication style of the pharmacy staff, based on a study by Linn *et al*.,[25] and on questions from the consumer quality index pharmaceutical care,[26] an instrument that is partly based on the medication counselling guidelines of the KNMP. Elements based on Linn *et al*. referred to the patient-centred communication style of pharmacy staff including 'the reaction of the pharmacy staff on a cue from the patient about worries with regard to their medication'. As recall of information (i.e. the ability to understand and reproduce medical information) is a prerequisite for successful medication adherence,[25] some elements directed to the use of recall-promoting techniques by the pharmacy staff were added, including 'did the pharmacy staff encourage the patient to ask questions during the encounter?' (0 = *no* and 1 = *yes*). In addition, the overall communication style of the pharmacy staff was scored, by measuring how the pharmacy staff were approaching the patients, by for example looking at their eye contact. These items were mostly scored on a 4-point Likert scale (1 = *not at all* and 4 = *completely yes*). The observation protocol was pre-tested on student (simulated)–patient interactions at the Utrecht School of Pharmacy; no changes were made.

After the encounter, patients received a questionnaire including questions on age and gender. Patients were asked to complete the questionnaire immediately after the encounter in the pharmacy, or because of lack of time, to return the questionnaire by free post to the Netherlands Institute for Health Services Research (NIVEL) within 2 weeks.

Finally, the pharmacy staff noted data about the number and type of medications on a form, immediately after patient counselling. All the data were anonymised using a randomly assigned unique number for each observation, questionnaire and medication form.

Data analysis

Three of the authors and a research assistant observed the first five video recordings together in order to reach agreement on the interpretation of the protocol. Next, two of these researchers analysed the five video recordings independently to calculate the inter-rater reliability. The measure of agreement, expressed in Cohen's Kappa, was 0.76. They again discussed their ratings and eventually, they reached consensus on a general counselling score for each medical discussion.

Subsequently, all of the following video recordings were analysed by one observer. To explore differences in discussed MEDICODE themes between first and repeat prescriptions, Chi-square tests were used. First prescription encounters were defined as encounters in which at least one first prescription medication was provided to the patient and repeat prescription encounters as encounters in which only repeat

prescription medication was provided. The level of significance was set at $P < 0.05$. Data were analysed with the Statistical Package for the Social Sciences (SPSS) version 18.0 (SPSS, Inc., Chicago, IL, USA).

RESULTS

Participants

All four pharmacies approached agreed to take part. All staff observed were women. In three of the four pharmacies, encounters were performed by eight different pharmacy technicians, and in the remaining pharmacy, five different pharmacy technicians performed the information provision. The number of encounters in which the pharmacist was interacting with the patient, was two to six per pharmacy.
Based on data from the two pharmacies maintaining a recruitment log, about one-third of patients did not meet the inclusion criteria as they collected prescriptions for others. Of those eligible (107), 73 agreed (response rate 69.2%).
Across the four pharmacies, a total of 159 patients signed the informed consent form. Of these, five did not receive their medication during the encounter, and were therefore excluded. In addition, one recorded encounter was not suitable for use because of problems with the video camera and one patient withdraw their consent after leaving the pharmacy, resulting in a final study population of 153 participants. The questionnaire was returned by 108 (70.6%). The majority of participants were women (64.1%), and aged between 35 and 64 years (55.6%). The average number of dispensed items per participant was 1.6 (Table 1).Of the 246 collected medications, almost three-quarters were repeat prescriptions. Almost one out of five of the collected medications was for the cardiovascular system (18.7%).

Duration of encounters

The median duration of the encounter was 132 s (interquartile range (IQR) 63.5–236.0). First prescription encounters (N = 42) were longer than those for a repeat prescription (N = 111); 178 s (IQR 125.8–332.5) compared with 109 s (IQR 52.0–219.0).

[TABLE 1]

Content and initiative

To analyse the course and contents of the 153 pharmaceutical encounters, the MEDICODE checklist was used (Tables 2 and 3).
Tables 2 and 3 show clear differences between first prescription encounters and repeat prescription encounters. For first prescription encounters, instructions on how to use medication, (dosage information (83.3%), form of the medication (71.4%) and duration of the treatment (42.9%)) were most frequently provided. The costs of the medication were discussed in more than one-third of the encounters (38.1%) mostly with respect to reimbursement by the health insurance.
Patients asked questions to the pharmacy staff in more than half of the encounters (52.4%; Table 2).
For repeat prescriptions, the themes most frequently discussed include the name of the medication (31.5%), instructions for medication use (e.g. dosage information (20.7%) and duration of treatment (18.9%; Table 3). Patients' questions were mostly concerned with the brand of the medication.

Topics that were only applicable to repeat prescriptions, such as the effects of the medication and the incidence of observed adverse effects, were never discussed (not included in Table 3). Pharmacy staff members seldom asked about adherence (1.8% of repeat prescription encounters).
Pharmacy staff provided more information when dispensing first prescriptions compared with repeat prescriptions.
They informed the patients more often about possible adverse effects ($P < 0.001$), the form of the medication ($P < 0.001$), the duration of the treatment ($P < 0.01$), circumstances when the medication should not be taken ($P < 0.01$), reasons for taking medication ($P < 0.01$) and about instructions on how to use the medication ($P < 0.001$). Besides, costs of the medication were significantly more discussed during first prescription encounters ($P < 0.01$).When collecting first prescriptions, patients asked more questions ($P < 0.001$) and they expressed more often their concerns regarding the medication ($P < 0.01$) compared with when collecting repeat prescriptions only.
Tables 2 and 3 show that pharmacy staff members initiated a discussion much more often than patients; 63% of the patients took no initiative at all. Still, patients initiated themes like the name of the medication and costs of the medication and they expressed their concerns regarding the medication when collecting a first prescription. Patients took significantly more initiative when collecting first prescriptions compared with repeat prescriptions ($P < 0.001$). If they initiated a conversation in a repeat consultation, it most often concerned the name of the medication. Patients never initiated themes like adherence and experiences effects of their medication. The average number of themes that a patient initiated was 0.6 per encounter.

Patient-centred communication

With regard to their style of communication, pharmacy staff scored between 3.7 and 4.0 (on a 4-point Likert scale, 1 = *insufficient*; 4 = *excellent*) on almost all elements. No differences between first and repeat prescription encounters were observed (Table 4).
Lower scores were found for eye contact with the patient (3.0 for first prescription encounters, 2.9 for repeat prescription encounters). Yet, while staff members were friendly and respectful to patients and left room for comments, they did not actively involved patients (e.g. by asking: do you have any further questions?): this was only the case in 10% of the first prescription encounters and in less than5%of the repeat prescription encounters.
Table 5 shows how pharmacy staff reacted to patients' emotional worries about their medication. Such cues were expressed in 10 encounters: in the first four prescription encounters (9.5%) and in six repeat prescription encounters (5.4%). There was a minimal reaction of the pharmacy staff on these cues in three of these consultations, acknowledgement was seen in five encounters and in two encounters the pharmacy staff further explored these worries.
Regarding the use of recall-promoting techniques, it was observed that pharmacy staff members did not stimulate questions by patients. In only four first prescription encounters (2.6%), pharmacy staff assessed the understanding of patients about their medication, mostly by asking 'has the doctor already explained the use of the medication?' (Table 5).

[TABLE 2]

DISCUSSION

Main findings

This observational study showed that pharmacy staff members are friendly and respectful to patients, and that they provide most information, such as dosage instructions, form of the medication, and treatment duration, when dispensing first prescriptions. In contrast, pharmacy staff provide minimal information when dispensing repeat prescriptions.

Topics that are especially relevant for repeat prescriptions, namely on patients' perceived effects of the medication (e.g. observed effects on symptoms and observed adverse effects) are never discussed. Besides, pharmacy staff members do not encourage active patient participation and they rarely explore patients' needs or ask about patients' concerns.

Limitations and strengths

[TABLE 3][TABLE 4][TABLE 5]

Some limitations of this study should be considered. First, because of the relatively small sample of four pharmacies and the fact that up to nine different pharmacy technicians in one pharmacy provided information to patients, we were not able to look at possible differences between pharmacies and between pharmacy technicians. Moreover, because almost all encounters were between pharmacy technicians and patients, it was not possible to compare the communication of pharmacy technicians to that of pharmacists. Second, there may be some selection bias, as the pharmacies that were willing to participate may be more engaged in patient counselling, compared with other Dutch pharmacies. This implies that our results may provide a too positive picture of the situation.

Third, the presence of a video recorder during the encounter may have influenced the way pharmacy staff were approaching patients. This could have had a positive effect on the responses of the observed pharmacy staff and on their communication style, which may have been more patient directed than usual. Nonetheless, we think that our main finding, that communication at the pharmacy counter could be improved, is valid, as pharmacy staff are likely to perform better than worse knowing they are being videotaped. Fourth, we did not observe patients' non-verbal behaviour because the video recorder was put behind the patient. Therefore, the data about patients' cues are limited to only verbally expressed cues of patients. Finally, our results show that pharmacy staff members score remarkably high on their communication style. The elements of the communication style were partly based on the KNMP guidelines, but these elements refer to quite basic skills of their communication style. However, we also asked patients to rate the counselling of the pharmacy staff member after the encounter, and they scored the friendliness of the pharmacy staff as high as we did. The strength of this study is that because of the videotaped pharmaceutical encounters, we were able to look both at the content of the communication, as well as at the communication style of the pharmacy staff. Furthermore, because of the pharmacy dispensing data on medications, it was possible to look at the differences in counselling between first and repeat prescriptions.

DISCUSSION

The finding that pharmacy staff members do not discuss the majority of the themes of the MEDICODE does not match the professional guidelines composed by the KNMP. The information pharmacy staff provide when they dispense first prescriptions is not complete when compared with the guidelines.

Moreover, possible adverse effects, the mechanism of action of the medication and the intended effect were rarely discussed by the pharmacy staff during repeat prescription encounters. Barriers for taking medication, such as adherence problems and consequences of non-adherence, were discussed in only one encounter. These results regarding compliance to guidelines in pharmacies correspond with work of Watson *et al*., who showed that pharmacy staff members do not follow the guidelines when supplying non-prescription medications.[27] We also found that patients receive little medical information when collecting first prescriptions, which is in line with results of Van Geffen *et al*., who demonstrated that patients who collected a first prescription for cardiovascular medication were dissatisfied with the information about the timeframe for the expected effect of the medication, how you could tell if the drug is working, whether the medication has any adverse effects, whether it interferes with other medications and what you should do when forgetting to take a dose.[22] The lack of information on medications reported here, and also by Olsonn *et al*.[28] means that important information is omitted, which could lead to mistakes during the use of the medications.

Also in line with other studies, we found that pharmacy staff members were friendly and respectful to patients, had sufficient eye contact, and left room for patients' comments.[19–21] However, they did not encourage active patient participation, as they did not ask for patients' needs and preferences. Besides, pharmacy staff did not stimulate patients' question-asking behaviour, which is also in line with other studies.[19–21] Yet, these findings do not match the professional medication counselling guidelines, that state that pharmacy staff members always have to check whether the patient has any remaining questions. Moreover, pharmacy staff have to assess the understanding of patients about their medication, and not only by the leading question 'has the doctor already explained the use of the medication?' Finally, they should tailor the provided information to the individual patient by asking for their needs and preferences.[21] But also patients themselves ask few questions and when they do, the questions rarely address medication use, but mostly concern the brand of the medication and its reimbursement. This is probably due to regulations of health insurances in the Netherlands, the so-called medication preference measures. Because of these measures, patients might receive a different brand of the same medication than the previous time they collected their medication, which raises many questions by patients. As such, pharmacy staff need to explain these regulations and possible reimbursements, which leaves less time available for the provision of medication-related information.

Besides information in the pharmacy, patients can receive information on medication from their general practitioner (GP). It has been demonstrated that patients prefer to receive medication-related information from their GP. Yet, it has been found that GPs spend little time on discussing medication use and adherence.[29–32] Generally, pharmacy staff see patients more frequently than the GP and are also more accessible than other health-care providers.[22] Therefore, the com- munity pharmacy team

could fill the information gap patients experience after consulting their GP,[32] not to fill in the gap in the provision of medication-related information and counselling.

Practice implications

Pharmacy staff are expected to implement their professional guidelines for medication counselling at the pharmacy counter. In order to implement these guidelines successfully, the reasons for non-compliance need further exploration. More research is needed to find out whether staff members do not know these medication guidelines, or if they either do not want or can apply these guidelines in daily practice, for example because of feeling uncomfortable in patient contact or just because of lack of time. If pharmacy technicians are not aware of the guidelines, there should be more attention to the guidelines and on ways to successfully implement them during the education of pharmacy technicians and in post- graduate education. Finally, the pharmacist is responsible for his or her team of pharmacy technicians, and pharmacists should encourage their team to provide good medical information, and they should also check the provided information at the counter once in a while.

Conclusion

When dispensing first prescription medications at the pharmacy counter, pharmacy staff provide medication-related information, although this information is incomplete accord- ing to the professional guidelines of the pharmacist organisation. Pharmacy staff members provide minimal medication- related information when dispensing repeat prescriptions, which also does not match their professional guidelines. As they do not ask about patients' concerns and beliefs about medication, this could result in unfulfilled needs of patients and eventually, less medication adherence. Further research is needed to explore why pharmacy staff members do not comply with the professional guidelines on interactions with patients about prescription medications.

Declarations

Conflict of interest The authors declare that they have no conflicts of interest to disclose.

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Authors' contributions All authors state that they had complete access to the study data that support the publication. MvD conducted the research and analysed and interpreted the data. MvD produced the first draft of the paper. She contributed to the many drafts and re-writing of the paper and final submission for publication. LvD supervised MvD and contributed to the paper through reviewing and commenting on drafts. LB was responsible for the recruitment of the pharmacies for the study, and commented on the drafts of the paper. LK, DP, EK and MB contributed to the paper through reviewing and commenting on drafts.

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TABLES

Table 1 Baseline characteristics of the study participants (N = 153)

	% (n)
Pharmacy	
1	21.6 (33)
2	22.2 (34)
3	28.1 (43)
4	28.1 (43)
Gender	
Female	64.1(98)
Male	35.9 (55)
Age (N = 106)*	
18–34	9.4 (10)
35–54	24.5 (26)
55–64	31.1 (33)
65–74	24.5 (26)
≥75	10.4 (11)
Number of medication per participant	
1	62.1 (95)
2	24.8 (38)
≥3	13.1 (20)
Status of total medication (N = 246)	
New prescription	24.0 (59)
First repeat prescription	4.1 (10)
Follow-up repeat prescription	71.9 (177)

*The lower N is a result of the non-response on the questionnaire.

Table 2 Discussed themes of the MEDICODE during first prescription encounters* in the pharmacies and the initiator of the discussion† (N = 42)

	% (n)	% pharmacy staff (n)	% patient (n)
General information about the drug			
Patient asks pharmacy staff questions about medication	52.4 (22)	0 (0)	100.0 (22)
Medication named	26.2 (11)	63.6 (7)	36.4 (4)
Patient receives other medication (e.g. other generic)	7.1 (3)	33.3 (1)	66.7 (2)
Class named	7.1 (3)	66.7 (2)	33.3 (1)
Concerns regarding medication	7.1 (3)	0 (0)	100.0 (3)
Strength of medication	2.4 (1)	0 (0)	100.0 (1)
Pharmacy staff asks patient's opinion of medication	0 (0)	0 (0)	0 (0)
Objections regarding medication	0 (0)	0 (0)	0 (0)
Doubt about effect of the medication	0 (0)	0 (0)	0 (0)
Explanation of prescription			
Instructions for medication (dosage)	83.3 (35)	94.3 (33)	5.7 (2)
Form of medication	71.4 (30)	96.7 (29)	3.3 (1)
Duration of treatment	42.9 (18)	83.3 (15)	16.7 (3)
Costs of medication	38.1 (16)	68.8 (11)	31.2 (5)
Medication-usage issues	11.9 (5)	80.0 (4)	20.0 (1)
Reasons for taking medication	11.9 (5)	60.0 (3)	40.0 (2)
Conditions for not taking medication	7.1 (3)	100.0 (3)	0 (0)
Adjustment of dosage	2.4 (1)	100.0 (1)	0 (0)
Pharmacy staff questions compliance with medication	0 (0)	0 (0)	0 (0)
Compliance problems	0 (0)	0 (0)	0 (0)
Solutions for non-compliance	0 (0)	0 (0)	0 (0)
Consequences of non-compliance	0 (0)	0 (0)	0 (0)
Additional information about the drug			
Possible adverse effects of medication	11.9 (5)	100.0 (5)	0 (0)
Mechanism of action of medication	7.1 (3)	66.7 (2)	33.3 (1)
Drug interactions	2.4 (1)	100.0 (1)	0 (0)
Contraindications of medication	2.4 (1)	100.0 (1)	0 (0)
Expected effect on symptoms	0 (0)	0 (0)	0 (0)
Timeframe for expected effect	0 (0)	0 (0)	0 (0)
Pharmacy staff asks about allergies/intolerance to the medication	0 (0)	0 (0)	0 (0)

*An encounter is defined as a first prescription encounter, when the patient received at least one first prescription medication during the encounter in the pharmacy. †The third column presents the percentages (absolute numbers) of the encounters where the theme is discussed in which the pharmacy staff member is the initiator, and the fourth column in which the patient is the initiator. The themes of the subject 'effects of the drug' were not included in Table 2, as these themes were never a topic of discussion.

Table 3 Discussed themes of the MEDICODE during repeat prescription encounters* in the pharmacies and the initiator of the discussion† (N = 111)

	% (n)	% pharmacy staff (n)	% patient (n)
General information about the drug			
Medication named	31.5 (35)	80.0 (28)	20.0 (7)
Patient asks pharmacy staff questions about medication	18.0 (20)	0 (0)	100.0 (20)
Patient receives other medication (e.g. other generic)	10.8 (12)	66.7 (8)	33.3 (4)
Class named	5.4 (6)	50.0 (3)	50.0 (3)
Strength of medication	2.7 (3)	66.7 (2)	33.3 (1)
Pharmacy staff asks patient's opinion of medication	1.8 (2)	100.0 (2)	0 (0)
Objections regarding medication	0.9 (1)	0 (0)	100.0 (1)
Concerns regarding medication	0 (0)	0 (0)	0 (0)
Doubt about effect of the medication	0 (0)	0 (0)	0 (0)
Explanation of prescription			
Instructions for medication (dosage)	20.7 (23)	91.3 (21)	8.7 (2)
Duration of treatment	18.9 (21)	90.5 (19)	9.5 (2)
Costs of medication	18.0 (20)	95.0 (19)	5.0 (1)
Form of medication	10.8 (12)	91.7 (11)	8.3 (1)
Medication-usage issues	8.1 (9)	88.9 (8)	11.1 (1)
Adjustment of dosage	7.2 (8)	87.5 (7)	12.5 (1)
Pharmacy staff questions compliance with medication	1.8 (2)	100.0 (2)	0 (0)
Compliance problems	0.9 (1)	100.0 (1)	0 (0)
Solutions for non-compliance	0.9 (1)	100.0 (1)	0 (0)
Consequences of non-compliance	0.9 (1)	100.0 (1)	0 (0)
Reasons for taking medication	0 (0)	0 (0)	0 (0)
Conditions for not taking medication	0 (0)	0 (0)	0 (0)
Additional information about the drug			
Mechanism of action of medication	0.9 (1)	100.0 (1)	0 (0)
Drug interactions	0.9 (1)	100.0 (1)	0 (0)
Possible adverse effects of medication	0 (0)	0 (0)	0 (0)
Contraindications of medication	0 (0)	0 (0)	0 (0)
Expected effect on symptoms	0 (0)	0 (0)	0 (0)
Timeframe for expected effect	0 (0)	0 (0)	0 (0)
Pharmacy staff asks about allergies/intolerance to the medication	0 (0)	0 (0)	0 (0)

*An encounter is defined as a repeat prescription encounter, when the patient received only repeat prescription medication during the encounter in the pharmacy. †The third column presents the percentages (absolute numbers) of the encounters where the theme is discussed in which the pharmacy staff member is the initiator, and the fourth column in which the patient is the initiator. The themes of the subject 'effects of the drug' were not included in Table 3, as these themes were never a topic of discussion.

Table 4 Communication style of pharmacy staff during pharmaceutical encounters (N = 153)

	First prescription encounter (N = 42) Mean (SD)	Repeat prescription encounter (N = 111) Mean (SD)
Does the pharmacy staff member take the patient seriously?		
Patient is approached as equivalent (1–4)	4.0 (0)	4.0 (0.2)
Does the pharmacy staff member take enough time for the patient?		
The pharmacy staff member speaks calmly (1–4)	3.8 (0.4)	3.7 (0.6)
The pharmacy staff member does not interrupt the patient unnecessarily (1–4)	4.0 (0.2)	3.9 (0.3)
There is space for comments of the patient (1–4)	3.9 (0.4)	3.8 (0.5)
The pharmacy staff member involves the patient in the decision to finish the encounter (0/1)	0.1 (0.3)	0.0 (0.2)
Does the pharmacy staff member listen attentively to the patient?		
The pharmacy staff member frequently initiates eye contact with the patient (1–4)	3.0 (0.8)	2.9 (0.8)
The pharmacy staff member asks for more details when necessary (1–4) (N = 6/N = 15)	3.7 (0.8)	3.9 (0.4)
The pharmacy staff member responds to reactions of the patient (1–4)	3.9 (0.3)	4.0 (0.2)

Table 5 Use of patient-centred communication by pharmacy staff (N = 153)

	First prescription encounter (N = 42) % (n)	Repeat prescription encounter (N = 111) % (n)
Cue responding		
Emotional cue from the patient on worries about the medication	9.5 (4)	5.4 (6)
Cue responding behaviour pharmacy staff		
Reactive: exploring	25.0 (1)	16.7 (1)
Reactive: acknowledging	50.0 (2)	50.0 (3)
Reactive: minimal reaction	25.0 (1)	33.3 (2)
Reactive: neglecting		
Recall-promoting techniques		
Stimulation of question-asking behaviour during encounter	0 (0)	0 (0)
Assessment of patient understanding	9.5 (4)	0 (0)
Stimulation of question-asking behaviour after consultation	0 (0)	0 (0)