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Progress in patient counselling practices in Finnish community pharmacies

Inka I. Puumalainen, Sirpa H. Peura, Heli M. Kansanaho, Charlie S.I. Benrimoj and Marja S.A. Airaksinen

Abstract

Objective   The aim of this study was to assess progress in patient counselling practices in Finnish community pharmacies during a national four-year program (TIPPA) from 2000–2003 promoting enhanced pharmacist–customer communication about medicines.

Method   A pseudo customer method was applied. Four visits with four different scenarios were conducted in a convenience sample of 60 Finnish community pharmacies of different size and geographic location. In total there were 240 visits during each time point measured (baseline in 2000 and three annual follow-ups, n = 960). The pseudo customers presented three scenarios related to self-medication and one related to a prescription medicine with a new prescription (baseline and the second follow-up) or a repeat prescription of the same medication (the first and the third follow-up). A structured data form customised to each scenario was used to record the interaction.

Key findings   Baseline scores were generally low. In two of the four scenarios (one self-medication and one prescription) a statistically significant improvement ($P < 0.05$) was found in total scores between the baseline and the third follow-up. Aggregation of the scores of the three self-medication scenarios did not show any change in counselling practices between the baseline and the third follow-up, measured as mean total scores ($P = 0.439$).

Conclusions   Some improvements were found in pharmacists' counselling performance in relation to customers' requests for advice about nasal products and also when prescription scenarios were presented. However, pharmacists' counselling rates were low in relation to a repeat prescription or when a request was made to buy a specific medicine. Further attention needs to be paid to the latter two types of consultation.

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Introduction

A review of evidence and practice concluded that better outcomes in drug therapies could be achieved by informing and empowering patients.[1] Patient counselling is considered a key priority for community pharmacists in modern healthcare settings. Indeed it is mandated by law and regulations in some countries.[2–4] This challenges pharmacy owners to reconstruct their business strategies accordingly and reconfigure service provision.[5,6]

Several strategies have been applied to promote patient-oriented counselling practices: for example, implementing quality standards and promoting the use of specific guidelines on patient counselling and training for pharmacists or pharmacy assistants.[7–10] The content of basic education has been changed to meet the needs of the new service role.[11] Furthermore, specific patients groups, e.g. diabetic patients and patients with asthma, have been targeted with enhanced patient counselling and patient education programmes.[12,13] Professional programmes e.g. the practice enhancement programme (PEP) in the US have been developed to enable pharmacists to acquire skills, knowledge and attitudes to deliver new customer-oriented services.[14] However, there is a lack of studies to provide evidence on whether the interventions have changed practice and, if practice was changed, whether the achieved changes were sustained.[15] Findings from a recent US study conducted using the pseudo customer method indicated that the intensity of state regulation did have an impact on pharmacists' oral counselling practices.[16]

One reason for the lack of evidence is a shortage of reliable and valid measures to assess the quality of new services and to assure implementation of new business strategies.[5] Patient counselling practices have often been studied by conducting surveys and measuring patient satisfaction.[17–19] Medication counselling has been included in patient satisfaction and self-evaluation instruments as one component among many other service quality components.[20,21] Non-participant observation methods have been applied in several studies assessing patient counselling practices in community pharmacies. One method which can obtain objective and reliable data on patient counselling practices is the pseudo customer method. It has been successfully applied e.g. in the US in assessing the impact of the Omnibus Budget Reconciliation Act of 1990 'OBRA'90' on performance,[22] and in evaluating the provision of written consumer information on medicines.[23]

In Finland, patient counselling from community pharmacies has been mandated by law since 1983. However, a pseudo customer study conducted in 1998 by the Association of Finnish Pharmacies revealed room for improvement in actual performance (Association of Finnish Pharmacies 1998, unpublished) This finding led to an extensive, four-year, nationally run development project (TIPPA) involving all the key stakeholders in the field of pharmacy, including Ministry of Social Affairs and Health. The aim of the study reported here was to assess any changes in patient counselling practices in Finnish community pharmacies during the 4-year period of 2000–2003 when the TIPPA project was run.

Methods

Intervention

The abbreviation TIPPA stands for 'customized information for the benefit of the patient from the community pharmacy'. The TIPPA project consisted of various planned and co-ordinated activities supporting a long-term development process at the pharmacy level. The main operational goal was to implement a new patient counselling model based on concordance and two-way communication.[24] This was promoted by encouraging pharmacies to produce and implement long-term development plans by applying methods of strategic planning, including self-evaluation of current practices. Pharmacy staff were provided with intensified training and several resources to support evidence-based communication about medicines with their customers.[9] The main resources included an electronic, easy-to-use drug information database on prescription medicines based on summaries of product characteristics (SPC) launched in 2000; therapeutic guidelines on self-medication launched in 2000 and 2001; a handbook on communication skills launched in 2001; and a quality manual introducing the principles of processing a long-term development plan launched in 2002. Their implementation was supported by national, local and in-house training. The implementation rate was assessed by a survey among practitioners 10 months and 2.5 years after the project was started (a convenience sample at 10 months, n = 370, response rate 82%, and a representative sample at 2.5 years, n = 734, response rate 51%).[25,26]

Pseudo customer method

Data were collected using a covert pseudo customer method, i.e. the person being assessed was not aware of the simulated patient's identity or purpose.[27] A pseudo customer visit involves a person unknown to pharmacy staff entering the pharmacy (a pseudo customer) and requesting specific product or general advice. The visit may take place at any time within a given time frame. The pseudo customer is trained to follow a standard script.

The pseudo customer visits were conducted in a convenience sample of 60 community pharmacies from the total number of about 580 outlets. The characteristics of the sample pharmacies are summarised in Table 1. The

Table 1   Demographic profile of the study pharmacies (n = 60) and target group (n = 600)

Variable	Study pharmacies		Target group	
	n	%	n	%
Service design				
Traditional counter	22	37	256	43
Separate self-care department	38	63	141	24
Combination of both			203	33
Geographic location of the pharmacy (county)				
Capital and Southern Finland	15	25	150	25
Southeastern Finland	10	17	58	10
South Ostrobothnia	14	23	59	10
Eastern and Central Finland	13	22	51	9
Pirkanmaa	8	13	68	11
Other parts of Finland	0	0	214	35
Annual prescription volume				
<50 000	40	67	321	54
>50 000	20	33	279	46

pharmacies were from different geographic locations and had a range of service designs. In pharmacies with self-care departments, customers have direct access to non-prescription medicines with the availability of a pharmacist to provide advice, while pharmacies with a 'traditional' service design have a counter where customers can obtain their prescription and non-prescription medicines. In Finland, only qualified pharmacists are allowed to dispense medicines and counsel customers in pharmacies. There are two pharmaceutical qualifications in Finland, Master of Pharmacy degree (MSc Pharm.) and Bachelor of Pharmacy degree (BcScPharm.). Pharmacists with a Bachelor's degree are mostly responsible for customer service and patient counselling.

Scenarios

The pseudo customer visits were conducted with four different scenarios in each pharmacy, yielding 240 visits per each time point measured (baseline in December 1999–March 2000, and three follow-ups in December 2000–January 2001; November 2001–December 2001; and January 2003–February 2003, respectively). In total, 960 interactions were analysed, 240 interactions for each scenario.

The scenarios were selected to represent different types of common requests in pharmacies (Appendix 1). Three were about self-medication and were based on sales statistics, representing some of the most typical symptoms for self-medication.[28] The fourth concerned a prescription medication: a new (the baseline and the second follow-up) and also a repeat prescription of the same medication (the first and the third follow-up). Pseudo customers were instructed not to initiate discussion except in the symptom-based scenario (scenario 2) where the customer asked for advice. The scenarios were developed by the members of the TIPPA Executive Committee, representing experts in the field of pharmacy practice, research, education and administration to ensure the practicality and validity of the scenarios. The scenarios were then reviewed by the Department of Pharmacology, University of Helsinki.

Data collection

The visits were conducted by a research institute specialising in pseudo customer studies. The research institute trained the pseudo customers according to instructions from the TIPPA Executive Committee, and the institute independently selected the study pharmacies. The pseudo customers (n = 9) worked for the research institute and were from varying professional backgrounds (e.g. teachers, economists). Depending on the scenario, there were some differences in the numbers of pseudo customers used over the study period. Four different pseudo customers were employed for scenario 1, two for scenarios 2 and 4 and the same pseudo customer did all the visits for scenario 3. The pseudo customers worked as a team, and at the end of each day they reviewed all of that day's data collection forms. The pseudo customers piloted the scenarios in community pharmacies and pretested the data forms in practice before the study began. Based on the

pilot test, small changes were made to the data collection forms.

During the baseline, structured forms were the only method used to record the interaction. During the three follow-up studies, a small number of the visits were also audiotaped to obtain more detailed information about the content of interaction, and to assure the reliability of the structured coding. The research company was responsible for the quality assurance of coding.

Scoring system

A scoring system was developed to analyse the interactions between the pseudo customer and the pharmacist (Appendix 1). Only pieces of information that were regarded as essential in each scenario were included in the scoring. The scoring criteria were based on the United States Pharmacopeia (USP) Medication Counselling Behaviour Guidelines that introduces the principles of two-way communication.[24] Total scores and scores for the two subscales 'Needs assessment' and 'Instructions for use' were calculated for each visit (Appendix 1). The 'Needs assessment' subscale included items related to clinical assessment, such as who is the medicine for and what are the symptoms. The 'Instructions for use' subscale included information on how to use the medicine, such as the dosage and the duration of the treatment. Both of these subscales were customised according to each individual scenario. One point was allocated for each item, yielding a maximum score between 5 and 8 depending on the scenario.

Data analysis

In addition to calculating total scores and scores for subscales for each visit, descriptive statistics were computed, including means, standard deviations (SDs) and frequency distributions by using SPSS 10.1. statistical software. The total scores and scores for the two subscales for each scenario were calculated and the non-parametric Friedman test was used to test for any statistical difference in mean scores between the baseline and the final measurement. The total scores for the three self-medication scenarios were summarised at each time point measured. As the data were not normally distributed, the non-parametric Friedman test was used to test for statistical significance in mean total scores between the baseline and the final measurement. P values less than 0.05 were considered to be significant.

Ethical considerations

All the Finnish community pharmacies were sent an information leaflet about the pseudo customer study by the Association of Finnish Pharmacies four weeks before the baseline assessment. Pharmacies could decline to participate by informing the Association of Finnish Pharmacies by telephone, and seven did so. Pharmacies were blinded for the scenarios, pseudo customers and time of visits. No reminders were sent during the project.

Results

The mean scores for each scenario at each of the four time points are shown numerically in Table 2 and as a histogram in Figure 1. Two of the four scenarios showed a statistically significant improvement ($P < 0.05$) between the baseline and the third follow-up measured as mean total scores (Table 2). In scenario 1 (a product request), scores for both subscales 'Needs assessment' and 'Instructions for use' showed a significant improvement (Figure 1). For scenario 4, only a new prescription was associated with a significant increase in scores for the subscale 'Needs assessment' (Figure 2), but both a new prescription and the repeat one showed an increase in the scores for the subscale 'Instructions for use' (Figure 2). In scenarios 2 (a symptom-based request) and 3 (a direct product request), the only statistically significant changes found concerned the 'Instructions for use' scale and this revealed a decline between the baseline and the final measurement (Figure 1).

The amount of information provided to the pseudo customers showed an increase in the scores obtained per visit (Table 3) for three of the four scenarios. The exception was the direct product request (scenario 3) where the proportion of pseudo customers receiving information remained almost stable at each time point measured.

Between zero and 10% of the pseudo customer interactions had maximum scores at the baseline, the proportion varying according to scenario. The proportion of pseudo customers that received no information included in the scoring criteria decreased in two of the four scenarios during the project (scenarios 1 and 4).

The proportion of pseudo customers receiving at least one piece of information included in the scoring criteria increased from 48% (n = 29) to 70% (n = 42) in scenario 1 between baseline and final follow-up ($P = 0.003$). In scenarios 2 and 3, the scores showed a declining trend between baseline and final measurement; from 27% (n = 16) to 20% (n = 12, $P = 0.583$) and from 93% (n = 56) to 78% (n = 47,

$P = 0.487$), respectively. In scenario 4, when the pseudo customer presented a new prescription she was given at least one piece of information in 62% (n = 37) of patient–pharmacist interactions at baseline and in 77% (n = 46, $P = 0.121$) during the second follow-up. With the repeat prescription, the proportions increased from 2% (n = 1) during the first follow-up to 12% (n = 7, $P = 0.028$) at the final follow-up. Overall the results show that a very limited amount of information was given to pseudo customers presenting a repeat prescription.

Statistical analysis of the aggregated total scores for the three self-medication scenarios between the baseline and the third measurement revealed no significant differences, $P = 0.439$ (the baseline: mean 3.77, SD ± 2.36; the first follow-up: mean 3.42, SD ± 2.61; the second follow-up: mean 3.77, SD ± 2.52; and the third follow-up: mean 3.82, SD ± 3.03).

Further data analysis might identify factors affecting counselling practices e.g. prescription volume, service design, pharmacist's qualification. Preliminary results from the statistical analysis indicated that no single factor could explain the differences in performance.

Discussion

Our findings indicate that some changes took place in the medication counselling behaviours of Finnish community pharmacists during 2000–2003. However, it is difficult to attribute to what extent the positive changes were due to the TIPPA project or to the effect of other factors influencing professional service provision. TIPPA has been the leading professional programme in the pharmacy profession since its inception in 2000. It has been supported by all the national stakeholders involved. There is also some evidence from national surveys that the practitioners were motivated to carry out the recommended long-term development process in their pharmacy. The surveys assessed the implementation of core actions related to TIPPA 10 months and 2.5 years after the project was started.[25,26] Awareness of the project and resources was already 90%

Table 2   Mean total scores and standard deviations according to scenario (n = 240 per baseline and each follow-up)

	Baseline mean ± SD	1st follow-up mean ± SD	2nd follow-up mean ± SD	3rd follow-up mean ± SD	P (between baseline and 3rd follow-up
Scenario 1 score range 0–5	0.83 ± 1.09	0.87 ± 1.03	1.42 ± 1.47	1.53 ± 1.32	0.004*
Scenario 2 score range 0–6	1.96 ± 1.47	1.95 ± 1.47	1.90 ± 1.46	1.83 ± 1.61	0.081
Scenario 3 score range 0–8	0.68 ± 1.46	0.60 ± 1.41	0.45 ± 0.85	0.45 ± 1.08	0.327
Scenario 4 (new) score range 0–7	1.87 ± 1.82	n.a.	2.62 ± 1.81	n.a.	0.006*
Scenario 4 (repeat) score range 0–7	n.a.	0.02 ± 0.13	n.a.	0.23 ± 0.70	0.023[a]

[a]Statistically significant $P < 0.05$.
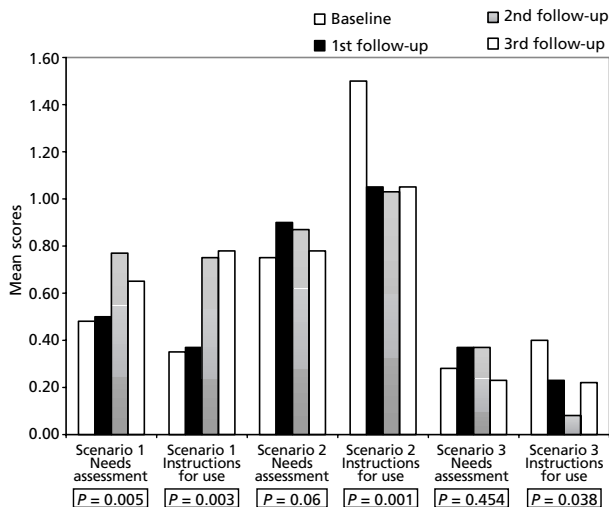n.a. = not applicable.

Figure 1 Mean scores for the 'Needs assessment' and the 'Instructions for use' subscales for the scenarios 1–3 related to self-medication (n = 60 per scenario per baseline and each follow-up).
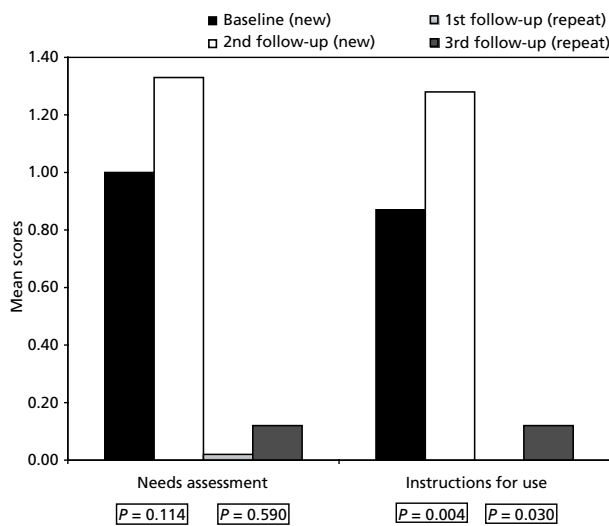
Table 3 Scores obtained (zero and at least one piece of information) according to scenario (% of the visits per scenario per point of measurement)

Total scores	Baseline %	1st follow-up %	2nd follow-up %	3rd follow-up %
Scenario 1				
0	52	48	35	30
1–5	48	52	65	70
Scenario 2				
0	7	18	10	22
1–6	93	82	90	78
Scenario 3				
0	73	80	73	80
1–8	27	20	27	20
Scenario 4 (new)				
0	38	n.a.	23	n.a.
1–7	62	n.a.	77	n.a.
Scenario 4 (repeat)				
0	n.a.	98	n.a.	88
1–7	n.a.	2	n.a.	12

n.a. = not applicable.

Figure 2 Mean scores for the 'Needs assessment' and the 'Instructions for use' subscales for scenario 4 (a new and a repeat prescription).

after 10 months, and most pharmacists said they had taken concrete actions to improve their patient counselling practices. The second survey found that self-reported actions typically included routine use of the drug information database designed to support oral counselling on prescription medicines (used daily by 88% of the respondents), improving privacy in customer service facilities (66%), and enhancing in-house training of the personnel to develop counselling skills (64%). However, the surveys were not specially targeted to the 60 study pharmacies involved in the pseudo customers studies. Thus, we do not know the actions taken in the 60 study pharmacies.

For this purpose, process indicators would have been needed as part of the follow-up studies to assess the impact of the actions taken on performance and to control potential confounding factors. More research needs to be focused on this area in the future to understand facilitators of professional services at the pharmacy level.[6,9]

Although there were some positive changes, there was not a consistent pattern across the four scenarios, making it very difficult to draw conclusions about the changes that may have occurred in medication counselling behaviours of Finnish community pharmacists during the four-year period evaluated. Previous studies using pseudo customer methodology have found that variability between the scenarios may influence the results.[29–32] In our study, the symptom-based request (scenario 2) initiated most active interaction. On the other hand, a direct product request with a potential iatrogenic effect of the analgesics (scenario 3) led to little interaction, although we expected that the pharmacist would assure safe and proper use of these medications. In order to reduce the impact of individual scenarios on the results, a larger number of scenarios would be needed to reflect the whole range of drug therapies and pharmacist–customer consultations. Furthermore, the sample of pharmacies would need to be representative according to outlets included and scenarios used, to obtain results that can be generalised.

Anecdotal feedback from the pseudo customers indicated that a lack of manpower in the pharmacies may have influenced the results, particularly during the final follow-up. There was a nationally recognised shortage of pharmacists at that time. However, more systematic data collection would be needed to confirm this impression. Another factor potentially influencing the results in 2003 is that generic substitution was due to start in community

pharmacies in April 2003, two to three months after the final data collection. Other factors that need to be taken into consideration when interpreting the results are other long-term professional programmes, quality management and service development processes that might have been going on in pharmacies.

Although some improvements took place in patient counselling practices during the TIPPA project, the results also revealed deficiencies in performance. First, few customers received advice optimally customised to their symptoms and health problems, i.e. reaching maximum scores according to scoring criteria. Our results suggest that further attention should be paid to pharmacists' interactions with customers making direct product requests for self-medication and with customers with repeat prescriptions. It may be the case that pharmacy practitioners do not have a clear understanding of their role in supporting patients on long-term therapies and in taking shared responsibility for reaching therapeutic outcomes. When customers ask to purchase medicines for self-medication, pharmacists may assume that the customer asking for a specific medicine has the knowledge to use them, and that there is thus no need to ask questions to assess their therapeutic condition for the treatment. These issues should be taken into account in the training of pharmacy students and in continuing education.

Audiotaped transcripts of pharmacists' consultations with their customers would give a better understanding of the detailed content of current counselling and the therapeutic information discussed. Our experience indicates that it might be valuable to use this method in future studies. Pseudo customer methodology also needs to be developed further, e.g. to find out the most reliable way of quantitatively scoring interactions. Sensitiveness of the measure (i.e. at what point the measure applied indicates a change) is crucial for the reliability of the results. In our study, the scoring criteria were based on USP guidelines and the same criterion was used for both the new and repeat prescription. Reliability assessments of the scoring criteria were not conducted.

Other methods have also been used in assessing patient counselling practices including, for example, surveys, observation and diaries. Social survey methodology is the most widely used approach by pharmacy practice researchers, accounting for a higher proportion of published papers than any other methodology.[33] However, observation seems to be the most reliable survey method with respect to the accuracy and consistency of counselling activities compared with self-completion questionnaires and diaries.[34]

Work is continuing in Finland to further develop community pharmacy practice. Stakeholders in Finland have found nationally co-ordinated, long-term activities necessary to promote health policy goals through professional community pharmacy services. After TIPPA, there will be a permanent, national co-ordination involving the same key stakeholders, with a special focus on integrating community pharmacists into local multidisciplinary co-operation, and on implementing sophisticated pharmacy services needed to assure more optimum therapeutic outcomes of medications.

Conclusions

This study has provided longitudinal data on four types of patient–pharmacist interaction in Finnish community pharmacies. Some improvements were found in pharmacists' counselling performance in relation to customers' requests for advice about nasal products and also when prescription scenarios were presented. However, pharmacists' counselling rates were low in relation to repeat prescriptions or when a request was made to buy a specific medicine. Further attention needs to be paid to the latter two types of consultation.

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Appendix 1: description of the scenarios and scoring criteria

Scenario	Scoring criteria	CScore

1 Self-medication (a product request)
A customer enters the pharmacy and asks for a nasal spray. The medicine is intended for an adult suffering from a runny nose and a mild flu. The symptoms make it difficult for the customer to sleep at night. The customer does not have any allergies and has used nasal sprays occasionally.
	Needs assessment
	  Is the medicine for an adult or a child?
	  Are the symptoms due to allergy or flu?
	Instructions for use
	  How to administer the spray into the nose
	  Harmful effects of long-term use
	  Consequences of long-term use
		Score range 0–5
		1
		
		1
		
		1
		1
		1

2 Self-medication (a symptom-based request)
A young (under 25 years) female customer enters the pharmacy. She asks for medicine for symptoms that are related to vaginal fungal infection. She has not had any infection before and she has not used any fungal medications. The symptoms (rash, leucorrhoea) had started a couple of days ago. She has just finished taking antibiotics (can't remember the name of the tablets, 10 days course, 1 tablet per day). She does not take contraceptives and she has visited a gynaecologist 2 or 3 years ago.
	Needs assessment
	  What are the symptoms?
	  If she had experienced the symptoms before, were they similar?
	Instructions for use
	  Administration of the pessary
	  Should be taken as a course
	  Should be taken at bed time
	  If the medicine has not had an effect in four days, must visit a doctor
		Score range 0–6
		1
		1
		
		1
		1
		1
		1

3 Self-medication (a direct product request)
A customer (a young man) enters the pharmacy and asks for analgesics by a brand name (ketoprofen) and a brand of H_2 receptor antagonist (ranitidine). The customer has suffered from headache for a long time, for which he has used ketoprofen, sometimes also ibuprofen or aspirin. He has had a prescription for ibuprofen 600 mg which was given to him due to workplace ergonomics. The doctor had also mentioned a possibility of physical treatments, if the symptoms would not disappear by adding exercise and changing workplace ergonomics. The customer has not had time to see a physician since; instead he has bought analgesics without prescription. He consumes 2–3 tablets almost daily. He has been taking analgesics for almost six months. Lately he has been suffering from stomach ache and heartburn (customer implies it is due to stress and too much coffee). His colleague has recommended this H_2 inhibitor and he has decided to try it. The customer has not considered seeing a doctor for his stomach ache.
	Needs assessment
	  Are both of the medicines for the customer himself?
	  Why is he taking these medicines?
	  How long has he been using analgesics?
	  How long has he been using ranitidine?
	Instructions for use
	  Customer is told about ranitidine products: 1–2 tablet per day
	  Should be taken as a one-week course
	  If symptoms do not disappear, must visit a doctor
	  Analgesics may have caused the stomach ache
		Score range 0–8
		1
		
		1
		1
		1
		
		1
		
		1
		1
		
		1

4 Prescription medicine
A woman (born in 1964) enters the pharmacy with a Ventolin (salbutamol) inhaler prescription. The customer has had a cough for a month due to flu. At home, her family complains about her coughing at night time. She has used some cough medicine that she had at home but it didn't seem to help. Her colleagues made her see a physician and the doctor prescribed a Ventolin inhaler, which expands the airways and is usually used for the treatment of asthma. The doctor tells her to take the medicine regularly for a week and after that only for acute symptoms. She can also use the cough medicine she has at home, if necessary.
	Needs assessment
	  Has she used the medicine before?
	  What did the doctor tell her about her medication?
	  Is the drug intended for the treatment of asthma?
	Instructions for use
	  Technical instructions for using the inhalator
	  Information about how the drug works
	  Possible adverse effects are discussed
	  Dosage information is given
		Score range 0–7
		1
		1
		
		1
		
		1
		1
		1
		1