

# Undergraduate students' experiences in counselling patients using long-term medication – the Effects Use Problems Checkups (EUPC) method

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## Abstract

**Background:** Monitoring the patient's condition is not common in pharmacies and new tools to learn it are needed. **Aims:** To analyse the suitability of the EUPC method (a memory aid for counselling long-term medication users: Effect, Use, Problems and Checkups) for learning patient counselling in pharmacies.

**Method:** Pharmacy students tested the EUPC method and recorded their experiences in an internet questionnaire. The students' answers were analysed using content analysis and quantification.

**Results:** About 90 % of the students regarded the EUPC method as well suited for counselling patients with hypertension and other long-term diseases. Nearly 65% of the students covered all of the counselling questions and 96% at least three of the counselling questions. The method was regarded as comprehensive and easy to use.

**Conclusion:** The EUPC method is well suited for learning patient counselling and use of the method ensures that the content of patient counselling will cover most important topics.

**Keywords:** *community pharmacy services, counselling, hypertension, patients, long-term medication users, pharmacy students*

## Introduction

Despite continuous efforts at developing patient counselling and adequately monitoring it, asking questions about the patient's condition and monitoring it are not always part of the patient encounter in European pharmacies (Hugtenburg *et al.*, 2004; Watson & Bond, 2004; Hughes *et al.*, 2010; Tully *et al.*, 2011). Counselling is more often provided for new rather than repeat prescriptions (Puspitasari *et al.*, 2009). In a study involving 13 European countries, researchers concluded that the provision of comprehensive pharmaceutical care was limited (Hughes *et al.*, 2010). In nine of the countries, less than half of the pharmacies in the study reported that they engaged in patient monitoring, with the percentages varying between 0% and 46%. Four countries reported a 53–76% participation rate.

The counselling and monitoring of patients who are using long-term medication is still not part of routine practice in Finland either, even though patient counselling is solely the pharmacists' responsibility in Finnish pharmacies and the pharmacists' obligation to provide patient counselling is stated in the law (Medicines Act 1987/395). According to the law, the pharmacist should always make sure that the patient is aware of the correct and safe use of the medicine. Despite nationwide development programs (Airaksinen, 1996; Kansanaho, 2006) the counselling varies significantly according to the drug group, with the users of a gynaecologic preparation or a psychotropic

receiving the least amount of counselling (Vainio *et al.*, 2002). Also, a simulated patients' method has shown marginal results in scenarios presenting a long-term medication used previously: the pharmacists counselled only 12% of the patients (Puumalainen *et al.*, 2005).

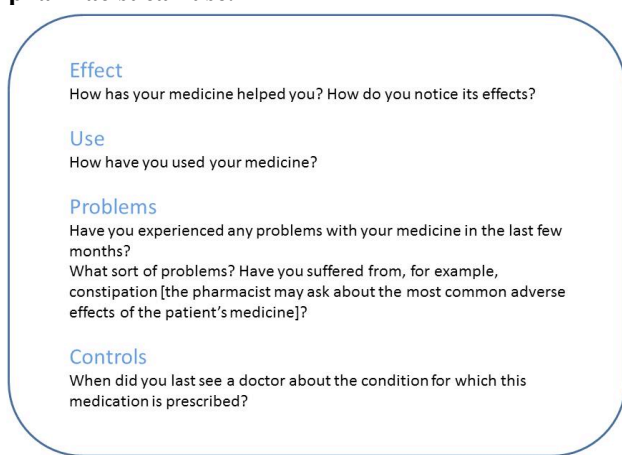
Several myths about patient counselling still influence the performance in pharmacies, even though they have been proven to be just myths: Pharmacists are reported to think patients do not want counselling, that patients are passive and that they do not need counselling for medicines which are already familiar to them (Katajavuori *et al.*, 2002). To address this educational challenge, many teaching methods have been used in teaching patient counselling to pharmacy students in Finland (for example, Hyvärinen *et al.*, 2008, Hyvärinen *et al.*, 2010; Hyvärinen *et al.*, 2011). In 2007, a training program at one of the three universities providing pharmacy education began actively using the so-called EUPC (Effect, Use, Problems, Check-ups) method when teaching the students to screen the patients who had been on medication for a long time.

The EUPC method, which is a memory aid for monitoring patients on long-term medication, was developed in an earlier study to support pharmacists' discussions with their patients in order to transfer information to the physician about the patient's medication (Saastamoinen *et al.*, 2009). The EUPC method guides the pharmacist in asking the patient simple

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questions about his/her long-term medication (Figure 1). The abbreviation EUPC refers to questions which cover four key areas of information, give important knowledge about the patient's situation and help the pharmacist to find out about the patient's counselling needs. The EUPC questions can be used in any order that is deemed reasonable within a given situation. The method can be used to teach pharmacy students and practicing pharmacists about patient counselling for those using long-term medication. The undergraduate pharmacy students receive in-house training two times for three months duration in a community pharmacy during the second and third years of their studies. Before the first training period, they receive a course in patient counselling (Hyvärinen *et al.*, 2008) at the university which teaches them how to use the EUPC method.

**Figure 1: The EUPC (Effect, Use, Problems, Checkups) method and examples of questions the pharmacist can use.**



Some memory aids have been presented before, especially aids for screening self-care patients' needs and counselling them. In the United Kingdom (UK), for example, pharmacists have used mnemonic aids called "ENCORE", "Sit Down Sir", "ASMETHOD" and "WWHAM" (Li Wan Po, 1991; Edwards & Stillman, 1996; Azzopardi, 2000; Rutter, 2005). These memory aids, however, do not necessarily accommodate counselling for and the monitoring of patients on long-term medication. Examples of mnemonic aids applied to counselling patients who are continuing long-term medication include the Indian Health Service (IHS) model of counselling (Lewis *et al.*, 1997) and "The 4Ms" for diabetes counselling (Darbishire *et al.*, 2009). However, studies evaluating the mnemonic aids and their use have been rare. Even most of the studies dealing with pharmacist-patient communication focus on a one-way communication from pharmacists to patients (Shah & Chewing, 2006). More studies about two-way communication are needed.

The aim of this study was to analyse the suitability of the EUPC method for patient counselling in pharmacies, and the experiences and opinions of undergraduate pharmacy students regarding the use of the EUPC method for the

purposes of asking patients who have been using the same medication for several years questions about their medication. Also, we assessed the content of patient counselling in which the EUPC method was used.

## Methods

The study material consisted of patient counselling episodes (n=237) which all second and third year pharmacy students (n=237) in one pharmacy school (University of Kuopio, Finland) documented in writing in an internet questionnaire in 2008. The counselling episodes were regular encounters with patients in pharmacies and took place during the students' three-month in-house training period in community pharmacies.

During their in-house training, the students were supposed to choose one patient taking long-term medication for hypertension. Patients with new prescriptions were not included. The students were supposed to discuss the medication with the patient in an authentic counselling situation and exploit the EUPC questions in order to find out about the patient's counselling needs. The students were asked to screen whether the use and the effect of the drug were sufficient, whether the patient was attending regular checkups and whether there were any problems related to the patient's hypertension care.

After the discussion with the patient, the student filled out an internet questionnaire which included open-ended questions about the discussion with the patient and the student's own perceptions about the situation (Appendix I). The questionnaire was developed jointly by experienced pharmacy and communication lecturers. It had been in use for one year before the current data were collected and normal feedback was asked from the students. Some of the questions were re-formulated before data collection. Students needed to fill out the questionnaire in order to get credit for the in-house training. While filling out the questionnaire, the students were asked to reflect on the suitability of the EUPC method for counselling a long-term medication user. In the questionnaire, two of the questions were specially designed to help the students with this reflection:

*How well suited is the EUPC method for counselling hypertensive patients in your pharmacy?; and, How well suited is the EUPC method for counselling other chronically ill patients in your pharmacy?*

The concept of suitability was not defined in advance; rather, the answers emerged from the students' own perceptions and experiences during the practical training.

## Content analysis and quantification

The documented episodes were read through several times and analysed using content analysis. The length of the documented episodes was approximately half to one page each. The content of the counselling was analysed by looking for documentation about discussing with the patient the effect, use, problems and checkups pertaining

to the long-term use of medication. The data was then classified quantitatively into these classes.

The suitability of the EUPC method was assessed by comparing the reasons the students had given for the suitability in the two questions of interest. The suitability was then classified quantitatively into three classes: 1) is well suited or quite well suited; 2) the suitability of the method varies; and 3) the method is not well suited. In unclear cases, answers to both questions were used, as well as answers to the other questions in the Internet questionnaire, to confirm the classification system used.

The reasons and arguments for each suitability class was analysed qualitatively in order to find grounds which supported the use of the EUPC method and grounds that disturbed or prevented the use of the method.

## Results

### Use of EUPC questions

All the students (n=237) answered the questionnaire. Different EUPC questions were utilised slightly differently in the counselling questionnaire. Sixty five per cent of the students had utilised all of the questions. However, 96% of the students covered at least three of the questions. Students covered the use of the medication least often: 78% of the respondents discussed the use of the medication with the patient. Eighty nine per cent of the students discussed the problems with the medication, 96% of students discussed its effect and 97% of the students discussed check-ups.

### Suitability of the EUPC method

Most of the respondents regarded the EUPC method as being well suited for counselling hypertension patients (90%) and patients with other long-term diseases (87%) (Table I). Only two per cent of the respondents regarded the method as not being well suited to counselling patients, and 8–11% thought that the suitability varied depending on the case.

**Table I: Students' (N=237) opinions about the suitability of the EUPC method.**

The opinion of the students	n	%
<i>Suitability for hypertensive patients</i>		
The method is well suited or quite well suited	211	90
The suitability of the method varies	19	8
The method is not well suited	5	2
<i>Suitability for other chronically ill patients</i>		
The method is well suited or quite well suited	203	87
The applicability of the method varies	25	11
The method is not well suited	5	2

\* Number of the students answering the question.

Those students who regarded the suitability of the method as being good or quite good argued that the EUPC method has many advantages in terms of its content, comprehensiveness and simplicity of use. These students also regarded the monitoring of medicinal treatment as an important part of care.

*"I think it is well suited for any pharmacy. It is a really good tool for finding out about how the treatment is going, where the patient is having problems and the patient's attitude towards the treatment."* (207)

The students stated that the EUPC questions were basic questions which were a great help in discussing the drug treatment. They reported that the method covers all of the important issues and helps pharmacists to remember the important questions. Students also regarded the method as a quick and effective tool.

*"The method is also suited for the counselling of other customers with a long-term illness because effect, use, problems and checkups are the foundations of all successful drug therapies, regardless of the illness being treated."* (13)

One of the advantages of the EUPC method that students mentioned often was its flexibility; it allowed the pharmacist to tailor the discussion specifically to the case at hand and to leave out those questions that were not needed.

*"The EUPC method is well suited for use in pharmacies. One can choose customer-specific questions; it is not always necessary to ask the customer each question. For example, if it is evident from the prescription that the customer has not been coming regularly for the medicine, one can emphasise the use and effect of the medicine during the discussion."* (124)

Students regarded the EUPC method as suitable for many different patient groups. Many thought that the method is well suited for busy customers who are not willing to discuss their medication. Students regarded the method as a good aid in helping to start the discussion. They also mentioned that the method is well suited for repeating important facts to the elderly. In those pharmacies where there was no possibility to sit down with the patient and discuss their medication use in an intimate way, students still regarded the method as a good tool for carrying out a discussion.

*"The EUPC method is very well suited for counselling a hypertensive patient. When the customer is in a hurry, I find that the best feature of the EUPC method is its ability to provide a quick, all-round and fairly comprehensive overview of the customer's medication."* (215)

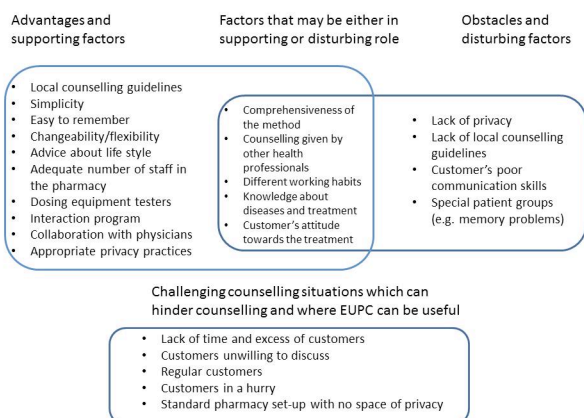
### Supporting and disturbing factors regarding the use of the EUPC method

The factors either supporting or disturbing the counselling process when using the EUPC method emerged from the data and we divided these factors into four categories (Figure 2). There were: 1) advantages and supporting factors; 2) obstacles and disturbing factors; 3)

factors that could play, according to the student's attitude, either a supporting or a disturbing role; and 4) challenging counselling situations where the EUPC could be useful.

Students regarded a local counselling guideline in the pharmacy, a sufficient number of workers, areas where intimacy could be guaranteed and the absence of hurry and queues as supportive for the use of the EUPC method. They also regarded close-knit collaboration between other local health professionals and the pharmacy, the familiarity of the customers with the pharmacist and the willingness of the customer to discuss their problems and concerns as helping to support follow-up of the drug treatment. Also, students mentioned an interaction program on the computer, the possibility to measure blood pressure in the pharmacy, and dosing equipment testers as helping to support the use of the EUPC method.

**Figure 2: The supporting and disturbing factors of the use of the EUPC-method.**



Factors that could even be regarded as obstacles to the use of the method included a complete lack of intimacy in the pharmacy, a lack of local guidelines and customer's poor communication skills, or patients with constraints due to the disease, for example memory problems.

The factors that students regarded as playing either a supportive or a disturbing role included the comprehensiveness of the EUPC method, counselling which the patient had already received from other health professionals, different working habits in the pharmacies, the patient's former knowledge about the disease and treatment, and the patient's attitude towards the treatment.

Situations that sometimes hindered the counselling process and where the EUPC method was found to be useful occurred when there was a lack of time and an excess of customers, or when the customer was unwilling to discuss their medication. When the customer was a regular customer with the pharmacy in question, it was sometimes too easy to suppose that everything was clear. When the customer was in a hurry, or when there was a standard pharmacy set-up and no space for privacy, it was sometimes difficult to begin a discussion. In these cases, the EUPC method could also support the counselling

process by providing simple and short questions to begin the discussion more easily.

When discussing the suitability of the EUPC method, many students mentioned that discussing the treatment interactively was not common in the counselling culture of the pharmacies. The pharmacists in the pharmacies did not know about the EUPC method because it had only been in use in patient counselling education for few years. Many students recommended using the EUPC method more widely.

## Discussion

The majority of undergraduate pharmacy students reported that they were able to apply the EUPC method well and that it was well suited for counselling patients on long-term medication. The EUPC method helped the students greatly in counselling chronically ill patients. They regarded the method as comprehensive and easy to use. Almost all of the students covered at least three of the areas of the EUPC questions (Effect, Use, Problems and Checkups). The situations where some pharmacy students found they were not able to use the EUPC method (for example, lack of time or intimacy and customers unwilling to discuss their medication) were the same situations which others found challenging and felt that the EUPC method actually assisted most in patient counselling.

In the current study, the content of the counselling was well covered. Usually, pharmacists tend to discuss the directions for use of the drug better than its side effects and other problems, but there is no evidence that the checkups and effect of the drug would be discussed with the patient at all (Puspitasari *et al.*, 2009). There is evidence that asking the patient questions reveals drug-related problems, but that the pharmacists do not ask the patient unless prompted to do so (Hugtenburg *et al.*, 2004). Unlike our results, pharmacy students improving their motivational interviewing skills in an exercise involving a virtual computerised patient had mixed feelings about the assignment due to the computer program operating incorrectly, even though they saw the task as helpful (Villaume *et al.*, 2006).

In this study, some unique results were achieved from testing a mnemonic aid in undergraduate students' counselling practice. There seems to be a lack of comprehensive studies about the use of other mnemonic aids in patient counselling, even though some of the mnemonic aids have been in use for almost two decades. An earlier study showed that the students tended to use questions related to the WWHAM mnemonic aid when counselling simulated patients in clinical examinations, even though they were not specifically instructed to do so (Rutter, 2005). In another study, researchers found that, whereas pharmacists and medicine counter assistants made use of the WWHAM mnemonic aid, they did not use it as a tool to engage patients in constructive two-way communication (Watson & Bond, 2004).

The main limitation of this study was that the EUPC method was only tested by students. However, the

students took their practical training in different types of pharmacies all over Finland, which makes it more possible to use the results to make generalisations about different pharmacy settings in terms of their geographical location and size. The EUPC method is actively used in teaching of the University of Eastern Finland and students undertaking their in-house training in community pharmacies are step by step disseminating the method into practice. Mnemonic aids still need to be tested through research amongst practicing pharmacists in this setting and more studies on the effect of EUPC in detecting patients' drug use problems are needed.

It was mandatory for the students to answer the internet questionnaire in order to obtain grades for the practical training period. This could be seen in the quality of the answers, since some of the less-motivated students provided only very short answers. However, only about 10% of the respondents fit this description. The mandatory nature of the questionnaire could also have caused the students to provide a more positive picture about the suitability of the EUPC method than when commenting freely. There is evidence, however, that the students can be critical in evaluating patient counselling teaching methods (Villaume *et al.*, 2006, Hyvärinen *et al.*, 2010). In this way, we also received comments from all of the students, not only from those who were the most interested. The fact that only 65 % of the students used all of the EUPC questions during the consultations indicates that the students applied the method independently. Despite this, in the current study the feed-back from students was still generally positive.

The students selected the patients themselves during their in-house period. Because they were staying three months in the pharmacy and counselling many hypertensive patients, it was possible that they chose to report on a patient who they found easy to discuss with about their medication. On the other hand, discussing medication with many patients may have helped students to reflect on the suitability of the EUPC method independent of the special case they were reporting on. The students were able to record their opinions and thoughts in their own words during a time when they were not busy, and this may have improved the quality of the reflections.

The EUPC method provides a useful tool in order to develop two-way communication between pharmacists and long-term medication users, but it is not yet well-known in Finnish pharmacies. Despite many efforts to develop patient counselling in Finnish pharmacies, the counselling and monitoring of patients on long-term medication still needs improving (Kansanaho, 2006; Puumalainen *et al.*, 2005). There is robust evidence that the situation is the same all over the world (Puspitasari *et al.*, 2010; Hughes *et al.*, 2010). The EUPC method could be one simple and cheap method to promote information exchange between patients and pharmacists and its use should be enhanced as a part of everyday counselling in pharmacies. This is currently being done in Finland by active use of the EUPC method in pharmacy education at the University of Eastern Finland, which is the second biggest of the three pharmacy schools in the country. Use of the method in the other pharmacy education programmes and in continuing education courses has

been sporadic and it should be promoted. However, the method has already begun to be disseminated to the pharmacies through the students' in-house training, because 59% of the community pharmacies are teaching pharmacies.

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### ***Appendix I: Questions in the student questionnaire***

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What subjects did you cover in your discussion?

What was easy to take into the discussion?

What was difficult to take into the discussion?

What did you ask using open, closed and leading questions?

Give reasons for why you asked about these matters?

What kind of information did you get from the customer?

How did you use the information you got in the situation?

What succeeded well?

What should you do differently in the future?

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