Intervention

# The evaluation of an intervention based on the application of patient self-completion concordance forms in Dutch community pharmacies and the effect on adherence to chronic medication

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ABSTRACT

*Objective:* To evaluate the use of patient self-completion concordance forms and to determine the effect of patient counselling by using concordance forms on adherence to chronic medication.
*Methods:* Patients with a prescription for new chronic treatment were randomised in an intervention or control group. The intervention group received a concordance form to fill in at home and to discuss during a consultation 2 weeks later in the pharmacy. The control group received the usual information and instruction on how to use the medicine. Afterwards, all patients were asked to fill in a questionnaire about their use of medicines and contact with the pharmacy employees. Adherence to the medicine was determined using rates of prescription refills after 6 months of use.
*Results:* The questionnaires showed that patients were satisfied about the concordance model. After 6 months of use, 79% of the patients from both intervention and control group were defined as adherent.
*Conclusions:* There was no significant difference found in adherence between intervention and control group.
*Practice implications:* Use five selected questions from the concordance form which provided most answers. Focus on one drug group and have more consultation moments.

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## 1. Introduction

Adherence to chronic medication is important for effective treatment. However, poor adherence is a significant problem for chronic medication use. According to the literature, the adherence to medication in developed countries is 50% after 1 year [1–3]. To reach a higher degree of adherence, it is important to involve the patient in a decision about starting (chronic) therapy [4].

According to Barnett et al. [5], patient participation in medication counselling is a necessary element for the provision of pharmaceutical care. Motivating patients to write down questions to ask the pharmacist results in more patient and pharmacist satisfaction with the information given. During communication with doctors, patients lack the opportunity to express their concerns, expectations, and beliefs [6]. Therefore, the more questions doctors ask the more content patients are with

their medication. Another study [7] describes the effect of encouraging patients to raise issues and to discuss symptoms and other health-related issues during a consultation with a general practitioner. Patients were provided with a leaflet to write down questions to ask the doctor, which improved patient satisfaction and perceptions of communication.

In the Netherlands, community pharmacies have changed from product-centred to more patient-centred activities [8,9]. The patient receives extensive information at the time of the initial prescription. Yet patients immediately forget 40–80% of this medical information [10]. This means it would be desirable to repeat certain information and provide feedback to help the patient remember. It is also important to discuss the indications of the medicine with the patient, in order to understand the importance of the medicine for their wellbeing. The pharmacist is, in most cases, the last professional the patient meets before actually starting to take the new medicine. Therefore, the pharmacist is the appropriate professional to answer any remaining questions the patient has about the medication. Furthermore, a study performed in Dutch community pharmacies concluded that patients who were asked to fill in a form about their

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experiences were more likely to report their drug problems in the pharmacy [11].

Hamilton et al. [12] studied the use of patient self-completion agenda forms on prescribing and adherence in general practice. The use of patient self-completion agenda forms followed by a consultation can be regarded as kind of balance sheet, as described by Janis and Mann [13]. After the consultation, where the patient receives information about the use of the medicine, the use can be discussed. Based on the advantages and disadvantages, the quality of the decision to use the medicine is increased. It is expected that this will be expressed in patient adherence to the medicine. We developed a patient self-completion agenda form for use in community pharmacy practice, the so-called concordance form. The aim of this study is to evaluate the use of patient self-completion concordance forms and patient consultations in the pharmacy using the form, and to determine the effect of the form and consultation on a patient's adherence to chronic medication.

## 2. Methods

The independent Ethics Committee in Leeuwarden determined that this study posed no risk to patients. The committee concluded that the Dutch law for protecting patients, who are included in a clinical trial is not relevant to this study protocol. Therefore further review was not required.

Eighteen community pharmacies, located across the Netherlands, were included. For each pharmacy, one or more employees (at least one pharmacist) took a course on treating patients in accordance with the concordance model. From May until December 2006, patients were selected according to the below mentioned inclusion and exclusion criteria.

*Inclusion criteria*:
- first prescription for new medicine for chronic use from selected drug class (Table 1);
- minimum age 18 years;
- consent from patient.
  *Exclusion criteria*:
- no opportunity to guide patients personally (for example patients in nursing home);
- when patients did use the prescribed medicine before.

**Table 1**
Selected drug classes.

| ATC-code starting with | Drug class |
|---|---|
| A02 | Drugs for acid related disorders |
| A07 | Antidiarrheals, intestinal anti-inflammatory/antiinfective agents |
| A10 | Drugs used in diabetes |
| A12 | Mineral supplements |
| B01 | Antithrombotic agents |
| C01 | Cardiac therapy |
| C02 | Antihypertensives |
| C03 | Diuretics |
| C07 | Beta blocking agents |
| C08 | Calcium channel blockers |
| C09 | Agents acting on the rennin–angiotensin system |
| C10 | Lipid modifying agents |
| G04 | Urologicals |
| H03 | Thyroid therapy |
| L04 | Immunosuppressants |
| M05 | Drugs for treatment of bone disease |
| N03 | Antiepileptics |
| N04 | Anti-parkinson drugs |
| N05 | Psycholeptics |
| N06 | Psychoanaleptics |
| R03 | Drugs for obstructive airway diseases |

**Table 2**
Questions on the concordance form.

| | |
|---|---|
| 1. | What are your expectations about the use of this medicine? |
| 2. | What concerns do you have regarding this medicine? |
| 3. | What problems did you experience using this medicine? |
| 4. | What do you notice of this medicine? |
| 5. | What would you like to know about this medicine? |
| 6. | What would you like to know about the use of this medicine? |
| 7. | What would be a reason for you to stop using this medicine? |
| 8. | What opinion do family, friends and neighbours have about using this medicine? |
| 9. | Is this the first time you get medicines to use for a longer time (more than 3 months)? yes/no |
| | If no, please mention the medicine by name? |
| 10. | Do you have any comments or questions? |
| 11. | How much time did it take to fill in this form? |

Patients were recruited according to an application for first and second dispensing in the pharmacy computer system. The selected drug classes are mentioned in Table 1. The pharmacy determined which groups of medicines this application was used. Before the start of the study a unique number was assigned to all patients from the selected pharmacies. When patients were included according to the inclusion criteria they were randomised by the pharmacy computer system in the intervention or control group. Patients with an even number were included in the intervention group, patients with an odd number were included in the control group.

The intervention group received the usual information and instruction and a concordance form (Table 2) with questions to fill in at home after the first dispensing of the medicine. Open ended questions were used to ask for patients opinion about their use of medicines. At the second dispensing, after 2 weeks, a pharmacy employee used the completed concordance form as a basis for a patient consultation. The control group received the usual information and instruction on how to use the medicine during the first and second dispensing (Fig. 1).

In the first part of the study, the authors hypothesized that the concordance model will create improved patient satisfaction with medicines. To explore this hypothesis, we used a patient questionnaire. After the second dispensing of the medicine, both patient groups received a questionnaire to fill in at home. The questionnaire contained 12 closed questions, using an explicit format varying from 4 to 7 points. The patient was asked to mark the answer which most closely matches what they think about the proposition defined in the question. The questionnaire included questions about contact with the pharmacist or pharmacy technician as well as the advantages or disadvantages of medication use.

In the second part of the study, the authors hypothesized that extra guidance with a concordance consultation during the second dispensing of the medicine would increase adherence to that medicine after 6 months. Patients were asked for consent to collect data from the pharmacy computer system concerning dates on prescription refills. Patients using inhalers for asthma or insulin for diabetes; who stopped using the prescribed medicine after consultation with the general practitioner; or who moved and went to another pharmacy to receive their medicines were excluded for this part of the analysis because it was not possible to calculate accurate adherence. After 6 months of use, the adherence was calculated using rates of prescription refills [4]. We divided the number of days the patient received the medicine supply from the pharmacy by the number of days the medicine was prescribed. The patient was defined as adherent if the calculated medicinal drug use was ≥75% according to prescribed drug use. A selection of the patients also received a second questionnaire about the use of medicine after 6 months. The aim of this questionnaire was to assess reasons for possible non-adherence to the medicine.