Pharmacy data as a tool for assessing antipsychotic drug use
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PROVIDING PHARMACEUTICAL SCHIZOPHRENIA CARE:
TOWARDS AN EXTENDED ROLE OF THE DUTCH COMMUNITY PHARMACIST

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Submitted
Abstract

OBJECTIVE Schizophrenia is a severe, complex psychiatric disease of uncertain aetiology, afflicting approximately 1% of the world-wide population. Generally, schizophrenia appears between the age of 16 and 30, hence, it frequently becomes a long-term, chronic disease. Optimal treatment exists of both psychosocial and pharmacotherapeutical interventions. In this paper, we propose recommendations to ameliorate schizophrenia care by an extended role of the community pharmacist. We focussed on supporting tasks towards the three main groups in the disease management of schizophrenia, e.g. patients, psychiatrists and community care providers.

METHOD Essay regarding the different aspects of improved pharmaceutical schizophrenia care. Recommendations are processed to implement elaborate schizophrenia care in the community pharmacy.

RESULTS Extended pharmaceutical care towards the patient with schizophrenia should exist of elaboration of information sources concerning drug use, structured dealing with problems regarding pharmacotherapeutical difficulties, active monitoring of the occurrence of adverse effects and regularly screening of medication adherence profiles. Ideally, a pharmacotherapeutical schizophrenia intervention is initiated through the collaboration of both pharmacist and general practitioner. While the pharmacist can provide prescription and individual patient information to the primary care provider, e.g. the psychiatrist, the general practitioner can provide information concerning current treatment state and indications of relapse of disease. On the other hand, psychiatrists should be encouraged to provide relevant patient information and useful indicators for recognising relapse of disease.

CONCLUSION Pharmacists are at the end of the prescribing process and are often the last primary health care professional with whom the patient has contact before making their medicine-taking decision. This places pharmacists in a strong position in terms of involvement in decisions about medicine taking. Especially in schizophrenia, a well-educated and motivated pharmacist may be the ideal person to transfer the benefits of therapeutic compliance.
Introduction

Schizophrenia is a severe, complex psychiatric disease of uncertain aetiology, afflicting approximately 1% of the world-wide population. Generally, schizophrenia appears between the age of 16 and 30, hence, it frequently becomes a long-term, chronic disease. Optimal treatment exists of both psychosocial and pharmacotherapeutical interventions. Although new, atypical antipsychotic drugs are better tolerated than classic antipsychotics, most patients suffering from schizophrenia will, to a certain extent, become disabled due to their disorder and, eventually, the greater part will be withdrawn from active society. Costs of treatment of schizophrenia are considerably high, since most often lifetime treatment is necessary.

According to Webster’s dictionary, a pharmacist is “a health professional skilled in the art of preparing, preserving, compounding and dispensing of medical drugs”. However, as the pharmacy profession continues to mature, the role of the pharmacist is expanding. Because of the varying medical treatment options, the frequent occurrence of side effects and the extremely low medication compliance, the pharmacist might play an important role in overall successful treatment of patients with schizophrenia. Communication between pharmacist and antipsychotic drug user at the outset of treatment can include reviewing the purpose of the medication, target symptoms, the comparative timing of potential benefits and side effects, how to identify and manage antipsychotic-related side effects and patient concerns.

Earlier research to the current role of the pharmacist world-wide revealed that there is growing awareness among pharmacists concerning their additive value to care providing in schizophrenia [1;3]. In the Netherlands, this insight also increases, however, pharmacists are still relatively unaware of the needs of the patient with schizophrenia [2]. On the other hand, many patients do not know what they may expect from the community pharmacist as a care provider in their disease [2].

In this paper we propose recommendations to ameliorate schizophrenia care by an extended role of the community pharmacist. We will focus on supporting tasks towards those involved in the disease management of schizophrenia, e.g., patients, secondary care providers like psychiatrists and hospital pharmacists and community care providers like general practitioners and social psychiatric nurses.
Chapter 10

Going along with the patient: assessing compliance, detecting medication difficulties and tracking down adverse effects

People with severe mental illnesses, and their relatives, have reported preferring community to hospital care. However, disadvantages of living in the community are poor social contacts (compared to those available in the larger long-stay hospitals), coping with the potential stigma of mental health problems and acknowledging one’s illness [3]. For schizophrenia, drug therapy is the most common form of treatment and patients have to cope with managing their medication and the potentially disabling adverse effects. Consequently, current providers of care are challenged to develop suitable services in the community to address these concerns [4].

Pharmaceutical care towards the patient

In table 1 activities are depicted, which may be implemented as pharmaceutical schizophrenia care. Earlier research revealed that one of the most important aspects which is currently lacking in schizophrenia care, is the sufficient delivery of detailed antipsychotic drug information [1;2]. Informing patients and their relatives can improve the confidence in care providers and in medication [5]. However, general agreement among psychiatrist and pharmacist concerning the intended information for the individual patient are desirable, in order to avoid the provision of contradictory information. Furthermore, special attention should be concentrated on information at outset of antipsychotic drug use. It has been proved that combined oral and written information, preferably given more than once, may improve insight in the need of medication adherence [6]. If adherence to first use of antipsychotic drugs is improved, chances on relapse decline and long-term prognosis can improve [7-9]. Thus, plural information sources concerning both medical and psychosocial schizophrenia treatment are recommended services for patient and relatives.
Towards an extended role of the community pharmacist in schizophrenia care.

Table 1: Pharmaceutical care for the patient with schizophrenia

<table>
<thead>
<tr>
<th>Request of patient</th>
<th>Pharmacies’ services</th>
</tr>
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</table>
| Extensive information | - Discussing instructions for use at first antipsychotic drug delivery  
- Elaborate (written) communication delivery concerning the role of the pharmacist in schizophrenia care  
- Creating discreet possibility of reading reference books about schizophrenia care and drug use  
- Creating possibility for acquiring information about patients’ associations and other care providers in schizophrenia health care |
| Discussing medical treatment and drug difficulties | - Pharmacists consulting hours for mental health care issues  
- Facilitating complex drug schemes by assessing medication profiles and, if possible, substituting by easier dose forms  
- Emphasising importance of therapeutic compliance and bringing up ways to improve and maintain this compliance  
- Assisting in reduction of unnecessary or superfluous psychotropic drug use |
| Reporting adverse effects | - Active indicating of possibility for patient to (anonymous or private) report adverse effects  
- Discussing risks for occurrence of adverse effects and ways to cope with these effects |
| Monitoring correct antipsychotic drug use | - Detecting overconsumption of antipsychotic drugs, thus, consulting the patient or, if necessary, the psychiatrist  
- Detecting underconsumption of antipsychotic drugs, thus, consulting the patient or, if necessary, the psychiatrist |

Earlier studies revealed that the Dutch patient with schizophrenia is relatively unaware of the specific support a community pharmacy can offer [2]. In order to involve patients more frequently in pharmaceutical care, pharmacists should elaborate bring their professional activities to the attention of both patients and mental health care providers. Firstly, patients’ associations should be informed regularly about current pharmaceutical activities. In the Netherlands, there are several organisations that focus their activities on both patients with schizophrenia and their relatives. These associations most often have periodic meetings and publish their own magazines, which both can be excellent possibilities to pass on pharmacy information. To start with, the general pharmacy delivery service or the existence of consultation hours can be promoted.

Secondly, during first contact with a psychiatrist or during discharge from hospitalisation, extended information about the role of the pharmacy can be provided. Since most patients need to continue (antipsychotic) treatment for a long
period of time, the existence and activities of all disciplines in mental health care need to be clearly communicated, in order to optimise multi-disciplinary treatment. At last, digital communication ways, like the Internet and email, can be used to get the patient acquainted with the role of the pharmacist. In general, knowledge and insight of patients with schizophrenia is found to be positively influenced by additional computer-based training [10]. Furthermore, recent investigations suggest that chatgroups may be a valuable communication tool for patients to avoid rehospitalisation (http://www.schizophrenia.com/newsletter/allnews/2002/chatroom.htm, consulted September 4th 2002). The added value of digital communication should be recognised by mental health care, including pharmacists. For example, Internet-homepages of patients’ associations can provide links to homepages of individual pharmacies and the latter ones can provide information and download tools for correct drug use and for reporting adverse effects.

Former investigations among Dutch patients with schizophrenia and their relatives revealed they feel positive about receiving reminders from their pharmacist in case of unclaimed prescriptions [2]. A proactive approach by implementing remedial efforts may enhance therapeutic compliance, for example by telephone and postcard reminders, letter reminders and electronic reminders. It has been proved that telephone reminders are slightly more effective in reducing the picking up time compared to postcard reminders, however, both interventions unfortunately did not lead to significantly decreased overall pickup times [11]. Probably, the actual value of an unclaimed prescription reminder program may be an improved relationship between pharmacist and patients. Thus, the effort and expense of a reminder system should be balanced against the opportunity to establish and improve pharmacist-patient relationships.

Reporting adverse effects

In the Netherlands, pharmacists are familiar with reporting adverse effects to the Netherlands Pharmacovigilance Foundation [12]. Community pharmacists are responsible for 40% of these voluntary reports, while physicians take account for the other 60%. Adverse effects are detected by spontaneous reports of patients or by alertness of pharmacist or physician. In the case of schizophrenia, most patients present side effects to their treating psychiatrist, who either changes medication or dosage or takes other measures to alleviate symptoms. However, patients are not always satisfied with attention provided to their experienced side effects [2]. In 25% to 60% of the patients the occurrence of adverse effects is a reason for non-compliance [13]. Reporting of side effects due to antipsychotic drug use occurs only sporadically at community pharmacies [2]. This phenomenon may not only be due to the limited patients’ knowledge of the possibility of reporting adverse effects at their pharmacy, but also, the nature of several frequently occurring side effects may prevent patients from reporting these symptoms at all. For example,
sexual dysfunction due to drug use has a high prevalence among antipsychotic drug users, however, is not reported regularly at the Pharmacovigilance Foundation [14]. Since continuous experience of adverse effects may eventually lead to preliminary drug cessation without psychiatrists’ approval, more attention should be paid to discrete ways of reporting and dealing with adverse effects. The community pharmacy may assist in providing these ways by personal pharmacist consultation, computer-based consultation or written communication. Furthermore, websites may be launched that enable patients to discuss their experiences with medication. In the Netherlands, a pilot project has recently been started, where patients with schizophrenia can report their experiences at the website of the patients’ association. Feedback is given by supporting care providers like psychiatrists and pharmacists.

In conclusion, it is important that the possibility of reporting adverse effects is stressed in both psychiatrists’ and (general) pharmacy information.

**Advising, prescribing and auditing rational pharmacotherapy in schizophrenia**

One of the most important aspects of disease management in schizophrenia is putting the patient central in health care, by equal focussing on the disease of all care providers. The patient centralisation automatically suggests that, in the ideal case, treatment strategies of all care providers are mutually adapted to the personal needs of the patient (Figure 1). However, uniformly provision of services may lead to loosing touch with the individual patient. Thus, the main treatment provider, who usually concerns the psychiatrist, should be aware of all other caring activities surrounding the individual patient.
Figure 1: Communication patterns in cross-sectoral schizophrenia consultation: who communicates towards the patient?

1: Providing relevant patient information and indicators for relapse
2: Providing prescription and individual patient information
3: Providing relevant patient information and indicators for relapse
4: Providing info concerning current treatment state and indication of relapse
5: Providing info concerning current pharmacotherapeutical treatment state and indication of relapse
6: Providing general drug information and individual prescription information

The auditing role of schizophrenia treatment by the community pharmacist.

In the Netherlands, 70% of the patients with schizophrenia are living at home or in protected community housing [15], which implies that approximately 65000 Dutch patients collect their refill medication from their community pharmacy (about 50 patients per pharmacy). As nowadays all prescription processing is automated, allowing to build up drug prescription records and drug use profiles, the pharmacist is well positioned to monitor drug use [16]. Although picking up refill medication at regular basis is not automatically a guarantee for correct intake of the right
Towards an extended role of the community pharmacist in schizophrenia care.

dosage at the right moment, it is definitely a reflection of the compliance of the patient. Thus, prescription records can be used to monitor repeat prescribing [17]. Pharmacists can detect under- and overconsumption of antipsychotic drugs. Furthermore, they can discover irrational psychotropic drug combinations and potential dangerous drug interactions. These may occur because patients stop or switch their psychotropic medication inconsequentially and apply for refills both at their psychiatrist and their GP. Finally, pharmacists can also monitor use of severe subtherapeutic or excessively high antipsychotic dosages and subsequently, may approach psychiatrists in order to deliberate expected risks and effects.

In order to synchronise the psychiatrists’ wish for supplemental patient information and the pharmacists’ supply of medical information, regional cross-sectoral networks can be used to make mutual appointments. In table 1, subjects that can be discussed in this consultation are represented. Since compliance is a major issue, it is essential that a proper definition of compliance is established when using prescription records. This definition should be determined beforehand, in which a refill rate may be useful parameter. A refill rate of antipsychotic drugs can be calculated out of prescription data, which ideally should be equal or close to 1 (chapter 7). In addition, guidelines can be formulated to determine which refill patterns in combination with certain risk factors give reason for concern and enhanced patient care.

Because of privacy legislation, it is important to obtain patients’ informed consent on beforehand, preferably during the first contact with mental health care. However, since both psychiatrists and pharmacists are care providers with professional secret, it should become common good to gather informed consent and exchange patient information in order to optimise treatment strategies. Furthermore, in table 2 mainly the additive value of the pharmacist towards the psychiatrist is mentioned, however, interaction between psychiatrists and pharmacists may lead to earlier detection of drug-related problems and improved follow-up of the patient with schizophrenia.
Table 2: Subjects to discuss in cross-sectoral mental health care networks

<table>
<thead>
<tr>
<th>Information concerning patients, valuable for psychiatrists</th>
<th>Service of community pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occurrence of non-rational, off-label antipsychotic and psychotropic drug use</td>
<td>Recurrent Drug Use Evaluations of psychotropic polypharmacy users (with known diagnosis)</td>
</tr>
<tr>
<td>Non-compliance to antipsychotic drug prescriptions</td>
<td>Regular delivery of prescription history of patient</td>
</tr>
<tr>
<td>Where do patients order refill medication</td>
<td>Regular delivery of prescription history of patient, combined with prescriber information</td>
</tr>
<tr>
<td>Adverse effects, reported at pharmacy consulting hours</td>
<td>Oral or written communication about reported adverse effects, possibly leading to pharmacotherapeutic intervention</td>
</tr>
<tr>
<td>What information about antipsychotic drugs is transferred to the patient?</td>
<td>What information about antipsychotic drugs for patients is needed?</td>
</tr>
</tbody>
</table>

The pharmacists’ role in drawing up formularies

In the Netherlands, pharmacists are active members of drug formulary committees for a broad variety of disorders. While hospital pharmacists of mental health care clinics are more often participants in choosing first choice antipsychotic drugs, community pharmacists are much less involved in such decision making. Part of the difference between these types of pharmacists is due to the relatively limited knowledge of psychiatric treatment among community pharmacists, which is also due to the structure of care in the Netherlands [2;18]. However, since the community pharmacist can play an active role in the disease management of schizophrenia, elaborate attention should be paid to future graduate and postgraduate training. If pharmacists are more aware of the various aspects of schizophrenic disorder, they are better capable of estimating what kind of interventions are possible and which are not in the community pharmacy setting. In addition, they may become more competent in formulary and treatment guideline decision making in schizophrenia and in assessing advantages and disadvantages of antipsychotic drugs in specific disorders, while deliberating these aspects against the costs of medical treatment. In conclusion, there is definitely a role for the Dutch community pharmacist in formulary decision making, but in order to stress his distinctive features in this role, extended education will be necessary.
Towards an extended role of the community pharmacist in schizophrenia care.

The evolving role of the pharmacist towards other mental health care providers

Since a multidisciplinary treatment approach to psychiatric rehabilitation has been proven to positively influence outcome of disease [19], pharmacists should be encouraged to collaborate with other healthcare professionals and paramedics in mental health care, like general practitioners (GPs), social psychiatric nurses, psychologists and social workers.

Combining community care for schizophrenia: collaboration of GP and pharmacist

An important aspect of the role of the GP in the treatment of schizophrenia is the timely recognising of a prodromal phase of (relapse) psychosis, since early intervention may prevent deterioration of disease. A 15-year follow-up study revealed that in the Netherlands, 1 in 6 patients after relapse were left with residual symptoms they did not have before. Effective relapse prevention offers the potential, therefore, of reducing treatment-resistant symptoms and putting a brake on the slide into chronicity [20]. Currently, two Dutch physicians described how timely intervention in general practice did prevent rehospitalisation of three patients with recurrent psychosis. They concluded that the adequate response of general practitioners to psychotic relapse in such patients warrants a regular contact to evaluate the patient’s network and to detect relapse in an early phase [21]. The latter aspect emphasises the need for close collaboration between GP and pharmacist. Prodromal symptoms may be induced by (temporal) non-compliance to antipsychotic medication and pharmacists may report this compliance problem as soon as recognised. Furthermore, during prodromic phases dysphoric and anxiety symptoms may aggravate [22;23], resulting in possibly increasing benzodiazepine and antidepressant drug use.

Through cross-sectoral conference, preferably also attended by regional psychiatrists, guidelines need to be founded to categorise severity of non-compliance and determine parameters for intervention. In addition, indicators for excessive benzodiazepine use should be formulated, in order to enable pharmacists to recognise irrational drug use, possibly due to relapse of disease [24].

Pharmacy information exchange with Social Psychiatric Nurses

Social psychiatric nurses (SPNs) are closely connected to community care of psychiatric patients and are frequently first detectors of deterioration of disease. Furthermore, they actively can behold patients’ difficulties with antipsychotic drug use. This aspect may be the foundation for consultation between pharmacist and SPNs. Especially the practical background of the SPN may provide new insight to the supply of antipsychotic drugs for the pharmacist. On the other hand, pharmacists may inform SPNs about effect and adverse effects of antipsychotic and
psychotropic drugs. This may enable SPNs to improved coping with drug intake problems and thus, increased control of medication adherence. In addition, SPNs can be the liaison between hospital psychiatric services and community services.

**Discussion**

The role of the Dutch community pharmacist in pharmaceutical schizophrenia care may be extended towards all participants in the disease management of schizophrenia. Patients and their relatives may benefit from ameliorated communication between pharmacists and physicians and, furthermore, can increasingly use the pharmacy as a source of information and support in managing medical treatment.

An increased role of the pharmacist fits in the new philosophy of concordance in medicine taking. The concordance model puts prescribers and patient on an equal footing, with decisions about medicine taking being a negotiation between them. Concordance implies a respect for the individualised patient’s own beliefs and wishes rather than a “doctor knows best” attitude [25;26] and especially is important in multi-disciplinary health care teams. If mental health care providers can achieve that patients’ beliefs about medical treatment are positive and unambiguous, patients’ awareness of the need for compliance may increase, eventuating in an ameliorated course of disease.

A limitation of disease management in schizophrenia in general and of pharmaceutical care in particular, may be the fact that only well-motivated patients will fully benefit from pharmacy services and support. Since 5-10% of the patients with schizophrenia are homeless (www.nationaalkompas.nl, consulted Sept 11th 2002) and others (up to half of the patients) are acquainted with substance abuse, a substantial part of patients will be missed for adequate care. Furthermore, several studies reported the actual importance of relatives’ attitudes towards disorder and treatment. Patients whose families refuse to participate in treatment were at high risk for stopping their medications, even with supplemental interventions [27;28]. This group of patients will also be difficult to support proactively. However, we suggest that after implementing and evaluating expanded pharmaceutical care in the general schizophrenia population, specific attention can be focussed on special interest groups.

An essential issue in the chance for success of pharmaceutical schizophrenia care is the co-operation of psychiatrists. Psychiatrists’ resistance is more likely in areas where community pharmacists assume a more autonomous role in patients’ treatment (discussing therapeutic alternatives with patients, changing dosage forms of physician-prescribed drugs to better suit patient needs) [29]. However, if elaborated community care may prevent relapse leading to hospitalisation, the working load for psychiatric teams may be alleviated, possibly resulting in a positive influence at shortening of waiting lists and emergency
Towards an extended role of the community pharmacist in schizophrenia care.

admittance capacity. In addition, a solid collaboration with the general practitioner is definitely required and should be the driving force behind a primary (pharmaceutical) care intervention for schizophrenia.

In comparison with other diseases, pharmaceutical care for psychiatric disorders is relatively scarce. Currently, diseases such as asthma and diabetes, although both more prevalent than schizophrenia, but less prevalent than psychiatric diseases in general (e.g. depression), dominate disease management programs in the Netherlands. This coincides with pharmacists’ confidence in advising patients with these somatic diseases versus psychiatric diseases like schizophrenia and depression. A recent study among antidepressant users revealed that, although compliance with antidepressants is low and treatment outcomes are sub-optimal, pharmacists are not using their opportunities to minimise this problem through effective communication and follow-up [30]. The results of both our study [2] and the depression study indicate that many pharmacists perceive that people with schizophrenia or other mental disease are not interested in discussing their treatment. That perception, not supported by patients’ own accounts, may be an important barrier. However, pharmaceutical care has to be based on what clients need and want and not merely on what a pharmacy team considers necessary [31].

When implementing pharmaceutical care, it is necessary to evaluate the projects performed, in order to assess the gained effects and the experienced difficulties [32]. The call for evidence based medicine is widespread, however, few mental health care providers gather data regularly concerning the outcome of routine care as opposed to research treatment, analyse the data and apply the results to improve practice. Defining both patient- and process outcomes accurately and testing versus a control group is essential, since auditing without strict parameters is impossible [33]. Furthermore, quality management may reduce the gap between the results that are actually achieved under every day treatment conditions and the aims that could have been accomplished. Quality management has been successfully practised in other medical disciplines for a long time, however, its implementation in psychiatry has only been restricted to pilot projects [34].

In conclusion, pharmacists are at the end of the prescribing process and are often the last health care professional with whom the patient has contact before making their medicine-taking decision. This places pharmacists in a strong position in terms of involvement in decisions about medicine taking. Especially in schizophrenia, a well-educated and motivated pharmacist may be an ideal medication expert in the integrated care with all care-providers surrounding the patient with schizophrenia.

Reference list


Towards an extended role of the community pharmacist in schizophrenia care.


