

Patient-Centered Communication and Counseling to Ensure Patient Safety Through Correct Use of Medicines: Experiences and Challenges

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Abstract: In this chapter we discuss experiences and challenges regarding patient safety and correct use of medicines. Patient-centered communication and counseling are essential in order to achieve this. Incorrect use of medicines endangers patient safety, and can lead to medication-related problems, which again may have serious consequences for both the patient and society. Some of the most prominent pharmaceutical factors compromising patient safety are: communication challenges, language barriers, variety in health literacy, and self-care without guidance from a healthcare provider. The common theme for most barriers connected to incorrect use of medicines seems to be communication. It is therefore essential for healthcare providers to have good communication skills and be able to provide patient-centered communication and counseling of high quality. This may be the path

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towards optimizing use of medicines and ensuring patient safety. To improve patient-centered communication and counseling, teaching communication, as well as training courses, should be included in the curricula for healthcare providers, in addition to postgraduate training.

Keywords: patient safety, correct use of medicines, communication, counseling, pharmacy

Patient safety is fundamental to delivering quality essential health services. WHO's work on patient safety was launched in 2004 by the World Alliance for Patient Safety. The work has evolved since then. One example is strategic guidance and leadership to countries through the annual Global Ministerial Summit on Patient Safety, which aims to advance a patient safety agenda on the political leadership level, with the support of health ministers, high-level delegates, experts, and representatives from international organizations (WHO, 2019).

Incorrect use of medicines is a serious problem, which not only affects the patient but also the healthcare system as a whole. Medication errors, defined as "failure in the treatment process that leads to, or has the potential to lead to, harm to the patient", are expensive and cause unnecessary suffering among patients (Aronson, 2009). Medication errors are a leading cause of injury and avoidable harm in healthcare systems: globally, the cost associated with medication errors has been estimated at US\$ 42 billion annually (Aitken et al., 2012). It can lead to medication-related problems, which may have serious consequences for individual patients. The occurrence of adverse events due to unsafe care is likely one of the 10 leading causes of death and disability in the world (JHA, 2018).

Reducing the risk of this is crucial and can be achieved through high quality patient-centered communication and counseling (Ryan et al., 2014). For successful implementation of patient safety strategies, like ensuring correct use of medicines, it is important to have clear policies, skilled healthcare professionals, and effective involvement of patients in their own care. Thus, quality health services should be effective, safe, and patient-centered.

What is the situation in Norway? In 2020, 69% of all Norwegians collected a prescription medicine from a pharmacy (Norwegian Institute of Public Health, FHI, 2021a). In addition, people use over the counter

medicines (OTC), herbs, vitamins, and minerals. There is also medication use in hospitals and nursing homes.

Only 20%–30% of medicines are taken as recommended. Although the research criteria may vary, there have been reports of incorrect prescriptions in 10%–25% of all cases. The previous medicinal product policy report indicated that 5%–10% of all acute internal medicine hospitalizations were the result of an incorrect use of medicines, and that about half of these hospitalizations might have been avoided (Department of Health and Care Services, HOD, 2015). In a study from Bergen, it was found that patients in nursing homes had an average of 5.5 medication-related problems caused by the use of on average 11.5 different medicines. A third of the medication-related problems were caused by unnecessary use of medicines (Halvorsen et al., 2010). One multicenter study of hospitals in Norway showed that more than 80% of patients had an average of 2.1 relevant medicine-related problems (Blix et al., 2004). The risk of medication-related problems increases with an increasing number of medicines. Many elderly patients have several illnesses and use many necessary medicines simultaneously. However, the literature also demonstrates that many patients use unnecessary medications, which also increases the risk of medication-related problems (Blix et al., 2004; Halvorsen et al., 2010; Viktil et al., 2006). This is especially unfortunate among older patients, who are particularly vulnerable to adverse reactions and other medicine-related problems (HOD, 2015).

The aim of the present study is to focus on the importance of communication and counseling to ensure patient safety in general, with examples from pharmacies regarding the correct use of medicines. We will identify challenges and describe the present situation based upon findings from the literature. Furthermore, we will discuss and conclude as to future approaches to what may be done, based on our experience and multiprofessional opinions.

Method

This study is based on the authors' experiences from their practice in pharmacies and the specialist healthcare services from the past several years to the present. A literature review was performed according to

Grant and Booth (2009). The authors' experiences have been valuable for recognizing the challenges in this area, and also for selecting keywords for the literature searches, which were not exhaustive but filtered through the following criteria. Articles from the last 15 years, with an emphasis on the last five years, have been included. Articles in English, published in international peer-reviewed journals, were chosen. Among the selection criteria, we included the following search terms: patient safety, communication, pharmacy, hospital pharmacy, health literacy, OTC. The literature search was performed from July to November 2021, including open searches on Google and Google Scholar, and more specific searches in Pubmed. We also included articles from the authors' own archives related to the topic. Articles written in Norwegian, or from non peer-reviewed journals, or older published studies were excluded.

The included articles covered the main experiences and challenges, relevant to patient-centered communication and counseling, defined by the authors. To describe Norwegian conditions primarily, it was necessary to include reports and documents from the authorities. A total of 57 studies were included.

Results and Discussion

Communication

The included studies show that many of the challenges presented in the introduction can be avoided if the communication, or more precisely counseling, is more focused. Counseling is, in Brown et al. (2016), defined as an “individualized process involving guidance and collaborative problem solving to help the patient better manage their health problems” (Brown et al., 2016).

Communicate originates from *communicare*, which is latin and means “to share”. Interpersonal health communication deals with imbalanced and complex power positions between the patient and healthcare personnel. In past times, this relationship, especially the doctor-patient relationship, was authoritarian and often about biomedical issues. Now, communication is more individualized and focused on each patient (Higgs et al., 2014).

The communication process between a patient and a provider is well illustrated in Figure 1 in Fieldman-Steward et al. (2005).

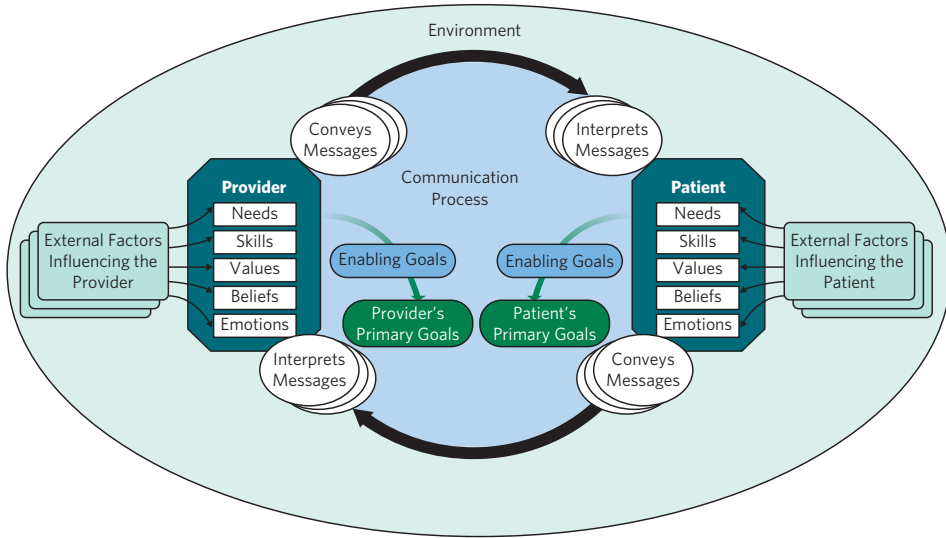


Figure 1. The communication process model of Fieldman-Steward et al. (2005, Figure 1)

This model focuses on the individual’s goals in the communication and discussion process, and describes which factors are important for how the communication process proceeds (Feldman-Stewart et al., 2005). The framework includes four key components, with a focus on elements that can be modified. The first component is the focus of the interaction: each participant’s communication goals. The second component consists of the participants themselves: each with five key attributes that determine, in part, how they address their goals. The third component is the communication process: each person both conveys and receives messages, and the messages themselves can be verbal, non-verbal, or silent. The communication process is iterative and extended in time, with one act having an impact on following acts. Finally, the fourth component is the environment in which the communication occurs, both the immediate physical setting and the context beyond. Important aspects of the environment, identified as external factors, affect the communication process through their impact on the participants’ attributes. The framework builds on classic communication frameworks to which it adds unique elements. Some of these unique elements include the prominent role of the participants’ goals and the distinct recognition that messages are conveyed through silence.

There are many models for assessing patient/healthcare provider interaction. One of them is the four habits model (FHM) (Frankel & Stein, 2001; Stein et al., 2005). This model is a relationship-centered framework for assessing healthcare provider communication skills with patients during medical interviews and encounters. The key concept in this model is: Patients don't care how much you know until they know how much you care. The four habits of clinical communication are: 1) invest in the beginning; 2) elicit the patient's perspective; 3) demonstrate empathy; and 4) invest in the end. The goals of the FHM are to: 1) establish rapport and build trust rapidly; 2) facilitate the effective exchange of information; 3) demonstrate care and concern; and 4) increase the likelihood of adherence and positive health outcomes (Frankel & Stein, 2001; Stein et al., 2005).

Communication Challenges

Healthcare professionals usually communicate with patients orally or through written information. There are, however, several challenges connected to both oral and written (health) communication.

The literacy rate in Norway is 100% (Burton, 2020), but to be able to read and write does not necessarily mean that one is capable of understanding written or oral health information. Being able to perform self-care requires a certain level of personal health literacy.

Personal Health Literacy

Personal health literacy is defined as “the degree to which individuals have the ability to find, understand, and use information and services to inform health-related decisions and actions for themselves and others” (CDC, 2021). This kind of literacy also includes the ability to understand and follow advice given by healthcare professionals.

From 2019 to 2021 a survey was conducted to assess health literacy in the Norwegian population. The results showed that a significant proportion of the population face a variety of challenges in dealing with health information (Le et al., 2021a). People on levels 2 and 3 are presumed to

possess sufficient health literacy based on the concept of “the patient’s health service”, a policy introduced by the government in 2014 in order to give patients more choices, and thus influence in their health questions (HOD, 2014). Thus, users of the health service must possess the knowledge and skills to “make choices” and “actively take part in decisions” concerning their own health (Le et al., 2021a). People on level 1 are not presumed to possess sufficient health literacy for the Norwegian patient’s health service. Of the study population, 20% were on the highest level (level 3), 46% were on level 2, and as many as 34% were on level 1 (Le et al., 2021a).

Language

In 2021, immigrants constituted 18.5% of the population in Norway (SSB, 2021). Public information about healthcare services is available mostly in Norwegian, sometimes English, but rarely in any other language. In addition to a foreign language, most immigrants encounter a different culture, and a different kind of “health language” – making communication more challenging. Even for native Norwegians, healthcare professionals’ “health language” can be challenging to understand.

A scoping review published in 2018 (Yehekel & Rawal, 2019) mapped out the literature on the *patient* experience of individuals with limited English proficiency. Sixty qualitative and mixed-method studies published between 2007 and 2017 revealed four major themes: (1) communication, language barriers, and health literacy; (2) relationships with healthcare professionals; (3) discrimination and intersection with other dimensions of identity; and (4) cultural safety. To overcome language barriers the literature says that patients preferred language-concordant healthcare professionals or the use of interpreters. Failing this, patients resorted to using nonverbal communication to express themselves. In addition, language barriers left some patients feeling vulnerable, disempowered, and frustrated in the healthcare setting.

Digital Health Literacy

An increasingly important public website is helsenorge.no, where quality-assured information about medical self-care is to be found – that is if one knows how and what to search for.

Digital health literacy can be expressed through:

- Competence in searching for digital health information
- Possession of general digital skills
- Readiness to adopt digital healthcare services

The health literacy survey found that women claimed to have a higher skill level than men in searching for digital health information, and those with an education above upper secondary school claimed to have a higher skill level than those with less education. Furthermore, the group over 65 years of age self-reported a lower skill level than other groups (Le et al., 2021a).

We can therefore conclude that, when it comes to medical self-care, the possession of general digital skills and competence in searching for digital health information is much needed.

Understanding Written Information

As stated earlier, OTC packaging is supposed to contain enough written information for the general public to be able to know how to use the medicine. However, not every patient reads the patient information leaflets (PILs) and the safety information. In addition, PILs are still difficult for many non-professionals to understand (From, 2013). A Danish study from 2013 on prescription medications showed that 70% of patients always read the PILs. Patients were mostly interested in reading about the side effects of drugs (77%), effects, use and storage (50% – 30%). But as many as 38% of patients had problems reading and understanding the text (Horwitz et al., 2009). A small Norwegian study from 2011 on the use of OTC painkillers showed that older people wanted to read the PILs but had difficulties doing so due to the font size, and that younger people didn't read the

PILs because they thought the information was not relevant (Halvorsen, 2011). OTC painkillers in Norway are equal to the ones sold by prescription, but in smaller packages. However, many believed that the OTCs are less “dangerous” than the prescribed ones especially since they are also available outside pharmacies (Halvorsen, 2011).

Patients’ Ability to Communicate with Healthcare Professionals

The health literacy survey from 2019–2020 (Le et al., 2021a) looked into Norwegian patients’ ability to communicate with healthcare professionals – meaning being able to actively engage in a dialogue with healthcare professionals in order to make good decisions concerning health. Only 12% appear to experience challenges. However, the results indicated that:

- Those with a long-term illness claimed to have weaker skills than others
- Those with an education above upper secondary level claimed to have higher skills than those with less education
- Some people in the 18–24 age group may face challenges when interacting with healthcare professionals

The earlier mentioned health literacy survey also investigated health literacy in five immigrant populations in Norway. This study demonstrated that a larger proportion of immigrants are at lower levels of health literacy compared to the general population. (Le et al., 2021b).

Based on the studies and our (the authors’) experiences communicating with foreign-language patients, we conclude that healthcare professionals must speak clearly, use the right words, and maybe use other tools, such as visual information.

Some studies have been performed regarding pharmacists communicating with foreign-language patients, and they show that language and cultural barriers may affect pharmaceutical service and patient-centered communication (Chang et al., 2011; Cleland et al., 2011;

Håkonsen et al., 2014; Schwappach et al., 2012). A qualitative face-to-face study involving Scottish pharmacists revealed a number of barriers to providing optimal care to migrants from central/eastern European states, such as: communication (information gathering and giving); confidentiality when using family/friends as translators; the impact of patient healthcare expectations on communication and length of the consultation; and frustration with the process of the consultation. Several barriers were specific to the migrants from these countries, but most of the barriers seemed pertinent to any group with limited English proficiency (Cleland et al., 2011).

A Norwegian focus group study consisting of ethnic Norwegian community pharmacists providing pharmaceutical care, who were in daily contact with non-Western immigrants, showed that language and cultural barriers, like body language and clothing, affected how much effort was exerted in order to provide this service, although the pharmacists knew that the patients needed drug counseling. They were all uncomfortable with situations where family or friends acted as interpreters, especially children (Håkonsen et al., 2014).

A Norwegian study published in 2021 investigated experiences and perceptions of Arabic and Kurdish people living in Norway, in terms of the medication information they received in the pharmacy. Overall, they were satisfied with the pharmacy service. However, their preferences in relation to medication information were not met. They had several suggestions for communication facilitators that could expedite medication information: simplified prescription labels, written information, pictograms, mobile phone apps, interpreters, and bilingual staff (Sletvold & Nguyen, 2021).

The results from the above-mentioned studies may be transferred to everyday life and meetings between patients and other healthcare professionals. Thus, as a healthcare professional it is important to realize that oral information is not necessarily the best way for all patients to receive information or knowledge. This information is often given to the patient in a stressful situation, and it is therefore of particular importance that it can be repeated or read later on by the patients themselves or their relatives or caregivers.

Ensuring Patient Safety After Discharge From Hospital: Experiences From Specialist Healthcare

At discharge from hospital, insufficient transfer of medication information is a common challenge (Cochrane et al., 1992; Coleman, 2003; Glintborg et al., 2007; Kripalani et al., 2007). After discharge, home-dwelling patients are expected to manage their medicines themselves, and adequate counseling is important for self-efficacy in relation to medication management (Náfrádi et al., 2017). In a study performed in Australia, pharmacists and patients were asked what made the pharmacist–patient conversations effective. The overarching theme or shared goal resonating from the participants’ interviews was that patients need to be confident in managing their medications at home. To facilitate this, patients focused mainly on pharmacists’ delivery of medication information and interpersonal behavior. For the pharmacists, building rapport was important, but they also emphasized patients’ understanding of their medications, and their level of engagement, as indicators of patients’ confidence in self-managing their therapy (Chevalier et al., 2018).

A Norwegian study from 2017 looked into patients’ needs for medication information after discharge from hospital, including the patients’ perception and appraisal of the information they received at discharge. The results from interviewing 12 patients showed that information should focus on empowering the patients throughout the hospital stay, and not only at discharge. The informants used various strategies for coping with their use of medicines, influencing their self-efficacy in relation to medicine management. They gained information in several ways: by receiving information from healthcare professionals, through observation, and by seeking it themselves. Some thought they could have been better informed about adverse reactions and how to manage life as a user of medicines. Others felt they did not want or need more information (Svensberg et al., 2021). This is also shown in other studies (Borgsteede et al., 2011; Kusch et al., 2018).

The National Center for Epilepsy, Oslo University Hospital, serves the most refractory patients with epilepsy from the whole country. Over

the years, different approaches to improving patient-centered communication have been utilized. As part of the service, a close follow-up of pharmacological treatment is a cornerstone. Therapeutic drug monitoring of all antiseizure medications is a tool to optimize treatment for the individual patient (Johannessen Landmark, Fløgstad, Baftiu, et al., 2019; Johannessen Landmark et al., 2020). It relies on close collaboration between the clinicians, nurses and pharmacists at the hospital, and pharmacologists at the laboratory for clinical pharmacology. The use of therapeutic drug monitoring in a clinical setting serves as a tool for improved understanding of drug exposure, and factors contributing to variability between and within patients: adherence, withdrawal, and interactions (Johannessen Landmark, Fløgstad, Syvertsen, et al., 2019; Syvertsen et al., 2019). This tool has also been used in direct communication with patients and their treating clinicians for improved health literacy and understanding of the importance of routines for drug intake and possible consequences (Johannessen Landmark, Fløgstad, Baftiu, et al., 2019).

Some years ago, a multi-professional pharmacology team was established, with the primary aim of optimal treatment with antiseizure medications for the individual patient: education of colleagues; information to patients and relatives; focusing on patient safety issues. Another practical task has been the participation of a pharmacist, attending the out-patient clinic along with the neurologist, for improved communication about medications. Furthermore, a digital e-learning course on the use of anti-seizure medications, and written information on the website of all the different drugs available, have been developed and implemented. These are among the most popular sites within Oslo University Hospital.

In several studies the patients' perspectives on challenges in epilepsy and their treatment were elucidated. Patients were interviewed with a focus on their perspective regarding adverse effects and adherence to medications, first as a project in clinical pharmacy (Mevaag et al., 2017), then as a larger-scale questionnaire (Henning, Johannessen Landmark, et al., 2019; Henning, Lossius, et al., 2019). Finally, the questionnaires were utilized in routine screening for adverse effects, adherence issues and other factors related to living with epilepsy.

These studies demonstrate that, through various interventions and focusing on different aspects of the treatment of refractory epilepsy, a patient-centered emphasis as well as a multi-disciplinary approach will hopefully continue to achieve improved treatment and care of this vulnerable patient group.

Ensuring Patient Safety at Community Pharmacies: Experiences of Communication About Prescribed Medicines

In general, Norwegian pharmacies have a monopoly on distributing prescription medicines to the public. Even though community pharmacies are private, they are part of the Norwegian healthcare system, and cooperate with other healthcare personnel to ensure patient safety and the correct use of medicines, and to help patients take care of their own health. The three main goals are to:

- Ensure that patients receive medicines of high quality in the correct form, dosage, and quantum
- Ensure that medicines are available throughout the whole country
- Ensure that patients receive high quality information and guidance that ensures correct use of medicines

In the report to Stortinget (Norwegian Parliament) No. 28 (2014–2015) (HOD, 2015) *White paper on medicines correct use – better health*, it is stated that pharmacies have an important role in providing advice on the correct use of medicines. The pharmacy is a low-threshold healthcare service. Pharmacists or pharmacy technicians provide advice on how to use prescription or OTC medicines. The quality of the counseling is of great importance to safeguard patient safety. Thus, being up-to-date and having good communication skills are of great importance to ensure the correct use of medicines and thus, ensure patient safety.

Since 2000, the number of pharmacies has more than doubled, they have longer opening hours, and sell a wider range of health-related products. The general public also seek advice for treating a range of minor illnesses.

The law specifies requirements as to how the pharmacy should be designed. A number of pharmacies are small, which is challenging when personal conversations take place between staff and customers seeking advice. Discretion and lack of privacy is a challenge when delivering professional pharmacy services, especially regarding elderly patients (Mamen et al., 2015). Studies from Australia and Denmark have revealed that a lack of discretion is one of the main reasons that pharmacists do not offer these services and patients do not receive them (Latif et al., 2013; Patwardhan & Chewning, 2009). Our experiences indicate a need to improve these factors. It is important to examine the culture of the pharmacy and the pharmacy manager's interest in communication. Studies have revealed that this may explain the variation among pharmacies in terms of their degree of communication (Kaae et al., 2014).

Employees in pharmacies are authorized as healthcare personnel: pharmacists (holding a bachelor's or master's degree in pharmacy), and pharmacy technicians (three-year high school specialty). They have combined theoretical and practical training on how to advise customers on when and how to handle minor ailments, and can adjust their advice to each particular customer based on symptoms, age, gender, and health condition.

Patient counseling is important on all levels of the healthcare services, and this requires good communication skills. What kind of communication skills are important in patient counseling? Several researchers have looked into this and found that they can be divided into content skills, process skills, and perceptual skills. All are important. Table 1 exemplifies

Table 1. Communication Skills for the Role of the Pharmacist (Hargie et al., 2000; Hyvärinen et al., 2010)

Various forms of skills	Details
Content skills	Discussion of the name and indication of the medicine, explaining the dosage, if forgetting a dose, what will happen, when will the effect appear, discussion of side-effects, exploring the patients' beliefs about medicines
Process skills	Building rapport, explaining, questioning, active listening, nonverbal communication, advising, opening, closing, assertiveness, disclosing personal information, persuading, emphatic responding
Perceptual skills	Pharmacists' belief about the patient and the illness, clinical and professional judgement decisions, awareness of professional confidence, and external distractions

the skills for the pharmacist role within each of these three categories (Hargie et al., 2000; Hyvärinen et al., 2010).

As mentioned before, information on the patient's medicines is of great importance to patient safety. Because pharmacists possess extensive knowledge about medicines (administration, dosage, effects, side-effects, storage, interactions, and important factors for correct use), the pharmacist is in a position to play an important role in patient counseling (Hämmerlein et al., 2007). In addition to being a medicine expert, the pharmacists see patients with a chronic disease probably more often than their physician does. These patients often see their physician just once a year, while the pharmacist meets the patient at least four times a year, when they pick up their prescribed medicines.

However, from our own experiences, we believe that pharmacists, as well as other healthcare personnel, should be more conscious of and focus on dialogic patient-centered communication. Several studies have examined this issue. A review of counseling practices, in relation to prescription medicines in community pharmacies, revealed a variation in counseling rates from 8% to 100%, depending on the research methods used. The type of prescription also influenced the rate. Higher rates were found in counseling consumers with new compared to regular prescriptions. Information on directions for use, dosage, medicine name, and indications was given more frequently than information on side effects, precautions, interactions, contraindications, and storage (Puspitasari et al., 2009). A newer study from the Netherlands described the information exchanged between pharmacy staff and patients on prescribed medication at the community pharmacy counter. When dispensing first prescriptions, pharmacy staff provided most information on instructions of how to use the medication (83.3%), the form of the medication (71.4%), and treatment duration (42.9%). Topics for repeat prescriptions (such as the effects of the medication and the incidence of observed adverse effects) were rarely discussed. Pharmacy staff rarely encouraged patients to ask questions. In only 10% of the new prescriptions and in 5% of the repeat prescriptions did the pharmacist try to involve the patient (van Dijk et al., 2016). A Norwegian study among elderly patients showed that the general practitioner (GP) was the main

source of drug information. As many as 50% of them were not informed about the medicines when picking them up at the pharmacy. However, 56% wanted to know more about their medications (Mamen et al., 2015). In a Danish observation study, 26% of the encounters had no communication about medicines (Kaae et al., 2013). The aim of a Swedish study was to determine the content and time disposition of patient-pharmacist communication during the dispensing of prescribed medicines. They found that 11 seconds (median) was spent on medical issues like user instructions, 72 seconds (median) on non-medical issues like availability of the medicine, and 88 seconds was spent in silence (Olsson et al., 2014).

Some studies have revealed that pharmacists use patient-centered communication to a low degree, for example low patient involvement, and low exploration of the patients' needs (Greenhill et al., 2011; Kaae et al., 2012; Latif et al., 2011). One review has shown that a patient-centered focus was found in eight of 32 studies (Murad et al., 2014). Some of these studies indicate that the pharmacists forget or do not think, to explore the patients' needs, understanding and knowledge of their medicines, while another review reveals patient-centered focus in several studies. For patient safety reasons, it is important to inform patients about administration, side-effects, interactions, and important factors for correct use. However, just as important is motivating the patients to adhere to their medicines to promote good health. Thus, the patient's preferences have to be explored, in order to provide the patient with medical information to help them make the right decisions. Patients have to be honest about their needs and concerns. A patient-centered encounter contributes to the patients' trust in healthcare personnel, not only the pharmacy personnel, which in turn will increase adherence and patient safety.

To improve patient-healthcare personnel communication, teaching and training is of great importance. A study performed with hospital doctors demonstrated that a 20 hour course using the four habits model showed an improvement in communication skills among these doctors (Fossli Jensen et al., 2010). A review from 2021 has also looked into how pharmacists can develop patient-pharmacist communication skills (Kerr

et al., 2021). They conclude that educational interventions that promote reflection are particularly useful.

Ensuring Patient Safety for Self-Caring Patients

WHO defines self-care as “the ability of individuals, families, and communities to promote health, prevent disease, maintain health, and to cope with illness and disability with or without the support of a health-care provider” (WHO, 2021).

There is a growing global trend for consumers to self-medicate with non-prescription medications, also called over the counter (OTC) medications, for common ailments (Benrimoj et al., 2008). Shifts in consumer preferences towards self-care and self-responsibility for health (Benrimoj et al., 2008), and the emerging trend towards “down-scheduling” of prescription medicines to non-prescription status (Global Self-Care Federation, 2004) are two factors associated with this development. Community pharmacists are the most accessible healthcare professionals to the public, and their competence is important to ensure the correct use of OTC.

When a member of the general public experiences symptoms of disease or illness, their response on how to treat the symptoms is often based on personal experience and advice from family or friends. A very common source of advice is to seek information on the internet, in these days referred to as “Dr. Google” or on the vast variety of public and private websites with health information. Depending on the severity of the symptoms, people also seek help at the emergency ward, or from a family doctor, or, if the symptoms are minor, they treat the symptoms through self-care or seeking advice at a community pharmacy.

Risks Associated With the Top Selling OTCs

Total OTC sales in 2020 were ca. NOK 3,5 billion (FHI, 2021b), and the leading indications were pain, fever and common cold. Use of nasal spray to treat nasal congestion has been rising steadily, and two thirds are sold

outside pharmacies (FHI, 2020). The number of people addicted to these types of nasal spray is, according to otolaryngologists, increasing (Hauge & Nordahl, 2019), and many healthcare professionals support restrictions to availability. It is hard to communicate information about safety concerns, and that continuous use beyond the recommended maximum 10 days leads to addiction and a constantly blocked nose.

Sales of paracetamol are second on the OTC list. A Norwegian study showed that 30% of female and 13% of male adolescents aged 13–19 use OTC analgesics weekly (Jonassen et al., 2021). Daily use of paracetamol, even in small doses, can give rebound headaches (Fischer & Jan, 2021). There has also been an increase in paracetamol intoxication, especially among young females (Soldal, 2017). In Sweden, non-prescription paracetamol tablets are, since 2015, no longer sold outside pharmacies due to the high increase in paracetamol intoxications (Sandstedt, 2015).

Remedies for smoking cessation (nicotine replacement therapy, NRT) are also high on the OTC sales list. The percentage of daily smokers in Norway has, however, decreased considerably from over 40% in the 1970s to 12% in 2016 (WHO, 2020). For some people, addiction to nicotine in cigarettes has been replaced by NRT addiction (Borup et al., 2015).

Supplements and Herbal Remedies in Self-Care

Many people use supplements and/or herbal remedies, instead of, or in addition to medicines as self-care. A Norwegian study from 2013 showed that among the 381 patients who participated, 44% used herbs (e.g., blueberry, green tea, garlic, aloe vera, echinacea) and among those using conventional drugs regularly, 45% used herbs concomitantly (Djuv et al., 2013).

It is a safety concern that herbal remedies often lack documentation of quality, efficacy, and safety, for example drug interactions. However, some interactions are known, for example NOMA recommends patients to refrain from herbal remedies containing ginkgo-biloba, ginseng, ginger and St. John's wart one to two weeks before surgery, as these could have an effect on bleeding during an operation (SLV, 2016).

Norwegian Governmental Strategies on Self-Care

The Principle of LEON

Since the 1970s, the principle of LEON has been the gold standard in the Norwegian healthcare system (Helsedirektoratet, 2016). The principle was introduced by the World Health Organization (Helsedirektoratet, 2010), and LEON (in Norwegian: Laveste Effektive OmsorgsNivå) means that patients with medical complaints are to be treated at the lowest care level possible.

Minor ailments are generally defined as medical conditions that can be reasonably self-diagnosed and self-managed with such things as over-the-counter medicines (OTCs; non-prescription medicines). People should in general manage self-care for minor ailments themselves before contacting the family doctor/public healthcare system. In Norway, a number of medicines are available without prescription, at grocery stores, kiosks, and fuel stations, as well as in pharmacies.

Reduction of Healthcare Costs

Norway has a universal, nationalized healthcare system that in 2021 was regarded as one of the best in the world (Schneider et al., 2021). It is also among the most expensive in Europe, primarily financed from public funds (WHO, 2020). A major pro of self-care is that it reduces strain on the public health system, and that patients pay the full cost for medications. Almost half of total medication costs are paid out of pocket: OTC (9%), non-reimbursable prescriptions (37%), and patient co-payment (3%). Remaining medication costs are funded by the authorities: reimbursable prescriptions (29%), medication in hospitals, and to some extent nursing homes (22%) (LMI, 2021).

Patient Safety for Self-Caring Patients in Pharmacies

Norwegian pharmacies have a monopoly on distributing prescription medicines to the public, but pharmacies also function as a place where

patients have healthcare personnel to turn to when experiencing minor ailments.

People often need assistance in determining whether there is a need for self-care at all, whether there are suitable self-care remedies, or whether the severity of the ailment requires the person to contact the emergency ward or family doctor, dentist, veterinarian etc.

If not stated otherwise, OTCs should only be used continuously for 7–10 days. Health personnel should always make sure that OTCs are not used longer than recommended. If the minor ailment persists, the pharmacy staff should refer the customer to other healthcare personnel if necessary.

There are some exceptions to the drug distribution monopoly of pharmacies, one being that grocery stores, kiosks and fuel stations can sell a number of OTCs categorized as suitable for self-care by the Norwegian Medicines Agency. OTC packaging and the inserted patient information leaflets should contain enough written information for the general public to use the medicine in an effective and safe manner.

Employees in grocery stores, kiosks and fuel stations are not allowed to give any medically related information or advice to customers regarding the self-care medication assortment. There is an age limit of 18 years, and customers may purchase one package only at one encounter. If people choose to buy their medicines in a pharmacy, there is no official age limit and few limitations regarding quantity, because the employees are trained healthcare personnel.

Criteria for OTC Status and Different Categories

It is important that self-care is done in a safe way so that a minor ailment does not turn into a severe condition needing hospitalization.

Whether a medicine is allowed OTC status or not is usually decided by the Norwegian Medicines Agency (NOMA) and some of the criteria NOMA assess are (SLV, 2021):

- Low general toxicity and no relevant reproductive toxicity, genotoxic or carcinogenic properties
- Low risk of known serious adverse reactions in the general population in normal dosages

- Very low risk of unknown serious reactions
- No interactions with commonly used medicines which can produce serious adverse reactions
- Condition or symptoms for indicated use can be assessed correctly by the patient
- Can be used without medical supervision, hence no parenteral medications
- Risk and consequences of incorrect use are low and harmless

Based on the above listed criteria for OTC status there are now three different categories of OTCs in Norway:

1. Most OTCs are available in pharmacies, grocery stores, kiosks, and fuel stations
2. Some are only available in pharmacies, but to be found in the self-selection area, such as combinations of paracetamol/caffeine, or aciklovir/hydrocortisone
3. Two products are (presently) kept behind the counter and the customer is given oral guidance: Viagra Reseptfri™ (sildenafil) and Duraphat™ (sodium fluoride)

Conclusion

The included articles, in addition to our own multi-disciplinary experiences, indicate that incorrect use of medicines endangers patient safety and may have serious consequences for both the patient and society. The common theme of most barriers connected to incorrect use of medicines seems to be communication. It is therefore essential for healthcare providers to have good communication skills, and to be able to provide patient-centered communication and counseling of high quality. This may be the path towards optimizing use of medicines and ensuring patient safety. To improve patient-centered communication and counseling, teaching communication, as well as training courses, should be included in the curricula for healthcare providers in addition to post-graduate training.

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