

Delivering pharmaceutical care in the Netherlands: practice and challenges

In this article, **Meindert Boisen**, describes pharmaceutical care in the Netherlands

Pharmaceutical care has been recognised by the International Pharmaceutical Federation (FIP) as one of the guiding principles within good pharmacy practice (see Panel 1).¹

It can be seen as the top layer of the pyramid of activities in a pharmacy. It represents the added value to the dispensing process and the direct application of clinical pharmacy to patients, respectively at the base and the middle of the pyramid.²

In the Netherlands pharmaceutical care is better known as “pharmaceutical patient care”. The Royal Dutch Pharmaceutical Society (KNMP) says: “Pharmaceutical patient care is the provision of care by the pharmacy team, directed towards the individual patient, in relation to pharmacotherapy, with the objective of increasing the quality of life of the patient involved.”

Much of the support in developing and implementing pharmaceutical patient care comes from the Academic Institute of the KNMP, which added the word “responsible” to align the term with other regulatory frameworks on quality in health and pharmaceutical care. Responsible care, as defined by the Dutch Act for Quality in Health Care Organisations, should be of a good quality, effective, efficient, directed towards the patient and targeted towards the real demands of the patient.³

The goal of high quality care has been pursued in three main ways, which I will now discuss in turn.

Pharmacotherapeutic forums

Pharmacotherapeutic forums, in which currently 95 per cent of GPs and pharmacists take part, can be seen as an example of step “C” of the pharmaceutical care pyramid (see Panel 1). In approximately 800 forums GPs and pharmacists meet six to eight times a year to reach agreements on pharmaceutical care in their locality. Forums are embedded in the national structure of the National Association of General Practitioners, the District General Practitioners Associations and the KNMP departments. Moreover, medical specialists and hospital pharmacists are encouraged to join these forums, which are then referred to as interdisciplinary pharmacotherapeutic forums. In 1999, eight experiments with such forums were set up that focused on co-



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operation between, and alignment of, outpatient and inpatient pharmaceutical care. These forums aim to promote quality and efficiency in the provision of pharmaceutical care, often via the development of a regional formulary and with the involvement of (local) health insurers.⁴

Data searches

Historically, Dutch pharmacy has put great emphasis on information technology. Among other things, this has resulted in establishing the Foundation for Pharmaceutical Statistics by the KNMP in 1990. In 2003 more than 1,500 of the 1,650 community pharmacies in the Netherlands were supplying the foundation with their data, amounting to 13 million patients. For each dispensed drug or medical aid, the dispensing pharmacy, the health insurer that does or does not reimburse, the prescribing physician and the patient for whom the prescription was issued are registered. The foundation supports pharmacies with data searches on compliance with medicines for osteoporosis, treatment of angina pectoris, treatment of glaucoma, and the use of hormone replacement therapy. Pharmacists can use these searches in order to identify patient groups at risk and take the necessary action.⁵

Quality assurance

Pharmaceutical provision in the Netherlands is mostly self-regulated. Since the introduction of the Netherlands Dispensing

Panel 1: FIP statement of professional standards

Pharmaceutical care is the responsible provision of pharmacotherapy for the purpose of achieving definite outcomes that improve or maintain a patient's quality of life. It is a collaborative process that aims to prevent or identify and solve medicinal product and health-related problems. This is a continuous quality improvement process for the use of medicinal products.

The goal of pharmaceutical care is to optimise the patient's health-related quality of life and to achieve positive clinical outcomes. To achieve this goal a structured approach is needed, which comprises distinctive steps:

- Pharmaceutical care requires that a professional relationship between the patient and the pharmacist must be established and maintained
- Pharmaceutical care requires that records of medication provided to a patient must be kept and that, with the patient's informed consent, additional patient-specific information must be collected, organised, recorded, monitored and maintained
- Pharmaceutical care requires that patient-specific medical information must be evaluated and, in the case of prescribed medicines, a therapy plan developed involving the patient and the prescriber

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Chemists Standards in 1996 by the KNMP, guidelines have been formulated with respect to the delivery of patient-focused care. The standards are based on the Act for Quality in Health Care Organisations which, among other things, regulates the mandatory quality system for all organisations that provide care to patients in the Netherlands.⁶ They distinguish between process and structural standards (see Panel 2).

A substantial part of the discussion around the quality of the contribution of the pharmacy in the delivery of pharmaceutical care is related to the presence of the pharmacist. Here I will focus on the presence of the pharmacist in relation to dispensing and management of medicines, and thus will leave the discussion around ownership aside. I will first discuss the quality of pharmaceutical care within the context of the individual pharmacy and then consider some data bearing on the quality of multidisciplinary pharmaceutical care.

In July 2003, representatives of the organisation Inspection for Health Care visited a sample of 196 pharmacies in order to establish the quality of implementation of the dispensing chemists standards. During an unannounced visit a semi-structured interview was conducted with the pharmacist and a pharmaceutical technician. If the former was not present at the time of the visit, he or she was interviewed via telephone. Scoring was based on four levels of compliance with the standards:

1. Standard is not present and not complied with
2. Standard is present, but is not complied with consistently, (written) procedures are not uniformly recorded
3. Standard is operational, is complied with, written procedures are recorded
4. As with 3 and supplemented with regular evaluation and readjustment

The unannounced inspection found pharmacists present in 70 per cent of the sites covered (Table 1). This is only a random indication at the time of the inspection. The score also relates to the accessibility of the pharmacist when not present at the pharmacy. A level 3 score indicates that a written note is available that states how the pharmacist can be reached if not present in the pharmacy. This note should be easily accessible for staff (publication board, pharmacy calendar, logbook). In case of more than one pharmacist working in a pharmacy it should be noted which of them is available.

Pharmacies have an important role in advising patients on the use of medicines. Thus, one of the basic tasks of a pharmacy team is to give written and oral information when dispensing a medicine. From the results it can be inferred that much can still be done.

In 34 per cent of the pharmacies written information is handed over when a medicine is dispensed, even if the medicines does not have a standard patient leaflet (Table 2). In

Panel 2: Netherlands Dispensing Chemists Standards⁶

Standards related to the delivery of pharmaceutical care ("process standards")

- a. Care directed to the individual patient/client, eg, dispensing of medicines and other products; provision of information; medication management or supervision; manufacturing
- b. Care directed to groups of patients and the public, alone or in combination with other providers, eg, pharmacotherapeutic forum
- c. Development of pharmaceutical care

Standards related to the pharmacy as an organisation ("structural standards")

two-thirds of the pharmacies the handing over of written information depends on the demand of the client and the availability of the information. This is mainly applicable to (bulk) pharmaceutical preparations that are manufactured in the pharmacy. Relevant handbooks and electronic reference systems are used insufficiently. In case of a first prescription, written information is almost always handed over. It appears from the practical checks that this is not the case with repeat prescriptions.

When looking at medicines management, Inspection for Health Care focused on first prescription, overdosing and interactions. The results for all three of these standards were similar. Initially, the signalling of a problem is generally adequate (mostly as a result of computerised medicines management systems), the only exception being the signalling of overdose of extemporaneously prepared medicines. Many pharmacies receive an insufficient score when it comes to the assessment and management of the signals. Inspection for Health Care relates this to the lack of a uniform, consistent treatment of the assessment and management of a signal, and to the lack of written procedures. A positive fact is that, retrospectively, more than 90 per cent of the way signals are managed can be traced.

As noted above, establishing effective pharmacotherapeutic forums is seen to be a priority in managing good pharmaceutical care in the Netherlands. A recent survey by the Dutch Institute for Efficient Provision of Medicines has sought to establish the quality of 767 pharmacotherapeutic forums that operate in primary care. Pharmaceutical coordinators from 397 forums responded (thus a response rate of 52 per cent). A quarter of the respondents state that the objective of their forum is to "reach agreements", and 11 per cent combines this with "testing of the agreements". In 1999 these figures were much lower; 16 per cent and 1 per cent respectively. Only 17 per cent of the forums have used quantitative data on prescribing

and dispensing in the period of the research, when testing agreements.⁸

Challenges ahead

Although the place of community pharmacy in the Netherlands health care system is generally secure it is, nevertheless, facing a number of threats or challenges.

Striking a balance with the purchasing role

The 1999 agreement between the KNMP and the Ministry of Health, Welfare and Sport focused on a trade-off between the magnitude of the dispensing fee and that of the claw-back of discounts received by pharmacists from wholesalers and manufacturers. On the part of the Ministry of Health the agreement not only allowed for an immediate "saving" on pharmaceutical spending but also for a shift in the role of pharmacists away from their purchasing role, towards more extensive provision of pharmaceutical care.

The latter is congruent with the objective of the KNMP that managed to secure the inclusion of community pharmacists¹ in the Medical Treatment Agreement Act. This Act regulates the relationship between patients and health professionals and in practice their inclusion means that pharmacists will share co-responsibility for the result of treatment. This is different from their current legal position and has stirred up considerable debate among doctors since they argue that it may imply that they will be forced to include the therapeutic indication on the prescription.⁹

Deregulating community pharmacy — aligning competition and quality

In line with the government policy to ensure more competition, the provision that allows hospital pharmacies only to dispense medicines to patients who are admitted to their own hospital has been changed to allow outside provision of medicines by hospital pharmacies. This has resulted in a number of initiatives of so-called "polyclinic pharmacies", instituted both by hospitals alone and in co-operation with community pharmacists. Critics argue, however, that hospital pharmacists are not equipped to provide pharmaceutical patient care in the way community pharmacists can.^{10,11}

A barrier to further opening of the market has been the provision in the Act that states that "a pharmacist can only be registered as a head pharmacist with, and thus be responsible for, one pharmacy at the time". Deleting this provision from the Act will mean that one pharmacist can be responsible for a number of pharmacies. The KNMP strongly opposes the plan on the basis of an anticipated loss of quality assurance in pharmaceutical provision and an increase in costs.¹²

Generic substitution Substitution by pharmacists is a subject of discussion in the Netherlands, more so now that pharmacists will be co-responsible for the outcomes of pharmaceutical care. Recently, Inspection for Health Care has issued a policy regarding

Table 1: Preconditions for pharmaceutical care evaluated — presence of pharmacist

	Accessible if absent (%)
Level 1	3
Level 2	38
Level 3	48
Level 4	11

Table 2: Preconditions for pharmaceutical care evaluated — written information

	Written information provided (%)
Level 1	1
Level 2	65
Level 3	24
Level 4	10

generic substitution by pharmacists. First and foremost, it values substitution by pharmacists as a means of cost containment. Secondly, it is adamant in stating that it receives few complaints about substitution in practice; in 99 per cent of cases the process works as it should. Thirdly, it recognises that recent court cases have underlined the fact that a pharmacist is only allowed to substitute when given the consent of both the physician and the patient, but is wary of the effect this ruling has on the freedom of pharmacists. As a result Inspection on Health Care proposes that: "It is justified to dispense a generic form of a medicine if this is done with reference to collective agreements, since in those cases the physician has given consent in advance. The proposition is that in these cases there is no deliberate infringement of the law on branding of products. If a physician wants to keep to prescribing a branded drug, he or she could, to avoid any misunderstanding, make this known in the collective agreements or mark the intent on the prescription (with a "!" or "@").¹³ In effect this means that the collective agreements such as those made within pharmacotherapeutic forums are seen as advance consent for substitution. The National Association of General Practitioners strongly opposes the policy. It is of the opinion that patients have the right to receive the medicine that was prescribed to them on medical grounds and that the pharmacist can only dispense a different form if the patient and the doctor agree."^{14,15}

Drug utilisation research

Pharmacoepidemiology and pharmaco-economics are the two sciences that focus on the effect of pharmaceuticals when used in practice. Where medical grounds for prescribing the medicine and dose, costs, duration of use, compliance and genetic make up of the

patient are different from those in clinical trials, drug outcomes research can give an insight into the use of medicines in practice. Pharmacists in the Netherlands contribute to these sciences by sharing their data on dispensing of medicines and medicines management with the independent research institute PHARMO.² PHARMO has, for example, researched the relation between daily use of statins and its effect on low density lipoprotein- and high density lipoprotein-cholesterol. This research has shown that patients could benefit from a shift from one statin to another if they do not reach the target level of total cholesterol; 20 to 30 per cent of patients stop statins too early. In conjunction with the Academic Institute of the KNMP, these results are fed back to community pharmacists in order to improve pharmaceutical care.¹⁶ The Foundation for Pharmaceutical Sciences offers members standard searches through its databases that can assist in selecting specific patient groups for intervention.

Admissions to hospital and the use of pharmaceuticals

Extrapolation of data from a meta-analysis of international literature, has led KNMP's Academic Institute to suggest that as many as 131,000 hospital admissions per year (8.2 per cent) are related to adverse drug reactions. The authors used the World Health Organization definition of adverse drug reactions that excluded therapeutic failure, intentional and accidental poisoning and drug abuse. These admissions would cost society approximately €186–430m each year. Moreover, these drug-related admissions account for 16.6 per cent of all admissions among the elderly, compared with 4.1 per cent in younger people. Importantly, 76,800 of the 87,400 drug-related admissions of the elderly are characterised as being preventable. Many of the studies that were reviewed suggested obvious solutions such as: improve the quality of prescribing; improve patient compliance; improve communication with the patient; and improve medicines management by the better use of computer systems and investing in capacity. All of these call for the pharmacist to be proactive in delivering pharmaceutical care. In this they should focus on prevention rather than being reactive when things go wrong.¹⁷

Conclusion

Pharmaceutical provision in the Netherlands has reached a high standard in recent decades. Medicines management and the use of information technology have contributed to pharmacists being regarded as highly qualified providers of health care.

Nevertheless, Dutch pharmacy still has a long way to go. Being able to follow-up on the co-responsibility for patients, organising medicines management in such a way that medication errors (and subsequent hospital admissions) are prevented, and creating effective systems of co-operation between com-

munity and hospital pharmacists, are some of the challenges ahead.

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