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Collaboration in healthcare, the tango to drug safety

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Summary

This thesis describes a number of research projects in primary healthcare in the Netherlands. Subject of study is how pharmacists and general practitioners (GPs) collaborate to achieve more rational drug use. 'More rational drug use', here, also means 'safer drug use': each drug is safe as long as it is used appropriately. In the Netherlands the –currently unique– situation exists that virtually all GPs and pharmacists participate in peer review or audit meetings. These are meetings between relatively small groups of pharmacists and GPs that discuss a wide variety of aspects to do with drug use. The frequency varies: some groups have monthly meetings and other groups meet twice a year. Peer review and audit meetings led to the research presented in this thesis.

Chapter one, the introduction, describes two aspects. §1.1 looks back in time. How has the collaboration between pharmacists and physicians evolved; what do peer review meetings originate from? Over the centuries, 'the pharmacist' has evolved from a sub-specialty of medicine to its own academic profession. From §1.1 we see that there always has been some kind of collaboration between physicians and pharmacists. In some places in the Netherlands, intensive collaboration between the two professions evolved already in the 16th century. However, over the centuries, the relationship between physicians and pharmacists can be seen as a 'love-hate relationship', in which the two professions continuously irritated each other because they intruded on each other's territory. Each felt threatened by the other and at the same time the professions needed each other to provide good patient care.

Here, the expression 'it takes two to tango' comes to mind. This expression means as much as 'optimal collaboration needs commitment from both' and this metaphor seems very appropriate for the situation. In the beginning, partners step on each other's toes a lot. In the end, it can be great fun to dance the tango 'as one' in a ballroom full of tango dancers. In the same way, good collaboration between pharmacists and physicians can lead to safer drug use. If both professions collaborate well in their aim to achieve rational drug use, this will lead to safer drug use, hence better patient care.

§1.2 provides a broader perspective: internationally, how do various professions aim for safer drug use, and who are responsible? To aim for safer drug use in fact means changing behaviour: behavioural change for instance by the drug prescriber or dispenser, or the patient. This section provides an overview of methods that are available to help achieve such changes in behaviour.

Although virtually all pharmacists and GPs participate in peer review or audit, clearly the various groups have different interpretations of this type of meeting. Also, the groups expressed a need for overviews of prescribing behaviour: how effective were the meetings

in changing prescribing behaviour? And can the confrontation with one's own prescribing behaviour be an impulse to change that behaviour? Can it be stimulating to see that colleague prescribers demonstrate different behaviour? In §2.1 the various possibilities are discussed in which feedback on prescribing can be given, depending on the aims.

Most prescription data are stored in the pharmacy's computer system. However, to use these data to generate overviews of prescribing was quite complicated. Therefore, the Social Pharmacy & Pharmacoepidemiology group in Groningen have developed a computer program that generates such overviews. This program is called AFTO (*Analyse voor FarmacoTherapie Overleg* –in English: analysis for peer review meetings). It enables pharmacists to make graphic overviews of which drugs have been dispensed to how many patients for which GPs. §2.2 describes the development and nation-wide application of the AFTO program.

The AFTO program provides more possibilities than just making graphs. AFTO organises the pharmacy data in such a way that it facilitates the conduct of advanced drug utilisation studies and various pharmacoepidemiological studies. An example is given in §2.4, a study of changes in prescribing of third generation oral contraceptives. In October 1995, studies were published that demonstrated an association between use of third generation oral contraceptives and the occurrence of deep vein thrombosis. §2.4 shows that after this 'pill scare', especially in the youngest age group, third generation oral contraceptives were used less. Furthermore, we saw no panic reaction: people did not suddenly all switch from third to second generation oral contraceptives. However, after October 1995, when women switched from one oral contraceptive to another, chances were higher that this was a second generation oral contraceptive, than before October 1995. For §2.3 (the development of a model to select people who are eligible for an influenza vaccination) we also used the AFTO program, and also for a study that has been published but not incorporated in this thesis¹. As a result, chapter 2 is a chapter that describes how the use of pharmacy data in several stages of drug utilisation review can support more rational drug use.

In chapter 3, peer review meetings are discussed in-depth. In the Netherlands, 45 peer review groups were willing to participate in a study of the state of the art and effectiveness of peer review meetings. To gain insight in the process of these 45 groups' meetings, we developed a questionnaire: was the meeting considered useful, have the participants learnt anything from it, and how did communication processes between the participants evolve? The factor analysis that is described in §3.1 distinguishes two factors: relational aspects between group members and structure and contents of the meeting.

Furthermore, of all these groups a pharmacist and a GP were interviewed with respect to various aspects of their peer review meetings. Because we did not expect these 45 groups to be representative of all peer review groups in the Netherlands we have also held a questionnaire survey among a random sample of 880 GPs. The combination of interviews and questionnaires gave the impression that peer review groups vary in the way that they

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conduct their meetings and the follow up of these meetings. Also, satisfaction with peer review differs; this varies from 'a waste of time' to 'the main source of postgraduate education'. A general conclusion is that the pharmacist contributes more to peer review than the GP (§3.2).

Next to general aspects of peer review, the survey among GPs focused on GPs' knowledge of common guidelines for rational drug use. There are information sources exist publish such guidelines, and which GPs use a lot in the preparation of peer review meetings (*Dutch National Formulary, or 'Farmacotherapeutisch Kompas'; GP guidelines or 'NHG Standaarden', and the Drug Bulletin or 'Geneesmiddelenbulletin'*). From the survey, we know to what extent GPs state that they prescribe according to these guidelines: the survey reflects reported behaviour. The results do not demonstrate any correlation between participation in peer review and reported prescribing behaviour according to national guidelines. As virtually everyone participates in peer review meetings, this is not surprising. However, GPs who were more content with their peer review meetings, on average had a better score on this questionnaire of reported behaviour. Another result is that in general, results were less positive than we expected: only 37% of the GPs had an overall score on the list that indicated general adherence to the national guidelines (§3.3). Another issue that became apparent in this study was the influence that specialists' prescribing has on the feasibility of agreements that are made during peer review meetings. Generally, specialists do not participate in primary care peer review meetings. §3.4 demonstrates to what extent specialists' prescribing influences GPs' prescribing of some cardiovascular drugs. Sixty-five percent of these drugs were initiated by specialists, which indicates that this is indeed a factor that may hamper making agreements about this drug group.

Finally, §3.5 gives a longitudinal analysis of the effects of peer review meetings on prescribing and dispensing behaviour: 33 meetings were evaluated and for 45% of them, a statistically significant effect could be demonstrated. In general, the effects are not very large. The effectiveness of peer review seems to be achieved sooner when the meetings are supported by continuous feedback on prescribing, by lists with patient names for whom the agreements involve a necessary change in drug use, and when the agreements are clear, unequivocal, and relatively easy to follow up.

Chapter 4 places the research presented in this thesis in a broader perspective. In many ways, the Dutch situation shows parallels with the situation in other countries. On top of that, peer review groups in the Netherlands have opportunities –because of the organisation of healthcare, because of the relatively small distances in this country, and because of the organisation of pharmacy data- that are unique in the world. We urge to make optimal use of those possibilities, as described in the thesis. Furthermore, we suggest the need to train clinical insight of pharmacy students, the option of pharmacists and GPs to have a short training period in each other's practices during their pre-registration

training, and the potential benefits of a more intensive collaboration between university and practice to achieve more rational –hence, safer- drug use.

Reference

¹ Ploeger MJ, Draadger GA, de Vries CS, de Jong-van den Berg LTW. Interactief verkeer(d)? Interfererende geneesmiddelen met orale anticonceptiva. Pharm Weekbl 1996;131(31):876-80.

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