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Reducing the use of out-of-hours primary care services: A survey among Dutch general practitioners

Ellen Keizer, Irene Maassen, Marleen Smits, Michel Wensing and Paul Giesen

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KEY MESSAGES

- GPs believe that the number of patient contacts with the GP cooperative could be reduced.
- Strategies to reduce the use of GP cooperatives perceived as both effective and advisable by GPs are introducing co-payment for patients, stricter triage and a larger role for the telephone consultation doctor.

ABSTRACT

Background: Out-of-hours primary care services have a high general practitioner (GP) workload with increasing costs, while half of all contacts are non-urgent.

Objectives: To identify views of GPs to influence the use of the out-of-hours GP cooperatives.

Methods: Cross-sectional survey study among a random sample of 800 GPs in the Netherlands.

Results: Of the 428 respondents (53.5% response rate), 86.5% confirmed an increase in their workload and 91.8% felt that the number of patient contacts could be reduced. A total of 75.4% GP respondents reported that the 24-h service society was a 'very important' reason why patients with non-urgent problems attended the GP cooperative; the equivalent for worry or anxiety was 65.8%, and for easy accessibility, 60.1%. Many GPs (83.9%) believed that the way telephone triage is currently performed contributes to the high use of GP cooperatives. Measures that GPs believed were both desirable and effective in reducing the use of GP cooperatives included co-payment for patients, stricter triage, and a larger role for the telephone consultation doctor. GPs considered patient education, improved telephone accessibility of daytime general practices, more possibilities for same-day appointments, as well as feedback concerning the use of GP cooperatives to practices and triage nurses also desirable, but less effective.

Conclusion: This study provides several clues for influencing the use of GP cooperatives. Further research is needed to examine the impact and safety of these strategies.

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After-hours care; primary healthcare; non-urgent; co-payment; health services accessibility

Introduction

Out-of-hours primary care in the Netherlands generally takes place at general practitioner (GP) cooperatives.[1,2] These GP cooperatives are set up for urgent help requests that cannot wait until the regular consulting hours of the patient's own GP. Key features of GP cooperatives and the charging system in the Netherlands are listed in Table 1. Telephone triage nurses assess the urgency of the patient's health problem and make a decision about the appropriate action to be taken: refer the patient to the emergency department or ambulance service, make an appointment for GP consultation or home visit, give the patient self-care advice by telephone or advise to visit their own

GP the next working day.[1] In the Netherlands, since the establishment of GP cooperatives in the year 2000, the number of patient contacts at GP cooperatives increased to 4 million contacts in 2014 (250 contacts per 1000 inhabitants per year).[3] Still about half of all contacts at the GP cooperatives, as well as one third of all clinic consultations are non-urgent (U4 or U5).[3] From a medical perspective, a proportion of non-urgent health problems can wait until office hours or be managed by the patient without further professional care. Likewise, at the emergency department (ED) there is also a great demand for care of patients with non-urgent problems.[4] Contacts of patients with unnecessary problems lead to inefficient use of

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Table 1. Features of general practitioner (GP) cooperatives in the Netherlands and charging system.[1,3,30,31]

Theme	Feature
General	<ul style="list-style-type: none"> • Out-of-hours primary care has been provided by large-scale GP cooperatives since the year 2000. • Every GP has to do a minimum number of shifts at the GP cooperative to maintain registration as GP. • Participation of 50–250 GPs per cooperative with a mean of 4 hours on call per week with compensation of about €65/hour. • About 120 GP cooperatives in the Netherlands. • Population of 100,000 to 500,000 patients with an average care consumption of 250/1000 inhabitants per year. • Out-of-hours defined as daily from 5 p.m. to 8 a.m. holidays and the entire weekend. • Patients are classified in urgency categories from high to low urgency (U1:2.1% U2:13.7% U3:35.3% U4:20.9% U5:27.5% in 2014). • Per shift GPs have different roles: supervising telephone triage, doing centre consultations or home visits. • The triage is supervised by telephone consultation doctors: they can be consulted in case of doubt, and they check and authorize all calls.
Location	<ul style="list-style-type: none"> • GP cooperative usually situated in or near a hospital. • Distance of patients to GP cooperative is maximally 30 km.
Accessibility	<ul style="list-style-type: none"> • Access via a single regional telephone number, meaning the first contact mostly is with a triage nurse (only 5–10% walk in without a call in advance). • Telephone triage by nurses supervised by GPs: contacts are divided into telephone advice (40%), centre consult (50%), or GP home visit (10%).
Facilities	<ul style="list-style-type: none"> • Home visits are supported by trained drivers in identifiable fully equipped GP cars (e.g. oxygen, intra venous drip equipment, automated external defibrillator, medication for acute treatment). • Information and communication technology (ICT) support including electronic patient files, online connection to the GP car, and sometimes connection with the electronic medical record in the GP daily practice.
Charging system	<ul style="list-style-type: none"> • Healthcare is largely covered by health insurance. • All residents over 18 years pay a monthly premium to their health insurance provider. There is no premium for children. • Employers pay a part of their employee's income to the tax administration for healthcare costs. • Patients do not have to pay an additional amount for GP care, both inside and outside office hours. • Residents over 18 years must pay an annual deductible (€375 in 2015) in case of use of healthcare (including emergency departments). This deductible is not applicable for GP care and also not for children.

resources.[5–7] In the Netherlands, the total cost of evening duties, night duties as well as weekend duties have increased in the period between 2010 and 2014 by more than 62 million euros (26%).[6] A previous study showed that 85% of GPs feel that patients receive too much care at the out-of-hours services.[8] For a lot of GP cooperatives the high number of contacts leads to a high workload, which could in turn lead to negative results for the quality of care and the motivation of GPs to be on duty.[9]

Little is known about strategies to reduce the use of GP cooperatives. However, there are several studies about strategies to reduce non-urgent use of the hospital ED.[10] Many of these strategies focus on co-payment for patients or a combination of financial incentives and education outreach.[11–13] The objective of this study was to identify views of GPs to influence the use of the out-of-hours GP cooperative.

Methods

Design and population

We performed a cross-sectional survey study among a random sample of 800 GPs, which is almost 10% of all GPs in the Netherlands.[14] We have taken the sample from the address list of the Netherlands Institute for Health Services Research (NIVEL). Using computer generated numbers in SQL, they took a random sample of

all GPs, excluding those who had recently received an invitation for participation in another study and those who stated not to be willing to participate in research. We sent all 800 GPs a survey in September and October 2012, to be filled in on paper or digitally. GPs received a reminder after two weeks. Ethics approval was not needed for this study.

Questionnaire

We developed our questionnaire based on an inventory of policy advisers and managers of GP cooperatives, in which they were asked about possible steps that had been taken to reduce the use of GP cooperatives, and based on literature and existing questionnaires. The resulting concept was presented to three successive expert panels, asking them to assess the questionnaire on phrasing and comprehensiveness. The expert panels consisted of three researchers, three GPs and two representatives of associations (the Dutch Association of Out-of-hours Services, now called InEen, and the Dutch College of General Practitioners; NHG).

The respondents were able to answer questions on patients' motives for contacting a GP cooperative on a three-point scale ('unimportant', 'somewhat important' and 'very important'). The GPs reported their own perceptions of the patients' motives for contacting the GP cooperative. Questions on the role of telephone triage and on strategies for reducing the number of patient

Table 2. Reasons for patients with non-urgent problems to visit the GP cooperative, according to GPs. Other reasons mentioned in an open-ended question were impatience, poor knowledge about body and health, demanding and idle patients, poor triage and/or organisation of GP cooperative.

	Not important (%)	Somewhat important (%)	Very important (%)
The development of the 24-hours service society ($n = 426$)	1.9	22.8	75.4
Worry or anxiety of the patient ($n = 427$)	0.7	33.5	65.8
Easy accessibility of the GP cooperative ($n = 426$)	7.7	32.2	60.1
Not having time during the day to visit the GP ($n = 426$)	3.8	42.7	53.5
Patient does not want to take any risk ($n = 423$)	3.5	44.2	52.2
Not knowing when to visit the GP cooperative ($n = 424$)	13.2	52.4	34.4
Familiarity with the GP cooperative ($n = 424$)	15.8	51.4	32.8
Anonymity at the GP cooperative ($n = 424$)	45.3	37.0	17.7
Limited accessibility of patient's own GP: waiting time for a consultation is too long ($n = 425$)	42.8	45.6	11.5
Second opinion ($n = 424$)	25.9	63.4	10.6
Limited accessibility by telephone of patient's own GP ($n = 425$)	49.4	40.7	9.9
Satisfaction with the GP cooperative ($n = 423$)	47.8	45.6	6.6
Bad relationship with patient's own GP ($n = 427$)	54.8	43.3	1.9

contacts could also be answered on a three-point scale ('no influence' 'slight influence' or 'a lot of influence'); whereas questions on the advisability of the strategies could be answered on a two-point scale ('advisable' or 'not advisable'). The respondents could mention other motives and strategies than those mentioned in the questionnaire, in open-ended questions.

Analysis

The analyses are descriptive and the results are reported in percentages. The data have been analysed using SPSS 20.0.

Results

Respondents' characteristics

The response to the questionnaire was 53.5% ($n = 428$). 53.2% of the respondents was male, the mean age was 48 (SD 8.5). Most GPs worked in a dual practice (31.5%) or a group practice (30.8%). The others worked in a solo practice (20.0%), a healthcare centre (15.3%) or somewhere else (2.4%). Most of them worked in an urban area (41.7%) or in a suburban area (41.7%), and 16.5% worked in a rural area.

Workload at the GP cooperative

The majority of GPs indicated that they have experienced an increase in workload at the GP cooperative for a few years now (46.7% 'a little' and 39.8% 'a lot'). Almost all GPs felt that the use of the GP cooperative could certainly be reduced (46.6% 'a little' and 45.2% 'a lot').

Patients' motives

Table 2 shows the possible motives, according the GPs, for visiting the GP cooperative with a non-urgent problem. The five motives that scored the highest percentage of GPs who reported this motive as 'very important' were the development of the 24-h service society (75.4%), worry or anxiety (65.8%), the easy accessibility of the GP cooperative (60.1%), not having the time during the day (53.5%) and not wanting to take any risks (52.2%).

Triage

A substantial part of the GPs (83.9%) felt that the way telephone triage is currently performed leads to many patients with non-urgent problems unnecessarily getting a clinic consultation or a home visit. 87.0% thinks this is because the triage system (mostly Netherlands Triage Standard (NTS)) is not strict enough (62.4% 'a little'; 24.6% 'a lot'), while 84.6% feels that it is caused by the characteristics of the triage nurse, such as experience, education, attitude and personality (60.8% 'a little'; 23.8% 'a lot').

Strategies to reduce the use of GP cooperatives

We presented the respondents with a number of strategies that could possibly lead to a reduction in the use of GP cooperatives. Table 3 shows how they assessed the effectiveness of these strategies, while also reporting whether or not they found them advisable. Their assessment of the effectiveness of co-payment for patients strongly depended on how much the contribution would be: the higher the amount, the more influence the respondents expected of it. An additional

Table 3. Influence and advisability of strategies to reduce the use of GP cooperatives.

	No influence (%)	Some influence (%)	A lot of influence (%)	Advisable (%)
Financial incentives				
• introducing co-payment of < €10 per contact (<i>n</i> = 415 ^a /397 ^b) ^c	21.9	58.1	20.0	47.4
• introducing co-payment of €10–30 per contact (<i>n</i> = 410/412)	4.4	37.1	58.5	39.6
• introducing co-payment of > €30 per contact (<i>n</i> = 404/412)	3.5	11.9	84.7	13.1
• allocating more duties at the GP cooperative to GPs and GP practices with a high non-urgent (U4/U5) use of GP cooperatives (<i>n</i> = 409/416)	64.5	31.3	4.2	13.0
• docking on GPs and GP practices with a high non-urgent (U4/U5) use of GP cooperatives in the reimbursement of the health insurer (<i>n</i> = 405/415)	68.4	27.2	4.4	4.8
Patient education				
• starting a national patient education campaign (by the Dutch College of GPs and the Dutch Association of Out-of-hours Services) on the purpose and the use of GP cooperatives (<i>n</i> = 418/414)	6.2	69.1	24.6	91.5
• giving feedback to frequent users by patients' own GPs (<i>n</i> = 419/415)	8.1	62.1	29.8	89.2
• encouraging using (reliable) health sites such as <i>thuisarts.nl</i> (<i>n</i> = 418/409)	14.6	72.5	12.9	88.5
• informational booklets at the GP practice on the purpose and the use of GP cooperatives (folders, website) (<i>n</i> = 418/412)	13.6	71.5	14.8	85.9
• setting up a national website on the purpose and the use of GP cooperatives (<i>n</i> = 418/408)	30.4	59.3	10.3	72.5
GP practices				
• allocating time during consulting hours to see patients on the same day (<i>n</i> = 418/410)	9.8	48.1	42.1	91.0
• improving accessibility by telephone of the GP practice during the day (<i>n</i> = 421/403)	16.2	54.6	29.2	90.1
• training GPs in encouraging patients self-management (<i>n</i> = 418/406)	32.8	56.0	11.2	55.4
• setting up an evening consulting hour (<i>n</i> = 414/404)	18.8	52.9	28.3	30.7
• introducing an open consulting hour in the late afternoon (<i>n</i> = 414/408)	33.3	54.8	11.8	18.6
• introducing an open consulting hour in the morning (<i>n</i> = 414/407)	53.4	37.2	8.5	17.2
Triage				
• stricter triage (GP cooperatives only to be used for urgent patient contacts) (<i>n</i> = 417/404)	3.1	39.8	57.1	80.9
• larger role for the telephone consultation doctor in dealing with doubtful non-urgent cases (U4/U5) (<i>n</i> = 419/408)	5.0	43.4	51.6	79.2
Feedback				
• annual feedback to the triage nurse about the percentage of consultations and home visits compared to other triage nurses (<i>n</i> = 416/410)	10.7	62.7	26.4	88.0
• annual feedback to GPs of the number of GP cooperative contacts compared to other practices (<i>n</i> = 418/415)	21.8	65.3	12.9	86.0

^a*n* influence.^b*n* advisable.^cOther strategies mentioned in an open-ended question were substitution of care from GPs to nurse practitioners for non-urgent problems and giving feedback to triage nurse on final diagnosis or action.

analysis showed that 32% of the GPs did not want any co-payment at all.

Other financial strategies, such as allocating more duties at the GP cooperative or docking payments on GPs or GP practices with a high non-urgent (U4/U5) use of GP cooperatives were considered not effective and not advisable by the respondents.

Most GPs felt that patient education would be advisable and expected that to be of 'some influence'. This type of patient education informs patients on the use of GP cooperatives by means of a national patient education campaign (91.5%), informational booklets at the GP practice (85.9%) or a national website (72.5%). It also contains strategies such as giving feedback to frequent users in the GP's own practice (89.2%) and

encouraging the use of reliable health sites where patients can find information about their health problem (88.5%).

GPs also preferred some adjustments regarding the accessibility and availability of daytime general practices. Most important in this respect were improving accessibility by telephone (90.1%) and allocating time during consulting hours to see the patient on the same day (91.0%); only a small part of the GPs preferred the introduction of an evening consulting hour (30.7%). A small majority (55.4%) approved of the idea to train GPs in encouraging patient self-management. For the most part the respondents expected these adjustments to have 'some influence'.

Nearly all respondents (96.9%) expected a stricter triage to be of influence (57.1% 'a lot of' influence) in reducing patient contacts, while 80.9% felt that stricter triage would be advisable. There is almost an equal amount of support for the idea to assign a larger role for the telephone consultation doctor in dealing with non-urgent doubtful cases: 51.6% expected this step to have 'a lot of influence', while 79.2% felt it to be advisable.

Eighty-six per cent of the respondents thought it to be a good idea if GPs were to receive an annual overview of the number of GP cooperative contacts from their own practice compared to those from other practices, and 88.0% felt it advisable to give feedback to triage nurses at the GP cooperatives regarding the percentage of clinic consultations and home visits assigned by them compared to that of other triage nurses. The respondents thought for the most part that this type of feedback would have 'some influence' on healthcare consumption.

Discussion

Main findings

A major part of the GPs consulted experience an increase in workload at the GP cooperative, while they all feel that the use of GP cooperatives could be reduced. GPs believe the five most important motives for patients with non-urgent problems to contact the GP cooperative are: the development of the 24-h service society, worry or anxiety, easy accessibility of the GP cooperative, not having the time during the day to go to their own GP and not wanting to take any risk.

A substantial number of GPs feel that telephone triage as it is currently performed leads to many patients with non-urgent problems unnecessarily getting a clinic consultation or a home visit. Telephone triage is a complex and vulnerable part of the out-of-hours GP care process.[15] Previous studies into the assessment of urgency by triage nurses at the GP cooperative show that rather than overestimating the seriousness of the request for help (1–18.8%) triage nurses more often underestimate those requests (7.1–41%).[15–17] The wish for stricter triage is therefore a balancing act: patient safety versus efficiency of healthcare delivery. More efficiency (fewer clinic consultations) may lead to more unsafe situations.

Strategies that GPs consider both effective and advisable in the reduction of the use of GP cooperatives are introducing co-payment for patients, stricter triage and a larger role for the telephone consultation doctor when dealing with non-urgent problems. GP

support for co-payment decreased when the suggested amount of the contribution increased.

Comparison with other studies

The motives for patients contacting the GP cooperative that were reported by the GPs in our survey as being important were partly matched by those of patients themselves. For example, worry was reported by patients as being the main reason for contacting the GP cooperative, and had the second highest proportion of GP respondents in this survey reporting this reason as 'very important'. [18,19] Yet, a lot of our respondents think that the reason to contact the GP cooperative often is the fact that patients do not have the time to go to their own GP's consulting session during the day. However, earlier research showed that patients do not consider this an important motive at all.[18] Moreover, GPs in our study did not consider limited accessibility of daytime general practices as an important motive for patients to visit the GP cooperative. In contrast, data on patient contacts show that practices with limited telephone accessibility generate a higher number of patient contacts at the GP cooperatives as opposed to practices that can be more easily contacted by telephone.[20]

A previous Dutch study among 1022 GPs showed that 77% would prefer co-payment for patients visiting the GP cooperative.[21] In many other Western countries co-payment for primary care occurs.[22] In New Zealand, Australia and to a lesser extent in the UK, there is a lot of discussion about the pros and cons of co-payment.[23] Some studies show that co-payment is not an important driver for patient choice.[24,25] Other studies show that co-payment reduces the frequency of care use and that this decrease is greater for the social deprived patient groups.[12,26,27] So, co-payment may lead to more inequity and to unsafe situations for the social deprived patients.

The respondents in our study prefer a larger role for the telephone consultation doctor. Previous studies show that using a telephone consultation doctor leads to an increase in the number of consultations by telephone, while the number of consultations at the GP cooperative remains the same and the number of home visits decreases.[28] However, it has not been proven if the telephone consultation doctor is cost-effective.

Strengths and limitations

We examined the views of a large sample of GPs about ways to reduce the use of the out-of-hours GP

cooperatives. Also, we asked them to mention patient's motives to visit the GP cooperative for non-urgent problems to compare their views with those of patients. Moreover, it can help to understand why GPs gave certain answers on the question about the strategies to reduce the use of the GP cooperative.

A limitation of our study is that there were no locums involved, although they take care of part of the duties at the GP cooperative. It is possible that their judgement on the workload will be less negative. However, we do not expect this limitation to have a major effect, since most of the duties at the GP cooperative are performed by GPs themselves.[9]

The response rate of 53.5% was similar to response rates in other GP survey studies.[29] It is possible that the opinion on this subject of the non-respondents differed from the respondents, which could have led to bias. In a non-response analysis, we found that there were no statistical differences in gender between the respondents and non-respondents. Moreover, the characteristics of our respondents are comparable to those of the national GP population in terms of age, gender and practice form.[14]

A last limitation is that the views of the GPs may be influenced by the payment system at the GP cooperative. In the Netherlands, the GPs get a fee per hour. If they were paid per patient contact, they may have had a more positive view about workload and non-urgent contacts.

Implications for future studies

Our results provide us with leads for further research. An in-depth qualitative study could provide more insight into GPs' opinions. It is not surprising that the GPs in our study were not in favour of introducing strategies that had negative consequences for themselves (e.g. more duties per GP). Therefore, it would be useful to examine what other involved healthcare professionals, such as triage nurses and locums, patients and directors/managers of the GP cooperatives think about these measures.

The role of the telephone consultation doctor in reducing the use of the GP cooperative could also be a subject of further study. Finally, a further study into the consequences of introducing co-payment would be useful. We recommend examining whether it is advisable to apply the deductible to the use of the GP cooperative (see Table 1 for information about the Dutch charging system).

Conclusion

GPs think that steps have to be taken to reduce the use of GP cooperatives. Examples of effective and advisable strategies are introducing co-payment, stricter triage and a larger role for the telephone consultation doctor. Further research is necessary to study the actual effects of such strategies on the use of the GP cooperative and patient safety.

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Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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