Evaluation of primary care services in Hungary

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Abstract

Background. It is a major challenge to show what configurations of primary care (PC) is associated with better outcomes, in terms of quality, equity and costs. The QUALICOPC Study tried to analyse and compare them within 35 countries, using validated questionnaires filled by family physicians/general practitioners (GPs). This paper aims to provide data of the Hungarian-arm of the QUALICOPC Study; to compare some findings to that of other participating countries; to give a comprehensive overview about the recent Hungarian PC system.

Methods. Altogether 222 questionnaires were completed by Hungarian GPs, delivered by fieldworkers, in a geographically representative distribution.

Results. Financing are based mostly on capitation, with smaller additional compensatory elements and minor quality incentives. The gate-keeping function is weak, although by referrals, the preference of patients is mostly considered. Communication between PC and specialists is often insufficient. Variety of available devices and equipment’s are appropriate. Single handed practices were 87%. Appointment instead of queuing is a new option and become more popular, mainly among better educated and urban patients. GPs are involved in the management of almost all chronic condition of all generations. Half of them estimate their job as still interesting, burn-out symptoms were rarely found. Among the evaluated process indicators, access, continuity, comprehensiveness and coordination were rated as satisfactory, together with equity among health outcome indicators. Financing is not sufficient, therefore many GPs are involved in other earning activities. The increasing shortage of manpower is a major challenge.

Conclusions. In the past 2 decades, there was visible improvement at service level and in economic circumstances. Cooperation and communication between different levels of health care provision should be improved, focusing better to community orientation and to preventive services. There is a need for specific primary care oriented guidelines to define the expected tasks of GPs.

Introduction

Primary care’s (PC) traditional key relationships: longitudinal comprehensive care for the individual, mobilising sources of community support, advocacy both for and against governance as the personal
and particular circumstances require [1, 2]. Many studies proved, that in countries where primary care system is stronger, the healthcare system performs better [3, 4, 5, 6]. Health services research often focuses to describe what kind of structures of primary health care systems are associated with better health outcomes, in terms of quality, equity and costs. Appropriate data collection are needed on essential features of the structure and delivery of primary care services in many countries [7, 8, 9]. There are different types of organisations in PC systems in Europe, therefore analyses of the relationship between delivery of PC service and health-outcomes are very important [6, 7, 8, 10–13]. To analyse these relations the Quality and Costs of Primary Care in Europe (QUALICOPC) study was planned, to describe and to compare how the primary health care systems of 35 countries perform in terms of quality, costs and equity. The findings and results of the study are expected to give evidence on the benefits of strong primary health care and on the performance of health care systems in general [7]. While family physicians/general practitioners (GPs) are the main providers of primary health care, they were involved in the study as survey subjects. The expectations and experiences of patients were also surveyed in other questionnaires, which were not involved in our study [7, 9].

Ten dimensions were chosen as indicators to measure primary health care: governance and economic conditions of the PC system, PC workforce development (structure); access to PC services, continuity, coordination and comprehensiveness of PC services (process); quality, efficiency of PC and equity in health (outcome indicators).

The researchers of the QUALICOPC Consortium have developed four questionnaires; a questionnaire for GPs, another to describe the infrastructure and technical provision of services (Practice questionnaire), filled by fieldworkers and 2 others for PC patients: Patients values, and Patients’ experiences [7]. All of these questionnaires were previously tested and validated [7, 9].

In each country, the response target was 220 GPs and 2200 patients. The questionnaires were translated into national languages via an official forward- and back-translation procedure. The study was completed in 32 European and 3 overseas countries (Australia, Canada and New Zealand) [9].

Aim

This paper targets: 1./to provide selected data of the Hungarian-arm of the QUALICOPC Study; 2./ to
compare some findings to that of other participating countries and 3./ to give a comprehensive overview about the recent Hungarian PC system.

Method

Two questionnaires were distributed, from the four which were developed for the study.

1. Practice questionnaire

A practice questionnaire, with 12-questions was developed to measure the practice-related indicators, to describe the impressions of patients on infrastructure, their comforts in waiting area, the communication of opening hours and equity in access (e.g. for handicapped persons).

2. GP questionnaire

It contained 60 questions (pre-structured multiple choice answers and options of numerical answers), on background and characteristics of the practice, additional professional activities and time allocation of the GP, job satisfaction, workforce development, efficiency, economic conditions, continuity and accessibility of care, coordination and cooperation, referral, medical record keeping, quality and comprehensiveness of services, equity in accesses, available equipment, task profiles, use of guidelines and feedback got from colleagues or authorities.

The study centre of the Hungarian arm of QUALICOPC project was established at the University of Debrecen. The Departments of Family Medicine of the three other Hungarian Medical Faculties (Budapest, Pécs, Szeged) contributed as well. Advertisements were published to recruit participating GPs in the whole country. GPs who wanted to contribute were selected randomly from the 310 applicants, but the expected geographically representativeness was also considered, All of the questionnaires were transported to the practices by fieldworkers; most of them were medical students. Fieldworkers had 3 tasks: 1.) recruiting patients to fill the patients’ questionnaires; 2.) were expected to check the infrastructure of primary care facilities filling the Practice questionnaire and 3.) they distributed the GPs questionnaires to the family physicians who posted them back to the study centre after completing.

Presentation of data, statistics

Although the original order of questions in the QUALICOPC Study was usually followed, few sub-chapters were formed to summarize the answers thematically. Mainly distributions are presented.
Some columns, where similar answer options were given, were merged. It was always indicated. In other options when only minimal answers come, these were not always presented. To comparison some data, regression analyses were performed using STATA software.

Ethics
The Hungarian Medical Research Council (TUKEB) approved the Hungarian arm of the study assigning the number: 20024/2011-EKU (643/PI/11.). Informed consent was included in the questionnaire, refusal of participation was also offered as the other option.

Results

**Practice questionnaire**
Recruitment of patients in the waiting room was successful, only 25% refusal was recorded. Opening hours were clearly indicated in 91% of surgeries, out-of-hours care was advertised in 88%. Eighty-eight percent of practices were located on the ground floor, 54% in multilevel buildings, having inbuilt elevators. Half of them offered free parking facilities for handicapped visitors and toilet accessible with wheelchair.

The cleanliness of facilities was evaluated as very clean (45%) and rather clean (54%). Intimacy was appropriately provided. Doors were usually closed in the waiting room, 80% of visitors did not hear what is being said at the reception desk and 94% could not hear or see what was happening in the doctor’s office.

**GP questionnaire**
Altogether 222 questionnaires were completed, by 118 (53%) male and by 104 (47%) female family physicians/general practitioners. Answers are presented according to the order of questionnaire.

The mean of their age was 53.4 (±10.9) years. Ninety two percent of them were born in Hungary, others come mainly from the neighbouring countries, where high density of Hungarian population is living (i.e. Ukraine, Romania).

**Location and composition of practices**
Most of the practices (31%) were in big (inner) cities, 8.6% in suburbs, 20.3% in (small) towns, 28.4% in rural and 11.3% in mixed urban-rural locations. The mean of the practice population (number of enrolled patients) were 1857(±912) persons. Comparing to the national distribution, they rated the ratio of elderly people (over 70 years) in the practice as average (46.9%), above (39.2%) or 9% below average. Ratio of socially disadvantaged people was estimated as average (38%), above averages (42%), below average (18.5%). A quarter of family physician estimated that ratio of ethnic minority patients are closely to their national representatives, while 52% expected higher, 20% believed lower figures.

Most of the doctors considered the turnover of the patients enrolled in the practice, as average (57%) and 37% below average.

**Workload**

The means of weekly working hours were 37.7(±8.6), GPs spent 31.5(±8.7) hours with direct consultations, home visits, and telephone consultations. Doctors above 55 years worked longer 39.1(±7.5) hours/week, while younger (below 55y) spent 36.1(±9.5) hours only (p=0.059). There were no differences between genders. The reported means of face-to-face consultations were 50.4(±16.1) patients per working days. Besides these, 11.7(±7.9) patients needed telephone consultations, while 0.9(±0.6) persons were contacted by e-mails. Average patient consultations lasted 8.2 (±5.4) minutes. Participating family physicians done 14.5(±13.1) home visits per week, 5.7(±4.5) for elderly patients and 1.9(±1.3) institutionalized patients were visited in other settings. In the past 3 working months, they reported 4.8(±3.9) night and 1.5(±1.2) weekend day shifts. The highest part of GPs (86.5%) was working alone, or in shared accommodation with other GPs (11.3%) or medical specialists (4.1%).

GPs were rarely away from their practices. Their vacation lasted 2.6(±1.4) weeks, attended conference or educational activities in 1.2(±1.1) weeks, yearly.

Sick leave lasted for 0.45(±0.2) weeks a year; even less participation on scientific events were reported 0.4(±0.4) weeks.
**Financing**

Beside their daily work in the family practice, 33% of GPs had no other paid activities, while 7% worked as company doctor (occupational health), 41% of them performed teaching activities, mainly medical education. Almost all of the practicing GPs (93%) were working as a self-employed, contracted with the *National Health Insurance Fund* and local municipalities, 2% were self-employed without contract and 3.2% was a salaried employee.

The financing of GPs from the *National Health Insurance Fund* are based mainly on capitation, representing 52.9 (±32.7)% as mean of estimated income. Fee for service activities represented 9.6 (±8.3)%, performance payment 5.0(±4.8)%, other sources 11.8(±11.4)%, while out of pocket payments 4.7(±3.6)%. Other sources were mentioned in 11.8(±11.4%).

There are additional elements (quality indicators), represented in the financing. For the proper diabetes care 19.4% of GPs get a financial bonus, 37.8% for reaching the targeted screening activities, 21.6% for the proper referral rate and 5.9% for working in remote areas.

**Professional competences**

Applied clinical guidelines are widely known and used by GPs (chronic heart failure in 70%, asthma in 65%, diabetes in 79% and COPD in 64%), although there are no available specific primary care oriented guidelines.

Feedbacks regarding prescription are usually provided by the insurer (73%), less by health authority.

In case of referrals, the preference of patients is mainly considered (in 60%), while 35% of GPs prefer own decision, not shared with the patients.

The available devices and equipment's in the questioned practices are listed in **Table 1**.

Regarding location of X-ray facility, it can be reached in the same building (4%) where the practice is located, 89% are accessible easily, only 7% are too far. The nearest GP practice was in the same building (39%), within a distance of 10 km (55%). The nearest outpatient’s clinic was in the
same building (10%), or less than 10 km (57%). Half of the nearest hospitals were also within this range.

The questioned practices offered 6.7(±3.5) opening hours on weekdays. Consultations in the evening, access to the practices after opening hours was quite different, although 32% were still open after 18 hours (6 pm.). On a rota basis availability was reported by between 11 and 18% of them, while 14% of GPs were always available for their patients, even at weekends. Most of the hospital based emergency and centre-based non-emergency services are run by other physicians.

Recently, 23(±23)% of GPs provide consultations by appointment and 59(±39)% offer a walk-in hour.

Almost all of the GPs prescribe cheaper equivalent drugs (generics) and 87(±11)% provide free samples of medication, if available. Doctors estimated that 13% of patients are frequently, 61% of them are occasionally delaying their visits for financial reasons.

**Enrolment into the practice**

Almost half (48%) of the new patients, entering the practices provided their medical records or these were sent by the previous GP, while 41% of them enrolled without handling previous files. Thirty four percent refuse patients from other geographical area, 43% never use any restriction, 5% consider the past medical history of patients and 12% of GPs respect the number of their enrolled patients to avoid financial restrictions.

Forty one percent of family physicians always accept non-insured patients, but 24% of them only in case of emergency.

**Cooperation with other specialists, referral**

The previous experience of GPs is the determining factor in case of referrals(by 58%), other points of view which are always considered: travel distance for the patients(42%), patient’s own preference(37%), expected waiting time(39%), comparative information on the specialist getting from other patients(22%) and cost for the patients 46%.
**Practice nurse** is employed by 95% of GPs, other health care professionals in a much less extent: receptionist (28%), midwife (0.5%), and laboratory assistant (2.2%). In the same centres where the questioned GPs worked, other professionals were also available: home care nurse (7.7%), psychiatric nurse (1.8%), dentist (4.5%), pharmacists (2%), social workers (4.1%), and practice manager (1%).

Practice nurses independently give immunization/vaccination (in 70% of practices), provide advices regarding health promotion, lifestyle, smoking cessation (in 83%), check routinely chronically ill patients (80%) and perform minor procedures (ear syringing, wound treatment) in 83%.

Referral letters (including findings, provisional diagnosis and test results) are written by 48% of GPs for all, by 41% for most, and by 10% for the minority of the patient. After consultation with specialist, treatment or diagnosis of the patients is told always (40%), usually (25%), seldom or never (25%).

After a patient has been discharged from the hospital, 81% of doctors receive summary/discharge report within 1-4 days, 5% of them within 5-4 days. The other 13% complained that never or rarely get it.

Hungarian GPs are involved in the management of almost every chronic condition (diabetes, hypertension, cardiovascular, musculoskeletal, mental disorders) and even palliative care. Services when procedures or interventions needed are usually provided by surgical specialists (urologist, ENT etc.). Some examples were offered in the questionnaire, doctors were asked how frequently are they involved in these or similar cases. Ratios are presented in **Table 2**.

All Hungarian PC practices are using computers, with specific software for GPs. The functions and recorded data are presented in **Table 3**.

Blood pressure is usually measured by the staff, regardless of the reason for visit (79.3%). Advices in smoking cessation, diet, physical activity, misuse of alcohol are the most frequent topics of life-style consultations, discussed with the patients in about 90 %. Family physicians are routinely involved in antenatal care (51%), in immunisations (29%), and paediatric surveillance of children, influenza vaccination (96%) and palliative care (87%).
Occupational health problems are rarely discussed with family physicians even work accidents. If doctors diagnose frequent respiratory problems, repeated cases of food poisoning among people living in a certain district, they usually report them to the relevant authority.

**Burn out**

Job related stress was mentioned by 27 (±24.3)% of the GPs, overloaded with unnecessary administrative tasks by 48.2 (±36.6)%. Half (54%) of them estimate their job as still interesting, while only 13% believe that GPs have well respected jobs and even less (2.2%) found a good balance between effort and reward. There were no significant differences between genders and time spent in practice.

**Discussion**

**Main findings**

The professional competences of Hungarian family physicians are wide, but not appropriately regulated. Required infrastructure and devices and equipments are available. Single handed practices are dominant. The capitation based finances is sufficient, additional income is often needed.

**Study limitations and strengths**

In the original questionnaires more answer options were offered, but we had to merge those where only a few answers come, to make the presentations easier [7]. Questions used in the study-questionnaires, could have different meaning for GPs working in different national systems, especially regarding structure of practice, ethnic minorities, insurance system and remuneration. It could be salary or enterprise based, or some combinations of them. That was not clearly questioned. Estimation of the real income from an enterprise is not as easy as providing data on salary.

After development of the questionnaires, there were no options to modify them according to national characteristics or to add national-specific questions. Some of the missed topics are explained later.
Because the presentations and scope of data within respective national publications of the QUALICOPC Study are very different, only limited comparison could have been made in this paper. There is strength of this study as well. Due to the validated method and uniform questionnaires, combined with the analysis of other publications, we are able to present the actual state of Hungarian PC, providing the first comprehensive description of our national PC system. It is ready for an international comparison. Nationally and geographically representative data were provided from 3% of all GPs. Their mean of age was 2 year lower than the national average.

All of the Hungarian GPs are suffering from huge administrative tasks, although majority of them still like and enjoy their profession. They are working usually longer than Dutch colleagues and almost the same as providers in the UK [8]. There were no visible differences between the levels of urbanization and number of working hours like in Austria, where GPs have a higher workload particularly those working in rural areas [17].

The finance from National Health Insurance Fund is based mainly on capitation, with smaller additional elements and minor quality incentives introduced a few years ago. Payment in Hungary is far from the “West European” remuneration. While it was increased in the previous years, its value is only about 30–40% of the income of GPs in the Netherlands and UK. Financial incentives to improve quality of service provision represent only about 5% of remuneration, with low effectiveness [15]. The whole PC provision is covered by the National Health Insurance Fund, but there are limited numbers of services, what the patients had to pay for (ie. issuing driver’s permit, some type of certifications). Financing for primary care is considered as insufficient; therefore many of GPs are involved in other “business” or earning activities as well.

After the democratic changes in Hungary (1990) the political, the economic system and legal circumstances have changed significantly. There were initiatives for privatization also in the health care system. Family physicians were the first who got a right to establish their own enterprises based on 2 contracts, one with the National Health Insurance Fund for financing and the other with the local municipalities for provision of primary care within a geographically defined area. Since 1992, patients were allowed to choose their own GP not only within their designated area. GPs are obliged to enrol
all local inhabitants of this area, and are entitled to accept others from outside [14]. For patients, enrolment into practice is an easy procedure; they have a right to change doctors, without explanation and any legal or financial consequences.

Available instruments, devices and professional competences of Hungarian primary care providers are the same as majority of GPs in other EU member states, similarly to all of the Nordic countries, who are well equipped and can provide a wide range of medical services, with a substantial variation between countries [18]. There were no specific questions about the routine usage of the instruments. The “gate-keeping” is light, without appropriate financial interest. Gate keeping of rural doctors does not differ significantly from urban based practices. Shared decision-making (SDM) is ideally a treatment decision making process. GPs in gatekeeper systems frequently consider patient interests, while in non-gate keeping countries GP's prefer more often own experience with specialists as benchmarking information [19]. Hungarian GPs are better inclined to SDM, using their experiences on previous referrals.

Price of the prescriptions become an issue for the Hungarian patients in the last decades only, and GPs are aware it. There are many drugs, mainly innovative and expensive medications, when prescription is allowed only by specialists [20]. In this case, there is a higher reimbursement rate, patients should pay less.

Earlier, appointment-system was not routinely implemented in Hungary, by now it become more popular, mainly among better educated and urban patients. Scheduled consultation are offered by the Hungarian GPs as well, recently in less extent then in the Finish arm of the study, where it is almost universal [21].

When the offices of GPs are closed, out of hours services are available for the inhabitants, but the type and involvement of GPs is different. Organization of emergency services is not similar; depend on the contracts between companies providing services and local municipalities.

All of the Hungarian practices have been used computer since 1997, to send reports to the National Health Insurance Fund. It does not provide universal (free) software, therefore it had to buy from profit-oriented IT companies. A “cloud based” internet connection was established in 2017, in order to
serve and connect the whole national health care system, but data upload and accesses are yet insufficient. Based on the findings of the QUALICOPC Study, more efforts needed in the Southern and Central-Eastern Europe, to decrease gaps in the adoption of IT services and to facilitate the interconnected health care [22].

Community orientation was found more frequently within countries having a list system, among self-employed GPs, those using medical records to make overviews, and are more active in prevention and multidisciplinary cooperation. Rural GPs and areas with more people from ethnic minorities are more community oriented [23]. Ethnic minorities are represented in Hungary by the Roma population only, although it is forbidden by legislations to register the race in medical files. They have more morbidities and clearly lower life expectancies [24].

Based on the variation between the 35 participating countries and their GPs, the importance of multidisciplinary cooperation should be emphasized [23]. This cooperation facilitated a broader variety of technical procedures, wider coordination with secondary care and increased collaboration among different providers [25]. Unfortunately, the screening opportunities (secondary prevention) of occupational providers are not utilized; practically there is no communication between family and occupational physicians.

The treatment and management of chronic disease is the 'challenge of the century'. Closer location of providers can improve access to services and to devices that aid chronic disease management [26]. There are similar initiatives in Hungary as well [24]. Continuity and comprehensiveness of care are closely linked to national healthcare expenditures; however, coordination of care is not [27].

Coordination between different levels of healthcare provision is a problematic issue in Hungary. As found also in the Polish-arm of the study, accessibility of care was considered as the best dimension, while the economic conditions were usually evaluated most negatively in all countries [28].

In the European countries, in the past decades the involvement of GPs in the care of diseases increased, while their preventive activities decreased [29]. Service profiles of GPs have expanded more in the past decades in those countries, where higher growth of health care expenditures was reported [16]. It is the case in Hungary as well, without an increase in health care expenditures.
Recently, Hungarian health care system faces two major challenges, low financial resources and shortage of manpower, mainly in primary care [24]. The Hungarian population is yet satisfied with the PC system, although performances of other health care levels (mainly hospitals) are rated negatively. Among the evaluated process indicators, access, continuity, comprehensiveness and coordination were rated as satisfactory, together with equity among health outcome indicators, while quality and efficiency were deteriorated in the previous years, influenced mainly by other levels of provision (secondary care, hospitals).

Conclusion
In the past 2 decades there was a visible improvement at the service and in the financial circumstances of the Hungarian PC, although it is far from the “West European” standards [14-16]. Cooperation and communication between different levels of health care provision is often insufficient. Without specific primary care oriented guidelines, the expected service profile of GPs is not clearly determined. There is yet a large space for improvement among the structure indicators, economic conditions and workforce development. Preventive services should be appropriately implemented in primary care, beside the improvement in community orientation.

Declarations
The Hungarian Medical Research Council (TUKEB) approved the study: 20024/2011-EKU (643/PI/11.). Consent to participate was included in the Questionnaire.

All authors have read and approved the manuscript.

Hungarian data and materials are available at the University of Debrecen (Hungary) and in the NIVEL (The Netherlands, together with the data of other participating countries.

Authors declare no competing interests.

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Tables

1. | Available devices and equipments in the practices | [%] |
|--------------------------------------------------|-----|
| Disposable syringes | 99.1 |
| Disposable gloves | 99.1 |
| Refrigerator for medicines | 98.7 |
| Blood glucose test set | 92.3 |
| Electrocardiograph | 96.4 |
| Blood pressure meter | 99.1 |
| Doctor’s bag for emergencies and home visits | 95.5 |
| Infusion set | 83.8 |
| Urine catheter | 77.9 |
| Otoscope | 71.2 |
| Resuscitation equipment | 71.2 |
| Any cholesterol meter | 36.5 |
| Set for minor surgery | 28.4 |
| Suture set | 25.2 |
| Defibrillator | 26.1 |
| Ophthalmoscope | 23.0 |
| Audiometer | 23.9 |
| Peak flow/PEF meter | 15.8 |
| Spirometer | 13.5 |
| Ultrasound for abdomen/fetus | 4.1 |
| Microscope | 4.1 |
| Coagulometer | 3.6 |
| Hemoglobinometer | 1.8 |
| Blood cell counter | 2.3 |
| X-ray | 0.9 |

Table 1. Available devices and equipment’s in practices
2.

**To what extent will patients in the practice population contact you as the first health care provider?**

| Description                                              | Almost always + usually | Occasionally |
|-----------------------------------------------------------|--------------------------|--------------|
| Child with severe cough                                   | 40.5                     | 7.7          |
| Child aged 8 with hearing problem                         | 29.7                     | 7.7          |
| Woman aged 18 asking for oral contraception               | 37.8                     | 45.1         |
| Man aged 24 with stomach pain                             | 79.3                     | 14.4         |
| Man aged 45 with chest pain                               | 89.6                     | 5.9          |
| Woman aged 50 with a lump in her breast                   | 80.2                     | 14.9         |
| Woman aged 60 with deteriorating vision                   | 56.3                     | 27.9         |
| Woman aged 60 with polyuria                               | 77.5                     | 15.3         |
| Woman aged 60 with acute symptoms of paralysis/paresis   | 72.5                     | 15.3         |
| Man aged 70 with joint pain                               | 91.9                     | 4.1          |
| Woman aged 75 with moderate memory problems               | 81.1                     | 12.2         |
| Man aged 35 with sprained ankle                           | 46.8                     | 34.2         |
| Man aged 28 with a first convulsion                       | 53.2                     | 19.8         |
| Anxious man aged 45                                       | 68.0                     | 21.2         |
| Physically abused child aged 13                           | 18.0                     | 6.8          |
| Couple with relationship problems                         | 17.6                     | 43.7         |
| Woman aged 50 with psycho-social problems                 | 60.8                     | 28.8         |
| Man aged 32 with sexual problems                          | 23.9                     | 45.5         |
| Man aged 52 with alcohol addiction problems               | 34.7                     | 44.1         |

**To what extent are you involved in the treatment and follow-up of patients in your practice population with the following diagnoses?**

| Description                                              | Almost always + usually | Occasionally |
|-----------------------------------------------------------|--------------------------|--------------|
| Chronic bronchitis/ COPD                                  | 94.1                     | 2.7          |
| Hordeolum (Stye)                                          | 40.1                     | 32.9         |
| Peptic ulcer                                              | 94.2                     | 4.1          |
| Herniated disc lesion                                     | 91.4                     | 5.4          |
| Congestive heart failure                                  | 94.6                     | 2.7          |
| Pneumonia                                                 | 93.2                     | 5.4          |
| Peritonsilar abscess                                      | 57.2                     | 29.7         |
| Parkinson’s disease                                       | 81.5                     | 12.2         |
| Uncomplicated diabetes (type II)                          | 97.8                     | 1.8          |
| Condition                          | Your Practice | Medical Specialist |
|-----------------------------------|---------------|--------------------|
| Rheumatoid arthritis              | 83.8          | 12.2               |
| Depression                        | 86.5          | 9.9                |
| Myocardial infarction             | 91.9          | 5.0                |

To what extent carried out in your practice population by you (or your staff) and not by a medical specialist?

| Procedure                                      | Your Practice | Medical Specialist |
|------------------------------------------------|---------------|--------------------|
| Wedge resection of ingrown toenail            | 13.5          | 14.9               |
| Removal of sebaceous cyst from the hairy scalp| 8.1           | 10.8               |
| Wound suturing                                 | 14.4          | 26.6               |
| Excision of warts                              | 4.5           | 11.3               |
| Insertion of IUD                               | 0.0           | 0.9                |
| Fundoscopy                                     | 1.4           | 5.0                |
| Joint injection                                | 8.1           | 23.4               |
| Strapping an ankle                             | 3.2           | 21.6               |
| Cryotherapy (warts)                            | 0.5           | 2.7                |
| Setting up an intravenous infusion             | 34.2          | 50.5               |

Table 2. Professional competences of GPs

3.

Electronic medical records
Medical files normally include the following information

| Information                                                                 | [%] |
|----------------------------------------------------------------------------|-----|
| Living situation                                                           | 14.0|
| Ethnicity                                                                  | 4.5 |
| Patients’ family history (e.g., depression, cancer)                        | 86.5|
| Patients’ weight and height                                                | 96.4|
| Smoking                                                                    | 91.4|
| Blood pressure                                                             | 99.1|
| Reason for encounter                                                       | 97.3|
| Diagnosis                                                                  | 98.7|
| Prescribed medications                                                     | 99.1|
| Test results                                                                | 99.1|
| Records are kept except for minor or trivial complaints                     | 24.8|
| Records are kept of regularly attending patients                            | 3.2 |
| Records are kept unless it is too busy                                     | 3.2 |
| Records are kept, routinely of all patient contacts                         | 70.3|

In the past 2 years, were the medical record system used to list a selection of patients on the basis of age, diagnosis or risk

| Use of Medical Records | [%] |
|------------------------|-----|
| No                     | 15.3|
| Yes, by age            | 29.7|
| Yes, by diagnosis or health risk | 68.9|
| Yes, by medications they take                                    | 43.7|
| Yes, to send reminders for prevention or follow-up                | 37.8|

Are medical records used for

| Use                                                                 | [%] |
|---------------------------------------------------------------------|-----|
| making appointments                                                 | 33.8|
| issuing invoices                                                    | 13.1|
| issuing drug prescriptions                                           | 99.6|
| keeping data of consultations                                       | 96.9|
| sending referral letters to medical specialists                      | 82.0|
| storing diagnostic test results                                     | 95.5|
| searching medical information on the internet                       | 88.3|
| sending prescriptions to the pharmacy                                | 11.7|

**Table 3.** Recorded data in the electronic medical system