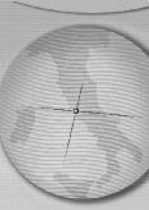




ITALIAN JOURNAL OF PUBLIC HEALTH

# Primary care in the Netherlands: current situation and trends

Dinny H. de Bakker, Peter P. Groenewegen

*NIVEL – Netherlands Institute for Health Services Research, Utrecht, The Netherlands*

*Correspondence to: D.H. de Bakker, NIVEL – Netherlands Institute for Health Services Research, PO Box 1568, 3500 BN Utrecht, The Netherlands. E-mail: D.deBakker@nivel.nl*

## Abstract

**Background:** Primary care in the Netherlands has a strong international reputation. However, this picture may be qualified in two respects. First of all, the Dutch primary care system is less cohesive than is sometimes suggested. Secondly, there are major challenges in the Dutch system (as is the case with other European health care systems), which have to be resolved in order to maintain and improve primary care.

**Methods:** Description of primary care in the Netherlands based on nationally and internationally published sources. Identification of challenges and trends. Narrative review of the literature.

**Results:** GPs have a strong position in the Netherlands. Their numbers are relatively low; they have a gate-keeping position, and there is no cost-sharing for GP care (unlike other forms of care). The primary care system as a whole, however, is characterised by weak coherence. Individual primary care disciplines have their own separate modes of funding. Challenges include a growing and changing demand for primary care services, and changes in manpower and organisation, that affect the balance between demand and supply regarding primary care services.

**Conclusions:** Among the threats to strong primary care are the risk of increasing fragmentation of care, negative side effects of a transformation process from cottage industry to service industry, and reluctance to invest in integrated primary care. An opportunity lies in the consensus among stakeholders that integrated primary care has a future. Technological developments support this, especially the development of electronic patient records.

*Key words: primary care, general practice, the Netherlands*

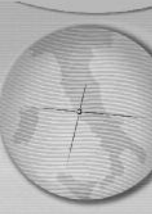
## Introduction

Primary care in the Netherlands has a good international reputation and the Dutch primary care system is often cited together with other strong primary care systems in the north-west of Europe. However, this picture may be qualified in two respects. First of all, the Dutch primary care system is somewhat less cohesive than is sometimes suggested. Secondly, there are major challenges in the Dutch system (as is the case with other European health care systems), which will have to be resolved in order to maintain and improve primary care.

Health care systems with a strong foundation of general practice-based primary care are considered superior to systems with a weaker primary care base [1-3]. There is evidence that strong primary care coincides with better health outcomes [4], good quality care [5], lower health care costs [6] and better opportunities for cost containment [7]. If primary care has well-organised, computerised patient information, it also provides better opportunities for monitoring population health, health care utilisation, quality, and preparedness [8]. It provides a solid basis for population based prevention [9,10]. Because of good accessibility, both geographically and financially, primary care is believed to minimize inequities due to geographical distribution and the high costs of health resources [11]. Strong primary care has been shown to mitigate the inverse association between income inequality and population health, especially in communities with high levels of inequality [12-14].

Primary care can be defined in a number of ways. Here, we adopt the definition given by the committee that prepared a report on behalf of the Health Council of the Netherlands, called European Primary Care [15]. After reviewing the various definitions the committee formulated the following:

*Primary care is generalist care, consisting of general medical and pharmaceutical care, nursing and supportive care, physiotherapy and*





*occupational therapy care, and non-specialised mental and social healthcare, together with preventive and health educational activities linked to these forms of care.*

Several authors describe characteristics that are associated with strong primary care [16, 17].

- A generalist approach. Primary care has a holistic focus, it is not oriented towards specific diseases but towards the patient as a person.
- The point of first contact with health care. New health problems of patients are first presented to primary care.
- A context-oriented outlook. Not only oriented towards individuals but also towards the context in which patients are living and working. This can be the context of the family, housing, working conditions or the community.
- Continuity. Primary care is offered continuously over time both in the short term (day and night) and in the long term in the various life cycles through which patients are going.
- Comprehensiveness. Not only curative care but also rehabilitation, health promotion and prevention. Not limited to specific patient categories or diseases.
- Co-ordination. The responsibility of making available the various resources of health care to patients and of integrating GP-services in the overall health care system.

Building a strong primary care system is one thing, maintaining a strong primary care sector while adapting to future needs is another. This paper describes the current position of Dutch primary care, starting with an overview of primary care in the Netherlands and focussing on general practice as the core provider of primary care. The international reputation of Dutch primary care and general practice is strong. However, there are also major challenges concerning increasing and changing demand, a changing supply and, consequently, a shift in the balance between both. Recent trends in Dutch general practice are described in the light of these challenges. The paper ends with a discussion on whether the strong points of primary care are sustainable into the future. Challenges as well as trends are more general and not specific to the Dutch situation. They apply both to countries with a similar position of primary care and to countries where primary care is in the process of developing.

## Primary care in the Netherlands

The Dutch health care system can be characterized as a social security system. The distinction between private and public insurance has been abolished in the Netherlands since 2006. There is an obligation for each citizen to take out health insurance and for insurance companies to accept every citizen. The basic package is identical for everybody and there is a no-claim premium reimbursement (GP care is excepted from this). There is freedom of choice to take complementary insurance (for example for physiotherapy) and to opt for deductibles (up to € 500). The organizational structure of the health care system is tiered in a public health sector, a primary care sector, a secondary and a tertiary care sector. The public health sector consists of a system of regional health authorities governed by municipalities. Secondary care and (long term) tertiary care are mainly provided in private not-for profit institutions [18].

A range of professionals and organisations are active in primary care. In the Netherlands the most important of these are general practitioners – who are usually seen as the core providers of primary care – community pharmacists, physiotherapists, midwives, home care organisations, primary care psychologists and social workers. Midwives represent primary care obstetrics in the Netherlands, where a large percentage of births takes place at home under the care of a midwife [19, 20]. Primary care psychologists and ambulatory mental health care organizations represent community mental health care. Primary care psychologists work as independent practitioners in small-scale practices. Ambulatory mental health is also provided on referral by large integrated mental health care organisations. Probably due to their small scale – comparable to the size of general practices – primary care psychologists are increasingly seen as potential partners in primary care teams. Home care is provided by large-scale organisations that used to be monopolistic and regionally based, but they increasingly compete with each other over a larger geographical range. Small scale alternatives are not common. Home help and nursing care are both provided by these home care organizations.

The number of primary care providers and the ratio of inhabitants per provider are shown in table 1 [21-27]. In some cases these are estimates because of a lack of exact information. In an international perspective two aspects might be highlighted.

Firstly, the number of inhabitants per GP, which is equivalent to average list size, is relatively high compared to other European countries. In most European countries the number of inhabitants per FTE GP does not reach 2000, while in the Netherlands there are over 2000 inhabitants per FTE GP [17]. The same goes for the number of inhabitants per community pharmacist. However, in community pharmacies there is a high rate of task

**Table 1. Primary care manpower in the Netherlands (2005-2007).**

| | Number (absolute) | Inhabitants per FTE [a] provider |
|---|---|---|
| General practitioners (45) | 8,673 | 2,331 |
| Pharmacists (46) | 2,825 | 6,100[c] |
| Physiotherapists (47) | 13,355 | 1,330 |
| Home care (48) | 57,567 (FTE) | 280 |
| Midwives (49) | 2,265 | 1,665[b] |
| PC Psychologists (50) | 1,234 | 20,000[c] |
| Social workers (51) | 2,493 | 6,560 |

[a] Full time equivalent
[b] Per woman of fertile age
[c] Estimates

delegation to assistants who do the work at the counter. Traditionally, Dutch community pharmacists have a low-profile role in care provision to the public, compared, for example, to the UK [28]. They are currently reorienting their role in this area and they play an important part in local pharmacotherapy audit meetings with GPs [29].

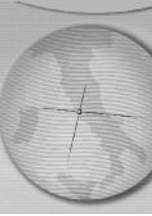
Secondly, primary care does not constitute one clear and cohesive system. Organization and funding are mono-disciplinary which is not conducive to collaboration. General practitioners, physiotherapists, midwives and primary care psychologists work as independent practitioners in relatively small-scale practices, whereas social workers and home carers work for large organizations on a regional basis. This scale difference hampers cooperation between home care/home nursing and general practice. For pharmacists we see a trend from small-scale independent operations towards franchise formulas and chains, sometimes with salaried pharmacists working in businesses owned by pharmaceutical wholesale companies. Generally the scale of the primary care provision is small (as in most health care systems that are based on social insurance in contrast to tax based health care systems), but there are tendencies towards scale enlargement [30]. In 2007 22% of GPs worked in a single handed practice, compared to 40% in 1997 [21]. There are integrated, multidisciplinary health centres but despite receiving state subsidies these serve less than 10% of the Dutch population. Local arrangements may exist concerning the way primary care professionals co-operate regarding individual patients. However, we also see isolated providers with limited formal linkage to others. In general, primary care in the Netherlands can be characterized as mono-disciplinary small-scale enterprise.

### Regulation, funding and payment

Specialty training for general practice is obligatory and takes three years. Practising GPs require re-accreditation every five years. Re-accreditation is conditional on how much of the five-year period they have worked as a GP. It is also contingent on having followed an average of 40 hours of accredited continuous medical education per year.

GPs in the Netherlands are gatekeepers for specialised care. Self-referral is not common, except for visits to an ophthalmologist and emergency departments of hospitals [31].

The relationship between providers (GPs, physiotherapists) and insurance organisations is governed by contracts. Until recently the contents of these contracts were mainly governed by negotiations at national level between government, umbrella organizations of insurers and providers. Gradually, insurers are being given more freedom in negotiations. Since 2005 tariffs for physiotherapy are freely negotiable, and with respect to GP care since 2006 a specific list of diagnostic and therapeutic interventions is negotiable. With respect





to multidisciplinary health centres, national subsidies have been replaced by negotiations between insurers and providers offering 'integrated primary care'.

Typical for the Dutch system is self-governance of professionals. Dutch GPs were, for example, early initiators in the development of professional guidelines. The first were developed in 1990 and currently there are over 70 guidelines, developed by the Dutch College of General Practice (NHG). The guidelines have no formal status, but deviating from the guidelines without a good reason can have legal consequences if adverse events lead to cases before the disciplinary tribunal.

The Dutch insurance system changed in January 2006. Since that date, the entire population is insured in the same way. GP services are part of the basic insurance package for the whole population as are services from midwives, pharmacists and primary care psychologists. Physiotherapist care is only part of the basic package for chronic patients (when they receive more than nine sessions). For all other people physiotherapy is not part of the basic package, but a large part of the rest of the population is additionally insured for physiotherapy. Illustrative for the strong position of general practice is that cost sharing does not apply to general practice (although it does for drugs prescribed by GPs). Table 2 summarizes the insurance reform [32].

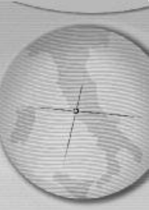
Payments for independently working professionals (pharmacists, physiotherapists, midwives, psychologists) are mainly on a fee-for-service basis, whereas social and home care workers are salaried. For GPs the payment system is a mix of capitation and a fee for each consultation.

### *Future challenges for primary care*
### *Meeting growing and changing demand*

Demand will increase as a consequence of demographic changes (population growth and ageing of the population) and epidemiological developments (changing patterns of disease). Ageing of the population will lead to more chronically ill people and greater co-morbidity.Apart from that, epidemiological trend analyses show increases in prevalence of such chronic diseases as diabetes, asthma, COPD and osteoporosis but decreases in neck and back problems [33,34]. The differential effects of these trends on demand for primary care disciplines were computed. Demand for general practice care, pharmaceutical care and home care is growing strongly whereas demand for physiotherapists grows at a lesser rate and care for midwives at a much lesser rate. In more general terms demand from chronically ill people requiring

**Table 2. The Dutch health insurance system after the insurance reform of 1 January 2006.**

| **Health care insurance law** | Introduced on 1 January 2006 |
|---|---|
| | Abolition of distinction between private and public insurance |
| | Insurance under private law with public limiting conditions |
| | Obligation for every citizen to take health insurance |
| | Risk Adjustment |
| **Insurance policy** | Free choice between insurance organizations |
| | Basic package (identical for everybody) |
| | Choice between in-kind and restitution policy |
| | Additional insurance (no obligation to accept, not necessarily with same insurer as basic package) |
| | Deductible € 150 per year (freedom to choose a higher deductible up to € 500) |
| | Collectives (via work or other) get premium reduction up to 10% |
| **Primary care** | Deductible does not apply to GP care and midwifery care |
| | Whole population on the list of GP/practice |
| | Mixed remuneration of capitation (€50 per year) and fee-for-consultation (€9 per consultation; higher amounts for long consultations and home visits) |





multidisciplinary care is growing [33,34].

### *Changing supply*

On the supply side we see, especially among general practitioners and pharmacists, a trend towards greater numbers of female professionals. The percentage of female GPs grew from 18% in 1993 to 35% in 2007 and, considering the gender profile of medical students, will continue to grow to almost 60% in 2020. Female GPs work on average fewer hours per week than male GPs, but also among males there is a trend towards part-time work status. Partly for this reason, but also to steer clear of management concerns, young GPs prefer to work as salaried employees in a group practice [34,35].

At the same time we see a trend towards medicine (or nursing for that matter) as an occupation like any other, and no longer as a vocation. This has partly to do with the growing numbers of female practitioners seeking to strike a balance between private life and professional life. And it has partly to do with market effects penetrating the health care domain, whereby health care is marketed as a product. At the same time, GP care is evolving from being provided by individual doctors to being provided by institutions.

### *Changing balance between demand and supply*

Growing and changing demand combined with professionals working less hours, poses challenges to the primary health care system. These challenges have to be met within the context of a shift from supply-side policy to demand-side policy. This trend is related to increased patient choice and better informed patients. The gate-keeping system, although functioning well [36], may not be a sustainable in the long run in Europe, when consumer orientation becomes more important. EU rulings and policies emphasize consumer sovereignty and this may contradict the restrictions inherent to gate-keeping.

A second trend is a shift from the typical Dutch self-governance by professionals to management by both third parties and primary care professionals. The role of third parties in Dutch health care is changing. Insurance companies are increasingly important in the new insurance system. Both the Ministry of Health and the Health Care Inspectorate develop performance indicators. Performance indicators are a way of governing health care that shifts autonomy and power from professionals to management. We see this especially in home care where care provision is left to the market after needs assessment by independent agencies [37]. The increasing scale of organisation of primary care also affects self-governance. With increasing scale of practices there will be differentiation of professional work and practice management.

Worries about shortages of GPs in the future have set the agenda in the last couple of years. The intake of trainees has been increased in recent years after forecasts with significant shortages were made, and indications emerged of increasing numbers of people not listed with a GP. Recent studies show that the number of people without GP is very low, but up to 2020 shortages can be foreseen varying in magnitude between 2% and 8% [34].

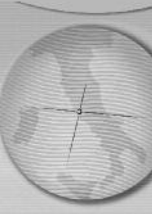
### *Trends in primary care*

We can analyse trends in demand because in 1987 and 2001 comprehensive surveys were held in general practice (the First and Second National Surveys of General Practice [8;33]). Growing demand is reflected in bigger patient lists and higher consultation rates. Between 1987 and 2001 the number of patients listed per GP increased by 10% to 2,500 per fulltime working GP. In the same period the consultation rate increased by 10% to 3.9 per patient per year in 2001 [38].

GPs were able to achieve this by changing their working pattern. The percentage of home visits of the total number of consultations almost halved to 9% [39], while at the same the percentage of telephone consultations almost tripled to 11% in 2001. The percentage of GPs with a walk-in consultation hour decreased from 48% to 13%.

Moreover considerable delegation of tasks to practice secretaries took place. Per full-time working GP there is on average 0.84 FTE (Full time equivalent, part-timers are counted on the basis of the fraction of a full-time working week they are working) qualified practice assistant. Apart from management and administrative tasks the practice assistants perform medical tasks, such as taking cervical smears, conducting hypertension checkups, removing stitches and treating warts [40]. Besides task delegation, task reshuffling has been proposed to solve capacity problems in general practice. Task reshuffling to existing as well as new professions and services is suggested. There are several initiatives we will summarize below.

From 1998 onwards practice nurses were introduced in general practice. In 2006 in almost 60% of general practices had a practice nurse doing checkups of diabetes patients and to a lesser degree hypertension and COPD-patients. Evaluations show that the introduction of practice nurses improved the quality of care and patient satisfaction and led to some reduction of GPs' workload [41]. Recently specialised master-level training courses were launched for nurse practitioners and physician



assistants. Numbers working in general practice are limited up to now but expected to increase in the future [42]. They are mainly working in the care for chronically ill.

Within the field of psychosocial care we see that GPs consider treating patients with psychological problems to be less their task than was the case fifteen years ago. The possibility to refer these patients to psychologists working in primary care has increased, both because the number of psychologists rose considerably and because psychology in primary care is now (since 2008) covered by basic insurance. In addition, psychiatric nurses are available for consultations in general practice, thus providing a link between primary and secondary mental health care. One third of general practices use this possibility [43]. The attention GPs pay to their patients' mental health problems does not add to their overall workload [44].

A major development since the end of the 1990s is the rise of independent organizations providing out-of-hours GP care. Until recently out-of-hours care was provided by small locum groups of between 8 and 12 GPs. Now almost 90% is provided by large scale GP cooperatives on a regional basis. In these GP coops telephone triage is standard procedure. For GPs the introduction of the coops meant on average five times less out-of-hours-services and more work satisfaction [45]. These coops limit themselves until now to out-of-hours care. One experiment with a call centre that conducted daytime telephone triage was stopped. The participating GPs did not notice any workload reduction [34].

Accessibility of primary care physiotherapists has been improved with the provision of direct access since 2006. In the past they were only accessible with a referral from a GP or a specialist. Preliminary analyses show that 25% of new patients of physiotherapists came without a referral [46]. To improve reintegration after sick leave, Occupational Physicians have been authorized since 2004 to refer to medical specialists and physiotherapists. Research shows that Occupational Physicians, at least initially, rarely took advantage of this opportunity during the first year. But in the longer term these numbers can be expected to rise [47].

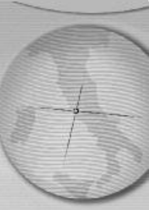
Pharmacists claim an increasing role as providers of pharmaceutical care, which could diminish workload in general practice. Examples are the management of repeat prescriptions, check-ups for diabetic patients and improving compliance. The first of these examples has been trialled in several local experiments but up to now, systematic evaluation has not taken place [34]. The second example was developed in a national programme called the Diabetes Check. Pharmacies taking part in this programme provide more (written) information to patients; however patients claim to need more oral information [48]. A pharmacy-led intervention showed that medication compliance in patients with moderate to severe heart failure can be improved, even in those with relatively high compliance [49].

Despite all the changes that have taken place, trust in the health care system in general and primary care in particular is consistently high [50].

### Discussion

To start with, the good news is that general practice-based primary care still holds a strong position in the Netherlands, despite the major changes that have taken place during the last few years. The capitation fee for general practice is maintained under the health insurance reforms, which is important because this underlines the responsibility of general practitioners for their practice population. Moreover a fee-for-service system would have put GPs in a position where others could compete for parts of services provided by GPs. A further striking point is that GP care is the only health care service that has been kept outside of cost-sharing measures. Stakeholders in the Dutch health care system seem to be well aware of the advantages of a strong primary health care system. The stakeholders committed themselves in a 'declaration of intent' to a community-based primary health care system with structural collaboration between primary care providers [51].

But is this enough to guarantee a properly functioning primary health care system for the future? We have seen that future demand with its growing numbers of chronically ill people requires a cohesive, collaborative system. Coherence is traditionally a weak point of Dutch primary health care. As in other countries primary care can be characterized as a 'cottage industry', dominated by mono-disciplinary, small-scale enterprise [52]. In the past, there was the GP as a personal and a family doctor who was supposed to keep an overview and provide comprehensive and integral care. Looking at the trends described in this article, this will be increasingly difficult. Within general practices, part-time working tends to fragment care over a greater number of providers. The introduction of GP cooperatives for out-of-hours work brought parts of general practice care into new organizations. Task delegation and task reshuffling to new and existing professions harbours the danger of further fragmentation. The scale increase and introduction of market forces in home care makes collaboration with locally working primary care providers





practically impossible. Similar worries about fragmentation are seen in the UK [53].

In conclusion, a number of forces work against the direction of integration and in the direction of fragmentation. In such a case strong policy instruments are needed to reach the intended situation of integrated primary health care. The actual implementation of cohesive primary care is, however, left to the interplay between health care providers and insurers. It is potentially attractive for insurers that they can contract integrated primary care as a whole, e.g. in the form of community health centres.

Furthermore, strong, integrated primary care can potentially save costs in secondary care, as is indicated by international evidence at system level. Some insurance organisations are taking concrete steps to support community health centres. However, at first this increases costs, and benefits will only show in the longer run. For insurers, it is still technically difficult to use savings in secondary care to invest in primary care. Moreover the existing fragmentation of primary care has the potential advantage for insurers to purchase care in a more competitive market. Add to this the general distrust between insurers and providers [54] and the prospects for integrated primary health care are not unequivocally positive.

An important condition for providing integrated primary care in a situation where more and more professionals are involved in the care for a single person, is the development of electronic patient records. Electronic medical record keeping is relatively well developed in the Netherlands (94% of GPs work with computerized patient records for example, [55]) but every discipline within primary care has its own software. The first steps will be the linking of records from GPs and GP-coops and by linking the medication records between relevant providers. Developing this further to a fully integrated Electronic Patient Record system is very important, but cannot replace a personal doctor guiding patients and their family through an increasingly complex health care system. Therefore, the main stakeholders in Dutch health care have spoken in favour of maintaining the situation in which patients are listed with a single GP or practice. Ideally, these GPs are members of a primary health care team or network and are supported by fully-linked patient records to keep an overview, in order to provide integral, comprehensive and continuous care.

**Acknowledgements**

This article is partly based on a presentation by the second author at the conference Comunitá e Salute. Il contributo delle cure primarie on November 21, 2005 in Reggio Emilia.

**References**

1) Larson E.B., Roberts K.B., Grumbach K., Laine C. The future of generalism in medicine. Annals of Internal Medicine 2005;142(8, Suppl): 689-90..

2) World Health Organization. Declaration of Alma Ata 1978; Geneva, WHO.

3) World Health Organization. Health for all in the twenty-first century 1998; Geneva, WHO.

4) Macinko J, Starfield B. The contribution of primary care systems to health outcomes within OECD countries, 1970-1998. Health Services Research 2003; 38:831-65.

5) Groenewegen P, Delnoij DMJ. Wat zou Nederland zijn zonder de huisarts? [Where would the Netherlands be without the GP]. Utrecht: Elsevier/De Tijdstroom, 1997.

6) Gerdtham UG, Jönson B. International comparisons of health expenditures: theory, data and economical analyses. In: Culyer AJ, Newhouse J, editors. Handbook of Health Economics. Amsterdam: North Holland, 2000.

7) Delnoij DMJ, Merode GH van, Paulus A, Groenewegen PP. Does general practitioner gate keeping curb health care expenditures? Journal of health services research and policy 2000;(5):22-6.

8) Westert G, Schellevis FS, Bakker DH de, Groenewegen PP, Bensing JM, Zee J.van der. Monitoring health inequalities through general practice. European Journal of Public Health 2005; 15(1):59-65.

9) Green LA, Philips RL, Fryer GE. The nature of primary medical care. In: Jones R., Britten N, Culpepper L, Gass D.A., Grol R., Mant D et al, editors. Oxford Textbook of Primary Medical Care. Oxford: Oxford University Press, 2004.

10) Tacken MAJB. Quality of preventive performance in general practice: the use of routinely collected data. Radboud Universiteit Nijmegen, 2005.

11) Ferrer LF, Hambidge SJ, Maly RC. The essential roles of generalists in health care systems. Annals of Internal Medicine 2005; 142 Suppl 8:691-708.

12) Kawachi I. Primary health care as a determinant of population health: a social epidemiologist's view. In: Westert GP, Jabaaij L, Schellevis FS, editors. Dutch general practice on stage. Morbidity, performance and quality in primary care. Oxford: Radcliffe Publishing, 2006: 26-32.

13) Shi L, Starfield B, Politzer R, Regan J. Primary care, self-rated health, and reductions in social disparities in health. Health Services Research 2002; 37:529-50.

14) Shi L, Macinko J, Starfield B et al. The relationship between primary care, income inequality and mortality in U.S. states, 1980-1995. Journal of the American Borad of Family Practitioners 2003; 16:412-22.

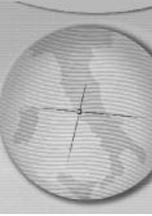
15) Health Council of the Netherlands. European primary care 2005. The Hague.

16) Starfield B. Primary care: concept, evaluation and policy. New York: Oxford University Press, 1992.

17) Boerma WGW, Fleming D. The role of general practice in primary health care. Norwich: The Stationary Office, 1998.

18) Exter A den, Hermans H, Dosljak M, Busse R. Health Care Systems in Transition: Netherlands 2004. WHO Regional Office for Europe?European Observatory on Health systems and Policies.

19) Wiegers TA, Van der Zee J, Keirse MJNC. Maternity care in the Netherlands: the changing home birth rate. Birth 1998; 25





(3), 190-197.
20) De Vries R. A pleasing birth: midwives and maternity care in the Netherlands. Temple University Press 2005.
21) NIVEL. www.nivel.nl/beroepenindezorg. [Accessed on 5-26-2009].
22) Griens AMGF, Tinke JL, Vaart RJ van der. Data en feiten 2008. [Data and facts pharmaceutical care, 2008]. Den Haag, Stichting Farmaceutische Kengetallen, 2008.
23) Kenens RJ, Hingstman L. Cijfers uit de registratie van fysiotherapeuten: peiling 1 januari 2005 [Data from the physiotherapists registration: january 1 2005]. Utrecht, NIVEL, 2006.
24) Statistics Netherlands. Statline 2005.
25) Hingstman L, Kenens RJ. Cijfers uit de registratie van verloskundigen: peiling 2007 [Data from the midwife registration 2007]. Utrecht, NIVEL, 2007.
27) Verhaak PFM, Emmen MJ, Winckers M. Het aanbod aan eerstelijns psychologische zorg. [Supply of primary care psychologists] Psycholoog 2007; 42:674-8.
27) Kwiz. MadiMonitor 2006.
28) Hassell K, Rogers A, Noyce P. Community pharmacy as a primary health and self-care resource: framework for understanding pharmacy utilization. Health Social Care Commun 2000;8:40-9.
29) Florentinus S, Van Hulten R, Kramer M et al. Which pharmacists contribute to high-level pharmacotherapy audit meetings with general practitioners? Ann Pharmacother 2006;40(9):1640-6.
30) Groenewegen PP, Dixon J, Boerma WGW. The regulatory environment of general practice: an international perspective. In: Saltman RB, Busse R, Mossialis E, editors. Regulating entrepreneurial behaviour in European health care systems. Buckingham: Open University Press, 2002: 200-14.
31) Kulu-Glasgow I, Delnoij DMJ, Bakker DH de. Self-referral in a gatekeeping system: patients' reasons for skipping the general practitioner. Health Policy 1998; 45:221-38.
32) Bartholomée Y, Maarse H. Health insurance reform in the Netherlands. Eurohealth 2006; 12 (2): 7-9.
33) Polder JJ, Gijsen R, Hoeymans N, Poos MJJC, Treurniet HF. The need for general practitioners in the Netherlands until 2020: an exploration of demographic and epidemiological changes in general practice. In: Westert GP, Jabaaij L, Schellevis FS, editors. Dutch general practice on stage. Morbidity, performance and quality in primary care. Oxford: Radcliffe Publishing, 2007: 247-56.
34) Bakker DH de, Polder JJ, Sluijs EM, Treurniet HF, Hoeymans N, Hingstman L et al. Op één lijn. Toekomstverkenning eerstelijnszorg 2020 [Exploring primary care's future 2020] 2005.
35) Velden LFJ van der, Hingstman L. The supply of general practioners in the Netherlands. In: Westert GP, Jabaaij L, Schellevis FS, editors. Dutch general practice on stage. Morbidity, performance and quality in primary care. Oxford: Radcliffe Publishing 2006: 257-64.
36) Cardol M, Bakker DH de, Westert GP. The activities of general practitioners: are they still gatekeepers? In: Westert GP, Jabaaij L, Schellevis FS, editors. Dutch general practice on stage. Morbidity, performance and quality in primary care. Oxford: Radcliffe Publishing, 2006: 107-14.
37) Algera M, Francke AL, Kerkstra A, Zee J van der. An evaluation of the new home care needs assessment policy in the Netherlands. Health and social care in the community 2003; 11(3):232-41.
38) Berg MJ van den, Kolthof ED, Bakker DH de, Zee J van der. The workload of general practitioners in the Netherlands: 1987 and 2001. In: Westert GP, Jabaaij L, Schellevis FS, editors. Dutch general practice on stage. Morbidity, performance and quality. Oxford: Radcliffe Publishers, 2006: 147-54.
39) Berg MJ van den, Cardol M, Bongers FJM, Bakker DH de. Changing patterns of home visiting in general practice: an analysis of electronic medical records. BMC Family Practice 2006; 7(58).
40) Berg MJ van den, Kolthof ED, Bakker DH de, Zee J van der. Professionalization of the practice assistant enables task delegation: 1987-2001. In: Westert GP, Jabaaij L, Schellevis FS, editors. Dutch general practice on stage. Morbidity, performance and quality. Oxford: Radcliffe Publishing, 2006: 163-9.
41) Berg MJ van den, Bakker DH de. Introductie praktijkondersteuning op HBO-niveau in de huisartspraktijk in Nederland: meta analyse 2003 [Introduction practice nurses in general practice in the Netherlands: meta analysis 2003].
42) Bakker DH de, Lamkaddem M, Haan J de, Nijland A. Invloed van praktijkondersteuning op de werklast van huisartsen. [Influence of practice nurses on GP's workload] Modern Medicine 2005;(8):400-3.
43) Meijer SA, Verhaak PFM. De eerstelijns-GGZ in beweging. Resultaten, conclusies en beschouwing van het evaluatie-onderzoek. Versterking eerstelijns-GGZ. [Primary mental health care on the move. Results, conclusions and dicussion of evaluation research of the programme enforcing primary mental health care]. Utrecht, NIVEL, 2004.
44) Zantinge EM, Verhaak PFM, Bakker DH de, Meer K.van der, Bensing J.M. Does the attention General Practioners pay to their patients mental health problems add to their workload? A cross-sectional national survey. BMC Family Practice 2006; 7(71).
45) Berg MJ van den, Bakker DH de, Kolthof ED. Objectieve en ervaren werkbelasting door avond-, nacht- en weekenddiensten in waarneemgroepen en in huisartsenposten. [Objective and subjective workload of out-of-hours services of GPs]. TSG 2004; 82(8):497-503.
46) Swinkels ICS, Leemrijse C, Bakker DH de. Bijna een kwart van de patiënten gaat rechtstreeks naar de fysiotherapeut 2006. [Almost a quarter of patients goes directly to the physical therapist]. Utrecht, NIVEL.
47) Steenbeek R, Kool RB, Visser E, Putten DJ van. De juiste verwijzing: evaluatieonderzoek verwijsfunctie bedrijfsarts. [The appropriate referral: evaluation of the referral function of occupational physicians]. Hoofddorp, TNO/Primant/ Marktconcern, 2005.
48) Hendriks M, Vervloet M, Dijk L van. Eindevaluatie Meer Jaren afspraken Farmacie 2000-2004: invloed van de Diabetes Check op de farmaceutische zorg aan patiënten met diabetes in de apotheek [Evaluation of programme pharmaceutical care: influence of diabetes check on pharmaceutical care provided to diabetes patients in pharmacies]. Utrecht, NIVEL 2005.
49) Bouvy ML, Heerdink ER, Urquhart J, Grobbee DE, Hoes AG, Leufkens HG. Effect of a pharmacist-led intervention on diuretic compliance in heart failure patients: a randomized controlled study. Journal of Cardial Failure 2003; 9(5):404-11.
50) Schee E van der, Groenewegen PP, Friele RF. Public trust in health care: a performance indicator. Journal of Health Organization and Management 2006; 20(5):468-76.
51) Ministerie van VWS. Intentieverklaring versterking eerstelijnsgezondheidszorg [Declaration of intent to strengthen primary care] 2004.
52) Davis P. Activities of the general practitioner: are they important? In: Westert GP, Jabaaij L, Schellevis FS, editors. Dutch general practice on stage. Morbidity, performance and quality in primary care. Oxford: Radclife Publishing, 2006: 229-38.
53) Royal College of General Practitioners, NHS Alliance. The future access to general practice-based primary medical care. Royal College of General Practitioners, editor. London 2004.
54) Groenewegen PP, Hansen J, Ter Bekke S. Professies en de toekomst: veranderende verhoudingen in de gezondheidszorg. [The future of the professions: changing relationships in health care]. Utrecht: VVAA/Springer, 2007.
55) Wolters I, Bakker DH de, Hoogen H van den. Evaluatie invoering Elektronisch Voorschrijf Systeem. [Evaluation implementation of electronic prescribing] Utrecht, NIVEL 2003.