

MANAGED CARE –
AN OPTION FOR THE GERMAN
HEALTH CARE SYSTEM?

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with some concluding remarks by
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Office of Health Economics

12 Whitehall London SW1A 2DY

© April 1998, Office of Health Economics

Price £10.00

ISBN 1899040 45 5

Printed by White Crescent Press Ltd, Luton

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Office of Health Economics

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The Office of Health Economics is supported by an annual grant from the Association of the British Pharmaceutical Industry and by sales of publications, and welcomes financial support from other bodies interested in its work.

For recent OHE publications see page 52.

This monograph is in part based on an earlier book contribution:

Seitz R, König H-H, Stillfried D Graf von. *Grundlagen von Managed Care* [Fundamentals of Managed Care]. In: Arnold M, Lauterbach K, Preuß K-J (Ed.) *Managed Care. Ursachen, Prinzipien, Formen und Effekte* [Managed Care: Its Background, Principles, Manifestations and Consequences]. Stuttgart: Schattauer 1997; 3-23.

The project was financially supported by IMS Germany. For their discerning comments our thanks go to Prof. Dr Dr h c Michael Arnold (Tübingen), Prof. Dr Reiner Leidl (Ulm) and the members of the OHE Editorial Board. Special thanks go to Jon Sussex, Associate Director of the OHE (London), for both his important comments and his help in translation and organisational issues.

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The purpose of the paper is to discuss the transferability of managed care to the German health care system.

In international comparisons, the German health care system seems rather expensive. Per capita health care expenditure in Germany is higher than the mean of all G7 nations. The UK shows both lower per capita expenditure and a lower share of gross domestic product (GDP) spent on health care than Germany. The ageing of the German population, combined with the shrinking income base of the social insurance system (which is largely financed from wages on a pay-as-you-go basis) will make far reaching reform inevitable. One possible option for health care reform would be managed care.

Managed care organisations are usually integrated care systems that are responsible for both insurance and delivery of care. Managed care can be defined as a set of strategies to reduce health care costs and increase efficiency at the micro level. There are five principal strategies for achieving these aims:

- careful selection of providers;
- structuring the care process around the primary care physician;
- creation of incentives via the method for remunerating providers;
- monitoring service supply and direct intervention in the care process;
- careful assessment of technologies according to efficiency criteria.

In Germany, health care is organised around, and financed by, a number of agencies. The most important contributors are the competing statutory sickness funds, which are highly regulated through the social code. They offer a comprehensive benefit package to everybody who is either mandatorily socially insured by law or is a voluntary member of a social sickness fund. Contributions depend only on income and there is free insurance for dependents. The different risk profiles of the funds with respect to income, age, sex, and number of dependents are equalised by transfer payments between the funds. There are also other contributors to

health care expenditure in Germany, namely: private and public employers (mainly responsible for sick pay); other branches of the German social insurance system (e.g. statutory pension insurance which is largely responsible for invalidity pensions and rehabilitation measures); public sector budgets; private health insurers; and private households (who cover individual co-payments and over the counter medicines). The analysis in this paper is largely restricted to the system of social sickness funds.

The most important weaknesses of the German system are the poor co-ordination on both the demand and supply side of health care services and problems at the interface of different care sectors, especially between the hospital sector and the outpatient sector, the latter consisting of primary care and specialist care physicians practising in private, office-based, mainly solo practices. These problems are largely caused by the incentive structures related to the fee-for-service reimbursement scheme for outpatient physicians and the institutional separation between these care sectors. Managed care could potentially improve the situation by means of better integration of care, achieved mainly through powerful information systems, selective contracting by insurers, gate-keeping primary care physicians and prospective payment of physicians through combined budgets which contain not only health services directly provided by the physicians but also referrals to other providers of care and prescribed drugs.

An analysis of the effects of managed care in the United States and in Switzerland shows that premia in managed care organisations are usually lower than in traditional fee-for-service arrangements. Most studies do not sustain the hypothesis that the quality of care is worse under managed care for the average population. However, it has been shown that the satisfaction and the quality of care of the elderly and the chronically ill may be worse in managed care organisations as compared to conventional fee for service plans. Apart from this, managed care could lead to some – in Germany so far largely unknown – disadvantages such as positive risk selection. There are also many open questions concerning for example: the monopoly power of managed care organisations; the optimal degree of integration (versus specialisation or outsourcing); and the required level of quality

assurance. In order to make sure that health plans and physicians do not scrimp on quality as a consequence of competition and of the incentives facing physicians, reliable quality measures have to be established. The existing US instruments for external accreditation like the health plan employer data and information set (HEDIS) are still too crude to serve as a sufficient basis for an informed choice of health plans.

When discussing the question of the transferability of managed care to the German system, it has to be remembered that no health care reform proposal would have any chance of success if it were to threaten the principle of social solidarity. This means that the financing of health care must continue to be determined according to ability to pay and that provision for health care must be determined according to the needs of patients irrespective of ability to pay. For these reasons, managed care could only succeed if it were to be regulated, as in the managed competition model. This model contains regulatory instruments – such as free choice of sickness funds and cross-subsidisation of the sick by the healthy – which already exist in Germany's social health insurance system. On the other hand, under managed competition, sickness funds may intervene in the care process in order to ascertain that co-ordinated care of good quality is provided to their customers at a competitive low price. The Californian experience with managed competition shows that this can lead to considerably lower premia without the solidarity principle being hampered.

The history of social health insurance in Germany demonstrates that central elements of managed care such as selective contracting already existed in the health care system at its introduction in 1883 and that some important features, such as the remuneration of physicians by capitation payments, were only abolished 30 years ago. Since the 1970s Germany's health care policy has been determined by consensus-oriented co-operation and contracts between top-level representatives of the interests of all concerned groups. Reimbursement regulations, quality and efficiency checks of providers and cost containment policies are almost exclusively negotiated and carried out at the regional (state) or federal level. Sickness funds usually co-operate in order to obtain uniform solutions for the entire system.

The theoretical concept of managed care, as well as the limited empirical evidence from Switzerland and California, are promising. Hence, some German sickness funds have seized the opportunity to test out some managed care elements in pilot projects, such as case management and gate-keeping by physicians. These elements are similar to the GP fundholding

scheme in the British NHS, but have been designed and introduced by sickness funds which use them to realise a competitive advantage in the health insurance market.

The recent German health care reform of 1 July 1997 has created the legal basis for these managed care projects. However, these projects can only be introduced in practice if the association of sickness fund physicians agrees. The underlying structure of the German health care system has not been changed by the reform. Its focus was a considerable increase in co-payment rates for pharmaceuticals, hospital and rehabilitation care. Such a cost-containment policy which only takes into account the demand for services and does not consider the supply side cannot be termed a managed care strategy.

In summary, Germany's health care system can be characterised as a consensus-oriented social insurance system. Within this system, competition between sickness funds has recently been introduced, but it has remained highly regulated. This willingness to increasingly trust in market forces could be the basis for the introduction of further managed care elements. Only then would it become possible to judge whether managed care really leads to more efficiency in the German health care system and whether it is possible to implement it without threatening the social solidarity principle or the quality of care.

I. INTRODUCTION

Caught between rising expenditure, suspected room for improved efficiency and dwindling availability of public funds, Germany's health care system is now in the forefront of public debate. In 1989 and 1993, two major legislative attempts to reform the German health sector brought home the futility of seeking to solve its problems unless the underlying structures are first reshaped. Even with the most recent health care reform, passed in July 1997, the basic characteristics of the German health care system remain largely unchanged.

Demographic trends in particular, linked to the ageing of the population, will hit Germany hardest of all the OECD countries and make thoroughgoing structural reform of the health care system inevitable. Worth canvassing as a possible model for reform are certain concepts that, in some sectors of American health care, have led to a complete revamping of service provision as well as the funding and insurance of health services, including tighter control of costs. Not unjustly, the structural changes in the United States which continue and which Germany may one day employ have been termed a 'managed care revolution'.

In Germany's debate over its future health policy, while reform proposals along managed care lines have attracted great attention, they have also encountered a barrage of criticism. Opponents of the managed care approach primarily argue that it vitiates the social-political assumptions underpinning Germany's health care system. Indeed, some of the current problems dogging America's health care system – particularly the large numbers of uninsured or underinsured American citizens – would appear to back up this critique. This would be to ignore the fact, however, that Germany in taking steps towards managed care would have restrictions derived from the solidarity principle, which – after all – is a prominent part of most other western European social systems too. However, service provision and insurance could be so co-ordinated under the banner of 'managed competition' that the health care system can be subsumed under the general category of managed care and yet still be deemed capable of accommodating the exigencies to which Germany's social-welfare-based health care system is subject.

This paper is structured along the following lines. Along with a brief description of the German health care system including a 'journey' of a German patient through the system, we offer an analysis of the factors driving expenditure and contribution increases in Germany in particular and in terms of international cross-comparison. Previous attempts to contain rising costs and contribution rates in the German system are then reviewed. A comprehensive definition of managed care paves the way for a detailed depiction of the various types encountered plus the instruments these deploy. Finally, the question of the transferability of managed care to a German context is addressed from various angles. Are, in point of fact, the historically evolved structures of the German health care system such as to preclude managed care being grafted onto them? If this is not so, then what would be the gains and drawbacks of introducing managed care to the German system? Here particular weight is attached to the experience of Switzerland, so far the only western European country with an insurance-based health care system to have incorporated wide-ranging managed care elements into its health care landscape. An account of already operational managed care elements in the German system (which in part are similar to the UK GP fundholding scheme), together with a summary of existing German legal constraints relevant to any possible future introduction of salient managed care elements, round off the main body of this paper. In a concluding section, we exemplify the managed competition model by looking at the case of CalPERS (California Public Employees' Retirement Scheme) and we attempt a final answer to the question whether managed competition can be deemed a viable option for Germany's social health insurance in its further evolution.

2. THE GERMAN HEALTH CARE SYSTEM: ITS STRUCTURE AND AFFLICTIONS

2.1 TRENDS IN GERMAN HEALTH CARE EXPENDITURE

According to figures released by the German Federal Statistical Office, nominal per capita health care expenditure (HCE/cap) rose from DM 1,149 to DM 6,478 between 1970 and 1995 in former West Germany. Real per capita expenditure (expressed in 1991 prices) rose from DM 2,766 in 1970 to DM 5,887 in 1995 (see Table 1)¹.

These expenditure figures include *transfer payments* due to sickness. In the German statutory health care system, these payments can be used as a conservative estimator for indirect costs defined as production losses (according to the human capital approach) because they come close to lost income due to sickness. In 1995 some 24 per cent of expenditure consisted of net transfer payments such as sickness pay² and disability pensions.³ As these are not included in the gross national product, they cannot be passed off as a genuine component of such. With transfer payments excluded, the health sector's share of gross national product (HCE/GNP) increased from 6.5 per cent in 1970 to 10.7 per cent in 1995 in former West Germany (11.1 per cent in Germany as a whole).

The OECD defines health care expenditure in a way that makes international comparisons possible. In a comparison across OECD countries illustrated in Figure 1, the German health care system seems rather expensive. According to the OECD estimates Germany's health sector as a share of gross domestic product⁴ (GDP) was 10.5 per cent in 1996 compared

Table 1 Per capita health care expenditure and share of GNP (former West Germany)

Year	HCE/cap in DM		Average annual growth rate of HCE/cap over preceding decade in %		HCE/GNP in %
	nominal	real*	nominal	real*	
1970	1,149	2,766	–	–	6.5
1980	3,132	4,147	10.5	4.1	9.2
1990	4,766	4,919	4.3	1.7	9.3
1995	6,478	5,887	6.3**	1.8**	10.7

* 1991 prices; health care services deflator.

** 1995 figure shows annual growth rate over the preceding 5 years.

Source: Compiled from Statistisches Bundesamt 1998.

with the G7 mean of 9.3 per cent.⁵ In Britain, the corresponding figure was only 6.9 per cent, while the USA had a massive 14.2 per cent – by far the highest health sector's share of GDP to be found anywhere in the OECD. Per capita health care expenditure (calculated in 1990 GDP Purchasing Power Parities) was also considerably higher in the USA (\$3,708) than in Germany (\$2,222) and Britain (\$1,304) and, for that matter, than the mean for all the G7 nations (\$2,045).⁶ However, since 1992, the health sector share of GDP in the USA has remained virtually constant and the growth rate of per capita expenditure has become much slower [61]. It is arguable that this recent development could in part be attributed to the spread of managed care.

2.2 THE STRUCTURE OF GERMAN HEALTH CARE EXPENDITURE

In 1995, total German health care expenditure including transfer payments amounted to 507 billion DM. The most important service category was the treatment of illness, which amounted to 57 per cent of total health care spent. Services following treatment accounted for more than a quarter of health care expenditure. These services include sick pay, invalidity pensions and rehabilitation care. Figure 2 gives an overview of total health care expenditure by service category in 1995.

1 The data for 1995 are the most recent available figures.

2 *Entgeltfortzahlungen*.

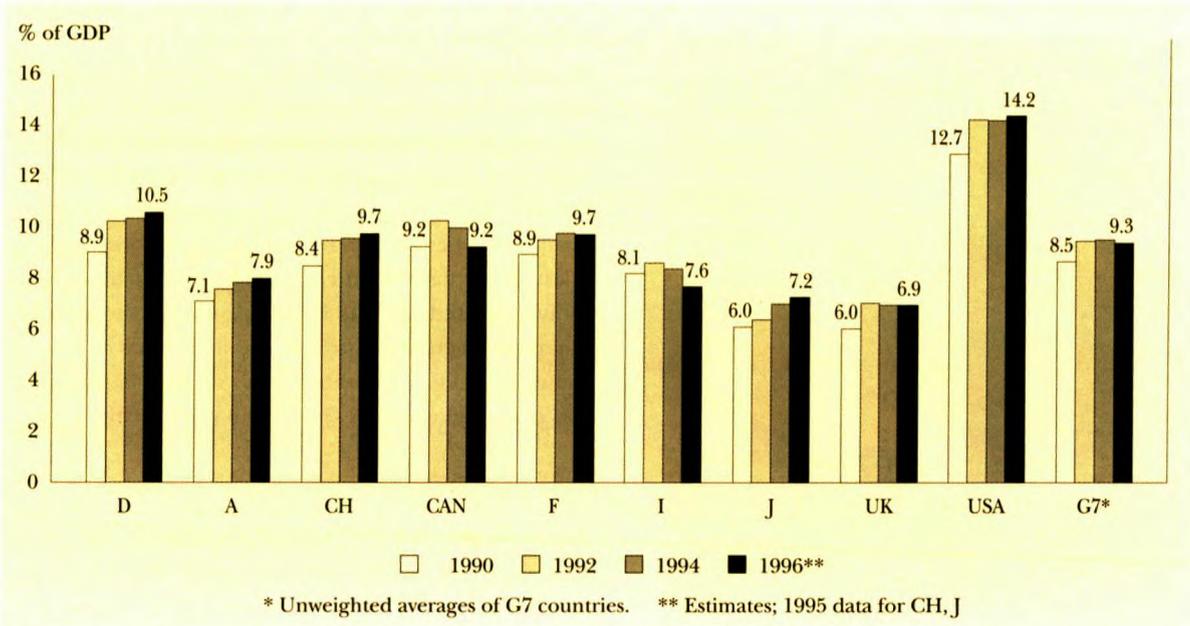
3 *Berufs- und Erwerbsunfähigkeitsrenten*.

4 In industrialised countries, the gross domestic product (GDP) is similar to the gross national product (GNP). GNP is defined as the current value of all final goods and services produced in a country in a given period of time. GDP includes the value associated only with domestic factors of production.[26] In 1996, Germany's GDP was 3,541.0 billion DM and GNP was 3,506.8 billion DM.[76]

5 For Japan, the 1995 figure of 7.2 per cent was used because the 1996 data were not available.

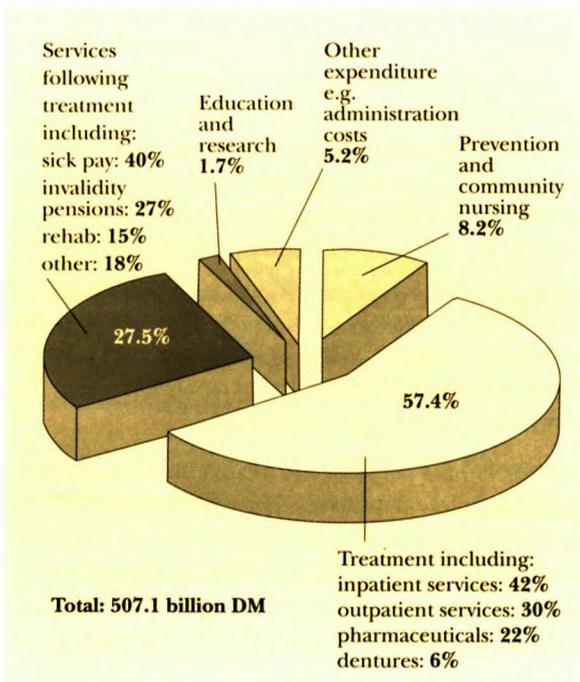
6 For Japan, the 1995 figure of \$1,581 was used because the 1996 data were not available.

Figure 1 Total expenditure on health: share of GDP



Source: Compiled from OECD 1997

Figure 2 Health care expenditure by service category, Germany 1995



Source: Compiled from Statistisches Bundesamt 1998

7 The statutory health insurance (*gesetzliche Krankenversicherung; GKV*) is a branch of German social insurance that, as set out in Social Code 5, covers risks of sickness, the cost of early-warning diagnosis, and maternity aid.

8 *Gesetzliche Krankenkassen.*

9 *Gesetzliche Rentenversicherung.*

10 *Gesetzliche Unfallversicherung.*

11 *Gesetzliche Pflegeversicherung.*

12 *Private Krankenversicherung (PKV).*

2.3 GERMAN HEALTH CARE INSURANCE: AN OUTLINE

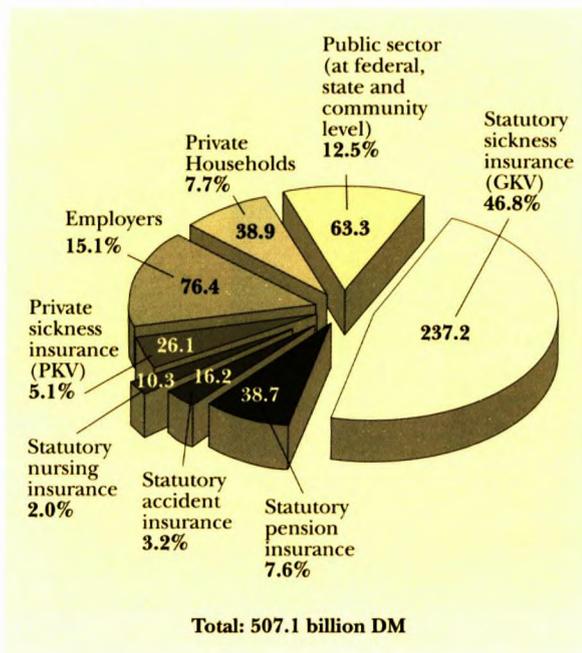
2.3.1 Contributors to health care expenditure in Germany

In contrast to national health care systems financed through taxes (e.g. UK) or highly market-driven systems (e.g. USA), the German system is characterised by mandatory health insurance financed from contributions – hence its name, the ‘statutory health insurance’ (or, to give it its German acronym, the GKV)⁷. The statutory health insurance system consists of statutory sickness funds⁸ which obtain their revenue mainly through contributions financed equally by the insured employees and their employers (see 2.3.2).

As Figure 3 shows, the statutory sickness funds are the most important contributors to health care expenditure in Germany. The other main contributors and sources of finance are:

- private and public *employers* who, apart from their 50 per cent contributions to statutory sickness funds, directly finance other services related to sickness out of their enterprises’ returns;
- *other branches of the German social insurance system:* statutory pension insurance,⁹ statutory accident insurance¹⁰ and, as of 1995, statutory nursing insurance.¹¹ These are, like the statutory sickness insurance, financed by contributions;
- *private health insurance*¹² *companies* charging their members risk equivalent premia;

Figure 3 Health care expenditure by contributor, Germany 1995 (billion DM)



Source: Compiled from Statistisches Bundesamt 1998

- *public sector budgets* of the federal government, federal states and communities and the federal employment agency,¹³ financed by taxes and contributions to the statutory unemployment insurance;
- *private households* which, apart from their contributions to the insurance fund systems, pay for services which either are not included or only partly included in the insurance packages, especially for over the counter (OTC) drugs, dental care and spectacle frames.

Both employers and their employees pay contributions to the social insurance fund system. In case of sickness, the insured has a legal entitlement to the services

13 Bund, Länder, Gemeinden, Bundesanstalt für Arbeit.

14 Civil servants receive coverage from a public health insurance scheme which represents their employer's (i.e. the state's) share of health care coverage with co-payments of up to 50 per cent for which they usually seek private health insurance.

15 *Versicherungspflichtgrenze*.

16 *Beitragsbemessungsgrenze*.

17 *Allgemeine Ortskrankenkassen (AOK)*.

18 *Ersatzkassen*.

19 *Betriebskrankenkassen*.

20 *Innungskrankenkassen*.

21 The local sickness funds, company funds and guild funds have to form state associations of their respective sickness funds. These state associations (e.g. of local sickness funds) then themselves form a federal association. The substitute funds are not obliged to form associations but have voluntarily done so at the federal level (one for blue collar workers and one for white collar workers).

specified by law. Table 2 shows the most important service categories, financed by the various contributors to health care expenditure. The basis of calculation of the contribution rates, as well as the actual rates which apply in former West Germany, are shown for the statutory sickness funds, statutory pension insurance funds and statutory nursing insurance funds (as at January 1998). Whereas contributions to these social insurance schemes depend only on the income from salary of the insured and the contribution rates of the individual funds, private health insurance companies charge risk equivalent premia. Contributions to the statutory accident insurance funds depend both on the size of annual earnings and on the work accident risk.

2.3.2 The statutory health insurance system

Nearly 90 per cent of Germany's population are insured under the GKV, of whom some 70 per cent are mandatorily and 20 per cent voluntarily so (Figure 4). The majority of those who are not members of a social sickness fund are privately insured.¹⁴ Mandatory insurance is prescribed by law for employees with an annual income falling below a DM 75,600 ceiling¹⁵ (1998). This income ceiling is revised upwards annually. An employee whose income exceeds the ceiling may, subject to certain restrictions, either elect to remain in the statutory health insurance fund or opt instead for private insurance. An employee's contribution is calculated by multiplying his assessable income by the contribution rate levied by his fund. It is deducted from the employee's pay-cheque and transferred to the sickness fund by the employer. A sickness fund may raise or lower its contribution rate according to its spending level. Income is assessable up to the same ceiling¹⁶ of DM 75,600 per annum (1998). Cost-free insurance is extended to family members who earn little or no income of their own.

Retired people's pensions are treated like assessable income with the pension insurance fund paying half of the health insurance contributions. For the unemployed receiving benefits from unemployment insurance, the federal employment agency pays health insurance contributions to the sickness fund. For those who are on social welfare, the local authorities either pay the health care providers directly or insure the recipients with a social sickness fund.

Operating under the GKV's umbrella are 554 independent sickness funds – including 18 local sickness funds¹⁷, 14 substitute funds¹⁸, 457 company funds¹⁹ and 43 guild funds²⁰ – these being banded in turn into larger umbrella organisations at the state and national level (1997 data)²¹. There are also 20 agricultural funds for farmers, one sailors' fund and one miners' fund (representing 4 per cent of all

Table 2 Source of financing and predominant health related service category by contributor

<i>Contributor</i>	<i>Mainly financed by*</i>	<i>Actual contribution rate and income ceiling (where applicable, former West Germany)</i>	<i>Predominant health service category (expenditure in billion DM 1995, Germany)</i>
Statutory sickness insurance (GKV)	pay-roll taxes (by employer and employee)	differs by sickness fund; on average 13.4% (6.7%+6.7%) up to income ceiling of 6,300 DM per month (1998)	treatment of illness (194.5)
Private sickness insurance (PKV)	risk equivalent premia (by employer and employee)	differs by sickness fund	treatment of illness (18.4)
Statutory pension insurance	pay-roll taxes (by employer and employee)	20.3%, for blue and white collar workers, (10.15%+10.15%) up to income ceiling of 8,400 DM per month (1998)	invalidity pensions (27.1) rehabilitation (7.2)
Statutory accident insurance	risk- and income-related premia (by employer)	differs by work category	invalidity pensions and compensation (4.8) treatment of illness (3.8) prevention at the work place (1.3)
Employers	enterprises' revenues		sick pay (55.2)
Public sector	taxes		job-related and social rehabilitation (17.9) nursing care for those who are on social welfare (17.1) expenditure for hospitals (11.6) education and research (8.6)
Private households	private income		treatment of illness (38.9)
Statutory nursing insurance**	pay-roll taxes (by employer and employee)	1.7% (0.85%+0.85%) up to income ceiling of 6,300 DM per month (1998)	home nursing care and cash for care by relatives (10.3)*** inpatient nursing care

* Some contributors, especially the statutory pension insurance, spend only part of their contribution income on health care. Total expenditure of the statutory pension insurance was 360.6 billion DM in 1995, of which the greatest part was spent on retirement pensions.[84]

** There is also private nursing insurance which is, unlike private health insurance, highly regulated in the Social Code (including with respect to premium setting). Data on private nursing insurance expenditure are not yet available.

*** In 1995, statutory nursing insurance only covered home nursing care. Coverage of inpatient nursing care was included on 1 July 1996.

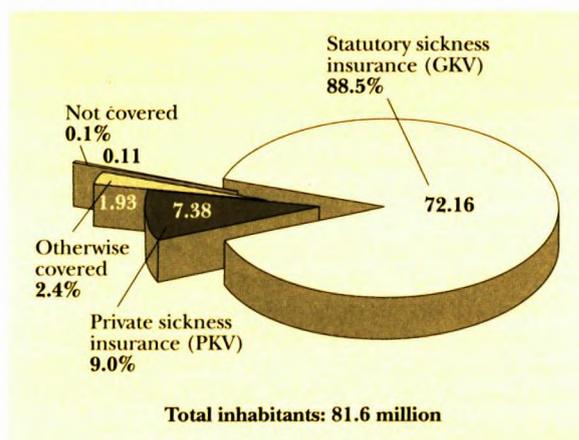
Source: Compiled from Statistisches Bundesamt 1998

socially insured) for which special regulations apply. The members of these professions for example do not have a free choice of sickness funds. These regulations are not considered in the further analysis.

Until 1995, access to many of the sickness funds was restricted, in some cases to insured people belonging to particular occupational groups (e.g. the nationally operating substitute health insurance funds for white collar workers²²) or to particular companies (e.g. company health insurance funds). In 1995, 45 per cent of all socially insured people belonged to local sickness funds, which did not impose such restrictions, while 34 per cent belonged to substitute funds, 10 per cent to company funds (including the sailors' fund) and 6 per cent to guild funds.[15]

22 *Ersatzkassen für Angestellte*.

Figure 4 Sickness insurance coverage of German population 1995



Source: Compiled from Bundesministerium für Gesundheit 1997a

From 1996, however, the social sickness funds have been obliged to compete with one other. There is now free choice of sickness fund for every member of the social health insurance system, the only exception being those company and guild funds which have decided not to accept outside members. Competition is regulated in order to keep it in line with the principle of social solidarity and to avoid economic inefficiencies. Thus the fifth statute-book of the Social Code²³ (SGB V) prescribes, for the GKV's entire health care operations, a comprehensive uniform legal framework mandatorily binding on all sickness funds.

Statutory health insurance funds are self-administered. They are independent public law corporations whose boards of directors and representative assemblies are democratically elected by employers and employees except for the substitute funds whose representatives are elected only by the employees.

2.3.3 A patient's journey through the German health care system

To help explain the German health care system, the provision and financing of services will be presented by following a fictitious patient Mr. P. When looking at Mr. P's journey through the German health care system, one important characteristic should be kept in mind: in Germany, there is a strict separation of outpatient and inpatient care. Outpatient care, both general and specialist, is almost exclusively provided by self-employed, office-based physicians most of whom work in solo practices and do not see their patients when

they are in hospital. On the other hand, physicians working in hospitals are employees of the hospitals and, with a few exemptions (e.g. in university hospitals and in cases of emergency), do not provide outpatient services. The majority of hospitals are either public or private not-for-profit institutions.²⁴ Local and state authorities increasingly delegate the management of public community and state hospitals to private limited companies.

2.3.3.1 Services provided

Mr. P is a construction worker and is insured with a local sickness fund (AOK) in former West Germany. He is married, has two children and earns an average income. For some time, Mr. P has had pains in his chest and back. In the last six months, he has not undergone medical treatment and has not been off sick despite his pains. As he was treated by an orthopaedic surgeon for spine problems some years ago, he now arranges an appointment to see the orthopaedic specialist the following week. Mr. P himself decided to see this doctor who was originally recommended to him by a colleague at work.

The orthopaedic specialist takes X-rays of Mr. P's spinal column, diagnoses a thoracic spine syndrome and prescribes physiotherapy and pain killing drugs. Mr. P gets the drugs at a pharmacy and is treated by a physiotherapist for three weeks.

As the pains, especially in his chest, do not decrease in spite of the physiotherapy, the orthopaedic specialist recommends that Mr. P arranges an appointment with a cardiologist. Mr. P however, decides to see his internist general practitioner (GP) instead. The GP undertakes a range of diagnostic tests including an electrocardiogram (ECG). As a result of his findings, he prescribes Mr. P drugs for coronary heart disease and refers him to an office-based cardiologist, with whom Mr. P gets an appointment a week later. The cardiologist makes an ECG and an exercise ECG. He suspects an insufficient blood flow in the coronary arteries and therefore arranges for a myocardial perfusion scintigraphy at an office-based specialist in nuclear medicine after a week's waiting period. The specialist in nuclear medicine sends the results back to the cardiologist. As a result of these findings, the office-based cardiologist then refers Mr. P to a community hospital with a cardiology department where a coronary angiography is undertaken. For the coronary angiography, Mr. P stays in hospital for three days.²⁵ Based on the results of the coronary angiography, the physicians at the community hospital recommend an operation in a cardiac surgery centre. After a waiting period of four weeks, Mr. P has a bypass operation. For this operation, he spends three weeks²⁶ in the cardiac

23 *Sozialgesetzbuch*.

24 In 1995, general hospitals accounted for 89.5 per cent of all hospitals and 92.7 per cent of all hospital beds in Germany. The remaining 10.5 per cent of hospitals (7.3 per cent of beds) are for the greatest part institutions specialising in psychiatric and neurological care. There are public (not-for-profit), private not-for-profit and private for-profit general hospitals. Public hospitals accounted for 41.5 per cent of general hospitals and 56.7 per cent of beds. Private not-for-profit hospitals, which are often owned by religious organisations, represented 40.6 per cent of hospitals and 37.6 per cent of beds. Private for-profit hospitals accounted for 17.9 per cent of hospitals and represented 5.7 per cent of beds.[15] Hospital beds which are only used by attending physicians accounted for 2.2 per cent of general hospital beds (1994 data).[75]

25 The average length of stay for coronary angiography is 2-3 days. This procedure however is also (and increasingly) performed as a day case in the ambulatory sector.

26 Depending on the type of operation, the usual length of stay for bypass graft is between 20 and 25 days (figures drawn from documentation for the calculation of case-based rates by the federal ministry of health).[14] The length of stay however may have shortened due to the incentive structure of case-based rates.

surgery centre. After being discharged, he has to wait for one week until he begins with inpatient rehabilitation in a centre specialising in cardiological rehabilitation. This takes four weeks.²⁷ After this rehabilitation, Mr. P goes to see his GP again.

The following providers take part in the care of Mr. P:

- an office-based orthopaedic specialist;
- an office-based pharmacist;
- an office-based physiotherapist;
- an office-based internist GP;
- an office-based cardiologist;
- an office-based specialist in nuclear medicine;
- a community hospital with a cardiology department;
- an inpatient cardiac surgery centre;
- an inpatient rehabilitation clinic.

2.3.3.2 Choice of providers

The insured has a 'smartcard' from his sickness fund which entitles him to consult office-based providers directly. On the card are details of Mr. P's insurance cover and personal data such as his name, date of birth, and address, but not his medical history. He is thereby entitled to services from any of the many providers who have a uniform contract with the respective regional association of sickness fund physicians.²⁸ If Mr. P is treated by a provider not having such a contract, the sickness fund would (except for emergencies) not pay for the cost of treatment. In Germany, however, almost every office-based physician has such a contract. The regional association of sickness fund physicians represents all contracted providers and makes contracts with all sickness funds. Direct contracts between sickness funds and individual (preferred) providers are prohibited. Medicines may only be dispensed by pharmacists, not physicians. As

27 The average length of stay for inpatient rehabilitation after coronary artery bypass graft is 29 days.[83]

28 *Kassenärztliche Vereinigung*. Usually there is one regional association of sickness fund physicians per federal state. In addition, there is a federal association of sickness fund physicians (*Kassenärztliche Bundesvereinigung*).

29 However the (state) associations of sickness funds can jointly terminate the contract with hospitals or hospital departments which work inefficiently, if the respective state authority agrees.

30 Sickness funds only pay for the current expenditure of hospitals. Capital investment is financed by the states (the 'dual financing system'). However, the sickness funds have recently been made responsible for the maintenance of buildings by law. This can be interpreted as a first step towards a unified financing system.

Mr. P's case is not an emergency, he can only be referred to a hospital by an office-based physician who functions as a *gatekeeper*. In order to be reimbursed for the treatment of patients in Mr. P's sickness fund, a hospital must be part of the hospital need plan of a state or have a uniform contract with the (state) associations of sickness funds. Most hospitals meet these preconditions.²⁹ Admission to a rehabilitation clinic presupposes a referral by the treating doctor and has also to be approved of by the statutory pension insurance fund (which pays for it, see below). If further treatment by other providers (specialist, hospital, rehabilitation clinic, GP) is necessary, the treating doctor writes a report, stating the required follow-up treatment and transfers his findings if necessary, but there is no further co-operation between the providers.

2.3.3.3 Financing of medical treatment

Mr. P's medical treatment is financed according to the principles set out earlier in Table 2:

- The *statutory sickness fund* which Mr. P has chosen (here: AOK) pays for the services provided by the office-based physicians, the physiotherapist and the hospitals.³⁰ The drugs prescribed by the physicians are (with some exemptions) included in the service package of the statutory sickness insurance as well, but the sickness fund only reimburses a fixed amount of money per medicine within a group of pharmaceuticals with identical or similar properties, whatever the actual price of the pharmaceutical. If there is a difference between the actual price and the fixed reimbursement level, it has to be borne by the patient (but usually there is no such difference). An exemption from this regulation covers medicines with substances which are protected by patent.
- The rehabilitation treatment is supposed to keep or restore Mr. P's ability to work and is therefore paid by the *statutory pension insurance fund*. As a construction worker, Mr. P is automatically insured with the statutory pension insurance fund for blue collar workers in his federal state. In contrast to health insurance, there is no free choice of insurance funds and there is a uniform contribution rate (for both blue and white collar workers) as far as pension insurance is concerned.
- Mr. P has to pay the following *individual co-payments* for the respective services (as of January 1998):
 - for ambulatory services provided by physicians (orthopaedic specialist, internist GP, cardiologist, specialist in nuclear medicine): no charge;
 - for physiotherapy: 15 per cent of costs;
 - for drugs prescribed by office-based physicians: for each package of medium size: 11 DM;

- for the services provided in the acute hospital: 17 DM per day for the first two weeks spent in hospital;
- for the services provided by the rehabilitation clinic: no charge, because it followed an acute care hospital stay which was longer than two weeks. Otherwise daily co-payment would be 17 DM until the 14th day of in patient care (acute plus rehabilitation). The co-payment for a rehabilitation measure without a preceding stay in a hospital usually would be 25 DM per day (up to 42 days per year).

2.3.3.4 Reimbursement of providers

In Germany, providers are reimbursed according to different schemes which are generally negotiated with the payers:

- For the *office-based physicians*, as explained earlier, there are regional associations of sickness fund physicians which have a monopoly on the care of the socially insured. The reimbursement method consists of two stages. First, the sickness funds at the regional level prospectively pay a negotiated budget to the association of sickness fund physicians for the entire outpatient care of all insured. This budget is calculated according to a fixed amount per capita. Then, the regional association of sickness fund physicians distributes the budget to the individual physicians according to a relative value scale which is negotiated between the associations of sickness funds and the association of sickness fund physicians at the federal level.³¹ The relative value scale assigns weights (points) to individual services. Some of them can only be reimbursed once a quarter and some are grouped together. The most important service group contains basic services such as the first consultation and examination of a patient. It is paid once a quarter and

31 *Einheitlicher Bewertungsmaßstab*. The individual regional associations of sickness fund physicians have the right to deviate within certain limits from the federally set relative value scale.[54] However, so far they have hardly done so.

32 There may be different budgets for different physician groups within one region. For this reason, the conversion factor may differ between physician groups, but not within one group.

33 *Fallpauschalen*.

34 *Sonderentgelte*.

35 Sickness funds and hospitals negotiate points as valuations for the services at the federal level. These are uniform for all federal states. The monetary conversion factors (DM per point) however differ slightly between the states.

36 For every hospital day exceeding the outlier threshold, the hospital receives per diems.

37 *Lohnfortzahlung*.

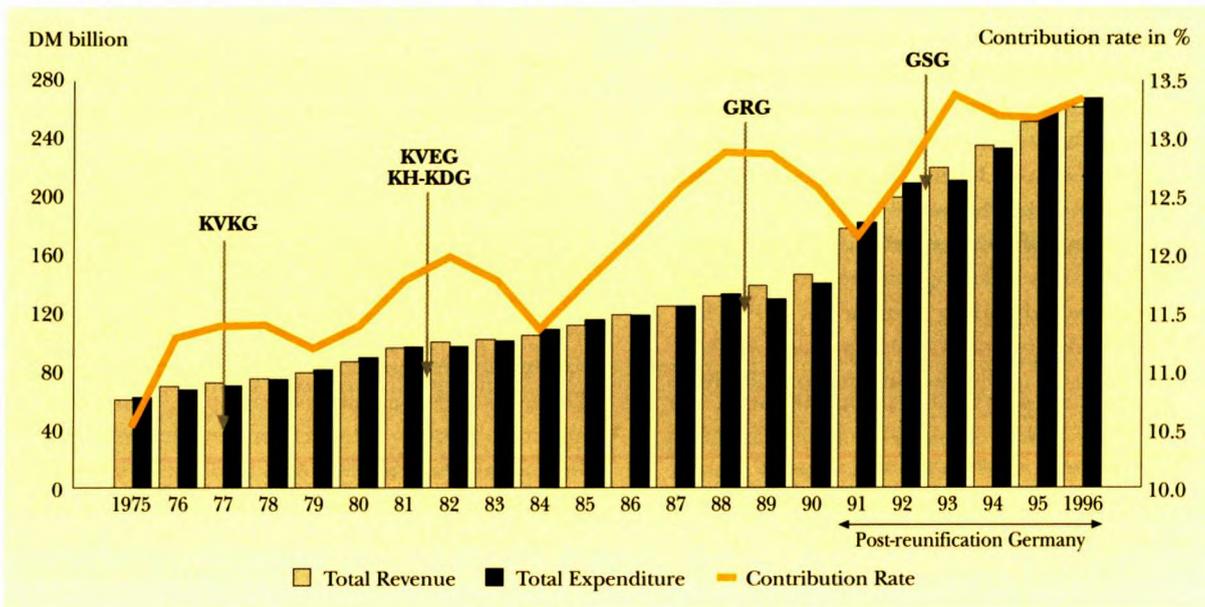
therefore represents a lump sum for the first contact. Additional contacts are reimbursed at a much lower level. The regional conversion factor (point value) is calculated by dividing the regional budget by the total number of points submitted by all physicians to the regional association of sickness fund physicians.³²

- The *office-based physiotherapist* is paid according to a uniform fee schedule which is negotiated between the sickness funds and umbrella associations of physiotherapists.
- The *pharmacist* receives a federally fixed mark-up on the price set by the manufacturer of the medicine dispensed. Depending on the price of the medicine, this mark-up lies between 34 per cent and 82 per cent. On average it is around 46 per cent of the manufacturer's price.[25]
- For *inpatient services* of acute care hospitals there are flat fees per case,³³ global fees³⁴ for particularly costly services and also per diem rates which are paid for every day of the individual hospital stay. Flat fees and global fees (together meeting 20-30 per cent of hospital revenues) are uniform for all hospitals in a state³⁵ whereas per diem rates (70-80 per cent of hospital revenues) are negotiated between sickness funds and the individual hospitals. Per diems consist of a basic charge for accommodation and food plus a departmental charge. For the bypass operation described above, the sickness fund would pay the heart surgery centre a case-based flat fee covering all provided services, independent of the length of stay (up to an outlier threshold).³⁶ For the coronary angiography, the community hospital would receive a global fee as payment for the diagnostic service, combined with a basic per diem charge and a departmental per diem charge for clinical services provided by the cardiology department. Because of the combination with a global fee, in such a case the departmental per diem charge is reduced by 20 per cent. The hospital physicians and nurses are employees of the hospital and receive a salary.
- The *rehabilitation clinic* receives uniform per diem rates which are negotiated between the pension insurance fund and the clinic. The staff working in the rehabilitation clinic are employees of the clinic and receive a salary.

2.3.3.5 Sick pay

During his journey through the health care system Mr. P is off sick for a total of eight weeks, excluding the stay in the rehabilitation clinic. Mr. P's inability to work has to be confirmed by a physician. For the first six weeks of Mr. P's inability to work, his employer provides his sick pay³⁷ and is obliged to pay at least 80 per cent of normal gross earnings. Many employers agree, however,

Figure 5 Trends in GKV revenue, expenditure and contribution rate



Source: Compiled from Bundesministerium für Gesundheit 1997a, 1997b

to pay 100 per cent.³⁸ From the seventh week of inability to work, it is not the employer but the sickness fund which provides the sick pay.³⁹ But the sickness fund pays only 70 per cent of gross earnings, and no more than 90 per cent of net earnings. Sickness fund payments are restricted to a maximum of 78 weeks within three years.

During his stay in the rehabilitation centre, Mr. P receives a transition payment⁴⁰ as sick pay from the pension insurance fund. As an insured with children, his transition payment amounts to 75 per cent of gross earnings.

2.3.4 Rising contribution rates as a particular cause of concern

Rising contribution rates over recent years have been a particular cause of concern. Owing to the collective nature of funding, health care expenditure has weighed

38 For construction workers, for example, an arrangement between the relevant trade union, *Industriegewerkschaft Bauern-Agrar-Umwelt*, and the employers, means that 80 per cent of gross earnings are paid for the first three days and 100 per cent for the remaining days (within the first six weeks).

39 *Krankengeld*.

40 *Übergangsgeld*.

41 *Krankenversicherung-Kostendämpfungsgesetz*.

42 *Kostendämpfungs-Ergänzungsgesetz*.

43 *Krankenhaus-Kostendämpfungsgesetz*.

44 *Gesundheitsreformgesetz*.

45 *Gesundheitsstrukturgesetz*.

46 *Rentenreformgesetz*.

heavily on wage overheads. In Figure 5 both the trend in the average contribution rate of the GKV and the timing of the major health care reforms are indicated. These have included the Health Insurance Reform Law⁴¹ (KVKG) of 1977, the Supplementary Cost Containment Acts⁴² (KVEG) of 1981 and 1982, the Hospital Cost Containment Acts⁴³ (KH-KDG) of 1981 and 1982, the Health Care Reform Law⁴⁴ (GRG) of 1989 and the Health Care Structure Law⁴⁵ (GSG) of 1993. It can be easily seen in Figure 5 that after a short period of decreasing contribution rates following the health reform acts, the average rates increased once again.

An important cause of this trend towards higher contribution rates has been traced back to inadequate increases in the standard against which contribution liability is determined, i.e. the assessable income of insured people. The principal cause lies in the fact that the share of wages (excluding income from self employment) in the overall gross national product has declined sharply over recent years. The high joblessness figures (in 1997 a record 4.4 million, leading to an unemployment rate of 11.4 per cent) exacerbate the funding problems that the GKV is currently experiencing.

Another significant influence on the financial straits the statutory sickness funds find themselves in takes the form of political directives prescribing transfer payments within the public sector. In line with legislation passed in 1989 (the 'Pension Reform Law'⁴⁶), as of 1995, payments by the federal employment agency to the statutory sickness funds

have been curtailed. At the same time, the contribution payments that the GKV pays to the unemployment and retirement insurance funds on behalf of sick-pay claimants have been raised (responsibility for payment of these contributions devolves to the patient's sickness fund following the first six weeks of sick-leave). The upshot, for the GKV, has been a loss of approximately 5 billion DM of revenue, which goes far towards accounting for the GKV's overall shortfall of 6.3 billion DM in 1996. Partially offsetting that, however, the introduction of social nursing insurance in 1995 has relieved the burden on social health insurance by 3.5 billion DM annually (estimate based on expenditure in 1994).[16]

The GKV's funding problems are set to worsen considerably over the next few years, as Germany becomes hard hit by the general ageing of its population. By the year 2030, according to World Bank forecasts, 28.1 per cent of the population will be over the age of 65, which will give Germany the highest proportion of elderly within the OECD (Table 3).

The demographic trends alone explain why Germany must expect to face, by the year 2030, an increase in its per capita health care expenditure of the order of 20-25 per cent, meaning that contribution rates to statutory sickness funds will have to go up by 2.5-3 percentage points from present levels. This forecast however, makes the assumption that age-correlated per capita expenditure will remain unchanged. Since the 1970s the age-correlated expenditure profile has, in fact, 'steepened' dramatically, with health care expenditure on older insured people accelerating far more than that on the younger ones. The most probable explanation is that this reflects the influence of improved medical technology on treatment costs. If the age-correlated expenditure profile to the year 2030 continues to climb at the same rate as for the period 1970-1992, then, barring unforeseen circumstances, per capita expenditure on health insurance will be about 40 per cent higher by the year 2030 than it was in 1992. This would translate into a contribution rate increase for people insured in the GKV of some five percentage points or more.[86]

Table 3 Percentage of over-65s in the population: international comparison

Country/Year	1990	2000	2010	2020	2030
USA	12.6	12.5	13.6	17.5	21.9
United Kingdom	15.7	15.9	17.0	19.7	23.0
Germany	14.9	16.2	20.2	22.5	28.1
Total OECD	12.9	13.9	15.6	18.9	22.5

Source: Compiled from Bos *et al.* 1994

Another point of concern is the steeply rising number of physicians in Germany.

Despite various regulations by the federal government and the regional associations of sickness fund physicians, the numbers of students graduating from medical schools and of physicians entering the profession is much higher than the number of physicians retiring or otherwise leaving the system. Between 1970 and 1995, the physician to population ratio has more than doubled. Whereas in 1970, there were 16.2 physicians per 10,000 inhabitants, this figure has steadily increased to 25.6 in 1985 and 33.6 in 1995. There has been a greater increase in the number of hospital physicians (41.6 per cent between 1985 and 1995 in former West Germany) than in office-based physicians (36.0 per cent). The increase in the number of specialists (44.9 per cent between 1985 and 1995 in former West Germany) has been stronger than that of primary care physicians (32.0 per cent).[16]

Projected demographic trends, progress in medical technology, a steeply rising number of physicians and an overall increasing of the economic pressure from such factors as rising joblessness – all of these factors pose a keen challenge for Germany's statutory health insurance system.

In the following sections, we will first review the attempts made so far in Germany to restrain health care expenditure. This is followed by an analysis of managed care, in particular from the perspective of its compatibility with the German system and its transferability to German conditions.

2.4 PREVIOUS EFFORTS TO CURTAIL EXPENDITURE

2.4.1 Macroeconomic targets

The cost-containment policies practised in German health care have largely involved attempts to control the flow of services by prescribing macroeconomic targets. The overriding goal of health care policy, as stressed particularly by the GRG in 1989, has been to underwrite the stability of contribution rates to the GKV as a percentage of labour income. This basic objective of contribution rate stability has, for some twenty years now, been at the heart of revenue-related expenditure policies. With the GSG of 1993, sector-specific global budgets have additionally been introduced, whose upward revision is usually pegged to increased revenue intake.

The most important decisions in connection with health care financing – apart from those taken on the political level – are made in top-level negotiations

between representatives of health care providers and the GKV. Macroeconomic guidelines must be adhered to during these negotiations. Representatives of individual hospitals in their annual negotiations with the sickness funds must not exceed an established budget ceiling with respect to service remuneration for individual hospitals. From 1993 to 1995, this ceiling was pegged to the level of individual hospitals' expenditure in 1992. Budgets could be upwardly revised only if the total assessable income earned by people with statutory sickness insurance had also undergone a commensurate increase. In 1996, this hospital budget ceiling was revised due to wage rises in the public sector.

The macroeconomic guidelines are intended to ensure that wage overheads remain stable, so that the German economy's attractiveness to investment is not further undercut. Another aim is to ensure that adequate financial resources are available for other uses than health care, uses that the political process deems to have a no less pressing claim on the public purse. Examples of these include helping eastern Germany back to its feet; the long catalogue of public and quasi-public goods (e.g. defence, education); the need to address the implications that growing joblessness is likely to have for unemployment insurance, and that the progressive ageing of the population will have for old-age pensions and nursing insurance. Managing expenditure by curbing revenue intake can also lead to improved technical efficiency as providers seek to produce their services at the least possible cost in order to stay within the prescribed financial framework.[2]

However, apart from a brief period following each law's passage, the instruments introduced have proved unable to achieve their stated goal of capping expenditure and contribution rates. In fact none of the attempted reforms was able to reverse the long-term trend of rising expenditure. The main reason for this is that none of the interventions was able to come to grips with the structures and entrenched incentives underpinning the health care system.

Guidelines which fix contribution rates or create budget ceilings are far from ideal. Individuals might prefer changing contribution rates. Factors such as the introduction of new medical technologies as well as increases in income are likely to influence the preferred contribution rates. Budget ceilings are also problematic since they are fixed in response to historical vagaries. For example, hospitals that worked inefficiently and wasted money in 1992 were 'rewarded' by strict budgeting based on 1992 expenditure. In addition, upward revisions to individual budgets are pegged solely to external macro economic indicators. For these reasons, it is unlikely that an economically

efficient outcome is achieved. Another important factor behind these inefficiencies is the fact that every macro economic attempt to rein in expenditure requires a concrete decision to be taken at a lower level, stipulating which particular services are to be targeted for savings. This can lead to *de facto* rationing along largely arbitrary lines, likely to proceed according to subjective criteria and to reflect the relative power of different groups within the sector in question.

2.4.2 Sector-specific budgets

Sector-specific budget ceilings pose considerable problems from the perspective of the interfaces between the service sectors. It can, generally speaking, be said that any sector-specific capping of expenditure prevents services from being directed to wherever they would do most good in terms of cost and quality. Worse, it provides an incentive to shift cost burdens onto other sectors (e.g. from the hospital to the rehabilitation sector) so as to remain below one's 'own' budget ceiling.

The pitfalls of sector-specific budgets are best exposed by citing two examples: the pharmaceutical budget and the remuneration mode for office-based physicians:

- In 1993, the GSG introduced a *pharmaceutical budget ceiling* in the hope of curtailing annual aggregate expenditure on medicines prescribed for GKV-insured people by the physicians of each regional association of sickness fund physicians. In the first year of this cost-curtailling measure, 1993, total spending on pharmaceuticals decreased sharply. But in the following years, it once again started to increase. In 1996, in some regions the entire year's medicines budget had already been used up by October. The sickness funds then wanted the physicians to reimburse them for expenditure in excess of the budget ceiling. However, the legal situation remains murky as to whether, in point of law, a collective responsibility may be said to pertain for physicians. A special problem, too, derives from the fact that the sickness funds were unable, as the year progressed, to provide the physicians with reliable information about how far the medicines budget had already been exhausted. In the hope of sparing their own medicines budget, the associations of sickness fund physicians have taken to admonishing physicians to prescribe only the 'bare minimum', whatever that means.
- The method of *remunerating office-based physicians* on a fee-for-service (points) basis with a stipulated ceiling on overall expenditure (according to which the remuneration value of each point is calculated) is an effective measure to control total expenditure. It has,

Table 4 Change in GKV revenue base and sector-specific expenditure

	1992	1993	1994	1995	1996
Billion DM					
Pharmaceuticals	32.58	27.48	29.17	31.41	33.42
Hospital	64.34	68.47	74.55	77.45	78.18
Office-based physicians	34.43	35.56	37.35	39.05	39.32
Revenue base	1,268.48	1,337.72	1,375.42	1,401.48	1,418.97
Growth rates					
(as compared to previous year)					
Pharmaceuticals	14.4%	-15.7%	6.1%	7.7%	6.4%
Hospital	12.7%	6.4%	8.9%	3.9%	0.9%
Office-based physicians	12.0%	3.3%	5.0%	4.6%	0.7%
Revenue base	9.8%	5.5%	2.8%	1.9%	1.2%

Source: Compiled from Bundesministerium für Gesundheit 1997b

however, the unfortunate consequence of inducing many physicians to deliver as many services as they can get away with, the idea being to secure the maximum number of points so as to maximise their share of overall available expenditure. But this only serves to drive down the point value for everyone.

These examples should suffice to show that, as things stand, the budget ceilings can only be met when services are tacitly rationed. Perhaps this facade can be kept up a while longer, without obvious inroads into quality, but one need only recall the demographic trends to realise the long-term untenability of the present system.

Table 4 shows the change in GKV revenue base and the change in expenditure per year for selected sectors for which budgets were introduced by the 1993 GSG. (The budgets were updated largely based on the GKV revenue base.)

2.5 THE 1997 HEALTH CARE REFORM

On 1 July 1 1997, the 'First and Second Law on the Reorganisation of the Statutory Sickness Insurance'⁴⁷ (GKV-NOG 1,2) was passed, which is the most recent health care reform in Germany. Amendments introduced by it include the replacement of both the collective pharmaceutical budget and (optionally) the method of remunerating office-based physicians.⁴⁸ Guidelines were introduced stipulating both the volume of prescribed pharmaceuticals and the volume

47 1. und 2. GKV-Neuordnungsgesetz.

48 The method of remuneration of office-based physicians does not necessarily have to be replaced. The law proposes the change as described but also permits continuation of the existing method (i.e. the combination of a fixed budget and a fee-for-service remuneration according to a points system and a retrospectively calculated monetary conversion factor per point).

of physician services. These are determined on the basis of individual practices of different physician categories. Volumes of pharmaceuticals and services are based on negotiation between physician associations and sickness funds at the regional level. Services provided by an office-based physician up to this ceiling are reimbursed according to a fixed monetary conversion factor. Beyond the ceiling, a reduced point value is to be paid (which may decrease as the quantity of provided services increases). Actual values have not yet been set for the proposed ceiling and monetary conversion factors.

Another important feature of the 1997 health care reform is that socially insured people can opt between services in-kind and reimbursement of services for which they themselves pay initially. For services in-kind the patient receives services without paying immediately and the insurance company compensates the service provider at a later date. The reimbursement method differs since the patient pays immediately, thereby guaranteeing payment. The reimbursement mode enables physicians to provide more or costlier services than they would under the in-kind mode. Those who use the reimbursement method risk paying more because they will only be reimbursed by their sickness fund the amount which the sickness funds would have paid for services provided in-kind. The sickness funds can offer the reimbursement option along with deductibles and reduced contributions. The health care reform also enables the sickness funds to reward members by offering contribution repayments to those who do not seek medical treatment within a given period.

The main result of this latest reform has been a substantial rise in the co-payments patients have to make. This has affected virtually all service sectors except ambulatory medical care (Table 5). In-built safeguards cushion the social effect of the regulations on co-payments. Thus, particularly poor members and children are completely exempted from these co-

Table 5 Co-payments under statutory sickness insurance (former West Germany)

<i>Sickness fund services</i>	<i>Co-payments as of 1 January 1997</i>	<i>Co-payments from 1 July 1997</i>	<i>Planned revised charges if and when sickness fund raises its contribution rate by 0.5 percentage points</i>
Medicines	DM 4 DM 6 DM 8 per item, staggered by package size	DM 9 DM 11 DM 13 per item, staggered by package size	DM 14 DM 16 DM 18 per item, staggered by package size
Bandage items	DM 4 per item	DM 9 per item	DM 14 per item
Transportation costs	DM 20 per journey	DM 25 per journey	DM 30 per journey
Therapies (e.g. physiotherapy)	10% of costs	15% of costs	20% of costs
Auxiliary materials	No co-payments	20% of costs	25% of costs
Hospital treatment	DM 12 per day for up to 14 days	DM 17 per day for up to 14 days	DM 22 per day for up to 14 days
Inpatient preventive treatments and rehabilitation	DM 25 per day	DM 25 per day	DM 30 per day
Follow-up treatments	DM 12 per day for up to 14 days	DM 17 per day for up to 14 days	DM 22 per day for up to 14 days
Maternity care	DM 12 per day	DM 17 per day	DM 22 per day
Dentures	40%* or 50% of costs	45%* or 55% of costs as from 1998: fixed subsidies	no change

* If patient underwent regular check-up.

Source: Compiled from Bundesministerium für Gesundheit 1997b

payments and income-dependent ceilings are set for the annual total of extra charges that insured people (especially the chronically ill) have to bear.

For dentures, fixed subsidies replace the previous regime of proportional co-payments as from 1998. The subsidy is greater for those who undergo regular check-ups. However, for those born after 1978, dentures have been removed from the service commitments of statutory sickness insurance.

In addition, under the 1997 reform the scale of co-payments is planned to be pegged to the sickness fund contribution rate. Should a sickness fund raise its contribution rate (and this is not caused by risk-based financial equalisation) then an increase in co-payments will ensue automatically. For each 0.1 percentage point increase in the contribution rate (e.g. from 14.0 per cent to 14.1 per cent) the absolute patient co-payment charges will go up by DM 1 and the co-payment percentages by one percentage point. At the same time, each member of such a sickness fund has the right to terminate their membership forthwith.

There is one important component of the recent health care reform which comes close to managed care (discussed further, below). The new laws will enable

new remunerative and organisational forms of service provision (directed at e.g. improved integration of the ambulatory and inpatient sectors) to be tested within the framework of voluntary pilot projects.

2.6 THE USA AS MODEL?

Many of Germany's health care politicians peremptorily dismiss attempts to derive viable reform options from the USA. In particular, the following charges are made:

- Compared with the USA, Germany from about 1980 onwards has not only had a lower health sector share of GDP and a considerably lower per capita expenditure, but also does better than the USA in terms of such general health indicators as infant and perinatal mortality.
- The USA is far less concerned with the notion of social solidarity. The upshot is that economically weaker segments of the population – the so-called 'working poor' – are frequently left unable to insure themselves, as are those with a previous sickness record. Some 17 per cent of Americans under the age of 65 have no health insurance whatever. Of these, 60 per cent are poor, to the point where they would need financial assistance to pay for insurance premia. The

private sector insurance companies are funded by risk-equivalent premia and focus their recruiting efforts on the young and healthy.[67] By comparison, only 0.1 per cent of Germany's population are without insurance coverage, and these are well-off.

Such negative judgements, however, overlook the fact that in its essential features the American health system is rooted in a specific social understanding. That the USA has such large numbers of uninsured people is largely due to the fact that health is not accorded the same social-political priority as compared with West European nations. Despite this relatively lower priority, America's poor do have access to *Medicaid* and America's elderly, handicapped and dialysis-dependent have access to *Medicare*. Both of these social programmes are funded by the public purse (mainly from taxes). The public share of health care expenditure in the USA lies at around 45 per cent.[60] In addition, uninsured people enjoy a statutory right of admission to hospitals for emergency treatment.

It is important to note that managed care can nevertheless be combined with the solidarity principle, under the roof of managed competition, as will be shown later. Indeed, a rapidly growing number of recipients of Medicare and Medicaid are members of managed care organisations.[62] Managed care was even proposed as a tool to realise comprehensive insurance coverage in President Clinton's 1992 health care review.

The high level of health expenditure in the USA is not necessarily the result of inefficient supply and demand structures. Progress in medical technology can also lead to price rises and an increased demand for health services. In fact it is precisely in medical technology that the USA leads the world. The high level of US expenditure is due partially to high administration costs.⁴⁹ High administration costs are not however the result of managed care but rather of market oriented health care systems. Managed care is a tool to combine market forces and regulatory cost-containment instruments. It is supposed to make the health care system both cheaper and more efficient.

49 Administration costs account for 24 per cent of total health expenditure in the USA as opposed to 16 per cent in Britain and 13 per cent in Germany according to an estimate by McKinsey.[27]

3. MANAGED CARE: WHAT IS IT?

So far a simple and binding definition of managed care has proved elusive. The managed care concept refers to a multiplicity of structural and procedural care forms that have heavily influenced both the insurance system and the care structure in the American health sector. They have been mainly driven by the will to achieve substantial cost reductions in medical care. But behind managed care lies a broader concept, that of restructuring health care and its funding system so as to ensure the most cost-effective medical care compatible with high quality.

At the heart of managed care is the idea that the care process should be guided by a complementary agent of the patient or – more generally – the insured. The theoretical framework for this idea is the principle-agent theory. If the relationship between the patient (principal) and the physician (agent) does not lead to efficient outcomes because of information problems for patients (lack of information or inability to understand and use it if it is available), a complementary agent acting on behalf of the patient is necessary in order to bring the provision of health care more in line with the interests of the patients and to improve efficiency. In general, there are several possible complementary agents, e.g. employers, sickness funds, associations of physicians and governmental institutions.[89]

A central feature of managed care is, however, that the management takes place at the micro level in a competitive environment. Managed care presupposes small competing entities as complementary agents of the insured and patients. In the US managed care system, employers purchasing health care on behalf of their employees make competing managed care organisations the complementary agents of the insured.

Managed care has altered the traditional division of labour in the health sector, which has been characterised until now by a sharp dichotomy between the medical domain of service provision on the one hand, and the funding and administrative tasks on the other. The far-reaching autonomy accorded to physicians during the care process is now giving way increasingly to a multi-functional 'management practice' at the micro level.

The purchaser's influence on health care is felt by both the patients and the providers. Patients are referred to specified service provision points and to selected providers. Patients' utilisation of these is steered directly by contractual arrangements and indirectly by co-payments and other financial incentives. Influence on providers is exerted directly by guidelines stipulating the range of services available and how these are to be delivered and indirectly by the remuneration mode (and other financial incentives).

The shaping of care structures and procedures by the purchaser occurs within a framework of various organisational types. The purchaser decides on the organisational type, i.e. he decides whether he wants care services to be provided by 'own' health plans or whether, and to what extent, he wishes to contract this out to other service providers.

A key characteristic of the managed care system is competition. The various managed care organisations compete with one another. For when it comes to concluding contractual agreements with health care providers, it is especially the number of their insured members, translated into bargaining power, that has the final say. These organisations compete in the health insurance market, partly on their benefits but principally on prices, i.e. the premia and contribution rates charged.

While competition between insurers/purchasers is certainly the driving force behind the spread of managed care, the service providers also find themselves exposed to increased competitive pressures. They are dependent on contracts with the managed care organisations since the conventional insurance system, where the insurance firm acts as sole cost reimbursing is increasingly being displaced by managed care.

Competition does not necessarily lead to socially desirable results. Insured people with poor risk profiles are finding it harder and harder, in the American insurance market, to find adequate coverage at affordable premia. Hospitals can no longer, as was their practice under the former system, readily shift costs sustained by the uninsured onto the backs of the insured. In view of the large numbers of uninsured and underinsured Americans, regulatory models have been developed for the insurance market that should, at

least in theory, guarantee every citizen access to an adequate service package. For the same reason, financial equalisation mechanisms have been proposed over and above the internal financial equalisation practices which the insurance companies themselves currently provide. Such mechanisms were a prominent part of the *managed competition* model which, in the run-up to the 1992 presidential election, came in for much public debate.

In the German system, given its prevailing social and political boundary conditions, managed care's only chance of success would be if competition were to be regulated and controlled, just as the managed competition model foresees. It is therefore very important, in the health policy debate now gathering pace in Germany, to see *managed competition* as a *sine qua non* for *managed care*, while still clearly distinguishing between the two concepts. Whereas managed care refers to alterations in the shape of the care process that have already occurred (and hence the relationships between purchasers and providers), managed competition is a model that incorporates both social and competitive aspects. If introduced, managed competition would amount to an across-the-board health care reform, with universal coverage and the different health plans competing with each other. A mandatory uniform service package covering the provision of basic health services, in tandem with a system-transcending financial equalisation mechanism (to subsidise people with relatively poor risk profiles), would obviate the possibility of plans with good risk profiles being unduly advantaged.

3.1 TYPES OF MANAGED CARE IN THE USA

The typical managed care organisation is a *health maintenance organisation* (HMO). To earn the HMO label, health care systems must possess an insurance licence. Hence HMOs, both in their legal status and in their management hierarchies, exhibit a high degree of integration with respect to their insurance and service functions. HMOs act, on the one side, as insurance companies and, on the other, they monitor and control the health care process on the basis of specific contracts with health care providers. HMOs produce health care services assembled into an insurance package.

There are various types of HMOs, the differences lying in the kind of contractual relationship that exists between the HMO and its physicians. The HMO employs the physicians either directly as employees (the *staff model*) or else it concludes health care contracts with an association of individual physicians (an *independent practice association* or *IPA*) or with a

group of physicians operating a common practice (the *group model*) or with a network comprising groups of physicians (the *network model*).

The integration of insurance and health care provision is an especially pronounced feature of HMOs of the staff and group model types. Such HMOs mostly maintain a large care centre whose segments are closely interlinked, not only functionally but also spatially. They very often offer a full range of services, including treatment by physiotherapists and opticians as well as remedial or convalescent course sessions. Literally, everything is 'under one roof'. Moreover, physician practices and those of other providers, along with (in many cases) a pharmacy or even a hospital, are owned by the HMO. Generally speaking, the physicians of a staff or group model HMO work exclusively for the latter, i.e. none of their patients are members of another insurance. This is known as a 'closed panel'.

About two-thirds of the American population are insured under a collective contract that their employer has concluded. For every insured person an HMO is paid in advance an insurance premium, which generally varies with the average risk profile of the group of employees to which they belong. This is referred to as 'experience rating'. The insured person is then given an insurance package. The services it contains are generally quite comprehensive. The required level of patient co-payments generally undercuts conventional insurance models. In return for these services and reduced co-payments, though, insured people agree to use only the providers of that particular HMO. Furthermore, they must accept the terms of contract as laid down – and these can vary considerably from one HMO to another.

The next most important managed care organisation, after the HMO, is the *preferred provider organisation* (PPO). The PPO is a partnership entered into by several physicians with their own practice and one or several hospital(s). But since they do not simultaneously function as an insurer, there is no integration – and here is where they differ from HMOs – of service provision and insurance. The insurance function devolves to the buyer of PPO services, i.e. an employer assumes this for his employees or else an insurance company acts as third party and intermediary between the insured person and the health care providers. A further difference from HMOs is that while a PPO-insured person is exposed to strong incentives to use PPO health care providers, his insurance will nevertheless pick up a large share of the bill if he does decide to use health care providers from outside the PPO network. In such a case, the insured person's co-payment component might amount to some 25 per cent of the bill, whereas if he sticks to PPO services it might be only around 10 per cent.

Table 6 Comparison between managed care and conventional insurance types in the USA, 1995 (only employer-funded insurance types included)

Insurance type	Market share ¹ (%)	Premium rate (average amounts in US\$)		Growth in average premium 1994/95 (%)		Employer share (average %)		Deductibles (US\$)		Co-payments ² (in % of total bill or US\$)		No co-payment ³ (%)
		Single insurance	Family insurance	Family insurance	Single insurance	Family insurance	In-plan ⁴	Out-of-plan ⁵	In-plan ⁴	Out-of-plan ⁵	In-plan ⁴	Out-of-plan ⁵
Conventional	27.4	175	440	3.4	86.4	69.4	253	20%		5		
HMO	27.5	157	411	0.9	75.3	62.1	-	0-10\$	100%	14.6	-	
PPO	25.0	174	422	2.6	82.2	67.3	180	0-20%	20-30%	12	2	
POS	20.1	172	434	2.2	79.3	67.8	118	0-10%	20-30%	44	0.5	

1 Percentage of all insured employees.
 2 Valid for most insured people (>70 per cent) in firms with 200 or more employees; 1993 data for conventional, PPO and POS type.
 3 Percentage of insured people where no co-payment is levied in firms with 200 or more employees; 1993 data for conventional, PPO and POS type.
 4 Utilisation of in-plan providers.
 5 Utilisation of out-of-network providers.

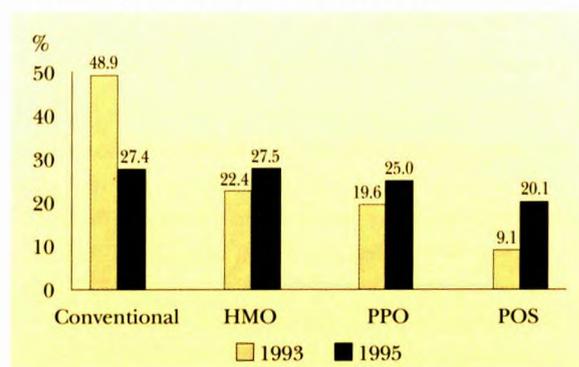
Source: Compiled from Gabel *et al.* 1994 and Jensen *et al.* 1997 (1993 data).

In a modified form of PPO, the *exclusive provider organisation* (EPO), insured people are only permitted to draw on care services within the network. If they use services provided outside the EPO network, they forfeit all rights to reimbursement.

Of increasing importance are the *point-of-service organisations* (POSs). Often, they are the second programme of an HMO. The insured person decides whether he wishes, in the event of falling ill, to be treated inside or outside his health plan's network. If service providers from outside the care system are used, the POS organisation will only refund a portion of the costs. The annual deductibles and co-payments imposed on external services are on average about the same for POSs and PPOs. But within the network of contracted providers, extra charges for POS-insured people are on average lower than with PPOs. POS organisations offer those insuring with them considerably more leeway in the choice of physicians than do HMOs, though in return they usually charge higher premia (Table 6).

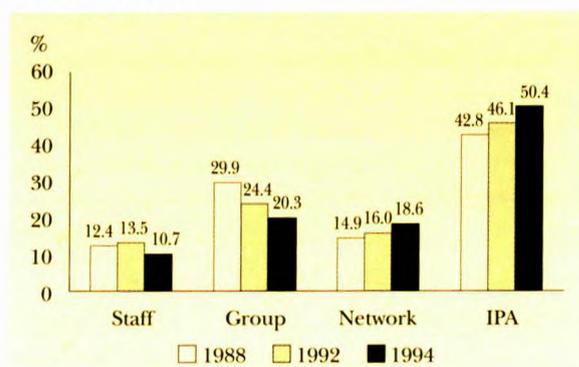
There is no doubt that managed care organisations are becoming ever more significant to the American health scene. If we look at American employees insured by their employers, the share of those with managed care coverage rose from 29 per cent in 1988 to 73 per cent in 1995. Of these some 28 per cent were members of an HMO, while 25 per cent belonged to PPOs and 20 per cent to POSs (Figure 6). 50 per cent of all HMO insured people belong to IPAs making the IPAs the predominant HMO type. Those opting for group and network models accounted for around 20 per cent each, while the staff model attracted around 10 per cent of HMO members. Relative HMO-membership has grown for both IPAs and network models, whereas

Figure 6 Percentage of insured employees covered by different types of plan, USA, 1993-1995



Source: Compiled from Jensen *et al.* 1997

Figure 7 Share of US HMO membership by type of HMO, 1988-1994



Source: Compiled from Gabel 1997

membership in group and staff models has decreased (Figure 7).

3.2 MECHANISMS OF MANAGED CARE

Managed care organisations are generally characterised by a high degree of integration in the care process. A managed care organisation's financial success was found to be strongly correlated with the degree of integration it evinces.[73]

To achieve a high degree of integration at a low cost, managed care organisations principally resort to five strategies:

1. They select their health care providers carefully (a process known as selective contracting).
2. They structure the care process around the *primary care physician (gatekeeping)*.
3. They create economic incentives by posting appropriate modes of remuneration.
4. They monitor service supply and demand and *directly* intervene (depending on procedural planning either only when called for or on a regular basis) in the care process. Here great importance is attached to *treatment guidelines*.
5. They strictly assess *technologies* according to efficiency criteria.

Generally speaking, influence on service provision is at its most pronounced with HMOs and weakest with PPOs. Often the only connection between a PPO's physicians is the fact that they all feature on the same list of service providers and treat members of that particular PPO for a lower fee than those insured elsewhere. The POS organisations occupy an intermediate position in respect of the extent to which the care process is integrated and insured people are bound into the care network. Should an insured person decide to seek a service provided from outside the network, the POS organisations undertake neither integration nor cost control.

Claims to integrate care to the greatest degree possible have to be balanced against the practice of selective 'carving out' of certain services or care sectors. Thus service provision in e.g. the fields of ophthalmology, dental care, mental care and drug abuse is frequently delegated to specialised organisations that have demonstrated high efficiency levels in that particular field.

Further details on the mechanisms of managed care can be found in Appendix I.

3.3 EVALUATION OF MANAGED CARE ORGANISATIONS

That managed care could ever be developed was due, in no small degree, to the large earning potential this approach seemed to promise for those running

managed care organisations. The market has thrown up a great multiplicity of health care modalities and regulatory instruments, the effects of which are, however, still difficult to determine. Thus, the freedom of insured people and their providers has been curtailed, albeit to different degrees, and an array of supplementary payment regulations are now in place, which in turn feed back on care quality and patient satisfaction in manifold ways.

Given the sheer variety of what is on offer, it is no easy task for employers or insurance seekers to decide which programme to contract with. However, in making their choice, employers and insurance seekers can draw on the results of evaluations compiled by special agencies. Particularly important here are the *National Committee for Quality Assurance (NCQA)*, a private, not-for-profit organisation which has become the leading accreditor of managed care plans; and the *Health Plan Employer Data and Information Set (HEDIS)*, an evaluation instrument developed by the NCQA. In contrast to the internally practised quality management described above, NCQA and HEDIS aim at enabling standardised and publicly available comparisons between health plans.

Further details on the evaluation of managed care organisations can be found in Appendix II.

3.4 MANAGED CARE AND THE PHARMACEUTICAL INDUSTRY

In the pharmaceutical care sector too, managed care has sparked off new developments. One of the key managed care elements is *pharmaceutical benefit management*, which was developed to optimise pharmaceutical therapy. The pharmaceutical benefit managers (PBMs) have two different business partners. On the one hand, they purchase pharmaceuticals in large amounts, and therefore at favourable wholesale prices, from pharmaceutical manufacturers. These they then retail to hospitals, pharmacies and HMOs. In this connection, they compile for their customers individually tailored formularies of pharmaceuticals. PBMs also develop *drug utilisation reviews (DURs)*, with the help of which pharmaceuticals can be screened for effectiveness. These are increasingly being used by managed care organisations. The PBMs often use mail order as their main distribution channel, especially in the case of repeat-use prescriptions for the chronically sick.

For any pharmaceutical company operating in the managed care market, it is important to be represented by as many medicines as possible on the formularies kept by the HMOs. Hence, the pharmaceutical companies use specially trained field service personnel

and put together a specific line-up of products and services. As far as relationships between the pharmaceutical companies are concerned, networking offers a way of securing market access, as well as boosting turnover and yield. The strategy of integration pursued by managed care systems is again seen in the pharmaceutical sector and a number of pharmaceutical companies have bought out PBMs. Other trends are for data exchange contracts and even joint ventures between pharmaceutical companies, HMOs and PBMs. This provides the means for *disease management* which aims at finding the optimal prevention and treatment path for a given disease and at increasing information of, and compliance by, the patients and their families.[64]

4. MANAGED CARE: A REFORM OPTION FOR THE GERMAN HEALTH CARE SYSTEM?

There is hardly a discussion of possible reform options where managed care elements do not receive an airing. In view of the multiplicity of organisations, elements and concepts connected with managed care, it is no surprise to find opinions diverging as to just what this means. Often managed care is equated with ruthless competition. Given the realities of the American managed care market this charge is understandable: for example such a common American practice as newly delivered mothers being discharged within 24 hours of giving birth, might appear in Germany to be a flagrant example of a competition-linked distortion creeping into the managed care system. All health care systems in the USA which provide coverage for childbirth have now been obliged by a recent court decision to pay for at least two days of post-natal care. However, this bill does not mandate this benefit in the insurance package.

While in the American system the law is often invoked to regulate health care quality, in Germany's health care system the regulation of competition is an absolute requirement because Germany's social consensus tends more towards solidarity, as is reflected in the commitment to a largely collectively funded, population-wide insuring of the sickness risk.

To pose the question whether managed care could be transferred to Germany and, if so, whether this would be desirable, raises the following issues.

Many German physicians oppose managed care, a stance they justify by pointing to the historical origins of Germany's statutory sickness insurance. To be sure, no understanding of the health care policy debate about managed care is possible unless rooted in a prior understanding of the structures and peculiarities of the German system as they have historically evolved. Thus it will not be inappropriate if we pause to review the history of statutory sickness insurance in Germany.

However, it is only in detachment from that historical context that the normative aspect can be examined, i.e. whether adopting managed care is at all desirable in the light of its track record to date, and just what the gains and losses are likely to be if the green light is given. In

order to venture a judgement here, managed care's strengths and weaknesses will be reviewed, as experience to date has shown them to be.

Some aspects of managed care can already be discerned in the German health care system, especially at the macro level. Firstly, office-based physicians are only entitled to treat the socially insured if they have a licence from the regional associations of sickness fund physicians to do so. (As from 1999, physician-to-population ratios will be set by the federal government.) Secondly, the social code defines the role of the primary care physician as co-ordinator of the care process. Thirdly, the 1993 GSG introduced sector-specific budgets for almost every service sector including drugs prescribed by office-based physicians. Fourthly, the associations of sickness fund physicians (in part also the sickness funds) check whether care is delivered in an economic way. There are guidelines relating both to treatment and the introduction of new services in the benefit catalogue which are also used for monitoring the care process. These are agreed upon at the federal level. Fifthly, new technologies may only be introduced in the ambulatory sector after they have been assessed by the federal association of sickness funds and sickness fund physicians. In order to increase the quality and transparency of care in the hospital sector, the 1993 GSG has created the legal basis for formalised quality assurance measures including the comparison of hospitals.

While the state governments set up the hospital need plans, the regional associations of sickness fund physicians are charged with securing that ambulatory care is available in their respective region and are responsible for distributing the budgets they receive from the social sickness funds to the physicians. This makes both the associations of sickness funds physicians and governmental agencies complementary agents of the patients in Germany's health care system.

Managed care, however, presupposes competition and management at the micro level. For this reason, in a German managed care system competing social sickness funds, which try to be as attractive as possible to their customers, would play the dominant role as active purchasers of health care (in co-operation with the associations of sickness fund physicians).⁵⁰

⁵⁰ Private health insurance companies do not make contracts with physicians in Germany. Thus, at least at the moment, they cannot qualify as complementary agents of their members.

Care management features at the micro level can already be found in the German social health care system. Firstly, competition between social sickness funds exists. Secondly, a few pilot projects have been started in order to examine whether health care within the system of social sickness insurance can be organised more efficiently. Some of these projects (which are restricted to social sickness funds) contain important managed care elements. Thirdly, the employers' liability insurance funds that are responsible for prevention and treatment of occupational accidents have already incorporated managed care elements within the regular care process.

These aspects of the German system will be compared to the managed care system in the US, in the next section. An additional perspective – on the likely effects of introducing managed care elements into Germany's consensus-oriented social system – will be sought by examining Switzerland's initial experiences with managed care.

4.1 MANAGED CARE AND THE GERMAN SYSTEM'S HISTORICALLY EVOLVED STRUCTURES

4.1.1 The origins of statutory sickness insurance

Managed care is not completely new to Germany. Elements of it can be discerned in the historical origins of statutory sickness insurance and its initial phase. This history began with the Emperor's message to the nation in 1881, in which the general direction for the later construction of a tripartite social insurance system (sickness, pension and accident insurance) was formulated. Germany's first great social reform of the modern era cannot be separated from the name of Bismarck, who masterminded the passage of legislation relating to sickness insurance (1883), accident insurance (1884), and pension and invalidity insurance (1889).

Mandatory sickness insurance coverage at first only extended to around 10 per cent of the population. Access to statutory sickness insurance services was restricted and the principal service was the awarding of sick pay to compensate for lost income due to sickness-related inability to work. Contributions to statutory sickness insurance were pegged to the insured person's income. The contribution rate was calculated from the risk profile of the pool of insured people. Since a pool was relatively homogeneous and both services and contributions were fixed proportional to income, the contribution rate was in effect risk-adjusted. A local

sickness fund initially catered for a mandatorily insured pool of mainly unskilled workers but there were also various local sickness funds for blue-collar workers of different occupations. By the early years of the 20th century Imperial Germany had some 23,000 sickness funds, with 45 per cent of them numbering fewer than 100 members.

The sickness funds were self-administered by their members. The power to decide the range of services and premia was vested in the sickness funds themselves. Employers paid a part of the premia in return for matching rights of consultation and veto within the self-administration framework. The sickness funds had a virtually free hand in contracting with providers. They could themselves define the health care process by such expedients as only contracting with selected physicians and ensuring that providers from outside the medical profession also played a central role in the health care process. Often the sickness funds would use treatment protocols or seek second opinions. Remuneration was usually by salary or lump-sum payment. Patients were limited to choosing among those providers who were able to obtain contracts with the sickness funds.

4.1.2 The changing role of statutory sickness insurance

The range of services expanded, with sickness pay being joined by a comprehensive insurance package, and the pool of insured people grew to include the whole of the population, with the exception of those who were privately insured. Statutory sickness insurance thus evolved away from its managed care origins and developed into the present system, with its heavy commitment to social solidarity.

The restrictions on physicians' activities and their economic dependence on the sickness funds encouraged the emergence of physicians' lobby groups, such as the Hartmann Federation⁵¹ (1900). These groups opposed the use of selective contracts, and came out for the patients' right to choose their own physicians and for the autonomy of the medical profession. The sickness funds responded by setting up their own associations at the national level. Several funds paid a fixed capitation fee per insured person to the Hartmann Federation, which then committed itself to provide adequate treatment for insured people and to remunerate individual providers.

Individual contracts between sickness funds and physicians were replaced more and more by collective contracts. In 1923 the unionised medical profession struck successfully for the complete outlawing of individual contracts. The Great Depression brought

51 *Hartmannbund*.

considerable increases in social insurance contribution rates, especially in the case of unemployment insurance, which had been introduced in 1927. Since physicians' incomes remained largely unchanged, the minister of labour threatened to declare physicians public servants. Following signals from the Hartmann Federation, indicating its members' readiness to accept a drop in income in return for continued autonomy of the medical profession, the associations of sickness fund physicians were set up in 1933, which from then on became the sole contracting partners of the sickness funds for ambulatory medical care. During the National Socialist period the associations of sickness fund physicians were made into public law corporations. The remaining sickness fund polyclinics – the fruit of the physician strikes of 1924 and 1925 – were dissolved and the role of hospital outpatient departments restricted to treatment of emergency cases.

Only in 1967 was the remuneration mode tied to the fee-for-service principle. The following years saw a significant technological investment in the practices of established physicians, which resulted in an expanded volume of services and costs. Since what ensued was not only a cost but also a revenue explosion, the latter resulting from dramatically increased assessable incomes, the 'crisis' in the health care system was at first not perceived as such. Only in 1977 was a cost-squeezing policy embarked on which continues to this day.

Restructuring the German health care system along managed care lines would, in some ways, mean returning to previous modes that may have been abandoned for good reasons. Only by carefully weighing up the likely gains and drawbacks can the advisability of such a course be assessed. This will require taking a sober look at the effects of managed care, one that reflects previous experience in its use in an historical-context-independent manner. For such experience we must mainly look to America, but there is also the Swiss case. Since Germany's social-political climate is more readily comparable to Switzerland's than America's, the Swiss track record to date with managed care is naturally of great interest to German health care policy-makers.[5];[79]

4.2 POTENTIAL STRENGTHS AND WEAKNESSES OF MANAGED CARE: THE AMERICAN RECORD

4.2.1 Strengths

The findings of a literature review by Miller *et al.* suggest that managed care organisations, particularly

HMOs, have succeeded in lowering costs, especially in the hospital sector, so that customer satisfaction with the cost of health care tends to be greater than in the case of traditional insurance coverage. Those insured with HMOs are less frequently hospitalised than those with other forms of coverage and their average length of stay is shorter. HMOs mostly decline to authorise costly tests and treatments whenever lower-priced alternatives are available. The quality of care in managed care organisations is on average comparable to that in traditional indemnity plans. Qualitative gains are achieved, especially in the preventive medicine sector, but also through such expedients as co-ordinating the health care process or restricting treatment to proven effective services.[56] Furthermore, a literature study, by Berwick, on the quality implications of payment by capitation does not support the theoretical hypothesis that this remuneration mode provides an incentive to skimp on the quality of care.[11]

Managed care introduces greater transparency into health care, or at least into some of its segments by external accreditation and information systems such as HEDIS. Managed care also sheds greater light on how services are being rationed than do budgetary approaches.[6]

From the provider's perspective, efficiency may be improved because managed care leads to standardisation of the management process and hence to greater administrative streamlining, particularly when providers are only contracted to one or two managed care organisations. Another advantage physicians see in the managed care system (especially in staff model HMOs) is that they keep regular and, compared with the conventional system, shorter working hours.

Increases in the health sector's share of GDP have slowed down significantly since 1992. While between 1990 and 1992 the health sector's share of GDP grew from 12.7 per cent to 14.1 per cent, since 1992 it has remained virtually stable to yield an overall 14.2 per cent of GDP in 1996.[61] In 1992, the US Congressional Budget Office calculated that the health sector's share of GDP would increase to 18 per cent by the year 2000, based on the assumption that health care expenditure would continue to grow at the same rates as were recorded between 1965 and 1991.[3] From 1993 to 1995 real US health care expenditure per capita increased by the lowest annual growth rates since the 1980s. These rates amounted to an average of 1.9 per cent per annum as compared to 4.8 per cent per annum in the preceding decade. As a consequence, the Congressional Budget Office has lowered its projections of future national health expenditure to 15

per cent of GDP in 2003. Since this trend is caused by reduced per capita spending in the private sector where HMOs, PPOs and POSs prevail, it may be attributed to managed care.[62]

4.2.2 Weaknesses

HMOs employ methods that, unless carefully monitored and managed, could result in a low-quality under-treatment of patients. This danger is acute when the insured or their employers have no direct way of telling that savings are being extracted at the expense of quality; and is also a particular danger when a managed care organisation expects that an insurance contract is not going to be renewed. Under these circumstances it is especially the preventive measures that the managed care organisation is likely to lose interest in providing, since it will not benefit from any future cost savings. This is a particular problem in the USA for three principal reasons. First, over-65s in America are usually insured with the federal (collectively funded) Medicare programme and therefore bow out of the insurance system, which only caters for those of working age. Second, the American population is extremely mobile and changing one's job or area of residence as a rule means changing one's insurance as well. Third, many members change their managed care organisation because they are dissatisfied with its performance or else their employer has just negotiated a better-priced contract with another organisation. Such turnovers affect around 30 per cent of those insured each year.

Moreover, managed care organisations and particularly the HMOs have a reputation for restricting physicians and the insured in their freedom: the physicians in their free choice of therapy and the insured in their free choice of physician. A long-standing physician-patient relationship can be instrumental in dissuading many Americans from taking out HMO membership or in deciding to cancel it.

Furthermore, patients seeking specialist medical treatment or hospitalisation must all too frequently expect to join long queues. The practices by which HMO patients are, in effect, rationed are manifold and can vary from HMO to HMO. Especially in markets where premia are calculated irrespective of the individual risk profile and no risk-based financial equalisation is practised, managed care organisations typically resort to rationing ploys to keep costly members at arm's length.

Those insured with managed care organisations are generally somewhat less satisfied with the quality of care they receive than are their counterparts in the

conventional system.[56] This is especially true in the case of sicker patients, who frequently report not receiving the care services they either need or want.[65] According to Ware *et al.* elderly and poor chronically ill patients have worse physical health outcomes in HMOs than in FFS schemes.[85]

Even if managed care organisations focus on displacing inpatient services to the ambulatory sector through carefully selected incentives, this does not necessarily make health care cheaper overall because incentives in a given sector might not lead to lower total costs so long as care providers are able to practise cost-shifting to other sectors. For instance, a study of members of the US military was unable to identify any significant cost gains through managed care. The author of the study put this down to the fact that utilisation of ambulatory care in managed care organisations was higher than in conventional care forms; also that the incentive structures operating in such managed care organisations as IPAs were too weak to make any significant inroads into costs.[33] Savings realised in the USA DRG-based prices (and these can be considered managed care instruments) for Medicare patients in the hospital sector were at least partially wiped out by raised expenditure in the ambulatory sector and cost-shifting to other payers.[62]

4.3 THE AMERICAN HEALTH CARE LANDSCAPE: OPEN QUESTIONS AND CURRENT TRENDS

4.3.1 Integration versus outsourcing

Integrated managed care organisations have adopted one particular programmatic approach: health care is always to be sought wherever the costs are lowest. The treatment sequence is usually the following: prevention, self-help, telephone counselling, physician consultation, hospitalisation, home care, institutional care (long-term).

The focus on optimal utilisation presupposes transparency of costs, services and outcomes in the individual care stages. Yet such transparency is hard to achieve. In addition, the merits of integrating care are questionable on three counts: 1. the high value that attaches to free choice; 2. the phenomenon of so-called '*economies of scale*'; and 3. the advantages of specialisation.

1. Compared with some European countries (e.g. Britain), the USA shows a marked preference for ensuring insurance-seekers a free choice of providers (via employer). In contrast to those insured with typical HMOs, those insured with point-

of-service organisations also have a large slice of their bills reimbursed even when they use providers from outside the POS network. America's high preference for freedom of choice explains the high growth rates of POS organisations. For the German system, too, it can be assumed that the bulk of the insured would wish to retain, within broad bounds, the right to their physician of choice and would therefore prefer POS organisations, or PPOs for that matter, to HMOs.

2. Many indications are so special that it makes excellent economic sense for health care systems to outsource (carve out) certain of their services and have other providers perform these. In the context of medical care, these so-called 'economies of scale' reflect the economic fact that it is usually cheaper for a specific treatment to be dispensed by a single health care organisation to patients of several other health plans than for each health plan to insist on a dedicated provider treating only its own patients. As medical knowledge spreads, economies of scale are becoming an ever more potent factor, reinforcing the greater specialisation needed to ensure that the system as a whole is provided with optimal care levels. Economies of scale are also very common in information processing, and managed care organisations invest considerable time and energy in keeping abreast of just how the care process within their health system is proceeding. However, other health plans do not have access to these data.
3. A corporate culture and philosophy of efficiency is more likely to develop in companies offering defined products that all their personnel can identify with and through which they can achieve recognition and status. If hospitals specialise, they may be able to attain both higher quality and lower costs.

Compared to the integrated approach, outsourcing also has its share of drawbacks:

- The seller of a specific service is often better informed than the purchaser about the production costs and properties of his product and can exploit this to his own advantage. Furthermore, the decision to outsource services often implies that sensitive information must be delivered to another company. In an integrated health care system these problems are internalised, since supplier and potential buyer belong to the same firm.
- Contractual relationships can prove inflexible, such as when one of the contracting parties adheres scrupulously to the terms of contract, although the circumstances pertaining at the time of concluding the contract have since altered.

Many of the drawbacks of outsourcing matter less the brisker is the competition in the marketplace for the services in question. However, the kind of specialised services where outsourcing makes most sense are not subject to much competition. These health care services are rarely needed, which impedes competition on the supplier side, particularly when they need to be provided in close proximity to the patient.

Many of the advantages of vertical integration can be realised and some of the above drawbacks can be ameliorated, slightly, by 'virtual integration': linking up the organisationally distinct suppliers of health care services via efficient information systems which are complementary to contractual relationships.[66]

4.3.2 Competition and insurance policy issues

At the start of the nineties, several large profit-oriented managed care organisations were in a position to retain some 30-40 per cent of their premium revenues and channel them into advertising, administration, expansion, and increases for top management salaries or stockholder dividends. Insurance premia at the same time went up sharply from year to year. This would seem to point to a highly imperfect level of competition between managed care organisations. Were competition between health plans functional, this retained component would surely be less.[3]

There were still HMOs, as of 1995, that laid out less than half their premium revenues on providing their insured members with medical care.[41] Nevertheless, it should be added that the competitive landscape, as seen from the perspective of the insured and the providers, has recently improved. That competition is becoming more active is exhibited by the relationship between HMOs and hospitals. While many HMOs, when negotiating over inpatient facilities, until recently were able to virtually dictate their terms of contract and push through massive discounts (which caused several hospitals to close down), negotiations are now based on greater equality of bargaining power between the partners. In addition, managed care organisations have seen their profits declining, so much so that, in 1995, employer-sponsored insurance holders experienced a premium increase of only 0.9 per cent as compared to 3.4 per cent in conventional health plans. The decline in premium increase could, however, have been caused by above-average profits in 1993. Over the past 30 years, high profits have often been followed by modest premium increases two years later.[42]

For 1998, many managed care organisations have announced considerable premium increases. This might be attributed to economic growth and low unemployment rates in the USA which have caused

many employees to demand a greater freedom of choice of providers.[63]

Meanwhile many employers have taken to declining to devolve the insurance risk, and hence also the insurance risk premia, to a managed care organisation. They now prefer to pick these up themselves as *self-insured companies* and contract with provider networks (of which an increasing number are managed care organisations, especially PPOs and POSs) for the provision of medical services only. An increasing number of employers entrust all administrative functions to a special service, so-called *third-party administration*, which is however sometimes supplied by an HMO. This service includes such tasks as compiling a network of providers, monitoring the health care process, devising quality assurance tests and, in general, handling the administrative side of the insurance process. The employer, however, largely determines the range of the insurance package.

The most important problem connected with insurance policy issues is that of risk selection. This may result from charging the same insurance premium to members, irrespective of risk (so called 'community rating'). Community rating leads to the incentive to select 'good risk' members, i.e. those with expected health care expenditure which is less than the premium. 'Good risks' will have the incentive to leave high-premium health plans and seek coverage through cheaper plans that adjust rates based on their risk profile, e.g. by having high deductibles to deter bad risks. Risk selection becomes an even more profitable strategy, which keeps premiums down in order to attract good risks and maximises corporate profits, if no risk-based financial equalisation, across the whole insurance spectrum, takes place.

In the HMO Act of 1973, community rating was a statutory condition for HMOs to be 'qualified' by the US government, to be entitled to e.g. certain federal grants and loans. This regulation was abandoned in 1988. Consequently, the share of HMO enrollees covered by standard community rating decreased from 47 per cent to 29 per cent between 1988 and 1993. Standard community rating has been replaced by rating methods which take into account the risk profile of the enrollees.[30] As a consequence, people or groups with a bad risk profile can only find insurance if they pay a correspondingly high premium. People such as the chronically sick who have high risk profiles are likely to lose insurance coverage because they cannot afford the premium. If this is to be avoided on social grounds, risk equalisation schemes must be introduced. However, they must not take place within health plans (as it is the case under the community rating scheme) but should be moved to a source outside them, as

envisaged in the managed competition model.[22];[53]

4.3.3 Quality assurance

If competition worked perfectly in a managed care system, it would lead to efficient outcomes with respect to quality of care. However, the intrinsic problems of the health care market such as information asymmetries make quality assurance measures necessary. According to Emanuel *et al.*[20], six factors here especially stand out. They do not exclude each other, but rather are complementary and mutually reinforcing:

- Managed care organisations should practise an open-ended information policy, otherwise insurance seekers cannot make an informed choice.
- A professional ethos is required of physicians, serving as a counterweight to financial incentives.
- Limits should be placed on the practice of posting direct financial incentives for providers (e.g. such incentives must not be allowed to exceed a prospectively set percentage of annual income, say 10 per cent).
- Independent institutions, binding on all health plans, must be set up to screen – both prospectively and at regular intervals retrospectively – all planned or existing treatment guidelines in terms of their compatibility with the current state of technology and research, including the concomitant costs.
- Compulsory establishment of independent complaints procedures for all hospitals, medical practices and managed care organisations is called for.
- A functioning competitive market is required, where care quality is a key factor.

Quality assurance not only requires changes to the institutional infrastructure and legal framework, but also collective action on the part of physicians, to safeguard the interests of individual patients. Reliable quality measures have to be established to enable the comparison of different health plans. This is a difficult task, as has been stated by an editorial in the *New England Journal of Medicine* recently: 'Efforts to evaluate the outcomes of care in complex illnesses are under way, but they are still in their infancy and are likely to be frustrated by variations in case mix.' [4] Also of great importance is to clarify what concrete effects strict competition within the managed care system will have on 'market equilibrium'. Will quality drop because the cost of premia turns out to be the driving competitive factor and employers come to rank cost above quality? Or will quality rise through the

ministrations of managed care, with quality itself becoming a competitive factor and managed care leading to improved deployment of information (eventually feeding back positively on quality)? These questions suffice to show that the effects of managed care can only be conclusively gauged when long-term competition prevails on all levels of the health care system. Plainly, American health care is still far removed from this condition. Yet the very centrality of competition in pronouncing, one way or another, on the success of the managed care experiment serves to underline one point: to answer the question of the transferability of America's managed care approach to German conditions we must first answer the general question of how transferable is the notion of competition in health care.

4.4 COMPETITION BETWEEN GKV FUNDS: A STEP TOWARDS MANAGED CARE?

Unregulated competition is disqualified as an option for German health care on social-political grounds. Like other European countries, Germany operates a version of the social contract based on a social consensus that competition in the health care sector should be kept on a tight leash. This is well exemplified by Germany's statutory sickness funds, which, since January 1996, have been permitted to compete with one another. Yet competition between purchasers of statutory sickness funds is only permitted within the bounds of the solidarity principle. This principle – to which a broad segment of population feels obligated – prescribes redistribution: from rich to poor, from single people to families and from healthy to sick, irrespective of age and gender. The solidarity principle impedes free competition since this would inevitably throw up insurance solutions with risk-adjusted premia for the various risk cohorts. Also, the upshot of such a 'pure' market solution would be that particularly poor risk cases with low incomes would remain uninsured.

Since any selection of healthy and rich insured people would constitute an infringement of the solidarity principle, the German legal framework specifies a contractual obligation for the statutory sickness funds, i.e. the individual funds must accept every would-be member. The only exceptions here are the company and guild funds, which are not compelled to take outsiders unless they so desire. Furthermore, the provision of income-dependent, risk-based financial equalisation is meant to iron out differences between sickness funds in respect of the risk profile and assessable income of insured people. Risk equalisation schemes are undertaken on the basis of four criteria:

age, sex, family-plan membership and income. However, morbidity risk within these categories is not taken into account in the adjustment formula. As a result, individual sickness funds still have an incentive to select good risks (in the sense of relatively healthy contribution payers). While contractual obligation prevents any up-front recourse to risk selection, it is still noticeable that the statutory sickness funds go to great lengths to tacitly select good risks: their ploy is to specifically target their marketing efforts to these lower risk cohorts, offering an assortment of fund-specific services designed to appeal to them.

Another potent brake on competition in Germany takes the form of regulations which cannot be derived from the solidarity principle. Thus the sickness funds have little leeway in drawing up contracts with care providers. They cannot conclude individual agreements with individual providers or groups of physicians, but have to confine themselves to taking out collective contracts with the contracting physicians en bloc. The remuneration mode (primarily based on the fee-for-service principle) is just as universally binding as is the service catalogue (with few exceptions such as health promotion courses) and the rules for calculating contributions. Greater leeway for selective contracting of providers by sickness funds is needed if there is to be increased competition on the side of providers.

In marked contrast to the German system, the contractual freedom that American HMOs possess – both towards care providers and towards their own members – is a linchpin of the managed care idea. No less important, however, to managed care is the decision-making autonomy that managed care organisations have over the mode of remuneration. When drawing up the service catalogue and conducting information management, in order to coordinate health care provision, US managed care organisations have considerably more room to manoeuvre than Germany's statutory sickness funds.

4.5 PILOT PROJECTS

4.5.1 'Family physician subscription' and 'combined-budget networked practices'

With a view to estimating whether, and if so to what extent, German health care can be made both less costly and more efficient, a number of pilot projects have been devised. Until the 1997 health care reform, many projects containing managed care elements ran into legal difficulties, despite participant involvement being purely voluntary. The recent health care reform, however, has created the legal framework for such pilot projects.

Particularly strong parallels with managed care are apparent in two pilot projects called ‘family-physician subscription’⁵² and ‘combined-budget networked practices’.⁵³ The contractual framework for the first of these projects was devised by the local sickness funds and the association of sickness fund physicians at the federal level. This model has been tested by the AOK Hessen in co-operation with the regional association of sickness fund physicians of Hessen in Frankfurt in 1997. For the pilot stage it has been restricted to the care of patients with diabetes or cardiovascular diseases. The ‘combined-budget networked practices’ project has been put into place by the company funds in Berlin. In addition, there are some other pilot projects which will not be further described as they are in essence similar to the two presented here.

In the ‘family-physician subscription’ project, the family physician functions as both *gatekeeper* and *case manager* who co-ordinates patient care over the whole care process. He is supported by a ‘social case manager’ (e.g. a nurse) who gives advice to the patients (usually by telephone) and informs the family physician about the local service infrastructure of nursing, rehabilitation and other social care institutions. The prevention of unnecessary hospital treatment is one of the key targets of social case management.

The local sickness funds do not yet force the participating patients to consult their family physicians first as gatekeepers. They assume that patients will voluntarily do so as long as they are convinced of the quality of their family physicians. Nevertheless, the funds are considering whether to reward a patient’s agreement always to consult their gate-keeping primary care physician first, by offering contribution repayments and other incentives.

In the ‘combined-budget networked practices’ pilot project, which was launched in Berlin in 1996, family physicians and medical specialists are bound together in a network. The office-based physicians are the target group of this project since, in Germany, they induce about 80 per cent of total health care expenditure; by providing medical services themselves, prescribing drugs and referring their patients to other providers. The whole net of about 270 participating physicians has been divided up into smaller networks of about 30 providers each who work in the same or neighbouring districts and are supposed to form a team. Key elements of the network are:

- **Quality circles:** Office-based physicians regularly meet in order to co-ordinate and develop the care process (e.g. discuss diagnostic and therapeutic measures both in general and for selected complicated cases). A medical council co-ordinates the outcomes of the circles at the local level and makes them accessible to all the participants.

- **Accessibility of providers:** The network is so co-ordinated that a patient can obtain care by a network physician (primary care physician or specialist) at any hour of the day and on any day.

- **Co-ordination:** Care is co-ordinated both within the network and between the network and other providers such as ambulatory nursing and rehabilitation organisations. In order to confirm the first diagnosis, a second opinion by another network physician is asked for. Outpatient nurses are supposed to regularly look after a patient at his home and call for a network physician if necessary. The network physicians keep in contact with their patients even in the case of inpatient treatment.

- **Patient card:** The patient card (which is offered on a voluntary basis) contains the most important medical data concerning a patient (blood-group, vaccinations, allergies, medication, medical history). It enables every physician to obtain immediate access to all the relevant patient data.

These measures are intended to prevent unnecessary use of services and hospital admissions. Co-ordination between providers is supported by a care management office established by the company funds. This central office also functions as an information base if inpatient treatment or nursing care is necessary. It recommends qualified acute, nursing and rehabilitation hospitals and co-ordinates care at the interface of different care sectors (e.g. by delivering information to providers of subsequent care sectors).

In order to provide the participating physicians with an incentive to seek efficiency in the production of health services (technical efficiency) and provide services of the quality and in the quantity to satisfy the consumers’ (i.e. the insured patients’) preferences (allocative efficiency), a special remuneration mode has been created, i.e. the network budget. This kind of reimbursement had to be agreed upon by the regional association of sickness fund physicians of Berlin.

The total network budget, by which the network pays for its physicians’ services, is calculated as the sum of the capitation fees which are corrected for the same criteria which are already taken into account in the risk-based financial equalisation mechanism between

⁵² *Hausarztmodell (AOK-Bundesverband).*

⁵³ *Vernetzte Praxen mit kombiniertem Budget (Betriebskrankenkassen Berlin).*

the sickness funds. This prospective 'global budget' has to cover expenditure for services provided by office-based physicians (within and outside the network), hospital expenditure and expenditure for prescribed drugs, therapies (e.g. physiotherapy) and auxiliary materials. Specific network services such as organising quality circles are remunerated by fixed prices and fall within the budget. Extraordinarily costly services like organ transplantation and renal dialysis, however, are not to be covered by the budget.

- The difference between the global budget and the actually incurred expenditure (which is calculated as usual according to the general fee schedules) is the network's profit or loss.
- Profits are distributed in equal amounts to the network (in order to extend the network services), to the sickness fund (in order to reduce the contribution rate) and to the participating physicians. Whenever the budget appears likely to be exhausted, the physicians are informed by an early warning system. Actual overspends will be deducted from the following year's budget. [43];[44];[69];[24];[50]

4.5.2 Comparison with managed care and with the UK NHS

Of all the pilot projects, the 'combined-budget networked practices' project is probably most closely related to managed care. As the providers participating in it work in independent practices and also see patients from other sickness funds,⁵⁴ the 'combined-budget networked practices' is most similar to an HMO of the IPA type.

There are, however, some managed care elements missing from it:

- The primary care physician does not have a leading position in the care process as gatekeeper and case manager. These functions are, to some extent, taken over by the care management office. This institution, however, only provides information to the network physician and is not a provider of care.
- Care is only 'managed' in the outpatient sector. Although problems at the interfaces between different sectors are mitigated by the care management office, care within the inpatient hospital sector cannot be directly influenced by the network.

⁵⁴ A provider can participate in the network as long as at least 12 per cent of its patients are from the relevant company insurance schemes.

- The incentives for the physicians are set at a collective level. Each physician benefits from the network's profit in the same way regardless of how much (if any) he contributed to the savings himself. As a consequence, incentives on the side of physicians are weaker than in the managed care system where generally individual incentives are set.
- There are so far no incentives for the general public to participate in the network. One third of the network profit goes to the sickness funds and can be used to lower the contribution rates for all members, not only those participating in the model. As the network so far has only a few participating members (as compared to conventionally insured company fund members), a decrease in the contribution rates, if it occurred, would hardly be large enough to be a real incentive for participation. However, the company funds of Berlin intend to create such an incentive by offering a lump sum payment of 120 DM per year to every participant.
- Decision and treatment autonomy by the individual physicians are not affected. Guidelines are not stipulated by the sickness funds but voluntarily decided upon by physicians.

In some ways, the 'combined-budget networked practices' pilot project is comparable to the 'Primary Care Groups' proposed in the English NHS White Paper in December 1997 (The New NHS: Modern, Dependable). These groups are to include on average 50 GPs. Their global budget also has to cover the costs of specialist treatment for which GPs refer their patients to hospitals. The German pilot project shares with the UK's GP fundholding scheme that physicians have an incentive to be as attractive as possible for the patients in order to gain new customers, but they also have an incentive to select good risks (whose actual expenditure remains below the capitation fee). There are, however, also important differences:

- Primary Care Groups will be, and GP fundholders currently are, a part of the National Health Service (NHS). They receive their budgets from the local Health Authorities, i.e. public agencies which do not compete with each other and are directly under the supervision of the Department of Health. The 'networked practices' in Berlin, on the other hand, receive their budget from a sickness fund which competes with other funds and tries itself to attract new members by offering the 'networked practices' as a benefit of the sickness fund.
- In the UK, fundholding GPs receive one global budget per practice and under Primary Care Groups will have one budget per group of 20 practices or so (in each of which one to 10 primary care physicians

work); specialist care is only offered by hospitals. The 'networked practices', on the other hand, consist of many individual practices providing both specialist care and general primary care.

4.6 THE SWISS EXPERIENCE WITH MANAGED CARE

The Swiss experience demonstrates that key elements of managed care can indeed sit well with a social consensus-driven health care system of the western European type. As in the USA so too in the case of Switzerland, rising health care expenditures have supplied the principal rationale for seeking a new health policy orientation. With a per capita expenditure of \$ 2,378 (in 1990 GDP Purchasing Power Parities) Switzerland in 1995 ranked second to the USA among OECD countries in terms of health-related spending.[61]

The first HMOs were set up in Zurich and Basle at the start of the nineties on the staff model, following amendments to the legal code that laid the basis for new insurance models. Three sickness funds – Helvetica, Konkordia and KFW – have banded together in an umbrella association known as 'Swisscare' and are now planning to establish a network of HMOs throughout Switzerland, mostly of the IPA type. In the Swiss managed care model that has been chosen, a central role is proposed for the primary care physician system: family physicians function as gatekeepers; they pledge to observe quality norms and to seek a second medical opinion. Physicians participating in the new insurance models may still, however, continue to treat patients who are not members of the HMOs.

Take, for instance, the 'Wintimed' model, operated by the KFW sickness fund in the Swiss town of Winterthur. People insured under Wintimed may select one of 19 Wintimed physicians as their family physician and gatekeeper to the rest of the health care system. As *quid pro quo* for thus restricting their otherwise free choice of physician, insured people receive a 15 per cent discount on standard KFW rates. Further, Wintimed's physicians are involved in risk sharing to the point of assuming half of any losses the insurer might incur, with a liability ceiling per physician being set at SFF 10,000. Losses in excess of this amount are borne by the insurer. A corresponding rule operates in the event of the insurer making a profit. The yardstick for determining profit and loss per insured person is the average expenditure level expected for his counterpart who is comparably insured with a traditional Winterthur sickness fund.

55 *Berufsgenossenschaften.*

Introducing managed care to the Swiss health care landscape has unleashed a spate of price competition in social sickness insurance, from which, it is hoped, more efficient and less costly care will eventually emerge. However, most Swiss remain loyal to their old insurance company, even though the insurance premia HMO members pay are around 20 per cent lower than with traditional insurance models and HMOs also do not require co-payments (which can easily add an extra third to the final bill) from their patients. In 1997, only 5.5 per cent of the Swiss population had opted for a managed care contract. However, sickness funds assume that this number will double in 1998. Besides making managed care contracts in primary care, sickness funds can selectively contract with hospitals which meet certain preconditions like low costs per case, a high quality of care and transparency of cost.

Competition between health insurance companies is regulated in Switzerland in many ways. The basic insurance package must include a statutorily stipulated range of services, which a sickness fund is obliged to offer each person insuring with them at a uniform, internally set premium (although the latter may vary from region to region). To obviate risk selection, all sickness funds must participate in a risk equalisation scheme, pegged to the criteria of age and sex. Health insurance legislation provides for payment of direct subsidies to poorer insurance seekers which actually would permit competitive, risk-based premiums.

The scale of the savings so far realised – i.e. before conclusion of expert evaluation of the care process as channelled by HMOs, compared with the traditional system – appears to be considerable, although certain corrections will prove necessary to adjust for the possibly better risk profile of HMO members.[74];[78];[34]

4.7 THE EMPLOYERS' LIABILITY INSURANCE FUNDS: MANAGED CARE ORGANISATIONS GERMAN-STYLE?

4.7.1 Function and organisation of the employers' liability insurance funds

To find managed care elements in German health care one can go beyond pilot projects with voluntary participants and look at the employers' liability insurance funds⁵⁵, the underwriters of statutory accident insurance.

The employers' liability insurance funds are responsible for insurance and service provision alike. They conclude health care contracts but only with selected, highly qualified providers. These so-called 'Durchgangärzte' (D-physicians) are usually general or

orthopaedic surgeons experienced in accident and emergency care and they discharge the same functions as *gatekeepers*. They decide if the patient requires 'special medical treatment' (ambulatory or inpatient) or whether 'general medical treatment' from a family physician will do. The insured person may only choose from among the D-physicians of his district, but he is permitted free choice of family physician. In the inpatient sector, besides the hospitals run by the employers' liability insurance funds themselves, only selected hospitals are licensed as health care providers.

Apart from the D-physician, the family physician is the central pillar of the employers' liability insurance funds system. Not only is the family physician the first port of call for patients with non-serious ailments and often handles first-aid in cases of job-related accidents; but as a physician whose brief runs to 'general medical treatment', he is also responsible for 80 per cent of all cases requiring further treatment.

The employers' liability insurance funds use information technology to monitor medical procedures and may, when called for, actively intervene in the care process. For example, they post (and monitor the enforcement of) morbidity and treatment-related benchmarks for the duration of inpatient stay, for the timing of after-care examinations and for the duration of inability to work. The services of the various care providers are fairly heavily integrated; especially worth mentioning is the integration of rehabilitation and nursing in the care process. Much rehabilitation care is provided on an ambulatory basis and proceeds according to the *case management* principle. In connection with work accidents, prevention is accorded top priority. This can be explained by the fact that the employers' liability insurance funds are explicitly charged by law to use all available means to prevent work accidents. This constitutes a difference from the American managed care system, where, despite the claims made by managed care organisations to give top billing to preventive measures, there are also important countervailing (including financial) incentives because of, for instance, the automatic transfer of older Americans to the Medicare system or the high mobility of the American population. In defining their preventive services, the German employers' liability insurance funds profit from their great specific expertise in work accidents and job-related ailments.

There is a parallel to the American health care system in the way that German accident insurance is funded: insurance premia are the sole responsibility of the employer. The per capita premium rates are calculated from the risk profile of the group and not from that of the individual insured person nor exclusively on the basis of income.

4.7.2 A legal framework for managed care

Elements of managed care, e.g. selective contracts between sickness funds and providers as well as the rationing of services, may require a considerable revamping of the German legal framework. With respect to statutory health insurance, Germany's social code focuses on uniform contracts at the federal and regional levels which prescribe the nature, scale and remuneration of services. In the context of statutory accident insurance, as we have seen, certain managed care elements (e.g. conclusion of selective contracts) have long been practised on the basis of existing law. The legal framework for certain managed care elements is therefore already in place in Germany, at least for part of Germany's social security system.

The main goal of the employers' liability insurance funds, as underwriters of statutory accident insurance, is to prevent work accidents and to provide patients with optimal service and care over a protracted period, enabling them to remain at work and miss as little time as possible through sickness. The employers' liability insurance funds are charged by law to fulfil this mandate. The aspect of curtailing costs is a secondary long-term goal. In contrast to the German employers' liability insurance funds, however, the overriding aim of most American managed care organisations is to maximise corporate profits. The admissibility of concluding selective contracts can, depending on the goals pursued, have very different effects on the quality of the health care process. Hence it is possible, depending on the interpretation of the social jurisdiction, that although the legal prerequisites of such measures are already in place for statutory accident insurance, they are nonetheless not transferable to the care process within the framework of statutory sickness insurance, since competition between the sickness funds might be prejudicial to the patients' interests.[70]

4.8 MANAGED CARE ELEMENTS IN CURRENT HEALTH CARE REFORM

Coming after the 'Health Care Reform Law' (1989) and the 'Health Care Structure Law' (1993), the 'First and Second Law on the Reorganisation of the Statutory Sickness Insurance' (1 July 1997) represents the third legislative endeavour of the last decade to reform the German health care system. Both the replacement of the collective budget for prescribed pharmaceuticals and the proposed replacement of the method of remunerating office-based physicians by measures which apply at the level of the individual physician, lead to a shift of incentives from the macro to the micro level. The new, stipulated, volume of prescribed

pharmaceuticals for each physician, however, has the consequence that individual physicians have an incentive to substitute other health care services such as referrals in place of prescribing medicines as soon as they believe that their individually allowed prescription volume is close to being exhausted. This is unlike a combined health care budget, which would be typical of managed care. The new guideline stipulating the volume of physician services which is reimbursed at a fixed point value, leads to physicians having the incentive to provide just as many services as permitted by the guideline.⁵⁶ This method of reimbursement may lead to over-treatment if the service volume for the average patient is set at a too high level and to under-treatment or cost-shifting, e.g. to the hospital sector, for the contrary case. On the other hand, it has important advantages over the previous method: firstly, the fixed monetary conversion factor makes income estimation more predictable for the physicians; secondly, the stipulation of a service volume helps to control overall expenditure without confronting the physicians with the full insurance risk of the patients. At the same time, some of the risk is shifted to the physician making the incentive structure comparable to the remuneration by capitation fees which is typical of managed care.

This latest health care reform also attempts to expand such pilot projects as the family-physician model of the local sickness funds and the model of networked practices of the company sickness funds. However, suitable projects can only be conducted with the agreement and co-operation of the associations of sickness fund physicians. Existing organisational structures may not be infringed and managed care-like 'purchasing models' where the sickness funds are given the option of concluding selective contracts with providers, have been rejected outright by the German government.

The substantive focus of this latest reform has been to raise patient co-payments and to peg contribution-rate increases to the scale of co-payments. These measures cannot, however, be considered managed care reforms. They are exclusively pitched on the side of the demand for health care services, while the service catalogue of

statutory sickness insurance is left relatively unchanged by the reform. Central to the managed care approach, however, is management of service demanders and providers alike. On the supply side, the instruments for re-organising statutory sickness insurance do not go far enough to qualify as managed care. Any structural reform along managed care lines would have a reorganised relationship between insurers and providers as its central element, but this was not even touched on in the reform.

Also to remain unchanged are the regulations prescribed by pharmaceutical and pharmacy law. Competition-enabling features, such as outside or multiple ownership of pharmacies, as well as pharmacy chains and physicians' dispensing rights, have not been addressed by the reform and will continue to be proscribed in Germany. Similarly passed over as a cost-squeezing instrument is the mail-order delivery of pharmaceuticals (e.g. to supply the chronically ill). Hotly debated, but in the final analysis also rejected, was the introduction of a drug formulary⁵⁷ where the legislator would stipulate which pharmaceuticals would be reimbursed by the statutory sickness funds. The central instrument of managed care in the pharmaceutical sector, i.e. an individually drawn-up drug formulary for each health care system, cannot be deployed in Germany under present law and also forms no part of the pilot projects. Similarly excluded from the reform debate has been the pricing law system governing pharmaceuticals, which includes legally prescribed wholesale and retail trade margins (uniform for all pharmacies in Germany) as fixed mark-ups on the manufacturers' prices.

The raising of patient co-payments has led to reduced spending by the statutory sickness funds on pharmaceuticals. In the third quarter of 1997, nominal expenditure on medicines was 16 per cent below the 1996 level.[16] Accumulated expenditure by sickness funds and patients for prescribed drugs decreased by approximately 2.4 per cent from 1996 to 1997 and by 6.5 per cent from the first to the second half of 1997. However one has to take into account that demand was partly shifted from the second half of 1997 to the first half in order to avoid increased co-payments. The patients' share of expenditure increased from 8 per cent in 1996 to 9 per cent in the first half of 1997 and 15 per cent in the second half of the year.[25]⁵⁸ Increased demand for over the counter medicines, on the other hand, seems to have offset, at least partly, the decreased consumption of prescribed drugs. As a consequence, the pharmaceutical companies have tended to shift their marketing activity from the physicians to the public and to gaining the pharmacists as proponents for their products.[80]

56 To be precise, two conditions have to be fulfilled for this to be the case: the marginal cost to the physician of producing services must be less than the fixed point value for every service unit up to the stipulated level and the marginal cost must be higher than the reduced point value for every service unit exceeding that level.

57 *Positivistliste*.

58 Estimated figures. However, it is estimated that 33 per cent of all prescribed drugs will be given to insured people who are exempted from co-payments.[88]

4.9 MANAGED COMPETITION AND THE GKV

The example of the employers' liability insurance funds shows that certain managed care elements – restricting the free choice of physician, tightly monitoring the health care process – are already present in a part of Germany's health system. The employers' liability insurance funds are, as we have seen, institutions in which insurance and service provision are merged:

- The employers' liability insurance funds conclude selective contracts with providers. The providers can be said to form an integrated care system or a 'quality community', albeit not one formed on a voluntary basis, unlike the pilot projects in the GKV which must be organised on a voluntary basis by law.
- Choice of physician is clearly restricted in the system of employers' liability insurance funds.
- Physicians' choice of therapy is clearly restricted by stipulations (guidelines) laid down by the employers' liability insurance funds.

However, unlike the managed care system, the employers' liability insurance funds are not exposed to competition. The employers cannot choose between different funds. On the other hand, the German statutory sickness funds have been competing since 1996. Thus it is worth asking: would it be possible, in respect of service structure, to transfer the employers' liability insurance funds' managed care elements to the GKV and combine them with the regulated competition already operating there?

As for translating managed care into practice, California has gone furthest down the road here. There, of all American states, managed care plays the greatest role. At the same time, California is, along with Minnesota, the state with the most far-reaching and stringent consumer protection laws on HMOs.^[38] Under managed competition several companies have joined together as a 'health insurance purchasing co-operative' to provide their employees with sickness insurance, the idea being to create the largest possible pool of insured people. But small firms too, whose poor risk prognosis could otherwise prevent them from offering their employees sickness insurance, can elect to join this pool. Employees can choose between different insurance companies or managed care organisations offering a standard comprehensive

service package. For the employees this considerably simplifies the choice and serves, from the provider's viewpoint, to stoke competition and the search for effective health care forms.

The California Public Employees Retirement System (CalPERS), which is responsible for supplying health care to about a million Californian enrollees (mainly state employees including family members and retirees), has gained a reputation as one of the most impressive examples of the managed competition model. Any health care system, such as an HMO, that CalPERS decides to contract with⁵⁹ declares that it is ready to accept, and extend health care to, all interested CalPERS members and to do so at a standard premium. Nobody can be excluded from insurance and health care because of his risk profile. At the same time, the health care systems pledge to collect data on patient satisfaction and medical outcomes in order to help insurance seekers in making informed choices. At the beginning of the nineties, CalPERS took the additional step of standardising the managed care organisations' service packages. The previous situation was such that insured people had to grapple with a matrix of no less than 1100 items setting out the differences between some 22 health care systems (e.g. their differing co-payment regulations plus the minutiae of their respective service packages) or else remain ignorant of just what the services on offer were.

Contrary to the typical concept of managed care, with the exemption of Kaiser Permanente, health plans in California have increasingly decided to offer the same comprehensive network of delivery systems. However, they treat the providers differently according to their cost-effectiveness.

Brisk competition in California has sprung up between the managed care organisations, with favourable spin-offs for costs and quality. Whereas from 1992 to 1993 premia for HMOs contracted with CalPERS still managed to rise by 6.9 per cent, from 1993 to 1994 they dropped by 0.4 per cent, from 1994 to 1995 by 0.7 per cent and from 1995 to 1996 by 5.3 per cent. [22]. At the same time, according to a study by the Pacific Business Group on Health, patient satisfaction among Californian state employees is running high, with some 80 per cent of all insurance-holders over the 1994-1995 period pronouncing themselves satisfied, a showing that compares favourably with that of their counterparts in PPOs or traditional programmes (indemnity plans). [12]; [57]; [47]

A further – and from a social-market perspective, highly welcome – feature of this managed competition model is its redistributive function. The fact that health care systems charge a standard premium,

59 80.6 per cent of CalPERS enrollees are insured with an HMO.

notwithstanding the shape of the insured person's risk profile, amounts to an across-the-board redistribution to members causing disproportionately high, and from those causing disproportionately low, health expenditures. All those taking out insurance pay the same standard premium, which is pegged to the mean health care expenditure, as calculated from the expenditures of the various risk cohorts. Assuming that health care expenditure mirrors the level of health of the insured, then perfect 'solidarity' may be said to prevail, financially speaking, between sick and healthy.

Despite, or perhaps because of, these positive results, California's managed competition model has so far not been able to solve the problem of risk selection. This appears in any insurance market where premia for all those signed with a particular insurance programme are calculated uniformly and not, or only inadequately, adjusted to the specific risks posed by individual members. In such cases, the insurance firms have a strong incentive to select the good risks and shun those that are poor risks i.e. likely to be costly. This hits the chronically sick first and foremost. But even in a system where contract seekers cannot be turned down, the problem of risk selection can still re-assert itself, as long as the insurers have every reason to make themselves as unattractive as possible to high (and therefore costly) risks, while offering ever better levels of care to low risk groups. A managed care organisation that offered efficient care for high risk cohorts would soon find itself a magnet for such cases but since it would in no way be compensated for its overall poor risk showing, its days on the market would soon be numbered. On the other hand, health care systems that are successful in winning over low risk group consistently make profits that from an overall economic standpoint are not justified, if only because of the comparatively favourable risk profile of those signed with them. In California's managed competition model, several large purchasers such as CalPERS have been trying to work out ways to compensate health care systems if they take on different risk profiles, ways that go beyond such straightforward criteria as age-linked profiles. But a satisfactory countervailing mechanism has yet to be found.[53]

Certain parallels between the new role of competition within the GKV and the 'managed competition' model can be discerned. The GKV's service package is comprehensive and mandatorily prescribed by law and its contributions are not pegged to individual risk. Moreover, German social sickness funds offer the same network of physicians to the socially insured. Within a sickness fund, besides a redistribution between healthy and sick, the GKV system also effectively undertakes a redistribution between rich and poor (though only for

incomes below the ceiling on assessable contributions) as well as between single people and families, since contributions paid into the GKV are proportionally pegged to members' income and family members acquire free coverage. The GKV is committed to across-the-board, risk-based financial equalisation, which is more stringent than the approaches so far developed in California.

A pivotal difference between the German GKV system and the managed competition model is that in Germany individual purchasers and sickness funds are largely unable to influence the care process. Besides the (legally enforced) structural rigidities – as reflected, for instance, in the monopolistic position accorded the regional associations of sickness fund physicians – another factor of fundamental relevance for both managed care's and managed competition's chances in Germany is the virtual absence of the necessary staffing and other infrastructure that the instruments of managed care require. For example, at present the training of German nursing staff is not such as to equip them to play an autonomous role, as would be desirable, in service provision; nor to take on central tasks within a managed care system, such as the monitoring of guideline compliance. Managed care continues to require an integrated care process and hence a seamless interface between the various care sectors, as well as close co-operation between providers. In Germany, however, we find that the care sectors are strictly demarcated from each other.

A 'managed care' revolution is hardly likely in the German system, if only because the scale of the problems and the attendant cost-explosion seem so much less daunting, as of now, than in the American case. It is important to consider what has been the basic feature of German health policy for more than twenty years: the consensus oriented co-operation of top-level representatives of the interests of all concerned groups (i.e. health care providers, sickness funds and politicians). Most Germans believe that this co-operation has led to satisfactory results with respect to cost containment and service quality. This co-operation may be threatened if the American system of managed care is employed.

For this reason, we may say that the interests of the German system seem better served by a stepwise gravitation towards managed care. This should be done through a critical reappraisal and revamping of present structures plus some experimenting with managed care approaches. On balance, this would seem a more realistic and reasonable option than risking a complete break with the previous system. The first signs of such a gradualist transition are already apparent, as we have seen, for example, in such pilot projects as the

'combined-budget networked practices' model, which does incorporate some managed care elements. In the nursing area a special university training programme has also been set up, its mandate being to qualify future nursing staff for such tasks as managed care would impose on them. The structural problems, such as the sharp division between the various care sectors (particularly between the ambulatory and the inpatient sectors) will only yield in time to unhurried, step-by-step reshaping. Increased empowerment of hospital physicians to provide ambulatory care, or a bolstering of the attending physician system, spring to mind as examples of possible steps, as too does the establishment of quality monitoring circles on which physicians from ambulatory and inpatient sectors could both sit.

The core principle of managed care – letting purchasers influence and monitor the service process – is at least to a certain extent realised in the current pilot projects. If these projects turn out to have the capacity to lead to a more efficient health care system, they are likely to be extended. Perhaps in the near future, the associations of sickness funds will, at the state or federal level, form 'health insurance purchasing co-operatives' in co-operation with the associations of sickness fund physicians and regulated by law – comparable to CalPERS in California. In that way a managed competition model could be introduced into Germany's social health care system with sickness funds being free to offer managed care as well as conventional insurance products to the socially insured.

5. MANAGED CARE FOR GERMANY? SOME CONCLUDING REMARKS BY MICHAEL ARNOLD

In next to no time managed care has attracted intense scrutiny even beyond America's shores. This is hardly surprising given the problem now besetting virtually all countries: how to pay for an increasingly costly medical care sector. In fact, interest in American insurance and health care structures has more of a pedigree than may meet the eye. Already in the mid-eighties – I am referring only to the German-speaking countries – health care policy-makers, sickness fund representatives, hospital administrators, and scientists from every discipline directed their assorted energies to evaluating the strengths and weaknesses of HMOs. Even then the organisational and legal possibilities were scrutinised with a view to building similar health care modalities in these countries.⁶⁰

Despite some agreement with managed care's core principles, voices were raised that effectively dampened enthusiasm. Analogies to the situation in Germany prior to establishment of the regional associations of sickness fund physicians, when the funds operated their own health care guidelines with physicians and dentists in their employ, could not be overlooked. Even today, service providers do not like to be reminded of that time, for the terms of remuneration and health care were then largely dictated by the funds. Only with the setting up of the Hartmann Federation and the advent of collective contracts (pushed through by the great strike of physicians) was a parity of weapons secured that, in the sequel, inaugurated a development congenial to all parties.

Particularly after World War II, in times of rapid economic growth, times that were also marked by a strong belief in progress, the balance of power shifted more and more towards the providers, the upshot being that the sickness funds – for all the great influence they exerted in matters of detail within the framework of shared self-administration – gradually ended up, literally, footing the bill for others.

Fundamentally altered boundary conditions have, however, brought this era to a close. We now have a

situation where heavy financial pressures are operating to restructure the way things are done. Much of what once was hailed as a great achievement – examples that spring to mind are fee-for-service remuneration and an insistence by the sickness funds on acquiring the latest and the most sophisticated medical technology going, the funding and remuneration modalities used in hospitals, a right of free choice for patients in selecting their physician and for the physicians themselves in deciding where to establish themselves, absence of any economic brake on patients in casting around among available utilisation options, an uncompromising commitment to medical progress, to mention only some – is now castigated as fuelling inefficiency and wasting scarce resources.

Efforts to remedy these suddenly perceived shortcomings have so far focused on greater regulatory rigour, more bureaucracy and cautious structural modifications such as reorganising the relationship between ambulatory and inpatient care. More recent proposals have been directed at changing incentives, by means of a wide spectrum of lump-sum remuneration modes, global fees, co-payments, combined budgets, etc.

Managed care goes way beyond any of these forms of influence. Essentially it involves service monitoring on a scale hitherto unknown in the German system, plus commitment to a management practice run by care providers and patients, not to mention significant curtailment of the treatment autonomy of physicians and the freedom of choice exercised by insured people. These are perceived as a bitter pill that has to be swallowed for the sake of greater quality and efficiency, yet the consequences of spurning such cuts in former freedoms and rights are likely to be even more bitter. For then inefficiency is here to stay; then the will is clearly not present to do what is *right and proper*, what is *meaningful*, what is *deemed necessary*.

Whether the elements of managed care currently being tested will be able to reach their ambitious goal, namely so lifting efficiency and quality that a reduction in services as a result of a funding shortfall proves unnecessary, cannot be definitively pronounced on as yet. Managed care is no panacea. Even it will be unable to eliminate many of the factors underlying aberrant

⁶⁰ Cf. here e.g. the 16th Colloquium on Health Care Economics organised by the Robert Bosch Foundation and held at Murrhardt on 29-30 May 1986.

management outcomes in the health care equation: think of data problems, risk selection, distribution on the basis of need. Even managed care is only a second-best solution, but still it is difficult to fault to answer *Steve Shortell's* rhetorical question, posed in one of his latest contributions on the transferability of managed care to the German health care system:⁶¹ 'If not managed care, then what?'

If there is to be an answer, it must surely come from those who cite Germany's existing framework to rule out the workability of any deeper-reaching reform (with special reference to anything that smacks of managed care). But if that is the only obstacle blocking much-needed reform, then clearly it is the legal framework that must change and be brought into line with on-the-ground realities. In this connection it is worth quoting what is something of a *leitmotiv* of Tomasi de Lampedusa's novel, *The Leopard*: 'Things must change in order that everything remains the same'.

61 Conference on Managed Care held in Tübingen in December 1995.

APPENDIX I MECHANISMS OF MANAGED CARE

I. SELECTION, SUPPLY AND QUALITY OF SERVICE PROVIDERS

The success of a managed care organisation depends in large part on the qualifications and reputations of their service providers, as well as on the size of the panel of such providers that they retain. Managed care organisations usually contract with only a limited number of physicians, but in making their choice they employ a wide range of criteria: basic and advanced training, special expertise, malpractice suits (if any), involvement in state programmes, existing contracts with hospitals, involvement in quality-monitoring programmes, etc.

When a managed care organisation has succeeded in cornering the market, for a provider to be refused by this organisation can mean bankruptcy. Thus, the American Medical Association (AMA) urges that any physician who is willing should be allowed to take out a care contract (the 'any willing provider' laws).[35]⁶² However the managed care concept is based on managed care organisations only contracting with a *limited* number of providers. For only in this way can

62 In November 1994, 31 states had enacted or intended to enact some form of 'any willing provider' laws.[36]

63 In a first test, 20 of the 54 largest metropolitan areas were selected at random. Here the likelihood of a particular metropolitan area being selected was proportional to the share of managed care-insured people in the overall population of that area. In a second stage, involving three levels of managed care types (group or staff model, IPA or network model, PPO) a random sample was taken in each case, the sizes of the respective samples being calculated from how managed-care-insured people were distributed in terms of the managed care types across the entire USA. Hence, the likelihood of a managed care organisation within a certain level being selected is proportional to the number of insured people signed with the managed care organisation in its particular market segment. The statements made in the text may therefore be taken as representative of the *general situation* (i.e. the overall care process situation in all American managed care organisations), assuming they are not taken as referring to certain organisation types (e.g. two out of three IPAs) but, instead, to *insured people* signed with a particular type of managed care organisation (meaning, in this context, two-thirds of all insured people who are members of an IPA). On this matter cf. p.1679 in the original literature.

they achieve a high degree of integration in the care process spectrum or push through cost-squeezing measures, since then they can resort to such ploys as threatening to shut out providers and, if need be, actually back up their threats with deeds. In this way the managed care organisations can virtually dictate considerable discounts and enforce compliance with their treatment guidelines. With a view to assuring inpatient treatment quality, managed care organisations are careful to sign up only physicians of proven reputation. In the American system of attending physicians, only good physicians gain access to efficient hospitals.

On the other hand, the managed care organisations have to constantly watch out that their panel of providers does not slip below optimal size. For one thing, their insured members like to remain with the physicians they know; for another, more physicians also means more freedom of choice for members, which in turn increases an HMO's drawing-power.

A study by Gold *et al.* from 1995[32]⁶³ has shown that two out of three IPAs and network model HMOs, but only 7 per cent of PPOs, make a point of visiting a physician's practice and screening him according to certain benchmarks and treatment data prior to signing him up. Around 50 per cent of HMOs but only 7 per cent of PPOs bind physicians tightly to their organisation – in the latter case, they have to provide care for a predetermined number of patients or are not permitted to treat patients signed with another insurer.

Three out of four HMOs and just under half of all PPOs use physician profiles and apply them, i.e. they make a point of comparing physicians in terms of the number of patients treated over a certain interval, the services delivered and the quality of treatment provided.

2. THE PRIMARY CARE PHYSICIAN AS GATEKEEPER

Most managed care organisations require their members, in the event of them requiring ambulatory care, to first consult with a primary care physician. With the exception of emergency cases, the primary care

physician acts as *gatekeeper*, i.e. he decides whether other providers should be called in and, if so, who.

The above-mentioned study by Gold *et al.* showed that 96 per cent of group or staff model HMOs, as well as 92 per cent of network model HMOs and IPAs, use primary care physicians as gatekeepers. In 61 per cent of group or staff model HMOs, as well as 92 per cent of network model HMOs and IPAs, insured people are obliged to register with a primary care physician.

Mostly primary care physicians are general practitioners or general internists; but sometimes they are paediatricians or gynaecologists. Their role is not confined to referring patients to other occupational groups – a criticism German physicians frequently direct at the primary care physician model. Rather, they treat the patient up to the limit of their competence. They also assume the role of *case managers*, co-ordinating treatment during a bout of sickness. But even when the patient is not actually sick, just by being there as a listener and dispenser of confidential advice, they discharge a vital psychological function for the ailing and their families.

A number of managed care organisations do delegate some of the care process to auxiliary medical personnel such as nurse practitioners and physician assistants. These take over elements of basic medical care, performing activities that in Germany would be reserved for physicians. They are used as gatekeepers in apparently straightforward cases, prior to bringing in a general medical practitioner should this prove necessary. Thus a patient with certain symptoms might never see a physician.

3. POSTING ECONOMIC INCENTIVES BY REMUNERATION MODE

Managed care heavily relies on *incentives* to steer the flow of services. The goal, pursued in the interests of combining quality with prudent use of available funds, is to only dispense such services as are actually required (and then only in the necessary amounts). The mode of remuneration employed can go far towards achieving this goal. The fee-for-service remuneration typical of classical insurance and health care programmes posts incentives, so long as the remuneration exceeds marginal costs, to provide as many services as possible and is therefore rightly seen as a driving factor behind the inefficiencies besetting the health care system. A further source of possible inefficiencies, closely linked to the fee-for-service remuneration mode, lies in the incentive health care providers have to induce demand, irrespective of the usefulness a service may have or the social costs it may entail. Managed care organisations try to circumvent this by operating various lump-sum

Table 7 **Incentive-driven remuneration modes and competitive mechanisms in HMOs and PPOs (in % of the respective categories)**

	HMO		PPO
	Staff or group model	IPA or network model	
Primary care			
<i>Operative remuneration form:</i>			
Capitation	34	56	7
Some risk sharing with providers*	68	84	10
Pure fee-for-service	3	12	90
Specialist medical care			
<i>Operative remuneration form:</i>			
Capitation covering all specialities	31	20	0
Capitation in certain specialities	69	47	7
Some risk sharing with providers*	59	54	3
Pure fee-for-service	24	42	97
<i>Competitive bidding between specialist doctors</i>			
	31	33	17

*E.g. capitation, withholding or bonuses.

Source: Compiled from Gold *et al.* 1995

remuneration modes and financial incentives, as well as a formidable array of monitoring procedures.

Most HMOs pay their service providers *capitation fees*. Physicians receive a fixed sum for each insured person, irrespective of which, or how many, services they actually dispense. This mode of remuneration gives physicians every reason to dispense as few services as possible, in order to maximise their profit per flat fee. At the same time, purchasers have a better control of expenditure, since this mode of remuneration allows them to shift some of the insurance risk onto the health care providers themselves. A number of managed care organisations spread the risk-sharing burden by the expedient of allowing their providers access to the organisation's profits, but only if they manage to remain, with their dispensed services, within the targeted goals. Another strategy is to hold back on payment of part of the fee, with full payment being made conditional on norms governing referral (e.g. to high-fee medical specialists or for costly hospitalisation treatment) not being exceeded. Finally, the insurance risk can also be passed to primary care physicians by allocating them a budget from which to purchase hospital and other specialist services on the insured person's behalf. Should they remain within budget, the primary care physicians may pocket part of the difference between the budget and the costs actually incurred. To meet the eventuality that unforeseen high cost cases might oblige them to exceed the budget, the primary care physicians generally take out re-insurance. The importance of these assorted approaches is shown

in Table 7. Over half the HMOs of the network model or IPA types use capitation fees as their mode of remuneration for *primary care physicians*; and over a quarter combine fee-for-service remuneration with some other form of risk-sharing involvement. *Specialists* are remunerated by capitation fees in only 20 per cent of these HMOs; but in certain specialised fields (cardiology, mental health, radiology, orthopaedics, and ophthalmology) capitation fees are relatively widespread with a 47 per cent share. Over half the IPAs and network model HMOs involve medical specialists in risk-sharing by some other means.

In addition to incentive-linked modes of remuneration, several managed care organisations make use of *competitive bidding*. Bids may be invited from suitable medical specialists to provide specialised services. Providers submit their offers to the managed care organisation and the HMO or PPO then makes a choice. Approximately one in three HMOs and one in six PPOs call for bids in this fashion (Table 7).

In HMOs of the staff or group model types, primary care physicians are mostly retained on fixed monthly salaries, with around a third being paid capitation fees. In more than two-thirds of these HMOs, primary care physicians are involved in some other way in insurance risk-sharing. Involving medical specialists in risk-sharing is more frequently resorted to here than in other HMO types. Capitation fees for treatment by medical specialists are the norm in around one in three staff or group model HMOs.

PPOs, by contrast, only exceptionally involve physicians in insurance risk-sharing, with 90 per cent of primary care physician payments being fee-for-service-based (according to specially negotiated fee regimes). As for medical specialists, this figure is close to 100 per cent. POS organisations involve health care providers more heavily in insurance risk-sharing than do PPOs, though less so than HMOs.

Around three out of four HMOs and just under half of PPOs take into account, when remunerating their health care providers (particularly primary care physicians), criteria pegged to: utilisation and cost indices, patient satisfaction and results of outcome studies, quality of health care, the economic success of the managed care organisation, etc. HMOs are even known to reward individual physicians who win new members for them.

Incentives to provide the most economical treatment possible may also be built into the remuneration regulations for inpatient treatment. As a result of the large numbers of patients on their books, managed care organisations have a strong bargaining hand with respect to the hospitals they have contracted with and

can therefore push through discounts of up to 30 per cent. Remuneration is mostly by reduced per diem rates, the length of stay being kept on a tight leash by strict case management (e.g. inclusion in a *care co-ordination programme*) and exact monitoring based on treatment guidelines. Other modes of remuneration practised in inpatient care are diagnosis-linked flat rates (diagnosis related groups) or even negotiating an overall budget for treatment of HMO-insured people.

4. MONITORING AND STEERING THE HEALTH CARE PROCESS: THE ROLE OF DIRECT INTERVENTION

To monitor treatment quality virtually all HMOs and two out of three PPOs deploy various quality assurance instruments, some examples being: *quality assurance documents*, *quality assurance committees* and (on the patients' side) *active grievance procedures*. Almost eight out of ten staff or group model HMOs, seven out of ten network model HMOs or IPAs and just under one in three PPOs attempt, by conducting *outcome studies*, to monitor the treatment process for specific clinical conditions and critically assess where and when changes are called for (Table 8).

Controlling and monitoring how services are utilised (*utilisation review*) is carried out in five sectors: prior to hospitalisation (*pre-admission review*); during treatment (*concurrent review*); after treatment (*retrospective review*); when the patient is discharged (*discharge planning*); and in the ambulatory sector to the extent that resource-intensive services are required (*ambulatory review*). Almost all managed care organisations monitor the care process in at least one of these five sectors, while

Table 8 Interventions in the care process by HMOs and PPOs (in % of the respective categories)

	HMO		PPO
	Staff or group model	IPA or network model	
<i>Physician profiling</i>	69	80	45
<i>Quality assurance</i>	97	96	62
<i>Outcome studies</i>	79	70	31
<i>Treatment guidelines</i>	76	76	28
<i>Utilisation management</i>			
– in at least one area (pre-admission, concurrent or retrospective review, high cost outpatient services)	97	100	86
– in at least four areas simultaneously	72	70	37

Source: Compiled from Gold *et al.* 1995

70 per cent of HMOs and about half this percentage of PPOs monitor four or all of these sectors concurrently.

Cost-intensive cases are watched very closely by managed care organisations, with care being dispensed on a case-specific basis (so-called *large-case management*).

A *second medical opinion* may also be sought with a view to avoiding unnecessary treatment. In 1989 some 62 per cent of PPOs stipulated a mandatory second opinion prior to surgical intervention. In the interim, however, this stipulation has come in for growing criticism, with the effort-to-utility ratio being deemed unfavourable.

Managed care organisations keep large stores of information on file for use in care management. These data, which are partly obtained from external sources, are used to help ensure that care will be provided at the most favourable price going. Quality assurance is not just left to random sampling procedures; specific care outcomes and results (*tracers*) known to point to substandard quality are monitored for too. The following indicators, among others, will lead to quality assurance interventions:[49]

- Absence of a post-discharge treatment plan;
- Transgressing physiological parameter thresholds;
- Death following non-essential surgical intervention;
- Repetition of surgical intervention required during hospitalisation;
- Nosocomial infections;
- Injuries sustained during hospitalisation;
- Decubitus;
- Side-effects of medicaments;
- Diabetic coma;
- Hospitalisation due to hypertonia, hypokalemia, low birth weight, asthma, stomach or duodenal ulcer, cellulitis, urinary bladder infections, or advanced stage of tumour.

Formal, written practice guidelines are used in around three out of four HMOs and one out of four PPOs (see Table 8). Treatment protocols or guidelines either state criteria that must obtain before certain services may be utilised, or they define which services and treatment procedures are deemed indicated for a given type of case. Depending on the particular case systematics, they may be oriented to symptoms, to diagnosis, or to specific methods of treatment. The increasingly widespread use of treatment guidelines is justified by pointing to the fact that the decisions physicians take in comparable cases show variations that are hard to justify. This raises questions from both an economic

and a qualitative standpoint that cannot be adequately solved by structurally linked measures alone – measures such as stipulating a primary care physician as *gatekeeper*, or introducing methods of technology evaluation, or incentive-driven modes of remuneration, etc. The objective, therefore, in introducing treatment guidelines, is to standardise the treatment processes in ways that benefit patients and purchasers.

A number of HMOs are known to develop treatment guidelines for their own internal use. Other sources of guidelines are national provider groups and federal agencies.[30] In addition, specialised consulting firms have in recent years colonised an emerging market niche in the development, distribution and continuous upgrading of treatment guidelines. Often these firms offer purchasers, besides these guidelines, a service providing external review of the health care process (*utilisation management*). Mostly such external utilisation management seeks to influence recourse to hospitalisation. In such cases, the consultants are authorised by the purchaser to evaluate every single admission *prior* to actual hospitalisation and, where appropriate, to refuse payment of costs should hospitalisation follow. To this end, utilisation management organisations employ specially trained nurses (*nurse reviewers*). Only in doubtful cases, or when the treating physicians object to the nurse reviewers' decisions, are special *physician advisors* called in to adjudicate. A pronounced form of external monitoring, that of *case management*, also involves the use of specially trained nurses, their paramount task being to see that particularly care- or cost-intensive patients are only accorded the most favourably priced treatment options (or at least to ensure that the care providers involved in the treatment process are made aware of the existence of these options).

The use of treatment guidelines is particularly pronounced when it comes to disease management. Within the compass of such integrated care management, treatment guidelines for providers and patients are used in prevention, diagnosis, therapy, rehabilitation and nursing.

5. TECHNOLOGY EVALUATION

The American health care system is very heavily technology-oriented and many critics attribute the cost explosion of the past years and high absolute expenditure levels to the disproportionate use of high cost technologies.

Managed care organisations are now keenly committed to containing costs in this sector too. This has obliged producers of medical technology to focus on the development of cost-saving gadgetry. Often, before any

new technology has a chance of being introduced, a trade-off must first be made between quality and costs vis-à-vis the older technology. This involves weighing up the pros and cons of both old and new technologies in respect of quality and costs, with the final decision being carefully scrutinised by managed care organisations and final consumers (i.e. the insured and patients) alike. This situation has spawned a host of new disciplines, such as pharmaco-economics, whose mandate it is to try to define the cost-effectiveness of new medicaments. Many managed care organisations - particularly HMOs - have set up their own departments to evaluate technologies. To take one example: Kaiser-Permanente, the biggest HMO in the USA, set up a *New Technologies Committee* in the early 1980s. It was empowered to assess new technologies and recommend which ones should be purchased and used.

It is still too early to know, however, whether the envisaged cost-cutting outcome can be achieved without a fall-off in quality of care.[17]

APPENDIX II

EVALUATION OF MANAGED CARE ORGANISATIONS

Version 2.5 of the *Health Plan Employer Data and Information Set* (HEDIS) employs a total of 65 indicators to evaluate the care process, with just under half relating to finance and management (there are approximately 15 indicators for each). Membership structure and extent of utilisation are monitored by approximately 20 indicators. For the sectors of patient satisfaction and access to care units, a total of five indicators are allotted, with nine indicators for care quality in the narrower sense. These are spread across the sectors of preventive medicine, prenatal care, treatment of acute and chronic diseases, mental health and substance abuse. A 1994 survey indicated that three out of four HMOs and one in five PPOs drew on at least one of these HEDIS indicators when evaluating their service process.[23]

HEDIS was developed by representatives of employers and care organisations, in conjunction with the *National Committee for Quality Assurance* (NCQA). The latter is a non-profit institution and the largest organisation in the United States working in the field of evaluating and accrediting managed care organisations. It also performs its own autonomous accreditations of managed care organisations by evaluating a total of six sectors:

1. Quality management and improvement;
2. Credentialling;
3. Members' rights and responsibilities;
4. Preventive health services;
5. Utilisation management;
6. Medical records.

Care costs are not included in the evaluation because, over and above HEDIS and NCQA, every one of the federal states evaluates its HMOs. In these evaluations, the focus is on the economical use of resources by managed care organisations as well as on their financial management.

Around half of all managed care organisations have submitted to evaluation at the NCQA's hands, sometimes voluntarily, sometimes in order to comply with ordinances imposed by the individual states (e.g. Florida) or corporations (e.g. IBM).

The NCQA divides evaluated managed care organisations into four categories:

- *Full accreditation* is granted for a period of three years to managed care organisations that have excellent programmes for continuous quality improvement and meet NCQA's rigorous standards. To date, 40 per cent of reviewed programmes have received full accreditation.
- *One-year accreditation* is granted to managed care organisations that have well-established quality improvement programmes and meet most NCQA standards. Currently, 37 per cent of programmes have received one-year accreditation.
- *Provisional accreditation* is granted for one year to managed care organisations that have adequate quality improvement programmes and meet some NCQA standards. 11 per cent of managed care organisations are currently in the provisional category.
- *Accreditation denial* applies to managed care organisations that do not qualify for any of the above categories. 11 per cent of managed care organisations reviewed to date have failed to receive accreditation.

The HEDIS programme, accreditation by the NCQA and regulation by the individual states, all pursue the twin goals of assessing different care systems and elaborating the criteria necessary to this end. Given the differing objectives and principal foci of these three instruments, they should be seen as complementary rather than substitutes. What they do all aim at, though, is bringing the greatest possible amount of transparency into the health care process. The quality measures which have been developed so far are still insufficient, especially because they do not adequately reflect the outcome of care. However, there is no alternative if introducing competition into health care is to yield an efficient allocation of resources.[23];[59];[40]

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