B. Abel-Smith, J. Calltorp, M. Dixon, Ad. Dunning, R. Evans, W. Holland, B. Jarman and E. Mossialos

Report on the Greek Health Services

Discussion paper [or working paper, etc.]

MINISTRY OF HEALTH AND SOCIAL WELFARE OF GREECE

REPORT ON THE GREEK HEALTH SERVICES

JUNE 1994

B. ABEL-SMITH
(chair)
J. CALLTORP
M. DIXON
Ad. DUNNING
R. EVANS
W. HOLLAND
B. JARMAN
E. MOSSIALOS

PHARMETRICA

MINISTRY OF HEALTH AND SOCIAL WELFARE OF GREECE

REPORT

ON THE GREEK HEALTH SERVICES

JUNE 1994

B. ABEL-SMITH
(chair)
J. CALLTORP
M. DIXON
Ad. DUNNING
R. EVANS
W. HOLLAND
B. JARMAN
E. MOSSIALOS

PHARMETRICA S.A.
ATHENS 1994

CONTENTS

ACKNOWLEDGEMENTS

Before we arrived we received a 200 page book of background material in English prepared by a research team consisting of Antonis Karokis, Nikos Polyzos, Theodoros Roupas and Mamas Theodorou under the supervision of Professor Aris Sissouras and Professor John Yfantopoulos. We found this invaluable. We could never have obtained in the time available some understanding of the complexities of the Greek health care system without it. Moreover this team was available throughout our deliberations to answer questions and to accompany us on our visits. In addition several members of the National Committee including Dr Vogiatzis, Professor Soulis, Dr Saroglou, Professor Liaropoulos, Dr Dervenis, Dr Varsamis, Professor Sideris, Professor Farmakides, Professor Chroussos, Professor Theocharides participated in the public hearings, in several meetings and made valuable contributions to our thinking. We also received before we arrived, a volume of position papers representing written views on possible reforms. Most important was the report of the Greek Advisory Committee on the NHS under the chairmanship of Professor Roussos. This volume was very helpful and was used in our work, though our conclusions are not the same.

We wish to thank all the above for the excellent work done in preparing for our visit and for helping us at all our meetings.

Brian Abel-Smith

"A change in regimen may have considerable beneficial effects, but the change must be made in the right way and with intention"

Hippocratic Writings, Penguin Classics, 1983

EXECUTIVE SUMMARY

The Greek health services are characterised by seriously under-developed services for public health, unethical practices of doctors and nurses, an excess of specialists and such poorly developed primary care services that the outpatients' departments of the hospitals are used to provide a considerable amount of it. Public dissatisfaction with the health services is far greater than in any other Member State of the European Union. There have been a succession of plans for reform, but none has so far had the determined and continuous backing of any government. We present below our long term vision for the development of the health services.

We **recommend** that the government should develop a coherent plan for health improvement with a strong emphasis on health promotion and prevention. The key to this is to build up a multi-disciplinary public health service with trained public health doctors posted to work at each level of the Service.

We **recommend** that the main Insurance Organisations should transfer their funds for health care to one unified fund which should buy services for their combined membership. The government should transfer to this fund the direct and indirect subsidies which it gives to health care. The fund would be directly accountable to the Health Minister but would not form part of the Ministry.

At the foundation of our reform of the health service is **the establishment of a family doctor service**: each citizen served by the unified fund would be able to choose a trained specialist in family medicine who would provide continuity of care and refer patients to the relevant further services which they might need. These family doctors would be mainly paid on a capitation basis and would have their expenses of practice reimbursed. They would also be allocated budgets from which to buy specialist services for their patients and budgets to pay for the drugs which they prescribe. They would rent space in existing health centres and polyclinics or practice from their own

premises. Their net remuneration should be at least as large as that of any other specialty.

We **recommend** that specialists, other than those providing primary care, should be paid on a **fee-for-service basis**. The level of the fees would depend on the number of services which all specialists provide: the more services, the lower the level of fees, so that total payments for specialist services are contained within a budget ceiling. Either rights to private practice would be denied to all doctors working for the national health service or they would be confined to senior doctors for a limited number of sessions per week held at the hospitals where the doctor holds his appointment We recommend an increase in salaries for medical professors to compensate for their loss of unlimited private practice rights. New types of contracts would be offered to diagnostic centres which did not provide incentives to increase their services. If this did not produce the required results, the NHS would have to become self-sufficient in this respect.

The unified fund would transfer funds to Regional Health Councils on the basis of the needs of the population of each region. These councils would give budgets to the hospitals and administer the contracts of and budgets for the family doctors. Attached to each Council there would be an independent ombudsman to deal with complaints from patients.

We **recommend** that each hospital would have its own Board and be run by a specially trained general manager responsible to the Board. In the long run the employees of hospitals would no longer have civil servant status. Hospitals would remain in public ownership but have the flexibility to shift resources between alternative uses without reference to higher authority. All appointments would be made strictly on merit. Steps would be taken to ensure that hospital beds are allocated rationally between alternative uses. Accident and emergency departments need to be developed, separated from other outpatient services. A variety of provisions need to be made for long stay patients.

We **recommend** that a limited positive list of drugs should be developed for use within the NHS and that a clear distinction made of drugs which patients can buy "over the counter" in any type of shop. The prescribing of each doctor should be monitored.

To bring about this reform, there will need to be **crash programmes for the training of managers, public health doctors and general practitioners**. We recommend the establishment of a new medical school with an emphasis on family medicine and public health in the greater Athens area and a large reduction in the size of the Athens medical school. Effective limits will need to set on entry to the medical profession and training for the traditional specialities greatly reduced under the control of a new Postgraduate Medical Council. Continuing education and health services research need to be expanded and financed by the government. A Medical Council needs to be established to police the ethical standards of the medical profession and

stamp out illicit payments to doctors of every kind. Nursing education will need to be greatly expanded and the status of that profession upgraded.

The extra cost of the developments which we recommend can be paid for by the measures we have recommended to secure economies in the present wasteful use of drugs and diagnostic tests.

INTRODUCTION

Terms of reference

We were appointed with the following terms of reference:-

1. Review the rationale for the creation of a National Health Service.
2. Review and help specify the policy objectives underlying the intended move to a separate service.
3. Review the expectations of key persons at the top level of government with regard to the purpose and nature of the Service.
4. Help the Ministry of Health and Social Security define, in broad terms, the main functions to be performed by the Ministry and the main functions of the Service.
5. Identify strategies for dealing with potential conflicts concerning the roles and responsibilities of the Ministry and the executive of the National Health Service.

Interpretation of the terms of reference

After discussion with the Health Minister, we have interpreted these terms of reference very broadly. In reviewing the functions of the Ministry, we have had to consider health in its widest sense including public health, health promotion and the prevention of illness. Our discussions with key persons at the top level of government have made clear to us the widespread dissatisfaction with the services as they function at present. This has led us into a wide review of the fundamental questions of the financing and organisation of the current health services. Both the Health Minister and the Prime Minister impressed upon us the current difficult financial situation of the country and thus the need for the efficient use of resources. We have therefore tried to find ways of reducing expenditure so that the immediate improvements needed can be financed out of economies found elsewhere.

The rationale for a National Health Service

We assume that Greece would wish to accept the same objectives as most other countries of the EU. These objectives have recently been summarised in an OECD publication:*

- Adequacy and equity in access to some minimum of health care for all citizens.
- Macroeconomic efficiency: the costs of health care should not exceed an acceptable share of national resources.
- Microeconomic efficiency: the mix of services chosen should secure health outcomes and consumer satisfaction at minimum cost.

At present the services available to different sections of the population differ in how they are provided and what is provided. The satisfaction with them varies very widely with, as will be shown later, the lowest average level of satisfaction among all EU Member States. It is, therefore, assumed that the government would wish, above all else, to upgrade this level of satisfaction with no additional cost. It has been our aim to try and find ways of achieving this.

The work of the committee

Most members of the committee arrived in Athens on 14 April and most left on 25 April. One member of the committee spent three days before the arrival of the other members in preparatory visits to health care organisations and other visits were made by one or more members of the Committee to the places indicated in Annex I. Oral evidence was given to the committee by representatives of all except one of the political parties. This last party instead submitted written evidence. We received evidence also from three ex-Ministers of Health and by the directors of the three largest insurance organisations, by the Dean of the Athens Medical School and the chairman of the Central Council of Health and spokesmen for the Pan-Hellenic Medical Association and the Hospital Doctors' Association. Less formal evidence was received as a result of interviews with others who are also listed in Annex I.

The arrangement of the report

The report is arranged in three parts. In the first we give a brief section on the health status of the Greek population, review the current organisation and financing of the health service and summarise what we have been led to believe are the weaknesses of current arrangements. In the second section we state a vision of long term developments which would, in our view, greatly improve on the present situation. In the final section we turn to the immediate steps needed to make progress towards this long-term vision.

---

* OECD, *The Reform of Health Care: a comparative study of seven OECD countries*, Health Policy Studies No. 2, Paris, 1992.

THE PRESENT SITUATION AND THE NEED FOR REFORM

THE HEALTH STATUS OF GREECE IN AN EU CONTEXT

MORTALITY

Expectation of life

The expectation of life in the different Member States of the Community is shown in Figure 1. Considering the level of living of the population, the expectation of life in Greece appears creditable, but there is under-reporting of infant deaths which may make the figure misleading. It is widely believed that the good expectation of life which is reported is mainly due to the Greek diet. There is a two-year gap between the life expectation of the rural population and that of the urban. This gap is wider at younger ages.

The main causes of death are neoplasms, cerebro-vascular diseases and diseases of the respiratory system. Greece has the highest rates of deaths from tuberculosis, communicable diseases, blood-diseases and genito-urinary diseases and the lowest death rates among Member States for bronchitis, emphysema and asthma, breast cancer and suicide and self-inflicted injury.

Throughout the 1980s, Greece has consistently had the highest level of tobacco consumption in the Community. This rose steadily from 1975 to 1987 but there has been a moderate fall since.

Infant, perinatal and maternal mortality

Infant deaths, as mentioned earlier are under-reported. The reported figures, both for infant and perinatal mortality, show Greece as having better rates than Portugal. There is a continually widening gap between post-neonatal mortality rates in the rural and urban populations. Maternal mortality is better than that in W. Germany, France, Italy, the Netherlands, Portugal and the United Kingdom.

THE TAKE-UP OF IMMUNISATION

Greece has the lowest but one percentages of children immunised among all Member States (see Table 2). There is therefore substantial room for improvement in this respect. At the time of our visit, there was an outbreak of measles.

AVOIDABLE DEATHS

Avoidable deaths are a basic measure of health care performance and consist of certain conditions from which people should not die, if they are given appropriate treatment at the right time. Thus if people die of these conditions, the deaths may reflect a failure to provide high quality curative and preventive medical care. The European Community's working group on avoidable deaths has produced a series of atlases of avoidable deaths. For the first atlas, seventeen conditions were selected by international consensus. In Table 3, the findings for these conditions in the period 1985-89 are given to show how Greece compares with other Member States. Only for four conditions is Greece above the average for the whole Community, but these involved a large number of deaths. It is below the average for the remaining 13.

THE INCIDENCE OF AIDS

Greece has the lowest incidence of AIDS among all Member States as shown in Table 4.

THE PRESENT ORGANISATION AND FINANCING OF HEALTH SERVICES

FINANCING

Health expenditure

The figures reported to the OECD show the expenditure on health services in Greece at 5.2 per cent of gross domestic product in 1991 (see Table 5). This is one of the lowest in OECD countries. It has since been shown that both the figures of health expenditure and gross domestic product are underestimated. We now learn that, using the recent family expenditure survey data, the proportion is probably more like 8 per cent of gross domestic product. This makes Greece stand out as a high spender for the level of living of its population. The relevant figures for all the EU countries are shown in Table 5.

The correction brings Greece into the same league as much richer countries such as Belgium, France, West Germany and the Netherlands. One can well understand the concern of the government that the figure should not increase still further.

Greece had, in 1991, about 42 per cent of health expenditure financed from private payments. This is the highest proportion of private financing among all Member States. Out of the 58 per cent of health expenditure paid for by public funds, about 25-30 per cent comes from social insurance and about 70-75 per cent from general taxation.

The Insurance Organisations

There are 39 different insurance organisations financing health care. Most of them cover a wide range of risks apart from financing or providing health care. From the 1980s, they have needed increasing subsidies from the government to meet their deficits but the sickness schemes have been in surplus owing to the low level of payments made to providers. Hospital fees, in particular, are far from covering the cost: the major part of the costs are met by the government. IKA, the largest scheme covering urban, blue and

many white collar workers, is financed for health care by 5.10 per cent of earnings from the employer and 2.55 per cent from the employee. The civil servants do not pay contributions and the employer pays only 1.8 per cent of earnings for health care: the rest is covered from taxation. Local authority employees have to pay 10.75 per cent of earnings and the employer 2.55 - 3 per cent of earnings. Employees of the Commercial Bank have to pay 6 per cent of earnings and the employer 3 per cent, while in the Ethnici Insurance Company the employee pays 5.1 per cent of earnings and the employer 0.8 per cent. The self-employed pay from 3,386 to 13,868 drachmas a month according to their class.

THE ORGANISATION OF THE HEALTH SERVICES

The early health action of the government was simply to establish public hospitals. Compulsory health insurance did not start until 1934, by which time there were many different insurance organisations established for different occupational groups which were deeply entrenched and left undisturbed. Not until after the 1983 law did the government create rural health centres and cover the rural population with tax-financed "health insurance": the parallel plan to create urban health centres was abandoned for economic and political reasons.

As a result, those living in urban areas, who do not belong to insurance organisations with their own special arrangements for primary care, use the outpatient departments of the hospitals or the private sector for primary care. Indeed, they are also used by those who find these special arrangements inadequate, either because they are only available for limited periods of the day or because they find them unsatisfactory for other reasons. It has been estimated that the number of visits to outpatient departments more than doubled between 1981 and 1991. At the hospitals there is little continuity of care because of changes in doctors on duty and the lack of computerised patients' records. Even the hospitals are only open in theory for 8 hours a day and in practice for shorter periods. Outside these hours patients have to visit the hospital which is on duty. We did not see a hospital with a separate accident and emergency department. Patients simply go to what they regard as the appropriate specialty clinic or wards for their condition.

In the case of inpatient care, beds are also allocated by specialty or to individual specialists. Thus some wards may be more than full, while others have many empty beds. A surprising gap in view of the fact that about 14 per cent of the population of Greece is over 65 is the lack of specific beds for long-term care. This is not because there is an extensive system of publicly financed nursing homes or of homes for the aged.

The services which insured persons can use depend on the insurance organisation to which they belong. The organisations are closely supervised by the Health Ministry. There is, however, nothing to stop any patient, irrespective of their insurance status, from simply going direct to the outpatient department of a public hospital.

IKA

The main provision of IKA consists of polyclinics with part-time, salaried, specialist doctors and dentists. They provide no preventive medical activity, rehabilitation or health promotion, other than the occasional AIDS poster. On the other hand IKA has, in addition to its 123 polyclinics, 119 contracted private doctors, 8 first aid stations, 47 child and maternity care stations, and 10 family planning centres.

Many of the IKA polyclinics are very inconvenient to use. The one we visited was said to be not untypical. There was no appointment system, so patients tended to arrive before it opened and, on opening, received numbered slips indicating the order in which they would be seen by a doctor in the specialty they had chosen. This led to quarrels between patients on who had waited outside longest. They had to wait hours until their appointment, as doctors often arrived late. If they needed time off work, the recommended number of days had to be approved by a doctor inspector elsewhere on the premises.

The current Director of IKA told us that in the past IKA tried to introduce an appointment system in some of the polyclinics, but this has become subject to sabotage by the doctors in over half the clinics where it has been introduced. Patients who had no intention of coming were booked for the appointments early or late in the day to enable the doctors to continue their private practice in the knowledge that there were no IKA patients waiting for a consultation. Telephone appointments had become impossible to make because the telephones were off the hook!

In some areas there is a system under which contracted doctors can see patients in their private offices. There is a maximum of 1800 members per doctor: Members choose their doctor and can change their doctor at the end of the year. The doctors are paid two elements of salary plus a payment for their rent: salaries are not related to the number of patients registered.

A survey about 5 years ago showed that patients made on average seven visits to the clinics: only one per cent never used IKA services and about 15 per cent are thought to use private doctors but come to IKA to get the prescription so that 75 per cent or 90 per cent of the cost will be reimbursed. A more recent survey* showed that 4 patients out of 10 had visited a private doctor's or dentist's office for an additional opinion, at least once in the last year.

IKA is only about 70 per cent self-sufficient in medical equipment. It has two scanners but they tend to break down. They therefore have contracts with private diagnostic centres. A series of commendable actions have been taken by the current President of IKA to prevent kick-backs from these centres to doctors employed by IKA. It has some hospi-

*Theodorou, M., Outpatient Care in IKA. A Comparison of two systems of family practicioners, IMOSY, Athens, 1993.

tals of its own and contracts with some small private hospitals paying them at the same low rates as public hospitals.

OGA

OGA covers the population who live in rural areas. The scheme is wholly financed by the government. Services are provided through health centres with permanent staff and a network of rural doctors and rural clinics staffed by doctors doing their one year of compulsory service in the first year after graduation. The average population served by a health centre is 15,000. There is no appointment system or referral system to other specialties or hospitals. No dental treatment is provided. Some rural posts are not manned by doctors and less than half of the positions for doctors are filled.

TEVE

The main scheme for the self-employed (TEVE), with 14.2 per cent of the insured population, gives access to private doctors in nine specialties, paid on a capitation basis who do this work for about four hours in the afternoons, when they also see private patients. The pay is low and it is difficult to recruit doctors to do this work. About half the visits of members are however to the public sector hospitals as the contracted doctors are not available in the morning. The consumption of drugs has been increasing and also the use of the diagnostic centres: the organisation is unable to monitor or control either of these expenditures. In view of the poor standard of the public hospitals, the organisation contracts with private hospitals for inpatient care; the cost is high and the quality of care questionable. The present Director is planning four polyclinics with family doctors and specialists which will be open on a 24 hour basis - two in Athens and one each in Salonica and Larissa. No dental care is covered.

The civil servants' scheme, with about 4.5 per cent of the insured, contracts doctors on a fee-for-service basis, though the rates paid are low and patients may have to supplement them.

The banks provide the highest grade of care. Most pay doctors and dentists on a fee-for-service basis. Members normally have free choice of doctor, dentist or hospital. Most funds operate on a reimbursement basis.

THE UTILISATION OF SERVICES

Office visits and drugs

A figure for the number of home and office visits per head is not reported to the OECD. It is probably around 8 (see Table 6). The number of drug items used is high; only France has a higher rate.

Use of inpatient services

The OECD figures on the use of inpatient services are the most difficult series to standardise between countries because of the difficulty of developing a standard definition of a hospital which accommodates institutions for caring for the elderly, the mentally ill and mentally handicapped. But the figures suggest that Greece is the one of the lowest users of inpatient services in the European Community (see Table 7)

CONCLUSION

The health care system of Greece is thus heavily curative and makes excessive use of hospital outpatient departments. There is little continuity of care, except for some who use the private sector. One has the impression of patients wandering rather aimlessly round the health system, generating unnecessary visits as they look for a doctor they trust. They have to wander far if they are sick during the night. By international standards the cost, correctly measured, is high for a country with Greece's standard of living.

THE FAILINGS OF THE PRESENT HEALTH SYSTEM AND EARLIER PLANS FOR REFORM

In this section, we list briefly some of the short-comings of the current health services. We appreciate that in setting them out we are saying nothing new. Most of what we say is well known to those working in the Service and have been features of the Service for many years. We start by mentioning two failings which were given less attention in the evidence submitted to us - the weakness of the services for public health and unethical and dishonest practices

Weaknesses in public health

When reviewing the present number, training and conditions of service of those doctors who are responsible for public health in Greece, we were struck by a series of problems and deficiencies. Although individual prefectures each employ doctors, most of them are newly trained doctors doing their one year of compulsory service; there are only 15 trained public health doctors in the country. The distribution of those doctors doing public health work is not related to the needs of the population. The role of public health in Greece is largely old-fashioned and bureaucratic, e.g. licensing restaurants, hairdressing establishments, swimming pools etc.

The public health services are not really related to, nor do the public health doctors feel responsibility for, the health of defined populations. The relation between the public health doctors and the rest of the health service is bureaucratic rather than managerial or collegial. Thus, public health doctors have no authority to review, comment on or evaluate the services provided by the other health sectors.

The status, pay and conditions of service of public health doctors are low in comparison to that of clinical doctors, even at the Ministry of Health. Thus the quality of individuals in public health is perceived as second rate and many are thought of as "drop

outs" from clinical practice. The education in public health seems to us inadequate, poor, and boring in the undergraduate medical schools. The training at postgraduate level seems to us good in part but in several respects inadequate for present problems, and largely theoretical rather than practice-based. The participants at the School of Public Health were reported as taking courses in order to get paper qualifications rather than being related to their interests or needs.

There seems to be little awareness of the problems (except in a few instances) caused by the lack of structure, adequate definition of tasks and responsibilities, inability to relate to defined populations, lack of population registers (e.g. birth and death), lack of laboratory facilities for the investigation of outbreaks and no real appreciation of the need to develop inter-sectoral links and programmes. It is thus not surprising that the immunisation status of Greece is poor in relation to the EU and that there have been a number of major preventable outbreaks of common communicable disease, such as rubella and gastroenteritis. The lack of a coherent health policy, at national or local level, to combat tobacco or alcohol-related harm are very evident to any visitor. The lack of concern with cigarette smoking among personnel involved in health care and policy we found shocking. The absence of any routine objective assessment of health needs in local (or national) populations by use of health reports (and acting on them) can only lead to increases in ineffective, inefficient and inappropriate health services.

We understand that no government so far has enunciated a clear policy to improve the health of the population with specific targets and indicators, in line with the policies of WHO which the government has endorsed.

If Greece wishes to develop a coherent health policy and rational deployment of resources for the treatment of those in need, it is essential to create a policy for the development of public health and its practitioners. Such a policy is outlined in Chapter 4 below.

Unethical practices

We have learnt that the following practices are common. By their nature, it is not possible to specify how widespread they are or the total sums of money involved.

1. "Envelope payments" are commonly given to, and sometimes demanded by, some doctors working in the hospitals and elsewhere. They are also given to nurses. One witness suggested that the income for a doctor from this source could amount to a quarter of a million drachmas per month or more. A large payment may be needed to ensure that a particular surgeon performs an operation or that a patient secures early treatment. It was suggested that this payment could amount to as much as a million drachmas.
2. Some drug firms are willing to reward monthly in cash those doctors who frequently prescribe their products. Again it was suggested that such payments

could amount to a quarter of a million drachmas a month. Or doctors may have the costs of attending a "conference" organised by a drug firm in a distant and expensive location paid by the firm if their products are frequently prescribed.

3. Kick-backs may be paid for referring to a particular diagnostic centre or securing the admission of a patient to a private hospital. Or the doctor may be one of the owners of the private diagnostic centre to which his/her patients are referred.
4. There have been cases where IKA doctors could get kick-backs from pharmacists.
5. It is by no means unknown for doctors in IKA health centres and other doctors to use their posts as a means of recruiting patients for consultations in their private offices.
6. Particularly in the civil service scheme, doctors have been known to claim for several consultations when only one was given.
7. Doctors are said to avoid keeping medical records in case they might be used as evidence of tax evasion.
8. As mentioned earlier, doctors have been sabotaging attempts made to improve the convenience of patients using IKA clinics.

Illicit payments are one reason for public distrust of the services. Although these practices are well known, no doctor has been disciplined for these activities in recent years, although a system of professional self-regulation exists.

Public dissatisfaction and evidence of distrust

Public dissatisfaction is shown by the way services are currently used in Greece. Many patients pay for services through their insurance fund but fail to use the services which the fund provides. Instead they go, even with minor health problems, to the large hospitals. Large numbers of patients simply bypass their local health services and go to the leading hospitals in the main cities for care, or where this can be afforded, to the private practices of doctors with good reputations. Public dissatisfaction is also shown by the widespread practice of making illegal "envelope payments" to doctors. It is widely believed that doctors will only give their closest attention to patients needs' if such payments are made.

The views of citizens of the Community on their health services are summarised in Table 8. The findings are from a Eurobarometer survey conducted in Member States in 1992. In the southern Member States, the majority of people do not think their health services are of good quality. But among them Greece stands out as having the lowest proportion thinking their health services are good and the highest proportion thinking them inefficient. Two-thirds of the population is willing to pay more for health services in higher taxes.

We would also put under this heading the low standard of services for the mentally ill and mentally handicapped, This a particularly serious issue as patients are in a very weak

position to express their dissatisfaction. A substantial amount of these services are still provided in old asylum buildings dating from the nineteenth century "with the stigma of social isolation of the mentally ill and the decreased value of human beings"*. Greece has been slow to adopt the policies long proposed by WHO to correct the uneven distribution of mental health resources between regions and introduce effective planning. An EU committee in 1984 described the situation in Dafni and Leros where the largest asylums are located, as "unique, calling for special attention". According to this report:-

> "In Leros the problems extend well beyond the walls of the institution and affect the whole island. The EU team's impression is that the use of Leros for years, perhaps even centuries as a dumping ground for the unwanted -lepers, convicts, political exiles, and now handicapped children and the psychiatric patients - has led to a deterioration of the entire life style and culture of the island"**.

There is now a programme covering the period 1992-2000, partly financed by the EU, with the aims of developing psychiatric units, avoiding mental illness becoming chronic, returning patients to the community and providing training***. As this subject has so recently been reviewed by an international committee and a progressive plan developed, we do not pay the attention to this important area which we would have otherwise considered appropriate.

Large geographical inequalities,

There are very large variations in the quantity and quality of what is provided in different parts of the country, only partly due to the way in which the population makes use of the services. Expenditures from the public health budget vary from 18,310 drachmas per head in Central Greece to 43,124 drachmas in Attica. While there is one doctor working in a health centre per 1,510 persons in Attica, there is one doctor per 3,284 persons in the Peloponnese. The provision of hospital beds varies from 2.9 per 10,000 in Western Greece to 6.9 in Attica. If NHS doctors and private doctors are added together, there are 20,390 in Attica and 476 in West Macedonia.

Over-centralisation and bureaucratic management

Policy-making, financing and the control of key sections of staff are all heavily concentrated at the centre. The prefectures rely on the centre for such resources as they distribute to their local health services.

---

* Yfantopoulos, J.N. "Social and economic policies in Mental Health Services" Schwefel, D. et. al (eds.), Costs and effects of Managing Chronic Psychotic Patients, Springer-Verlag, Berlin. 1988, pp. 51-75.

** Commission of the European Communities, Reform of Public Mental Health Care in Creece, Brussels, 1984.

3. Madianos, M.G., and Yfantopoulos, Y. N., Final Monitoring Report on the Greek Psychiatric Reform, Athens 1991.

Lack of incentives in the public services

The status of so many health service employees as civil servants leads to rigid pay scales and the limited ability of local management, such as exists, to reward good service or discipline those who neglect their work or do it indifferently. There is a lack of incentives for almost all grades of staff, except the incentive to leave early for other work. There is limited professional satisfaction for doctors or consumer satisfaction for patients because of the lack of continuity of care, the lack of user friendliness and the inconvenience of using public health services, particularly the over-crowded outpatient departments which lack separate accident and emergency departments. There is no consumer representation.

The lack of medical records or an efficient health information system

The service lacks an effective system of medical records or a health information system geared to show how health resources are used, let alone the outcome of care. Most doctors do not keep records in private practice and records which are kept are not accessible. One reason for this, as mentioned earlier, is that such records might be used as evidence by the tax collector.

The lack of cost-effectiveness

Although staff establishments are tightly controlled, in other respects annual budgets are not adhered to; financing is effectively open-ended. There are no cost containment measures on either supply or demand other than the 10 or 25 per cent co-payment for drugs. Hospital beds are used wastefully; some hospitals and some sections of hospitals have low occupancy and day surgery is hardly developed. As will be shown later there appears to be an excessive use of drugs, particularly of high cost third generation antibiotics, and absurd overuse of expensive diagnostic tests. Not only is there a lack of incentives for good performance, but there are positive incentives for provider-induced demand. The multiple sources of finance lead to unnecessarily high administrative costs and poor coordination of planning and financing.

Unbalanced mix of staff

There is an excess of doctors (some of them poorly trained) and a serious shortage of nurses, very few of whom have been well trained. The training of both needs modernisation. There are hardly any family doctors and a gross excess of specialists. There is hardly any continuing education or funding for research. Students are unevenly distributed between medical schools. On top of this there is serious tension between university staff and NHS staff due to their very different terms of service. The former are allowed private practice and the latter are not.

Lack of quality assurance

Finally, there is virtually no system to assess services for quality or appropriateness, let alone cost-effectiveness, anywhere in the health services. There appeared to be no medical notes in some of the primary care facilities which we visited.

It should be stressed that not all of these failings are to be found everywhere. We have met doctors who conscientiously perform their duties and condemn those with shady behaviour. In one of the heath centres we visited particular efforts were made to keep high standards of care and stop illicit payments. We visited one hospital which is in the process of introducing a computerised information system.

EARLIER PLANS FOR REFORM

There has been no lack of plans to reform the health services. Even under the military dictatorship, the then Minister of Health proposed a National Health Council to plan the health sector, harmonise the regulations of the insurance funds, change the distribution of resources and decentralise the health services. A system of primary care with capitation-paid family doctors was envisaged. Nothing came of this plan. After the restoration of democracy, a working party in KEPE pointed out in 1976 that the method of paying doctors encouraged provider-induced demand and discussed the underground economy in health care. They proposed the unification of the three basic insurance schemes.

In 1980 the then Minister of Health tried to pass a law to create an agency to coordinate health care provision, to develop a network of primary health care teams based on family doctors, to reform the Ministry and to introduce "numerus clausus" for medical students. The proposal never became law.

With a change of government, the 1983 National Health Service Law was passed aiming to give universal entitlement of health services and create a fairer distribution of health resources. The State was to be responsible for the provision of services, there was to be a common source of finance and services were to be unified and decentralised with local participation. These measures were never implemented. The law also required that no new private hospitals could be established; several were bought up by the State and others were forced to close owing to the low fees paid to private clinics by the insurance organisations. The salaries of NHS doctors were substantially increased and private practice by these doctors was forbidden by law. But this law was never effectively enforced and it did not apply to university professors or doctors in the armed forces.

An unintended development was the rapid growth of unregulated private diagnostic services, largely owned by doctors. We were told that there are in Greece 12.5 CT scanners per million persons and 21.5 ultra sound scanners, while in some other countries of the Union the corresponding ratios are 5 and 13.5. A system of primary care

was to be developed based on family doctors and health centres with a system of referral. Nearly two hundred rural health centres were in fact built (though not all of them were adequately staffed) but the corresponding chain of urban health centres never materialised. Progress in training family doctors was pathetically slow.

From 1992, private hospitals were allowed to be opened once more, provided they fulfilled certain requirements. Doctors in public hospitals were given the right to choose whether to be full-time or part-time. If they opted for part-time they would receive very low salaries and be officially allowed private practice. Only about 400 doctors selected this option.

CONCLUSION

We are by no means the first to draw attention to the failings of the present health care system. Governments of different complexions have proposed reforms - in particular the unification or coordination of insurance organisations, the decentralisation of services and the introduction of capitation-paid family doctors. But no government has so far had sufficient determination to implement reforms of this kind.

VISION OF THE FUTURE

HEALTH IMPROVEMENT

This part of the report sets out our vision of what the organisation and financing of health care could look like in the long run. In the process we set out a number of alternatives on some important points. We leave to part III the question of how any new expenditures which we propose could be paid for by savings elsewhere. Also in part III we discuss the process of transition from the present situation to the future we have set out in this part of the report.

BROAD OBJECTIVES

We start by stating in brief the objectives which we believe should underlie any reform of the health sector. They can be listed under three headings:

1. To create a coherent policy to improve health with inter-sectoral coordination and a strong emphasis on health promotion and prevention,
2. To increase public satisfaction:-
   - by providing for each citizen a chosen and trained specialist in family medicine with continuity of care and financial incentives to retain patients registered with him/her. This is the essential foundation of our proposed health system
   - by improving management and creating incentives for good performance throughout the health system,
   - by improving quality of care through reforms in medical education, the implementation of quality assurance systems, promoting continuing education, the upgrading of nurse education and creating an enhanced status for nurses and the paramedical professions.
   - by decentralisation, public participation and complaints procedures.
   - by providing equal access both financially and geographically.

3. To pay for the improvements by creating incentives for cost-effectiveness, by changes in provider payment systems, by enforced budget limits and by cutting down the present waste in the prescribing of drugs and the provision of excessive diagnostic tests.

The rest of this Chapter is concerned with the first objective - health improvement.

THE EVIDENCE

To our surprise, very few of those who gave evidence mentioned the wider purpose of health improvement: evidence was concentrated on failings of the medical care system. Only one of the representatives of the political parties mentioned this in its widest sense though others, including ex-Ministers, mentioned the importance of prevention in general or only in an occupational context. No one of those we questioned referred to the role of those working in public health in this connection, though we regard their role as pivotal in securing wider health improvement. What worried us most was that there were senior people in the university system who appeared to have a very limited understanding of the importance of public health and thus of specialists in this subject.

NATIONAL HEALTH POLICY AND TARGETS

Environmental factors, such as housing, traffic and employment, and behavioural factors such as smoking, diet, and alcohol consumption, probably make greater contributions to the levels of health of a population than the provision of clinical services. Of critical importance is the distribution of income and the extent of poverty. Health services can, however, play an essential role in improving quality of life and can produce valuable improvements in other aspects of health status. In view of the breadth of the causes of ill-health, public health is a multi-disciplinary activity and discipline.

An effective public health service must identify and be responsive to public health problems, and be effective in promoting strategies to combat them. If no well-attested solution is available, an effective service ensures that appropriate investigation and research is mounted in order to develop the knowledge and define the problems that require solution and the means of solving them, and thus to identify appropriate methods of applying them. The intelligence system maintained by the service should provide appropriate mechanisms in order to undertake these public health tasks.

Although the health of the population of Greece has never been better, there are complaints about the medical services provided. All those providing services to improve health are hampered when they are unable to predict or measure the impact of their efforts, and the demand for their services exceeds their ability to supply them. Public health aims should transcend political ideologies.

A strategic approach to health planning requires the identification of specific goals for improvements in the population's health. However, in order to describe the current position and to chart progress towards such goals, it is often necessary to identify intermediate objectives, not only for health, but also for the important determinants of health and the processes that lead to changes in those factors. This may be because the improvement in health status itself is delayed or because health outcomes bear a complicated relationship to multiple causal factors and therefore interventions are better aimed at individual determinants rather than specific outcomes.

If those objectives are to be useful in guiding policy and programme design they should be accompanied by measurable indicators describing levels of health, the appropriate determinants of health and levels of relevant service provision. The indicators need also to be sensitive to changes of the size anticipated. Once indicators have been identified targets can be set that will suggest the pace at which progress towards those objectives could reasonably be expected. As the impact of any strategy tends to be much less if its implementation cannot be subsequently evaluated, it follows that appropriate information of this kind is a prerequisite for effective strategic planning.

In several countries, an overtly strategic approach to planning for improved health - not just health service provision - has been adopted and a structured set of objectives and related indicators has been developed. Such a process must have immediate objectives such as:

- to establish a limited set of valid indicators to reflect key aspects of levels of health, determinants of health and health-related service provision in Greece.
- to collect information where possible on the current state of the nation's health using these indicators, and identify important areas where data are unavailable.
- to suggest targets for improvement and to monitor progress towards those targets.

The long term objectives of such an exercise may be:-

- to provide a common focus for data collection and use (e.g. in annual reports)
- to highlight the lack of data in many areas and stimulate efforts to improve this situation.
- to clarify the opportunities that exist in terms of potential health status improvements for health promotion and for disease prevention programmes.
- to provide a national mandate for local initiatives where local information is lacking or subject to large sampling errors.
- to monitor the impact of current and future health strategies on measurable indicators of the nation's health.

Targets can be used to highlight important areas of the strategy and are of help in the process of converting policy into programmes. They also provide a tangible means of monitoring progress and can act as a stimulus for the collection of good quality data.

There are disadvantages to targets such as spurious priority being given to what is measurable; they can also seem simplistic or may appear to be unrealistic or unattainable.

Although health goals and objectives may be common to national populations, the mechanisms by which they are best achieved often vary according to local situations. The targets should therefore not be used to dictate the programmes to be used in order to achieve the improvements required.

Within each area, objectives should be subdivided under the following headings:-

- Improved health status,
- Risk factor reduction,
- Improved services and protection,
- Surveillance and data needs.

Examples of priority areas for Greece, similar to the rest of Europe, could be:-

1. Smoking
2. Alcohol - related harm
3. Drug and other substance abuse
4. Nutrition
5. Exercise
6. Mental health
7. Healthy physical and social environment
8. Accidental injuries
9. Occupational safety and health
10. Birth control
11. Maternal and infant health
12. Surveillance and control of infectious disease, including sexually transmitted diseases, HIV infection and immunisation
13. Blood pressure control
14. Screening for cancer
15. Dental health
16. Physical and sensory disability

In addition, Greece has hereditary diseases such as thalassemia.

Indicators and targets need to be:

- Credible
- Clear
- Selective
- Compatible
- Achievable
- Balanced
- Quantifiable
- Ethical

Having such targets would enable Greece to develop a coherent health policy in line with other European Union countries and enable options and choices to be considered within an agreed framework.

THE PUBLIC HEALTH FUNCTION

Modern health policy requires an effective source of knowledge which can be brought to bear in a systematic way upon a range of issues affecting the health of the public. This function is exercised by public health specialists, by no means all of whom may be medically qualified, and comprises the following:-

1. Determining and interpreting the health status of the population and the factors which have a bearing on it.
2. Identifying the requirements for health care, so as to promote and plan health service provision, monitor and improve the efficiency and effectiveness of the service.
3. Developing information services to provide medical information to assist in determining the health status of the population and in supporting the planning and management of the service.
4. Promoting health by means of health education, vaccination and immunisation, screening services, and preventive measures generally.
5. Identifying outbreaks of communicable disease and controlling such outbreaks in co-operation with others who have statutory and professional responsibilities in relation to communicable diseases.
6. Identifying the effects on the population of adverse environmental factors and initiating action to control such hazards in co-operation with others who have responsibilities for environmental health.
7. Identifying the needs of special groups in the population such as children, the physically handicapped, the mentally ill, and the elderly.
8. Providing advice on medical manpower planning, postgraduate medical education, and the physical planning of health service buildings.
9. Undertaking appropriate education and research.

TRAINING IN PUBLIC HEALTH

Public health is defined as the science and art of preventing disease, prolonging life and promoting health through the organised efforts of society. Its chief responsibilities are the surveillance of the health of the population, the identification of its health needs, the fostering of policies which promote health, and the evaluation of health services.

As shown above practice includes:

- Communicable disease control and environmental health,
- Services for special care groups,
- Health service resource use,
- Planning and management.
- Research and development, education and training.

In Greece, as in all EU countries, there is a crucial need to develop a cadre of public health doctors who can contribute to the improvement of health and the formulation of health and health service policy. They add a medical contribution to the following activities:

(1) Use epidemiological methods to:-
   - Define and describe the health needs of the population,
   - Identify environmental and social hazards to health,
   - Elucidate the causes and determinants of disease.

(2) Undertaking surveillance of communicable and non communicable disease control activities.

(3) Providing advice to those concerned with setting priorities and planning services

(4) Participating in the development of policy on disease prevention, health promotion and health education.

(5) Evaluating the implementation and outcome (efficiency and effectiveness) of health policies and services provided in populations.

We attach no small importance to the fourth of these functions as, at present, the public at large seems to have exaggerated ideas about what the health system can do for them and thus use it inappropriately. At the same time, Greek patients seem to distrust their health care system in general, because of its uneven accessibility, the frequent absence of bond between doctors and patients and the financial burdens involved. On the other hand, a good doctor is sought, when ill, either through recommendations by family or friends or because of the affiliation to well known hospitals. Patients themselves ask for new technology, e.g. CT scanning, ultrasound investigation and other diagnostic methods and are willing to pay extra, even for complaints which are, actually, minor. Drug treatment, often with expensive new drugs, is sometimes requested by patients, although after the prescription, the drug may not be taken. There are no active patients' organizations or consumer associations to provide information about health and health care and the quality of its delivery.

The public should be informed about the dangers in the overuse drug prescriptions and self medication and the limitations of diagnostic tests. They should also be constantly told about the risks of smoking, drug abuse and sexually transmitted diseases. There needs to be a development of the concept of the rights of patients.

This information, often critical of existing practice, should be provided by an independent authority, not linked to either the Health Ministry or medical organizations.

Dissemination of information, in the media will be acceptable, if that information is given by people with authority. Any public information service should therefore seek to employ key figures from public life to support its messages.

The funding of such an information service should come from the Health Ministry. One aim should be to reduce the ill-informed demands which the public make on both the public and the private sector. Another should be to try and influence behaviour. Such health promotion activity should be very carefully devised. For example, excessive emphasis on dangers to health can be counter-productive. This is now vast international experience on which Greece can draw in developing its campaigns of health promotion. This kind of activity should be seen as a necessary part of the public health service. But there are considerable doubts about whether it is likely to be effective without the a strong back up of support from a prevention-conscious family doctor service.

Public health medicine should be introduced into a variety of settings to be effective through:

- the central ministry or health department,
- the local health departments
- hospitals and other health services' administrations.

A way to focus activity at each level can be the preparation of a report on the health of the population which will spell out areas of unmet need, inefficient provision and opportunities for more effective resource use. Preparing the report and ensuring change, as a result, is the work of public health medicine. Given these tasks and responsibilities the training required can be outlined. This is set out in Annex II. It consists of two stages. The first requires education in the scientific basis of public health medicine. The second requires in-service training.

STRUCTURE

There must be a public health presence at the centre in a planning role, as well as at the periphery. Public health specialists are required at all levels of a health system, both in a strategic role as well as in an operational capacity to implement policies.

In view of the crucial contribution that public health professionals make to health policy and the improvement of the population's health, it is essential to recruit well qualified and committed professionals to the discipline. This can only be achieved by ensuring that they have adequate status within the systems, are not burdened with unnecessary bureaucratic tasks, are rewarded at least as well as other specialists, are adequately supported and have an appropriate career structure.

The precise number and location of public health doctors will depend on the precise configuration of the Service. However certain general principles apply. Public health units at local level should be responsible for populations of between 300,000 - 800,000. This enables a reasonable mix of skills to be deployed. The teams of public

health doctors will require a director of public health, as well as a number of specialists, one of whom will need to have special responsibility for communicable disease control. The others may have special expertise in epidemiology, health promotion and disease prevention, health service evaluation and /or may be responsible for either specific geographic localities or services e.g. the elderly, the disabled.

At the central level major functions that will need to be fulfilled are:-

- Monitoring the nation's health and the outcome of health care.
- Seeking a greater understanding of what influences and determines health, ill health and the quality of life.
- Implementing the changes required to achieve improvement.

There needs to be a Chief Medical Officer(Public Health) at the Ministry will the following responsibilities:-

- to monitor the state of health of the people of Greece and advise the Ministry on measures to improve it.
- to participate in the development, formulation and implementation of policy relating to health and health services.
- to advise on all medical aspects of health care.
- to advise on those aspects of governmental policy that influence health, such as education, agriculture, industry, environment.
- to liaise with the medical profession and other professional groups in Greece and internationally.

It cannot be emphasised enough that public health at all levels is a team activity. In addition to the public health doctors, the team will need to have statisticians, economists, social policy analysts etc., as well as adequate supporting staff and access to data sources, computing ability and information.

The precise organisation and deployment of such resources will require additional analysis. However a striking deficit in Greece is the absence of adequate population registers crucial in the execution of modern public health tasks, e.g. immunisation, screening, health needs assessments.

A further prerequisite for the appropriate fulfilment of the tasks is access to public health laboratories, capable of investigating large number of specimens in outbreaks of infectious disease.

The precise number required of public health doctors in Greece cannot be estimated. However it is crucial to plan to have academic departments in each medical school appropriately staffed both by medical and non-medical disciplines and that these have responsibility for part of the pre-clinical and clinical curriculum (at least 4 weeks full-time in each part). In addition there is need to strengthen the academic structure and number of staff in Schools of Public Health.

At local level, teams of public health doctors should, if possible, comprise at least 4

medically qualified persons and at least an equal number of non-medical specialists. At central level a commensurate number of individuals will be required.

To achieve this manpower expansion, it will be necessary to plan it in stages.

1. Identify a number of good qualified, practitioners and provide either local or international short courses to upgrade their skills.
2. Attract newly qualified practitioners of high calibre to the discipline and provide them with the training outlined either outside Greece or within.
3. Once a small cadre of excellent trained practitioners has been created progress to full development.

CONCLUSION

Greece, as shown in Chapter 1, has achieved a high level of health for its economic development. We are convinced that the expansion and strengthening of the public health function offers the most cost-effective way of securing further improvements in the health of the population.

THE FUTURE FINANCING AND ORGANISATION OF HEALTH CARE

None of the arrangements currently made by the large insurance organisations leads to satisfactory health care for their members in terms of convenience, user-friendliness and the quality of care. This is partly because few of the doctors providing the services see this work as that to which they are most committed. The fragmentation of funding leads to many doctors having multiple jobs or roles, often providing episodes of treatment to patients they may never see again. The unification of the health care financed by the main insurance organisations has long been proposed. We see this as essential to create an agency with the power and authority to improve the services provided.

THE EVIDENCE

In this we are responding to the evidence of the majority of those who came to see us. This proposal was specifically mentioned by the three ex-Ministers who gave evidence and by the representatives of three of the political parties.

POOLING THE HEALTH CARE FUNDS

An essential step in the overall reform process is the consolidation of financing sources into a single fund under the administration of a single agency. This might be designated as the Unified Fund, and would be administered by its own separate administrative/executive structure. The unified fund will act, directly or indirectly, as the 'purchaser' of care, making choices as to which agencies and persons will be paid, and for what services, rather than simply paying bills as submitted. It will also advise on the overall level of funding to be made available for health care services.

As the purchaser of health care for all or the majority of the population, the unified fund will be responsible for evaluating the appropriateness and effectiveness of the care being provided, and making contracting decisions accordingly. It will require a substantial decision support system, providing more detailed and comprehensive data on patterns of service use than is currently available. It will also require access to the expertise necessary to evaluate those patterns, as it will be expected to use its control over finances to encourage the provision of effective and efficient care. The unified fund must be given a degree of independence from day-to-day political considerations. It will, however, be accountable to the Health Minister.

Consolidation of payment does not require the merging of the social insurance funds. These can remain independent, but will be required to make contributions to the consolidated fund on behalf of their members, equal to the amounts they now spend on health care. The amount of required contributions by each fund will be changed over time to correspond with changes in the costs of care services for its members. The unified fund will make proposals to the Ministry of Health for these changes, which will be determined by Ministerial decision.

The insurance organisations will retain responsibility for:

- pensions;
- cash payments for income replacement; and
- certain supplementary health care benefits (such as eyeglasses, or adult dentistry).

These are all areas in which the benefits offered by the funds differ, and there is no compelling reason for homogeneity. The individual social insurance funds will thus continue to offer different benefit packages in these areas. They will also retain their assets, and will be required only to make on-going contributions to the unified fund.

The unified fund will contract and pay for all those 'core' hospital, medical and pharmaceutical services which are currently benefits under all social insurance funds. It will do this through Regional Health Councils, the case for which we argue later in this Chapter. These core services might include certain supplementary benefits which, in the judgement of the unified fund, should be provided to all members. Thus we would omit adult dentistry from core services. Over time, the range of core services may be made more specific; current services may be restricted or dropped, and new services may be added to the core. With respect to the purchase of the core services of health care, however, it is the unified fund, not the social insurance funds, which will be the purchaser. The social insurance funds will serve only as a conduit for health care expenditures, collecting funds from their members and transferring these to the unified fund. They will no longer be paying specifically for the care of their own members. (In fact, the funds do not really pay for the care of their members at present, since such a high proportion of the cost of that care is supported directly or indirectly by government subsidy.)

The national government will contribute directly to the unified fund, amounts equivalent both to its present subsidies (through the prefectures) to the NHS hospitals and rural health centres, and to the present contributions for health care to particular funds, whether visible or invisible. The unified fund will then be able to purchase services from these agencies, through various contractual forms, at payments reflecting their true costs.

At present, members of different social insurance funds make contributions at different rates, with different levels of employer contribution and with different forms of benefit. The consequence is that the contributions of members of different funds vary in ways that bear little relation to differences in income or ability to pay. Under present legislation, the methods of calculation of contributions to the different funds are being made more uniform. The creation of a unified purchaser fund also suggests that patterns of contribution and benefit be made more equitable.

But this is not a necessary feature of the consolidation process itself; at least at the outset the social insurance funds need only be required to contribute amounts equivalent to what they now spend on the health care of their members. This will not, in itself, require any changes in the patterns of contributions to the different funds. The purpose of the reform is to consolidate present payments through a single purchaser; the question of the equity of the contribution system can be left for political decision at a later stage.

What will become more uniform is the form of health care services received. With a single purchasing agency for the whole country, the basic benefits purchased through that agency will have to be similar for all those covered by the Fund and, we hope, available wherever the insured persons live. The success of the reform will then hinge on those benefits being "equalized up" rather than "equalized down", even if this cannot be rapidly achieved. If the consolidation is perceived as primarily taking away forms of benefit now enjoyed by members of the smaller, more "privileged" social insurance funds, it is likely to encounter significant political resistance.

An obvious problem is how to equalize up benefits, without adding significant amounts of additional funding to the health care system - additional funding which in present economic circumstances is unlikely to be available. We believe that there are sufficient resources already being devoted to health care in Greece, but that for various reasons they are not being used effectively. Other recommended changes in the delivery system will, we believe, lead to these resources being freed up for more effective use. It will thus be possible to equalize up benefits within the present levels of expenditure.

We have emphasized the importance of consolidating at least the main financing sources into a single purchaser. Since such a large proportion of the Greek population is covered by a small number of funds, however, it might be sufficient to require only

the participation of IKA, OGA, TEVE, TAE, and the public sector employee funds. We understand that at present the central government also pays for the care of certain disadvantaged groups such as very poor people, the unemployed, and special populations in the north. These funds too should be consolidated into the unified fund which would have responsibility for purchasing care for the corresponding populations. The unified fund must, however, make no distinctions within the covered population for whom it purchases care; in particular the indigent must not be identifiable as such by any provider.

The many other small insurance organisations might be given the option of contributing to the unified fund, or of retaining responsibility for paying for their members' health care. It should be noted, however, that since the state subsidies for hospital care in particular will now be flowing to the unified fund rather than directly to the hospitals, hospitals will be increasing their charges for patients outside the Unified fund to levels representing their actual current costs.

Those organisations choosing not to contribute to the unified fund will be required to reimburse the full costs of inpatient or outpatient services used by their members; these prices should no longer be fixed independently of actual costs by ministerial decision, because there will be no separate contributions from state funds to cover hospital deficits. The prices charged to those not covered by the unified fund will be different for different hospitals, reflecting the differences in their costs. Hospital outpatient departments will also charge for specialist services. Hospitals will need to establish proper costing systems to ascertain their full costs including the depreciation of capital and the rental value of land.

We understand that at present there is a limited degree of favourable tax treatment for private insurance funds, with the individual being able to deduct contributions (up to a ceiling) from taxable income. Since the consolidation of payment sources is a fundamental principle of the reform, this form of public subsidy for separate coverage should be removed. This is not meant to suggest that we see no role for private insurance. Some people may well wish to pay for more luxurious hospital accommodation than can be afforded for the whole population - with private rooms, telephones, television etc. Some may even wish to insure so that certain types of treatment can be purchased abroad. But removing this type of subsidy is in line with the main international trend (e.g. Australia in 1984, Denmark in 1986, and Finland in 1989). European experience suggests that the persistence of a small privately insured sector does not necessarily undermine the effectiveness of a "near-universal" health system.

In our judgement, the consolidation of the funding sources described above will provide sufficient leverage to carry through the other reforms which we recommend, although it would be preferable to consolidate all funds flowing into health care. But it would be highly inappropriate, indeed grossly unfair, if insurance funds that chose to

remain outside the unified fund continued to "pay for" hospital services at prices far below their actual cost. The members of those funds may feel that removing the subsidy "forces" them to join the unified fund. But the choice is still theirs; they are merely required to pay the full costs associated with their choice.

PAYING PROVIDERS OF CARE FROM THE UNIFIED FUND

The consolidation of the purchasing function requires that it be separated from the provision of care. The purchaser/provider split is a central feature of health reform in a number of countries which did not have it before, such as Sweden, New Zealand and the U.K: it has also been proposed for Spain. It has long been a feature of such countries as Belgium, Germany, France and the Netherlands. In the Greek context, it is the unified fund and not the insurance organisations which will be the purchasing authority. Hence the funds owning clinics and other facilities, such as IKA, might continue to do so, but payment for the services of these clinics would come from the unified fund, not from IKA itself. In the same way the health centres now owned and funded by the national government might still be government-owned, but would be funded from the unified fund rather than through public grant or subsidy. They can compete for custom with other providers.

Another option for both these clinics and health centres is that the present owners might choose to lease these facilities to other organizations or groups. These would then contract with the unified fund and take on responsibility for providing care of defined forms and/or to defined members of the covered population. But the unified fund will use its purchasing power to change the pattern of service provision; the present pattern would not in our view be acceptable.

But it must be clear that if IKA, or any other fund, continues to function as a provider of services, it will no longer be permitted to provide services specifically for its own members. Instead it will be in a contractual relationship with the unified fund, on the same basis as any other provider, to provide services to persons who might or might not be enrolled in IKA and making their contributions through that organization.

PRINCIPLES OF PROVIDER PAYMENT

The unified fund may make contracts in a variety of forms with providers of care, but these relationships must embody certain principles.

First, money should normally follow patients. This principle is being pursued internationally because of its potential to encourage the development of a "user-friendly" service. Providers should ideally be pleased to see patients and rewarded for caring for them. Providers who are impolite, inconsiderate, not readily available or otherwise inadequate should be at risk of losing patients, and losing financing with them.

This is the strength of fee-for-service payment; unfortunately it has equally well-known weaknesses. Capitation payment also encourages providers to attend to the concerns of patients and their families.

The principle should not, however, be applied without allowing for regional allocation of funds. The resources assembled by the unified fund should, in the long run, be allocated among different regions in Greece in proportion to the size and needs of their populations, by, for example, adjusting for the age structure or mortality rates. But there must be some authority over how these funds are used at the regional level. One intention of the reform is to improve the quality of services available in the regions so as to change public perceptions that reliable, high quality care is only available in the main centres, particularly Athens. Thus residents of the regions, if they continue to travel into Athens or other university centres, will not necessarily be able to draw after them a proportionate share of the regional allocation of funds.

Secondly, **payment should be related to performance**. Performance includes but goes well beyond productivity. In the health care system, services and procedures are of no value in themselves. They are of value only in so far as they respond effectively to a patient's problems and needs. It is important that providers be efficient and energetic, highly productive, and the payment system should encourage this. But it is a fundamental truth, unfortunately not always reflected in clinical practice, that interventions may be worthless and sometimes potentially harmful, regardless of their technical quality or the efficiency with which they are produced. "Doing the right thing" is at least as important as "doing things right", and sometimes the "right thing", the best quality care, is to do nothing.

Ultimately "performance" means the achievement of improved health outcomes, not simply the generation of large numbers of procedures and services. Patients may easily come to interpret a high level of intervention, such as imaging, testing, or drugs, as representing high quality, effective care, particularly if these interventions involve highly sophisticated equipment or advanced techniques. All too often clinicians make the same error, particularly if they are also rewarded, directly or indirectly, for offering such care; but regardless of their technical or scientific sophistication, interventions without demonstrable health benefit should be avoided. They should not be provided, and certainly should not be paid for by the unified fund, the patient, or anyone else.

It is our understanding that the inappropriate provision of advanced, high cost interventions is a serious and growing problem in the Greek health care system. The present financing system - fragmented, open-ended, and with minimal accountability for effectiveness or outcomes - is a significant contributor to this problem. The unified fund will have to develop indicators of provider performance which are outcome-based. There is extensive concern in other countries with the problem of measurement of health outcomes. While the underlying "science" is still only partially developed,

there is increasing experience of managing health care systems so as to focus provider behaviour on improving outcomes rather than simply increasing activity levels. Such management requires a very significant improvement in the range and quality of statistical and other information available to the unified fund and regional authorities, as described further below.

Thirdly, **health expenditures must be globally constrained or "cash limited"**. Left unregulated, expenditures on health care will expand without limit*. No mechanism has ever been discovered by which health care systems can be made self-stabilizing. Accordingly nearly all industrialized countries with modern health care systems apply some form of global constraint on health care spending, and nearly all have achieved some degree of success in cost containment. The main exception is the United States where periodic claims are made that some or other version of "market principles" and "competition" are about to make that system self-stabilizing without the need for direct public intervention. Expenditures in the United States are nevertheless expanding without apparent limit. The consequences are increasing strain on public and private budgets, deterioration of both efficiency and equity, and high levels of public dissatisfaction.

As mentioned earlier, expenditures for health care in Greece are in fact much higher than those reported to the OECD and are expanding through both public and private channels, overtly and covertly. The consequences are parallel to those so extensively documented in the United States, albeit on a very much smaller scale -budgetary strain, deteriorating efficiency and equity, and public dissatisfaction.

The application of these principles implies a decrease in the stability of funding for all provider organizations. If money follows the patient, and depends upon performance, then institutional shares in the globally constrained health care budget may rise or fall over time. Management must be given the authority to respond to, or anticipate, such changes. Responses might include expanding or closing particular facilities, developing new services, and changing staff.

THE ROLE OF REGIONS

As already mentioned, one of the major criticisms we have encountered concerns the extremely centralised nature of decision-making in the health system. Minor decisions about, for example, the purchase of equipment or the appointment of staff, frequently have to go from the local hospital, via the prefecture, to the Ministry. This can cause inordinate delays and is extremely frustrating for managers and professionals at the local level. Furthermore it is clear that those with personal access to the centre can

*. This proposition was formulated by Aaron Wildavsky in 1977, as the «Law of Medical Money».

bypass this system. There is a need to adopt radical measures if this extreme centralisation is to be overcome.

The principle that money normally follows the patients requires that regional allocations of funds be made on the basis of the populations served, rather than on the locations of specific providers, an approach increasingly used in many countries, such as Finland, Italy, New Zealand, Norway, Sweden and the United Kingdom. This also implies a greater degree of equity among regions, since the funding available to pay for the care of a particular person, wherever that care might be received, will not itself be dependent upon where that person lives. When funds are, as now, provided directly to institutions or providers, the concentration of providers in a few urban centres implies that the residents of those centres receive a disproportionate share of the benefits. We would not recommend therefore that the unified fund should contract with or otherwise allocate funds directly to every reimbursed provider in the country, with no explicit recognition of their location.

The principle of regionalization of funding on a geographical basis does not, however, necessarily indicate the need for regional agencies of some kind. The unified fund could allocate funds directly, taking account of each regions' population and its needs. But, in the longer term, we recommend that the unified fund should partition its pool of funds among a certain number of regional agencies on the basis of the number and characteristics of either the populations or the providers within their boundaries. These agencies could then decide which services to purchase from which providers. The regional agencies would be accountable to the centre for health planning, allocating resources and evaluating the performance of the health system in their respective regions.

At present hospitals are largely financed by budgets. But they also receive from the insurance organisations payments per day of care which are substantially below cost. We do not favour this last form of payment as it gives the hospitals an incentive to encourages long inpatient stays. An alternative would be to pay on the basis of groups of diagnoses. Systems of payment by groups of diagnosis are used in the United States for Medicare, in Sweden and Australia and partly for allocating budgets in Portugal. Such systems are complex to operate and have some adverse effects. We do not favour such a system for Greece in the immediate future because of the need to try and build up the quality and acceptability of the hospitals outside the main centres. Thus we recommend that hospitals should receive budgets. But there should be clear contracts with the Region with specific targets for the use of each budget such as reductions in waiting time or provision of defined services.

The principle of an authoritative regional health tier in the system is already provided for in the law and is strongly supported by most of those to whom we have spoken. Assuming this recommendation is accepted, there still remain a number of questions about the accountability and authority of the regional tier and these are examined be-

low. In the long run, we assume that certain services, such as primary care, are allocated a specific and protected share of the budget.

DEFINITION OF GEOGRAPHICAL REGIONS

How should regions be defined? For governmental purposes, the country is divided into 51 local government areas (prefectures) and 13 regional development areas. With regard to health care, the 51 prefectures have or have had a number of functions including:

- distributing the health budgets to the hospitals and other NHS providers in the prefecture as determined by the Health Ministry.
- certain aspects of environmental and public health.

From 1993 to 1994, administration of the health centres was under the prefectures. The current arrangement again places health centres under the 'administrative control' of a local hospital. The current situation in the prefectures is that the Prefects are appointed by the Government. In October 1994, elections of the local government prefecture representatives will be held for the first time. This will obviously change the nature of the prefectures' relationship to their populations. The potential effects on the health care system are as yet unknown.

Presidential decree 51/6-3-1986 established the 13 Regions for planning, programming and co-ordinating regional development for the whole country. At that time, the Ministry of Internal Affairs appointed Peripheral (Regional) Secretaries General. Law 1622/14-6 -86 defines the composition of the Regional Council as:

- the Secretary General as Chairman
- the Prefects of the Prefectures of the Region
- the Chairmen of the Prefecture boards who have been elected directly by the population; (under the new Law they may be the same as the Prefect)
- a representative from the municipalities or communities of every Prefecture. In the Attica Region, this representation is higher than elsewhere.

The responsibilities of the Regional Planning Councils are:

- recommendations to the central administration (Minister of Internal Affairs, of the Cabinet etc.)
- preparing and submitting regional development plans from the Region to the Centre.
- distribution of resources referring to the public investment programmes in the prefectures.

The responsibilities of the Regional Secretary General are:

- to represent the Government at the Regional level,
- to supervise all the Regional public services,

- to be responsible for cross-prefecture administration and the co-ordination of prefectures and the Region with the Ministries.

As far as the health care system is concerned, Law 1396 in 1983 allowed for the creation of 9 Regional Health Councils, changed to 13 by Law 206 1 in 1992, and back to 9 in the 1994 Law 2194. This recent regional classification is shown below.

Population of the nine regions

Macedonia (including Salonica)	2.523.256
Thrace	360.436
Epirus	339.628
Thessalia	634.846
Central Greece (including Athens)	4.394.669
Peloponnesus	1.026.023
Krete	540.054
Ionian	193.634
Aegean Islands	456.612

The functions and composition of the Regional Health Councils are described in the 1983 Law. But these regions and Regional Health Councils have never been established.

A number of proposals already exist about how health regions might be geographically defined. Quite appropriately, these proposals are not based on arbitrary notions of population size. Experience elsewhere demonstrates that there is no 'magic number' which provides the perfect base for health planning and resource distribution. More important are criteria such as:-

- transport patterns and patient flows (geographical access),
- the existence of a general hospital with the usual range of secondary services (and possibly some tertiary services which might serve more than one region),
- a critical mass of family doctors and associated services,
- relationship to local government boundaries,
- relationship to other regional boundaries. As mentioned above, the 13 planning Regions already established could provide this link.

These criteria indicate that the prefectures are too small to act as health regions. The map which follows shows the regional population distribution and the health resources (beds, staff) in 13 regions. If this regional pattern were to be selected, there would be a need to define clearly the relationship between the planning Region/ Secretary General and the regional health authority.

CREATION OF THE REGIONAL AGENCIES

The regional agencies for health would be controlled by Regional Health Councils, to adopt the terminology of the existing law. The RHCs should be public bodies, corporately accountable to the unified fund. We see advantage in separating the functions of providing services from those of choosing which services should be bought. The RHCs should make their decisions from the point of view of an informed consumer -buying on the basis of consumer acceptability, quality and price. Indeed in New Zealand, the health services have for this reason, been made accountable to a different Ministry from that supervising the bodies choosing what to buy.

Some appointments to the RHCs should be made by the Health Minister on the basis of nominations from relevant bodies in the region (such as local government). Some might be appointed by the universities (provided they are not doctors) and chambers of commerce. Others would be appointed by the unified fund. The appointments should be for five years but initially some should be appointed for three years and some for four years to secure some continuity. The appointed members should not be regarded as representatives or delegates of their nominating groups. Rather they should be selected for their competence, knowledge and experience of public affairs and health care in particular. Health care professionals should be in a minority on any one RHC and the Chairman should not be a practising health professional.

The Accountability of the Hospitals

To whom should the hospital boards be executively accountable? One option is for all the provider units to operate as relatively independent 'self-governing' bodies but still within the NHS. This model would require clear legal definition. But experience in the UK suggests that self-governing NHS providers do have to be made accountable in some way within the system, if they are not to pursue their own survival and success at the expense of the public good. Given that the purchaser/provider split would be operative at regional level, the hospitals should be accountable to the RHCs which in turn would be accountable to the unified fund. Budgets would be given to institutions on the basis of approved plans(See Figure 2).

The Work of the RHCs

A small but competent staff group will be required to do the work of the RHC. It would be inappropriate to give a detailed description of the regional staff structure. However the following skills are likely to be required:

- public health/epidemiology
- health planning

- finance
- capital development
- management/administration.

In so far as matters such as continuing medical education, nurse education, primary care development, manpower planning etc. are concerned, it is recommended that advisory groups should be created, involving relevant people from the NHS in the region, to ensure that regional variations and needs are fully taken into account.

A REGIONAL OMBUDSMAN

Before we leave the subject of the Region, we recommend that there should be stationed at the Region an ombudsman who would be legally qualified and appointed for a five year term by the Attorney-General to whom the incumbent would be accountable. The Ombudsman's function would be to deal with complaints on administrative matters from the public. He/she would be entirely independent of the Ministry of Health and the Regional Health Council, but the latter would have the obligation of providing an office and supporting staff. Each Ombudsman would publish an annual report which would include the action taken on the most important complaints. If unethical conduct or professional misjudgment of any doctor is alleged, the matter would be referred by the Ombudsman to the Medical Council for action (see Chapters 10 and 11). The Ombudsman would include in the annual report the decisions of the Council on matters referred to it.

ORGANIZATION AT THE CENTRE

The current organization of the Ministry of Health, Welfare and Social Security is shown on the following page. As can be seen, departments with an identifiable health care element in their work are distributed across the Health and Welfare Directorates and are also to be found to some extent in the Social Security Directorate.

Our proposals on pooling the health funds from the various social insurance funds and creating the unified fund, obviously imply a major reorganization of the Ministry. After considering a number of options, and bearing in mind the pressing need for decentralization, our proposals for reorganization at the centre are described below.

Integrating Health and Welfare

Because health and social welfare are so closely linked in people's lives, there would be great advantage in creating a single policy focus at the centre for particular 'care groups'. Elderly people are perhaps the best example of the inter-dependency of social and health needs. Much of the care for the elderly should have little to do with medicine and doctors; but many elderly people do have a need for appropriate medi-

cal care, particularly towards the end of their lives. Mental health is another example where integrated health and social policies bring particular benefits.

At present, the separate Health and Welfare branches of the Ministry are both headed by an Under-Secretary/Deputy Minister. We assume that there is joint planning and policy development between the two Directorates, but experience from other countries suggests that this is not always easy to achieve. Another consequence of this separation is that any national policy questions which involve both health and welfare cannot be authoritatively resolved below the level of the Minister.

Two options flow from this analysis. One alternative would be to combine the Health and Welfare portfolios under a single Deputy Minister. The structure within this single department would no doubt need to retain health and welfare "specialisms" but links between the two would be easier and could be built into the organization for policy-making. If the other option of two separate Directorates is retained, there should be a major reorganization within the Directorate of Health. The emphasis at senior levels should be on integrated policy development for particular 'care groups' like the elderly and the mentally ill.

The Unified Fund

Irrespective of which of these two models is preferred, there is then the question of how the unified fund should be linked to the Minister and the Ministry. We see two alternative possibilities which are described as Models A & B below and shown in Figures 3A and 3B:

Under model A, the unified fund would be incorporated into the executive structure of the Ministry and would not therefore have 'agency' status and its own board. The advantages of this model derive from the integration of decisions about funding and the operation of the health system. Joint policy making could be achieved within the organization under the Deputy Minister.

Under model B, the unified fund would be a separate 'agency' reporting directly to the Minister. The advantages of this model derive from the separation of overall decisions about funding from the decisions about how the system (regions, providers) operates in practice. The unified fund would have its own board which could consider overall funding strategies and make appropriate recommendations directly to the Minister.

The pros and cons of these alternative models should be considered in detail. On balance, the majority of us would favour model B. It is worth noting however that either model would reduce the number of levels at the top of the structure which are numerous at present.

Staff Structure in the Ministry

There has not been time to produce detailed organizational proposals for the inter-

nal arrangements in the Ministry although some general principles have been indicated. But there are some important functions which do not currently seem to have a focus in the Ministry organization.

A Chief Medical Officer (See Chapter 4).

A Chief Scientist to develop and co-ordinate clinical, public health and health services research.

A Human Resources Director to develop national employment policies and management development initiatives.

The Central Health Council

The Central Health Council (CHC) was created in 1982 by Law 1278/82. The CHC is an advisory body to the Minister in the fields of the structure and function of the NHS. The composition is:

- 3 representatives from the Pan-hellenic Medical Association (PMA)
- One representative from each of the associations of dentists; pharmacists; nurses; local government; federations of workers; farmers; traders; chemists, biologists and physicists; public servants; medical school; dental school; pharmacy school; military health service
- 2 senior officers from the Ministry of Health
- IKA Governor
- OGA Governor
- National Drug Organisation Chairman
- 3 members appointed by the Minister from the scientific and social fields.

The Chairman of the CHC is elected by the medical members of the Council only. Several councils and committees work under the CHC with a variety of briefs.

We see an important continuing role for the CHC but have a number of proposals to make. In our view the CHC should be encouraged to identify topics for inquiry and initiate studies as well as responding to requests for advice from the Minister. The criteria for the topics selected, and the reports, should be published as widely as possible. Secondly, it is our view that the composition of the CHC and its sub-committees should not be based on representation of special interest groups and trade unions. The members should be individually selected for their personal knowledge and expertise and the Chairman should be a 'lay' person; that is, someone who is not a medical or health professional or directly involved in the NHS. There should be at least two members of the Council who can speak for the patients/users/consumers of the NHS. We recognize the difficulty here in that patient or consumer groups are not prominent in the Greek context. Nevertheless, it will be increasingly important that the users of services and their families have a voice at the centre as well as at local levels. The current composition of the CHC does not seem to us to make it an appropriate body for this purpose.

Thirdly, we do not think the present council is a suitable body to finance research. We discuss the role of research in Chapter 10.

PRIMARY HEALTH CARE

Greece invented the concept of the family doctor - now is the time to reinvent it in Greece. In our view, the model for primary health care in Greece should be for every resident of Greece (except members of an insurance organisation which has decided not to join the new scheme) to be entitled and encouraged to register with a family doctor whom they have chosen. This family doctor should be well trained and maintain high clinical standards. These doctors will be specialists in family medicine.

THE EVIDENCE

This recommendation was strongly endorsed by those who gave evidence to us. It was mentioned early in the statements made by the three ex-Ministers and support for it was pressed on us by three of the representatives of political parties. Two of these six spokesmen added that these family doctors should be paid on a capitation basis and one was torn between payment by salary or fee-for-service.

THE RATIONALE FOR GENERAL PRACTICE

Throughout the world, a transfer of health care from the secondary to the primary health care level is being planned. This is in line with the policies of WHO. Primary health care is non-hospital or first contact (excluding accident & emergency department) health care. It is provided mainly by family doctors and in many countries, such as Sweden and the United Kingdom, also by community nurses and others, who work as part of primary care teams. Family doctors are generalists who deal with patients and their families and they act in a holistic way, integrating physical, social and psychological approaches to their patients' problems. Family doctors see patients with any

presenting problem. They can deal with about 90% of all consultations within the health care system in their primary care teams, without referral to specialists or investigations or admission to hospital. The patients are not filtered before seeing their family doctors and so the family doctor sees the broad spectrum of illness which is prevalent in the community.

Greece needs to follow this trend towards primary care. One reason is to keep health care costs under control, as family doctors use fewer resources in treating patients than specialists. They are able to do this because they get to know the patient well, the patient's family and the work situation. They have in front of them the complete history of the patient's previous illnesses. The family doctor can act as gatekeeper in deciding if it is necessary to refer the patient to more expensive and specialised services. One of the tasks of the RHCs will be to contract effective and efficient primary care as well as other health services. This will require a high quality of management.

A second reason is because a registered list of each family doctors' patients can be one of the most effective ways of implementing good health promotion and preventive medicine policies. An organised system of general practice should make it possible for Greece to improve on the present low take-up of immunisation and increase cervical cytology screening. Family doctors should have the responsibility of monitoring the health of young children and patients over the age of 75 on their lists. They should be encouraged, by financial incentives, to run health promotion clinics such as for hypertension, diabetes and anti-smoking. Public health medicine should be planned on a regional basis and integrated with general practice, utilising wherever possible the computerised data base of patients registered with family doctors in each region.

In the long run, we envisage health centres or other group practice premises which are well equipped with facilities for minor operations, dressings, ECGs, cervical cytology and taking blood specimens (which can be sent to the local hospital for analysis by means of a collection service or analyzed in the centre). X-ray may be taken in the health centres or at the local hospital. family doctors will be able to refer patients for virtually all imaging procedures (including ultrasound and barium contrast radiology) but requests for CT and MRI scans would need to be filtered by specialists, who will decide on their appropriateness. We would like to see some specialists coming regularly from the hospital to hold sessions in health centres at the request of the family doctors (for example, paediatrics, rheumatology/orthopaedics and psychiatry).

We understand that at present general practice in Greece is a low status, low income branch of medicine. As mentioned, above patients go direct to specialists. There is an unfortunate tendency for some specialists to regard primary care doctors as those who only use a particular set of low-technology procedures. The able and ambitious doctor in Greece does not want to become a generalist, ideally becoming a professor in a medical school, but not in general practice or, for that matter, public health. But this

form of medical status hierarchy is dated, and is changing rapidly in the modern world. It results in a pattern of capabilities and service use which cannot effectively and efficiently meet the needs of populations. A principal objective of the reform must be to raise the competence, status, and authority of the family doctor to become the cornerstone of the health care system.

A MODEL

In the following paragraphs we set out in some detail one possible model of how a scheme of family doctors might operate in Greece. The model is based on the system in the United Kingdom. We are aware that such a system also works well in other countries with a similar payment system, such as the Netherlands or, more recently, Ireland and Sweden. In all cases, it is the practice of family doctors to refer patients to a specialist when they think this is appropriate. A visit might be made to these countries before deciding on the precise administrative system suitable for Greece.

The registration of patients

All residents in Greece will be entitled to register with a NHS family doctor whom they have chosen, unless they are members of an insurance organisation which has decided not to join the new scheme. Patients will be allocated an NHS number which will be the same as the national ID number. This number should also be used as the patient's hospital number. Children should be allocated numbers at birth. Children in the NHS at the start of the scheme will need NHS numbers to be allocated to them.

The list of patients registered with family doctors in their region should be held on a regional computerised data base. This data base will also be collected together on a central national computer. It may be helpful to adapt one of the existing data bases for registering patients.

Training

It is now recognised that, because of the complexity of their work, family doctors need an extensive training - generally regarded as being of at least three years duration after the one year of post-qualification practice in hospital (the internship year). This training is usually two years in hospital specialties which are relevant to general practice (internal medicine, paediatrics, obstetrics, gynaecology, psychiatry, geriatrics, dermatology etc) and one year in a training practice.

We understand that in Greece at present there are only about 560 doctors with any training in general practice and some have been trained on very short courses. The widespread service which we envisage will require some 5,000 - 6,000 family doctors and these will have to be trained. In the long run, specialists in general practice (or fam-

ily medicine) will be required to have post-graduate vocational training schemes, lasting 3 years (two years in hospital specialities and one year in training practices) as this is the recommendation of the European Union. Only doctors who have received this training will be able to register patients on their NHS lists. A professional body of family doctors, with representation from the NHS authorities and medical schools, will need to be established and given the responsibility for setting the examination for family doctors to gain approval for training and for certifying family doctors once they have been trained. Trainees could be paid a salary equal to about 70% of the full ultimate Family doctor income while they are in training. Doctors approved to do the training, the trainers, will also need to be paid for this work. There will be one trainee allowed for each practice which is certified as suitable to be a training practice. Trainers will be carefully selected by, among other criteria, inspecting their practices and patient records.

Training for general practice should be introduced into both undergraduate and postgraduate medical training. The quality of this and the support given to it by the Medical School are vital. The Ministry of Education and the Medical Council, which we propose in Chapter 10, will be responsible for introducing these changes within undergraduate education. There should be a Department of Family Medicine, with a Professor, in every medical school and at least six weeks in the undergraduate curriculum devoted to family doctor training, preferably in a rural area where newly qualified doctors are required to work. The training should eventually be carried out by trained family doctors. Any new medical school in Greece should emphasise family doctor training in order to increase the number of family doctors and reduce the number of specialists.

The family doctor training programme will include the subject of medical record keeping. These records of patients will be transferred to the new doctor, if a patient decides to change family doctor. Doctors who repeatedly fail standards will be helped to improve their clinical practice by means of retraining courses: those with persistently low standards will, eventually, not be allowed a place within the NHS family doctor service.

Place of practice

Many of the family doctors will practice from the rural health centres. The patients will be registered with the family doctor of their choice in the health centre: they will be entitled to choose any of the doctors in the group which is practising from the health centre. We recommend that the health centres should be separated from the hospitals and the family doctors working in them must receive their capitation payments directly from the Region. A major part of the responsibility of the family doctor is to manage, through the referral process, the use of specialist and hospital care, and they cannot do this effectively if they are financially or administratively dependent upon the hospitals.

Family doctors may wish, in the short run, to refer their patients to a specialist practising in a health centre rather than to a specialist in hospital. There are rural doctors,

without any specialty, practising in the approximately 1400 provincial surgeries. They will need to be upgraded to family doctors and their surgeries will be fully supported as described below. Special measures should to be developed to encourage such doctors to remain in their rural positions, by, for example, car/motorcycle allowances and locums to enable them to have long periods of leave.

The organizational arrangements for family doctors can be quite flexible. In urban areas, they may choose to rent space in IKA polyclinics and or practice from their own individual premises. As more group practices are formed, they will practice from group practice premises rather than from individual surgeries for one single-handed doctor. These could be in rented premises or in health centres. Possibly, a family doctor or group of family doctors, all on capitation, might continue to practice within an existing clinic or outpatient department, paying for the use of the facilities on a contractual basis or even taking over the clinic and managing it themselves. In the rural areas, groups of family doctors may choose to lease health centre facilities from their present owners.

Dental services will be provided by dentists working in clinics or health centres, concentrating their work, as we have suggested above, on dentistry for children. The dentists will continue to be paid by salary.

Legal status

The NHS family doctors might be employees of the NHS as civil functionaries rather than civil servants. But the experience of salaried family doctors is unsatisfactory in nearly every country of the world, where it operates. The temptation in running a health centre is for the patient to be sent to whichever doctor is available. So doctors do not have their own patients and see the results of their treatment. This is professionally unsatisfying and depersonalising for the patient. Where the doctor also has a private practice, the temptation, elsewhere as in Greece, is to see this as the rewarding work both professionally and financially. So the doctor tends to arrive late at the health centre and leave early. The alternative, which we favour, is for the family doctor to be an independent contractor with his or her own patients and to be paid as a self-employed professional.

This does not necessarily mean that the family doctor will practice alone. Family doctors should be encouraged (by group practice allowances) to practice in groups, with colleagues whom they find congenial, in the same premises sharing staff and reception areas. To stop such a service becoming bureaucratic and impersonal, we recommend that the maximum number of family doctors in a group should be 10 but we expect that most family doctors will want to practice in groups of three or four. Within large health centres or clinics, such as IKA has built, there could be a number of separate groups of family doctors, each with their own reception area and, where possible, separate entrances.

Maintaining standards

To maintain standards, there needs to be a maximum for the number of persons a family doctor is allowed to register. We suggest that this should be 3000 patients per family doctor. The national average number of patients per family doctor - the average list size - will be 2,000 patients and attempts can be made to keep the range between 1800 and 2200. It will be necessary to pay additional payments to attract family doctors to practise in the less popular areas in order to reduce the average list size to the normal range: conversely it will be necessary to limit the number of NHS family doctors who are allowed to practise in the more popular areas. A minimum list size of 1000 patients will be needed to be entitled to the normal family doctor payments: it will be necessary to allow time for family doctors to build up their lists to at least this number. Special arrangements (such as those used in other countries) would be made for family doctors working in remote areas such as islands and mountainous regions.

NHS family doctors will be expected to be available to provide services to their registered patients for 24 hours per day for every day of the year. They should be expected to work 40 hours per week in patient care (consultations, maintaining records and writing referral letters) excluding time spent on-call. Doctors will be able to arrange for their patients to be seen when they are not on duty by other colleagues on a rota basis.

Medical standards can be monitored by:-

- reviewing activity such as prescribing and referrals from computerised information systems,
- comparing a random selection of the patients' medical records, which family doctors will be required to keep, with clinical protocols covering the 50 commonest conditions (these already exist for family doctors in other countries),
- monitoring availability to patients, the functioning of appointment systems and out-of-hours availability.

Administrative arrangements

The family doctor service will be administered by the RHCs (though it may be necessary to subdivide some regions). There would need to be a separate, clearly identified, budget for primary care, completely independent of the hospital sector at both the regional and national levels.

Patients will be free to choose any doctor within their region but doctors must sign that they are willing to visit patients in their home, when this is medically indicated, and the patient requests a home visit. Thus doctors will refuse to register patients who live too far away. Patients should eventually be entitled to change their family doctor whenever they wish but, in the transitional stage it may be necessary to limit the changes to not more frequently than every three months. Just as patients are free to choose their family doctor, it is recommended that family doctors will be free not to accept patients

on to their lists of registered patients. Patients who are unable to find a family doctor will be allocated to one by the RHC and the family doctor will be expected to keep that patient for at least three months.

When the family doctor thinks it necessary to obtain the opinion of a specialist, who alone has access to the more advanced diagnostic equipment, or the family doctor thinks that admission to hospital may be required, he or she writes a letter to a named specialist. The patient may be consulted about the convenience of fitting in a visit to the place where that specialist works. The letter will set out the brief history of the patient, the family doctor's provisional diagnosis and the action requested from the specialist. The specialist will then take over the management of the case, until he or she refers it back to the family doctor with, again, a letter setting out the diagnosis, the treatment, if any, provided and recommendations about any further treatment.

Prescriptions for medicines etc. will be written on NHS prescription pads. Only NHS prescription costs will be paid from the NHS budget. Very expensive drugs will be carefully controlled by monitoring the total cost of expensive individual drugs. It is proposed in Chapter 9 that there should be a positive list of drugs and appliances which family doctors can prescribe which will be paid for by the NHS. Investigations and tests can be ordered by NHS family doctors on special NHS request forms from NHS laboratories and imaging facilities. In the interim, contracts may be placed with selected private diagnostic centres on a basis described in Chapter 8.

Before leaving the subject of drugs, we would mention that one modern development which has not yet reached Greece is the use of community pharmacists working as part of group practices. One of their tasks is to give advice on prescribing. We would suggest that several pharmacists should visit pharmacies in other countries which have developed this role, so that they can return and establish prototype organisations in Greece.

PAYING THE FAMILY DOCTOR

A number of national health care systems still pay for primary care through fee-for-service payments to family doctors or "primary care specialists". Some, such as Germany or Canada, impose a global limit on total fee-for-service payments to all doctors by augmenting or discounting the level of the fees paid, so as to keep total payments within a pre-determined budget. Such control also requires that doctors within the system are prevented from charging their patients above the fee schedule or maintaining external private practices. In other countries, such as France (for 30 per cent of doctors) or the United States, the payment system is open-ended. By careful structuring of both the fee schedule and the training process, it is possible (as in Canada) to maintain a balance between family doctors and specialists (roughly 50/50). Self-referral is discouraged, with reasonable success, by paying specialists much less for non-referred services.

A carefully controlled and managed fee-for-service systems can thus work relatively successfully in some settings. It is therefore **one option** for Greece. But the administrative complexity of running such a system should not be overlooked. It should, moreover, be pointed out that uncontrolled fee-for-service leads, as in the United States, to the most expensive and least effective of all systems. Fee-for-service payment strongly encourages doctors to try to satisfy their patients, and to work energetically and efficiently. They are highly productive, as in Canada, Germany, and the United States, if productivity is measured only by activity. But even at best, fee-for-service payment has the effect of emphasizing episodic and procedure-intensive care.

In such a system, the incentives for the family doctor as gatekeeper in the referral system are somewhat ambiguous. On the one hand, patients must go to the family doctor first and this prevents a number of unnecessary consultations. But on the other hand, if family doctors find their fees too low (which is usually the case) they can react by shortening visit lengths and recalling patients more frequently. (Such behaviour has been documented in Canada.) Such "revolving-door medicine" is associated with high rates of referral for diagnostic tests, specialist consultations, and drug prescribing. Since the Greek health care system displays precisely these problems, among others, the extension of fee-for-service is unlikely to change this pattern of behaviour.

There is a growing consensus that true primary care, because it cannot be well represented as a simple bundle of procedures and services, should be paid for largely on a capitation basis as has long been the case in the United Kingdom or the Netherlands. In recent years the capitation system of paying family doctors has been increasingly adopted in a number of countries. Italy changed to paying all family doctors on a capitation basis in 1980. Ireland followed for its General Medical Services scheme in 1989 and Sweden in 1984. The new family doctors in both Finland and Norway are partly paid on a capitation basis. This view is even gaining strength in the United States, where the "integrated delivery systems" in California and the southwest have recognized that primary care, paid on a capitation basis, is the key to the successful management of all care services for a defined population. They are now projecting radical and rapid changes in the prevailing pattern of payment, and the virtual disappearance of conventional open-ended fee-for-service practice. **A capitation-based family doctor service providing primary care and covering the whole population is in our judgement the best direction for the reform of the Greek health care system.**

But payments need not consist only of those calculated on a capitation basis. We would suggest, for example, that the family doctors' income might be made up of payments which depend on:

- the number and type of patients registered (80%). Payments for patients aged 65 or more should be greater than the payments for those aged under 65.

- items of service for approved activities such as immunisations, home visits at night (10 p.m. - 8 a.m.) and some other approved payments related to activity (20%).

The income of family doctors, averaged over their careers, should, in our view, be designed by the government to be not less, and perhaps more, than the total medical practice income (from all sources) of other specialists - in particular those working in the hospital sector. This will imply a higher payment (by at least 20%) in the first years of practice when compared with hospital doctors who have been practising for a similar length of time.

The cost of approved medical premises and approved ancillary staff (secretaries, receptionists, nurses etc.) should be fully reimbursed up to an agreed limit per family doctor. Close family members of the family doctors in a practice (parents, children, spouses) will not be eligible for reimbursements. The costs of expenses incurred by family doctors in providing their services (for use of their telephones and cars, for example) should be reimbursed.

As a condition of this payment contract, the family doctor will not be permitted to engage in private practice involving patients covered by the unified fund. Those who wish to charge private fees or to accept other payments from patients, will not be allowed to practise within the unified fund family doctor system any more. NHS family doctors, will, however, be allowed to offer services on a private basis to others, such as members of social insurance funds not included in the unified fund (if any) or tourists, so long as this does not interfere with the family doctor's central responsibility for his NHS patients. A capitation-paid family doctor should, moreover, be permitted to claim some payment from the unified fund for services provided to patients registered with other family doctors who require urgent care while they are temporarily absent from home or are otherwise legitimately unable to contact their own doctors. The unified fund may wish to consider deducting a corresponding amount from the capitation amounts paid to the family doctor with whom such patients are registered.

The referral process plays a central role in linking financial incentives with improved performance, and its development is a critical feature of this reform. The family doctor will serve as both coordinator of and gatekeeper for other services, such as specialist care in or out of hospital, prescription drugs, and diagnostic services. Referral to hospital in-patient or out-patient services or to specialists working in health centres or polyclinics will only be via the NHS family doctor (except for accidents and emergencies). The details may vary, but, in general, such services will be paid for in whole or in large part from the unified fund only if they have been prescribed by or referred from an approved family doctor. Otherwise, the patient must pay the full cost as a "by-pass fee". Patients will be in a position to influence the place to which they are referred: a family doctor who ignored a patient's strong preference would be risking the patient changing

to another doctor. But patients going on their own initiative to Athens for treatment, will no longer be subsidized from public funds.

The referring family doctor will not be permitted to have a financial interest, direct or indirect, in any of the facilities to which he refers. In the long run, there may be no contracts from the NHS with the private sector. Meanwhile, any referrals to facilities within the private sector which may be approved by the NHS will only be paid by the NHS for NHS registered patients. Retrospective authorization by family doctors of referrals or investigations which are made directly (without prior family doctor authorization) will not be allowed and should be part of the quality control of the family doctor services.

BUDGETS FOR REFERRALS AND DRUGS

Under this system of payment, there will be a temptation for some family doctors to make an excessive number of referrals to specialists, particularly of patients which the family doctor regards as "difficult" or time-consuming. Thus the majority of us favour a refinement of the system as the long term aim. Each family doctor would be given a budget to pay for referrals. The budget can be held by the region and items charged to his or her account. The budgets can be based on the size and characteristics of their registered populations and used to pay for each service by a specialist for a listed patient (either outpatient or inpatient) and each diagnostic test requested by the family doctor or the specialist, to whom the patient has been referred. Any unspent surplus in these budgets, at the end of the year, could, on application to the region, be used for approved purposes such as for continuing education, or enhancements of the practice. A proportion of any over-spending might be deducted from the family doctors' remuneration, unless the family doctor could show that it was justified by exceptional circumstances.

A second and separate budget could be assigned to each practitioner for the prescribing of drugs. Again it would be held by the region on the practitioner's behalf. This budget is kept separate, partly because this is an area where waste has tended to be greatest and partly because the allocation of budgets will need to be more subtly adjusted according to the patients registered with particular practitioners.

The assignment of such budgets is one way of encouraging conservative, cost-conscious prescribing and referral behaviour and of countering the present pressures, financial and otherwise, for the generation of excessive, unnecessary care and charges. We recognise that there are risks of fraud and low standards of care, but the availability of choice of family doctors should limit the latter. And systematic checks will need to be introduced to prevent the former. Our reform proposals also rely heavily on the development of much more highly trained and professional family doctors, who will be more aware of the limits of intervention and independent of inappropriate financial incen-

tives. At the same time, the region will have to monitor the prescribing/referring behaviour of practitioners, as is now done in many other national systems, both to identify questionable behaviour patterns and to serve as an information base for the continuing education and professional advancement of practitioners.

For this system to work without undue risks falling on individual doctors because they happen to have one or more patient requiring very expensive and prolonged care, there will have to be two safeguards. First the grouping of family doctors will be essential to share risks. This can take a variety of forms. Either doctors decide to work physically together, sharing the costs of premises and staff etc, as well as their budgets. Or else they voluntarily decide to join into 'consortia' with shared budgets without physically operating from the same premises. They would pay the staff of the consortia to give each doctor monthly data on his/her use of the common budget, so that they could monitor the use of it. Secondly, there could be limits to the liabilities of the family doctors, either by placing a money limit on the costs which the doctor has to cover from the budget for an episode of treatment for any patient or certain defined conditions are paid for centrally by the unified fund, such as renal dialysis, certain cancers and heart operations.

The assignment of budgets to family doctors gives them a direct financial interest in conservative practice, and thus raises the possibility of both under-treatment and public mistrust of family doctor motives. It would clearly be preferable if one could rely on professionalism alone to guide practice decisions. But at present we understand that the provision of financial incentives to over-prescribe and over-refer is so extensive and entrenched in Greece, that on balance we believe that financial counter-incentives are necessary. We recognise that we are recommending a major change to introduce this system in Greece, because it requires well trained family doctors and a major change of culture.

CONCLUSION

We have suggested above three options for introducing a family doctor service in Greece. We do not favour a fee-for-service payment system for family doctors, though we would expect the profession to press for it. What would need to be emphasised is that the Government should only consider this option if the fees paid out were subject to an annual cash limit. This rider on the proposal may make it appear far less attractive. What we favour instead is a system where the majority of the payments to family doctors are largely on a capitation basis. The advantage from the point of view of the doctors is the fair coverage of expenses which is part of our recommendations. The majority of us favour building on to this a system of budgets for prescriptions and the payment of specialists, both for inpatient and outpatient care, as the best way of inculcating habits of cost conscious decision-making.

THE ORGANIZATION AND MANAGEMENT OF NHS HOSPITALS

A hospital cannot be expected to use its resources efficiently, unless it has the ability to shift them between alternative uses. While it may be useful to draw up a line budget at the beginning of the year, each hospital should be given the authority to spend more on one heading than originally planned and spend less on another. The limits to this local discretion should only be for compelling reasons and should be clearly defined. There is, for example, a major national shortage of nurses. A hospital which can attract more nurses should not be allowed to do so without limit, if this means that other hospitals will be even more seriously short-staffed. Major equipment should not be bought, if this will lead to under-utilisation of similar items elsewhere.

It follows from the foregoing that we envisage major delegation of both financial and managerial authority to the hospital. To ensure that this delegated authority is matched by clear accountability, substantial changes will be needed in the way hospitals are governed and managed.

There is however no one model which will serve all situations. What follows therefore are general principles of organisation and management which can be applied to produce different configurations to suit local needs and the type of hospital services involved.

CONDITIONS OF EMPLOYMENT

If the proposals in this report are to have any hope of implementation, there is a fundamental issue to be resolved: the security of employment enjoyed by all those classified as civil servants. We understand the constitutional and legal prescriptions in this regard, and the considerable political and social reasons which make change difficult. Not least among these is the potential knock-on effect of any change in other parts of

the public sector. But if there is to be any real accountability and authority in NHS hospitals and other health service organizations, the following processes must become part of the management system for all those employed within the management structures:

- Posts should be advertised and selection made on an open, competitive basis.
- There should be appraisal of the performance of each staff member in the managerial hierarchy. (Many appraisal systems exist and one could be chosen and adapted to suit local circumstances.)
- Positive and negative sanctions should be applied based on these appraisals.
- Promotion should be based on demonstrated competence and potential.
- Individuals should be removed from their posts if, after appropriate opportunities for training, they are not sufficiently competent.

No organisation can operate efficiently unless these basic principles are in place. Managers at all levels must have the authority to manage and be accountable for their performance. Promotion is often a matter of length of service or patronage. Managers, such as exist, can do nothing effective about the situation, because staff know that they have security of tenure, however inadequate their performance. On the other hand, staff who perform excellently cannot be sure of recognition, either financially or in their career paths.

We have not been able to explore the legal and constitutional implications of our proposed changes in any depth. We have been told that security of tenure for a civil servant is a constitutional right. It is worth noting, however, that in some systems (such as that of the United Kingdom), the staff working in the NHS have never been classified as civil servants, unlike their colleagues working in the health ministry. NHS staff in the UK have their own conditions of service as public servants, concerning pay, pensions, employment contracts and so on. We, therefore, recommend that the implications of changing the status of NHS staff be investigated urgently. There would seem to be two obvious lines of enquiry:

- to consider the wisdom of tenure for civil servants across the board. Most countries have moved or are moving away from such systems, even for civil servants, since the demonstrable outcomes are ineffective performance at least, and abuse of the system at worst.
- reclassify NHS staff (who must be the largest employment group in the country) as NHS/public servants of ' functionaries' with their own terms and conditions of service.

Meanwhile it might be possible to allow hospitals to employ specific staff on a contract basis, paid appropriately to compensate for the lack of traditional job security. Such contracts would specify the expectations of the job, the salary to be paid, the appraisal system to be applied and the notice required on both sides to terminate the contract.

QUALITY ASSURANCE

Before outlining a framework for hospital organisation, it is important to stress the reason for clear organisational arrangements within which individuals are held accountable for their performance, is to assure high quality services to patients and their families. In the hospitals, as in primary health care, the test for the whole organisation should be its ability to develop standards of care, monitor these standards and take appropriate action where standards are not met.

There has ben a major growth in systems of quality assurance and organisational audit in the health care field in recent years. So called total quality management (TQM) programmes have been introduced in many hospitals and a new specialism of quality coordinators/managers has developed. Most quality assurance programmes cover:-

- Clinical standards: morbidity, cross-infection rates, re-referral rates, length of stay etc.
- Patient systems: reception, waiting times, medical records, transport, information etc.
- Professional training and qualifications: proportion of trained staff, post qualification training, external accreditation,
- Managerial/personnel systems: recruitment and selection policies, appraisal mechanisms, trade union participation, equal opportunities, etc.

Linked to all these aspects of quality assurance is some system for ascertaining patient and family satisfaction with the services received. Most well-managed hospitals, whether public or private, now have mechanisms for advising patients and their families about what will happen to them in hospitals and for checking on their level of satisfaction with the service provided. Brochures, surveys, spot checks, post-discharge interviews and good complaints systems are just some of the techniques employed.

In the absence of a well developed network of professional colleges/associations in Greece, there are nonetheless developments in quality assurance. But the emphasis on quality will require promoting at national level and imbedding in policies and review processes in the Ministry, the NHS and the RHCs. An assessment of the many approaches to quality assurance taken in other health care systems could be an early task for the newly constituted Central Health Council discussed in Chapter 5.

THE HOSPITAL BOARD

The present structure of a hospital board created by Law 1397 in 1983, is: 4 members appointed by the Minister of Health, 1 local government nominee, 1 elected member of the medical staff and 1 elected representative of the 'other' staff. The Chairman (President) may be any one of the 7 members but, if a doctor, cannot be practising in the hospital concerned. Typically, the 7 members would include at least 2 and possibly up to 4 or 5 doctors.

The Board is thus implicitly expected to represent various staff groups and, at the same time, to be accountable for the overall operation of the hospital. These 'dual purpose' boards are or have been much in evidence in other public health systems. The general experience is that the model achieves neither real representation of the interest groups nor clear accountability for the governance of the institution.

It is, therefore, recommended that the boards should comprise members selected for the relevance of their backgrounds, skill and knowledge of the local communities. Members of the hospital staff, including the doctors, should not be on the Board as voting members. Instead, there should be appropriate professional advisory mechanisms to enable their representatives to contribute to the board's decision-making process. It would seem appropriate to extend the current arrangements for paying the chairman and vice-chairman to the other members.

In the case of the local government nominee, currently provided for in Law 1397, it will obviously be important that the hospital has linkages with local government. But in the light of the importance of creating a corporate board (that is, a body which has legal status as a single entity, and in which the views of the majority are the views of the whole board), it could be argued that local government representation should not continue. This is a matter for further consideration. To protect consumers' interests, we proposed in Chapter 5 an ombudsman at regional level.

Functions of the Hospital Board

It will be vital for the board to confine itself to the strategic direction of the hospital. The experience in other countries is that board members can be drawn into too much detail; it will be important that board members are given clear descriptions of the role and provided with induction training.

The board's strategic functions should be:-

- to determine the overall policies for the hospital,
- to decide on the services to be provided and changes in the services over time,
- to monitor the overall performance of the hospital, including its financial performance,
- to delegate executive action to the general manager (see below),
- to create proper mechanisms for the medical staff to influence the hospital's operation (see below).

The board would eventually be corporately accountable to the Regional Health Council. Each RHC would be required to produce an annual report on its operation and activities and should ensure that the local communities have legitimate ways of expressing their views through public meetings, community consultations etc. The board will probably need to meet no more than once a month on a formal basis and these meetings should normally be open to the public and the media.

Legal Status of the Hospital

We have had a number of discussions about what the implications of these proposals would be for the legal status and ownership of the hospitals. Even though our understanding of the legal requirements is limited, we gather that there need be no difficulty in securing that hospitals remain in public ownership. One possibility is for the hospitals to be sold to private companies in which the government held 99 per cent of the shares and the remaining one per cent was held by local government. If this made it possible for the new board to recruit its own staff, including many who worked in it before it was sold, without the security of tenure given to civil servants, this would be a great advantage.

THE GENERAL MANAGER

The 1983 Law provided for the creation of general manager posts in hospitals but this provision has not been implemented. Most hospitals have a traditional structure with administration, medical staff and nursing 'reporting' to the Chairman of the Board who has, therefore, become de facto the general manager on a part-time basis. We found widespread agreement that this situation is unsatisfactory and that general managers should be appointed as soon as possible. The 1983 Law described a version of this role (a 'coordinator') but our proposal envisages a more substantial role. It is our view that the appointment should be full-time. The general manager should be accountable to the board and his/her performance should be evaluated by the board on a regular basis. Although the general manager cannot be the manager of the medical staff, he/she must have a sophisticated grasp of the doctors' clinical work and aspirations.

MEDICAL ORGANIZATION

The employment status of the qualified doctors in hospitals differs fundamentally from that of the other staff groups because of the doctors' personal accountability for individual patients. They cannot be 'managed' in the normal sense of the word; that is, they cannot be held accountable for their clinical work to a manager somewhere else in the organization. Nor indeed can any one doctor with consultant/specialist status do more than monitor the clinical practice of his or her peers.

This 'clinical freedom' is a common feature of most developed health systems across the world. Indeed the 'independence' of the individual medical practitioner is an important safeguard for the patient. This privilege, however, brings with it specific obligations and powers. The obligations require the doctors to practise within the financial capacity of the hospital, to observe its policies, to work collaboratively with other disciplines, to monitor the performance of their peers, and so on. The powers include the

doctors' right to influence which services are developed (or run down), to require adequate and timely services from other hospital departments, to formulate clinical policies, and so on. It is fair to say that at present the mechanisms, both for enforcing these obligations and for exercising these powers, are far from effective.

We see the appointment of the general manager as crucial to ensuring that these obligations and powers are enforced and exercised. The role will provide a focus for the doctors to affect how the rest of the hospital is managed and a way for 'management' to affect the behaviour of doctors.

To assist this two-way process, each hospital should have a medical advisory committee or group, elected by the doctors in the hospital. The president or chairman of the committee should be in frequent discussion with the general manager and the board but, as already indicated, should not be a voting member of the board. There are a number of options for the structure of such medical advisory arrangements, but the important principle is the need simultaneously to recognise and to contain the considerable power of the medical staff. These would replace the existing Scientific Committees.

SENIOR MANAGEMENT STRUCTURE

It is important to stress that no one model of internal organization will be appropriate for all hospitals, particularly with regard to how the major departments within the hospital are sub-divided and managed. There are, however, some obvious flaws in the way most Greek hospitals are internally organized at present, and these should be addressed.

We are assuming that for the time being the traditional professional and/or functional hierarchies will persist below the general manager level. It will be important, however, to consider the trend in other countries towards delegation of authority within the hospital to provide for general management of discrete clinical services on a multi-disciplinary basis. These so-called clinical directorates can take a number of forms and should be considered as a future step towards increased devolution within hospitals.

Financial Management

As already implied, most hospitals require considerable upgrading of the finance function. If the individual hospital is to have efficient systems for accounting, budgeting, internal audit and performance monitoring, the finance function should be given much greater prominence and not subsumed within the general administrative function. In most hospitals of any significant size, there should therefore be a Finance Director, accountable to the General Manager, who has the necessary technical skills as well as a grasp of the special characteristics of hospitals and health care.

Information Management

We understand that the information systems in hospitals are in most cases poor or non-existent. On the clinical side, if medical records are completed, they are often inadequate and rarely computerised. Management information is minimal and not linked to patient-based information. There is no integration of information, either as regards the individual patient, or between different health institutions. Reliable information regarding the activities performed in both the inpatient and outpatient departments is essential for any attempt to make hospitals work more efficiently, to secure better integration between the different components of the system and to apply better planning and steering mechanisms between levels of care. Accurate information is one of the key tools for modern hospital management. Upgrading the total information function is one of the most urgent tasks facing the Greek health system.

A strategy for upgrading the information system must start at the basic level: the information recorded must be accurate and complete. The best way to encourage this is to develop feedback mechanisms, where relevant and timely information on clinical practices is presented at departmental or hospital meetings and regularly circulated to the doctors (for example the pattern of pharmaceutical prescriptions, diagnostic procedures performed, selected treatment methods etc.). This feedback loop creates the first and most important level of awareness - how do we practice, what are the results, how much does it cost? The integration of data on medical and nursing practices with the resources used is essential. It is also of great importance to link this feedback to the existing knowledge base about the effectiveness of different medical procedures.

What we are definitely not suggesting is that Greece should attempt to produce a combined telemedicine information system. This is far too ambitious. Many attempts to rush in this direction have ended in very wasteful failure. What we are suggesting is that Greece should move forward step by step, using proven methods and technology.

We have, for example, been told about the common use of multiple ultrasound examinations of pregnant women without specific indications and about mammography screening of women under age 50 and after age 69. Regarding both these technologies, there now exists valid data on an international level that calls for much more restrictive use.

A system of clinical/medical audit by external and internal methods would be a useful tool to be introduced as soon as possible. This essentially means picking selected medical/nursing procedures and drawing samples of patients or patient groups and checking how far the activities performed are in accordance with findings in the relevant literature.

At regional and national levels, the collation and analysis of performance data should be an integral part of the monitoring and planning of services. A base for comparisons of clinical and economic performance between hospitals and within specialties

can be created at this level. To develop this, there need to be special units for the collection, analysis and dissemination of the relevant data.

A number of options exist as to where the information function should be managed within the hospital. Information services are sometimes part of the finance function. Another model, which emphasises the centrality of the patient record and the importance of accurate clinical information, is to establish a Director of Information accountable to the General Manager.

Nursing and other Clinical Professions

The picture in nursing is one of a gross shortage of nurses overall and an even more severe shortage of trained and specialist nurses. Nurses, midwives and health visitors have low status and pay. Like the doctors in the NHS hospitals, nursing staff are precluded by law from undertaking private fee-paying work. Like most of the hospital staff, the working day of nurses is inefficiently organised. Major problems occur at night, leading to the prevailing practice of private 'nurses' being engaged by patients' families at considerable cost. There are recommendations in Chapter 10 regarding the urgent action required to upgrade the training, working conditions and professional standards of the nursing professions.

As far as the organization of nursing in the hospital is concerned, the Nursing Director should be accountable to the General Manager and should be part of the senior management group. He or she should contribute to the policies and operation of the whole hospital, as well as being responsible for the provision of high quality nursing services on a 24-hour basis.

The other clinical professionals who are, or should be, directly involved in clinical care in the hospital include technical staff in laboratories, X-ray, pharmacy, etc. and therapists (physiotherapy, occupational therapy, speech therapy). These groups are generally managed at relatively low levels in the hospital hierarchy and have little influence on clinical practice. This partially explains the inappropriate skill mix which exists in many clinical areas. In the case of pharmacy in particular, there is no senior professional pharmacist to devise and monitor systems for controlling the prescribing practices of doctors in the hospital.

It is therefore recommended that a senior managerial role be created, Director of Clinical Support Services, who would be responsible for the management of these services. The Director should be accountable to the General Manager and should be full-time in the role; that is, the Director should not be a doctor who simultaneously continues in clinical practice.

There should be an established mechanism for establishing clinical protocols, admission and discharge policies and standards of practice; this process must involve the nurses, doctors and other clinical groups.

Hotel Services

At present the 'hotel' services in the hospital (housekeeping, catering, estate/building maintenance, etc.) are within the administrative function. Some of these services are contracted out to external suppliers. It is again recommended that these services be grouped under a single and appropriately qualified manager, either as part of the overall administrative function or, in the larger hospitals, under a Director accountable to the General Manager. It is assumed that the procurement function might well be organized along similar lines.

Personnel Management

As far as we are aware, the personnel function within the NHS hospitals is not well developed. By personnel, we mean trained specialists who provide a range of services to do with staff and their employment: recruitment and selection; training; employment policies and practises; staff services; etc. Many of the recommendations in this report will result in much greater local discretion in these areas. If doctors eventually had their employment contracts with the hospital board, the need for local personnel departments will be even greater. It will therefore be vital that senior personnel staff are part of the (larger) hospitals' organization. Ideally we would wish to see a Personnel Director, with appropriate staff support, as part of the senior management group.

We set out in figure 4 an indicative organisational chart. This is not a blueprint; it can be adapted to a particular hospital's circumstances.

CONCLUSION

Our review of the current management arrangements of hospitals has been critical. We recognise that part of the reason for the present situation is the belief we encountered that fundamental change is impossible. The quite unsuitable status of civil servants with tenure is regarded as unalterable and thus there is little point in modernising the structure and appointing managers, because such managers are bound to be ineffective without the powers they need to do their job. As outsiders, we find it hard to believe that some way cannot be found round current obstacles to change, as other countries, starting in some cases from a similar situation, have managed to adopt modern practices.

SPECIALIST MEDICAL SERVICES

In the last Chapter we described how we saw the specialist services in relation to the organisation of the hospital. In this Chapter, we deal with the internal organisation of these services and in particular the payment system for specialists and the role of the private sector. We do not cover all the issues which could be raised but only with those to which our attention has been drawn.

THE ORGANISATION OF SPECIALIST MEDICAL SERVICES

Medical appointments

The principle of appointments being made entirely on merit is no less important for doctors working in hospitals as it is for other staff. All posts should be given job descriptions and advertised. We propose that all appointments and promotions should be made by specially appointed committees, chaired by the chair person of the hospital board or his or her deputy with a representative of the doctors of the hospital, but the majority of the members should be external assessors from the specialty concerned, chosen by the specialty, not by the hospital.

The allocation of beds

At present, a glance at statistics for hospitals shows that beds are very poorly allocated between specialties. Some wards have high occupancy with the addition of "stretcher beds", while others have very low occupancy. It seems to be no one's responsibility to secure rational use. The question is sensitive and medical advisory committees may well want to "let sleeping dogs lie" rather than antagonise one of their members. We believe that someone must have clear authority to grapple with this is-

sue. In our view this should be the responsibility of chairpersons for each unified department of medicine, surgery, psychiatry, intensive care etc. This individual would be one of the existing chiefs and would select the division chiefs. There should also be a committee of these chairpersons which would secure that beds are rationally allocated between the departments.

We mentioned earlier in this report the lack of beds for long-stay patients. We believe that beds should be specifically allocated for this purpose under the control of specialists in internal medicine. In time the specialty of geriatrics may develop. Such beds need to be available all over the country so that patients can be treated near their families. A variety of provision is needed, some in acute hospitals where its facilities are needed, some in small hospitals or nursing homes solely for such cases, supervised by family doctors who are paid a part-time salary for this responsibility on top of their remuneration from general practice.

Accident and emergency services

We mentioned also the lack of emergency and accident departments. These should be established in the main hospitals with a senior specialist in charge and other specialists on call. These positions of those in charge are of considerable importance as a well run department can save a substantial number of lives. It will take time to produce the qualified specialists to run them. In large cities, there may be a rota of departments open at night to which ambulances are instructed to take serious cases of accidents. This enables one hospital at a time to have on duty all the appropriate skills for dealing with such emergencies. The ambulance services need considerable upgrading to equip them all with wireless communications and appropriately trained crews.

THE PAYMENT OF SPECIALISTS

The appropriate form of payment of hospital-based or other specialists poses a difficult problem, particularly since, unlike the cases of nurses and family doctors, Greece is wrestling not with shortage but with severe over-supply. Since such an extraordinarily large number of doctors has been admitted (and continue to be admitted) to practice in Greece, there is no method of payment that will resolve the inconsistency between their expectations and demands, and the resources available. This problem is not unique to Greece; many other countries have created a similar problem for themselves over the last twenty years. But the problem appears to be unusually acute in Greece, because relative to other OECD countries, Greece has many more doctors and fewer resources.

On a more positive note, however, it is important to recall that the level of resources devoted to health care in Greece, when correctly measured, is already quite high (as a share of GDP) relative to other countries of Europe and the OECD. It follows that if

doctors' incomes could be made more open and transparent, no longer linked in more or less covert ways to their referral and prescribing behaviour, the savings from reducing unnecessary or unnecessarily costly forms of care would be sufficient to pay them incomes somewhat greater than those they now receive while still yielding savings for the health care system as a whole.

The payment for specialists' services is complicated by the variety of forms and settings of practice in the modern health care system. Hospitals are not the only institutional bases for specialist practice. Various forms of "free standing" diagnostic and treatment facilities have now been developed in some countries, such as surgical day care centres or diagnostic imaging centres, that offer services similar to those available in hospitals.The specialists may own and/or work in such a centre, or may refer or bring their patients to it.

The choice of mode of payment for specialists' services is thus intertwined with that of payments to institutions. One may pay an institution which then pays doctors: this is currently the predominant pattern for hospitals in Greece. But one may also pay both the specialist and the institution separately, as is typical when private fee-for-service practitioners refer patients to diagnostic facilities. Or one might pay a specialist for a package of professional and institutional services, when the practitioner owns or contracts for the institution.

The disadvantages of exclusive salaried payment

The problems with paying specialists a salary are illustrated by the experience of the NHS hospitals and IKA polyclinics in Greece. Most hospital doctors are salaried full-time employees, and are not allowed to see patients privately for fees, though in practice some do so. Hospital doctors who are also university faculty or in the armed forces may, however, have private practices. But we understand that many doctors work much less than a full day. In the IKA clinics most doctors are contracted on a part-time basis, but again many of them work fewer hours than those for which they are contracted. Service in the public clinic, though poorly paid, is used by the doctors, in some cases, to recruit patients for their private practices.

There are thus very powerful financial incentives to minimize the time and effort devoted to salaried institutional practice, and to spend time instead in private work, whether permitted or not. At present, management in the institutional setting lacks both the power and the incentive to enforce conscientious performance of salaried work. The result is serious problems of access for patients in the public hospitals and clinics, despite the national surplus of doctors.

There are two main **options** for paying for specialist care, although one could design many variants of each. Each has strengths and weaknesses, some of which can be identified here. **One option** is to continue and attempt to rationalize the present ap-

proach, of paying for specialist care through hospitals. Hospital budgets would be set on a global basis, with perhaps a component adjusted according to workload, much as at present. The difference would be that the whole budget would come from the unified fund, through the Regional Health Councils. Specialists would continue to be salaried employees of the hospital. The present IKA and other clinics could then become specialist polyclinics, as their primary care functions become separately identified and transferred to the new family doctors. These specialist polyclinics could receive paid referrals from family doctors. They might become linked with the NHS hospitals, or budgeted on a free-standing basis. When the new family doctor system is fully operative, we would expect a major reduction in referrals to specialists, so that many fewer such polyclinics would be needed.

International experience suggests that private practice is very difficult, if not impossible, to eliminate when doctors are paid on salary. British consultants and German medical professors have maintained this privilege in systems that are far more tightly contained and managed than the Greek system is or is likely to be in the foreseeable future. One is then left with the choice between recommending the elimination of this practice, in the confidence that the recommendation, whether or not it is formally accepted, is extremely unlikely to be effective, or recommending toleration of the practice under conditions and restraints which, it is hoped, will eliminate its worst characteristics.

The form of payment for both doctors and the institutions in which they work must encourage, or at least not discourage, committed and effective practice. In this respect it must reinforce the improvements in monitoring, management and evaluation of medical performance which we recommend elsewhere. This might be achieved through much tighter management in hospitals and other institutions to ensure that salaried specialists maintain a high level of performance in those settings. Since there is such a surplus of specialists in Greece, a really firm management strategy would include "firing" doctors who were unproductive, or ineffective, providing care of low quality or inefficiently, or who were engaging in illegal private practice or otherwise padding their incomes. A "fired" doctor would be ineligible to receive payment, directly or indirectly, from the unified fund, either for a period of time, or permanently. The threat of this would help to reinforce the prohibition for doctors in the public system to offer private services to patients covered under the unified fund. Doctors who chose to remain out of that system could of course offer services to anyone they wished, on any terms they wished, but they would not be paid from the unified fund.

FEE-FOR-SERVICE PAYMENT

An alternative approach, which would represent a radical departure for Greece but is characteristic of some other systems such as Canada, the United States, and to some extent France, would be to transfer specialist physicians to fee-for-service pay-

ment. This would require the establishment of a uniform fee schedule, and a corresponding reporting system. The fee schedule could be set nationally, or could vary by regions in order to reflect different costs of practice or to provide encouragements to locate practice in under-serviced regions.

THE SEPARATION OF THE PUBLIC AND THE PRIVATE SECTORS

Fee-for-service reimbursement of specialists may in fact be a much less radical change from current arrangements than appears on the surface as this system is used in illicit and licit private practice. A major difference, however, would be that all fee-for-service payments would be taxed, as we understand that at present by no means all the receipts of all doctors are reported to the tax authorities. If specialist doctors are to be paid fees for their services from the unified fund, they cannot be permitted to make extra charges to patients covered by the unified fund. Doctors could, of course, move entirely outside the NHS and see patients on a purely private basis, on any terms they chose, but neither they nor their patients would be paid by the unified fund.

This strict separation of practice could be problematic if many of the most prestigious doctors resigned their university posts and moved outside the service. One may confidently anticipate claims that this would be the case. On the other hand, Greece is not a wealthy country and it is far from clear that a large number of doctors could support themselves on a purely private basis. Doctors in university posts might thus be given higher university salaries partly because of their responsibilities for teaching and research and in part compensation for the loss of the right to bill for services at rates above the general fee schedule. It may be argued that increasing the salaries of clinical professors is not possible without increasing to an equivalent extent the salaries of all the other professors in the university. We do not accept this argument. Many countries have learnt to live with a substantial differential between clinical and non-clinical professors.

We do not exclude other types of payment from the hospitals on top of fee-for-service earnings. The hospitals should pay the doctors for administrative work for the hospital which cuts into their time for earning fees. Thus honoraria should be paid to members of the medical advisory committee, to the heads of the clinical departments and to those who sit on appointing committees. Hospitals at the periphery would be well advised to pay honoraria to leading doctors to persuade them to come and do weekly sessions in their hospitals in addition to paying their travel expenses. Such sessions would have several advantages. They would help to raise the standards of the local doctors and they would reduce the current pressures from patients to be referred to the main centres. Similarly, general practices may well pay for specialists to come to see their patients in their practices, on a regular basis for half a day. This not only is more

convenient for the patients but serves as a form of continuing education for the doctors in the practice.

Containing the cost of fee-for-service payments

In order to reconcile fee-for-service payment with global limits on health care expenditure from the unified fund, the fee-for-service payments would have to be adjusted in each time period - probably a year - to be equal to the pre-determined cash limits. This approach, used in Germany and increasingly in Canada, defines the fee schedule in terms not of currency amounts - dollars, marks, or drachmas -per service or procedure, but in terms of points or units. Such a schedule is usually called a Relative Value Scale in the United States, and the values assigned to each item in the schedule are Relative Value Units or RVUs. The currency value of each RVU is then determined at the end of the billing period so as to equate the total value of billings with the amount of currency budgeted by the unified fund to pay for specialist care.

PERFORMANCE-BASED PAYMENTS

In between these two major strategic options, one could design various forms of performance-based payment for specialists in hospitals and clinics, which could be combined in various ways with basic salaries. These would supplement, but would not substitute for, better management oversight to ensure that doctors are in fact working - putting in both the hours and the effort for which they are paid.

A problem with all performance-based payment systems, as with straight fee-for-service, is that they tend to reward production rather than performance. More health care is not always better, although it is always more expensive. In North America reference is made to the bias in favour of "procedural" and against "cerebral" specialties and styles of practice. The most valuable and effective activity of the doctor may be not to do anything, but rather to watch and think, and to intervene in a minimal but precisely targeted way. But thinking is hard to observe and measure; it is much easier to count and pay for standardized interventions whether or not they do any good. We have been told that this bias is at present a particularly serious problem in Greece, especially in the private sector.

The issue is not simply one of cost without benefit. All interventions have potential negative effects. Even if a test carries no risks in itself, the inherent impreciseness of all testing means that there will be some "false positives" -normal healthy people who are erroneously identified as ill, at risk, or abnormal. Apart from the resulting anxiety and stress of such labelling, positive tests lead to further interventions which carry their own costs and risks. Unnecessary and inappropriate care is thus a health hazard as well as an economic burden. If it is being carried out in a private sector which is inadequately regulated and monitored, the risks are magnified.

DIAGNOSTIC CENTRES

This leads into the question of the appropriate relationships between NHS facilities and doctors, and those in the private sector. The question arises, in different forms, under either strategic option. If specialist services are all to be paid by fees-for-service, should private diagnostic facilities be eligible to receive fees from the unified fund on behalf of its covered population? Or if specialist payment all flowed through hospitals, should hospital doctors be permitted to refer to private facilities?

These questions will have to be addressed by the unified fund, whatever the form of payment, and it must take into account factors of cost, quality, convenience, and need. We have been told that there are many examples of hospital diagnostic facilities being under-used or under repair with mysterious frequency, while patients are referred to privately owned centres from which the referring doctor may receive some form of benefit. A long run response could be to make sufficient provision in the public sector and make no private facility eligible to receive public funds. Existing public facilities could be paid overtime for extra work, providing they had done a defined number of tests in normal working hours

In the short run, we would propose that new types of contract are negotiated with private diagnostic centres which have been selected on the basis of their quality. The contract would offer the centre a lump sum for an amount of work defined in advance for the year. If the work sent to the clinic exceeded the defined amount, extra tests would be charged not at average cost but at marginal cost. The same level of payment per test would apply for deductions, if fewer tests were ordered. This reduces the incentive for the clinic to try and secure more tests. Each year, the diagnostic centres of approved quality should be asked to put in quotations for contracts on this type of basis. The contractors would be selected, among other considerations, on the basis of price. If this system worked without abuse it might be continued in the long run. If not, the public sector would have to make itself self-sufficient.

THE CASE FOR FEE-FOR-SERVICE PAYMENT

There are, we believe, five general arguments in favour of moving towards a fee-for-service system. **First**, such a system of payment would have to be instituted for payments by family doctors for specialist consultations, though the money could go to the hospitals or clinics rather than the doctor. As family doctors would be paying for all outpatient consultations except emergencies, they will control any tendency for consultations to be short or unnecessary. If the patient complaints that the specialist did not give enough time to the consultation, the general practitioner will refer to another specialist next time.

Secondly, the present hospital system seems to be characterised by inflexible and

inappropriate patterns of use. Although we were told that rates of hospital use are relatively low in Greece, we do not have confidence in the data we were shown. There is a world-wide trend towards greatly reduced use of inpatient care, in part due to the widespread adoption of day surgery. **We definitely do not accept the suggestion that Greece needs in total more inpatient hospital capacity**. More may be needed outside the main centres if they can be suitably staffed and equipped and win the confidence of the local public with a corresponding reduction in the main centres, particularly Athens. On the other hand, we understand that some existing hospitals in Athens are old, poorly designed for modern needs and too small. There may well be a case for some replacement with a larger modern hospital.

We would, however urge considerable caution as changes are now becoming so rapid. The observation that cataract surgery, for example, is routinely performed as an inpatient service, with an average length of stay of several days, suggests that Greece is quite out of line with modern practice. The procedure is now normally performed on a day care basis. The observation that the length of stay is even longer in the private sector than in the public, suggests that this is to increase profits and is not justified professionally. Other average lengths of stay, for example for myocardial infarct, also seems significantly longer than normal practice in other countries. In general, day surgery is very under-developed. A payment process which encourages doctors to generate high throughput places indirect pressure on hospital managements to reduce lengths of stay and move patients through faster. Such pressure from doctors may help to reinforce initiatives by the unified fund to encourage more efficient management of hospitals, either directly or through the budgetary process.

A **third** advantage is that doctors would have an interest in the hospital being in use throughout the full working day and would thus support the efforts of management to secure that this happens, instead of expensive facilities lying unused from the early afternoon. The sharp reduction in doctors training for the traditional specialties which we recommend in Chapter 10, will mean that a greater load of work will have to fall on those who have completed their training, unless there are to be longer waiting times for treatment. A fee-for-service payment system will make this extra work more acceptable. A **fourth** advantage is that doctors will become as productive while at work in the public sector as they are currently said to be in the private sector. A **fifth** advantage of an overt fee-for-service system is that it can reduce the pressure from doctors to engage in private practice, in addition to their salaried positions. In effect all doctors become private practitioners, but under controlled conditions and paid from collective rather than individual funds.

But would it be politically possible to pass, and especially to enforce a clear separation between NHS doctors without rights to private practice and those who are wholly in private practice? If this recommendation is not acceptable to the government, we

would suggest the **option** of allowing public hospitals to be used for the private patients of senior doctors and professors, on a strictly limited basis, for one or two evenings a week, depending on rank, with the money divided between the doctor, supporting staff and the hospital. Each doctor would set his/her own level of fees. All the billing would be by the hospital not the doctor. At the same time, we would like to see vigorous action to enforce the ban on private practice by other doctors working for the NHS, even if the methods to enforce it are far from pleasant. Nothing could be worse than the present situation where, in the hands of some doctors, all practice becomes de facto private practice.

We attach great importance to the principle of doctors being "geographically whole-time". A crisis concerning a particular patient can arise at any time. It is much more satisfactory for the doctor in charge of the case to be available within the hospital to attend to it, than to have to be summoned from a private hospital. If, for example, surgeons take the view that operating facilities are superior at private hospitals, then we would attach very high priority for additional expenditure to improve the facilities, and, if necessary, the staffing of the theatre and recovery rooms in the public sector hospitals.

A shift to a fee-for-service system of specialist payment would bring problems of its own. It would encourage productivity and resolve the public/private split. Combined with global cash limits, such a system need not lead to uncontrollable cost escalation. But fee-for-service does not, in itself, address the appropriateness of care, and it is commonly more difficult to monitor, to evaluate, and particularly to modify individual performance in such a system.

A fee-for-service system requires extensive, accurate, and timely information. It would take time to devise the system and establish an efficient system of securing rapid payment. All claims for services would need to be submitted soon after the end of the month and analyzed rapidly so that the monthly claims could be compared with the share of the annual budget. Interim payments could then be made by establishing an interim price for the relative value units to ensure that the global budget will not be exceeded.

Establishing a relative value scale

The establishment of the Relative Value Units will inevitably be a contentious issue. We would propose, based on international experience, that the following principles should underlie the scale:

- the main criterion should the time normally involved for the doctor, though some allowance should be made for the skill required for and the complexity of procedures.
- the time allowed for the consultation should take into account the need for his-

tory taking, full communication between patient and doctor, for the doctors' cerebral activity and record keeping: many scales have undervalued the basic consultation, so that doing any procedure becomes more profitable for the doctor than seeing another patient: we favour generous provision for the consultation and less emphasis on procedures.

- similar acts and procedures should be clustered together to prevent the escalation of the number of relative value units into some 2000 items or more.

Once a scale is established, the effects must be regularly analyzed. All scales are bound to have some perverse incentives. They must be detected and the scale revised accordingly. A working party should be set up to devise the scale. It would be useful to include in this working party a trained family doctor and a trained public health doctor, as neither would be beneficiaries of the scale established.

CONCLUSION

Thus, on balance, we recommend the payment of specialists on a fee-for-service basis. This is because of the need to overcome the present major shortcomings of the specialist services. We intend the system to operate both for the outpatient and the inpatient work of the specialists. There are, as we have pointed out, risks with this option, as there are with any alternative. What we suggest is important is that the actual working of the system should be reviewed on the basis of well-structured operational research. We discuss developments in research in Chapter 10.

DRUGS

In Greece, the number of drug items per head, as reported to the OECD is the second highest in the Community (see Table 6). The number of drug items reported to the Committee for IKA was about six per head. If the OECD figure is correct, this suggests very substantial purchases direct from the pharmacies and/or very high rates of drug use for the other health insurance funds, though some purchases were for use in other countries. The OECD figure suggests that it is in this item that substantial economics can be made. A survey conducted by IKA showed that 30 per cent of drug packages dispensed were not used at all and in 18 per cent of packages, only one or two pills were taken. As mentioned earlier, there is grossly excessive prescribing of expensive antibiotics

Expenditure on drugs is estimated to be 38 per cent of the total government and private expenditure on health in 1992. A more relevant comparison is between drug expenditure and gross domestic product. Table 9 shows that in this respect, drug expenditure in Greece appears grossly excessive, running at 2 per cent of GDP compared with one per cent or less in many countries. The nearest figure to Greece was W. Germany spending 1.8 of GDP but there drug prices are subject to no control.

The average Greek over 50 is estimated to be taking 4 drugs at any particular time. Due to the lack of medical records and computerized pharmacy records, many of these drugs have detrimental interactions, making the excessive prescribing of drugs particularly dangerous.

THE PECULIARITIES OF THE DRUG MARKET IN GREECE

Greece differs from the majority of EU Member States countries in the following important respects:-

- there is so far no recognition of intellectual property and thus drug patents: under EU regulations Greece will have to come into line in this respect in 1998. This will only apply to new products launched on to the market from 1998.
- there is, as yet, no distinction between "Over The Counter" (OTC) products which can be bought without prescription and those which can only be bought with a doctor's prescription (ethical products), such as is to be found in other EU countries. There is, however, a category of drugs which are marked in pharmacies with a red line which indicates that they must not be sold without a doctors' prescription. But this is largely confined to drugs which are particularly dangerous and/or addictive. Under the law virtually all drugs require a doctor's prescription, though we understand that many pharmacies are, in practice, willing to sell non-red line products without a prescription.
- there is no positive list or negative list for all the health insurers: IKA has a very large positive list but even that is not properly enforced. It is also intended to be used for OGA. The practice in this respect in the other EU countries is shown in Table 10.
- there is no generic market: instead generics are sold under a variety of brand names (locally called "copies") by different local and foreign companies. This reduces competition by price and makes to difficult to introduce the right of pharmacists to substitute. There is no opportunity to reduce the drug bill by promoting the use of generics as far as possible. The action in this respect of the other EU countries is shown in Table 11.
- there is no effective monitoring of the prescribing of individual doctors providing services to insured persons. This is despite the excellent progress which has been made in developing the statistics of national drug sales, now in defined daily doses, by the National Drug Organisation's subsidiary company - "Pharmetrica". The monitoring of doctors' prescribing behaviour is undertaken in most EU countries.
- despite legal restrictions on sales promotion activities, we understand it is by no means unknown for drug firms to offer rewards to doctors who prescribe their products generously, particularly to enable them to attend industry sponsored "medical conferences" in attractive locations throughout the world.

Patents

The recognition of intellectual property might encourage Greek firms to try to enter the market for new chemical entities. There is considerable potential for this, if firms formed partnerships, particularly with scientists working in some universities in Greece.

There are, however dangers. Even if the new measure covers only new drugs, inter-

national firms may choose first to enter the market with new products in the southern European countries, and particularly Greece, on the grounds that their controls on sales promotion practices are weak. It may also lead manufacturers to produce marginal variations of old products or new combination drugs, so that they are technically new. This makes it all the more important that Greece tightens its controls by 1998 and has established a clear and restrictive positive list for health insurers. Otherwise there is the risk that, at the least, very expensive new products will be very widely prescribed for conditions for which older products are no less effective.

Distinguishing between OTC products and ethical products

We understand that work has reached an advanced stage on the preparation of a list of OTC products. We would recommend, as in some EU countries, that the list should in part be designed with the further aim of distinguishing between products which are covered by health insurance and those which are safe for consumers to buy directly: most of these are inexpensive. If people were permitted legally to buy OTC products without a prescription, it should go some way to lighten the load of very minor consultations which contribute to the queues at hospitals and health centres. It would also relieve the health insurance funds of some costs where, in many cases, the administrative cost of reimbursing the pharmacy is hardly justified by the amount reimbursed.

The question which arises is whether OTC products should be freed from price control in the hope that market competition will lower prices. We do not recommend this, as the experience of France showed that freeing the prices of these products led to increases rather than the expected reductions in these prices. A further question is whether OTC products could be sold in shops other than pharmacies. We see no reason why they should not be on general sale.

Establishing a positive list for all health insurers

A positive list for the products reimbursed by all health insurers has great potential for reducing the cost of these schemes. Such a list could be established by a committee serviced by the National Drug Organisation, which would include representatives of the health insurers, pharmacists, employers and insured persons, taking into consideration the essential drug list published by WHO. The list might have two parts - the first for use in primary care and secondary hospitals with a further list only to be used by named doctors in designated departments of tertiary hospitals. If prescribed by other doctors, the patient would have to pay the whole cost. The list would include a large number of generic products, previously ascertained as bio-equivalent from appropriate blood level testing

Developing a market for generics

A market for generics can be simply created in Greece by the Ministry of Health and Social Security or the National Drug Organisation, periodically advertising for international tender batches of products listed by their generic names. Local producers of "copy" products would of course be able to tender. The drugs once obtained could be stocked in the central drug store and resold to private pharmacies. The drugs should be found bio-equivalent by submitting blood samples to be analyzed by the Institute of Pharmaceutical Research and Technology, a branch of the EDF, before being licensed for distribution

Monitoring individual doctors' prescribing behaviour

The statistics maintained by Pharmetrica and IKA could readily be extended to provide monthly individual doctor profiles which could be given the unified fund. This information could be used for the following purposes which are not exclusive:-

- to warn doctors that their prescribing is considerably above average. This could be re-enforced by such sanctions as fining doctors who over-prescribe in excess or warning them that their contracts or their rights to prescribe for health insurance could be withdrawn and in extreme cases applying this sanction.
- to select for new contracts or appointments those doctors who are economical prescribers.
- to enable the regions to give drug budgets to each doctor based on the characteristics of the patients registered with them. This is done in both Germany and the United Kingdom. Doctors could be given monthly statements showing their expenditure on drugs so far compared with their budgets.
- to introduce incentives for economical prescribing by allowing any savings on the indicative budgets to be held in separate accounts for each doctor which could only be used to pay, as mentioned earlier, the expenses and for locums (where necessary) to enable the doctors to attend postgraduate courses approved by a body established centrally for this purpose.
- to identify those doctors who are prescribing what appear to be excessive amounts of a particular drug or of drugs produced by one particular company - thus suggesting that some type of inducement has been offered to the doctor to behave in this way.

The control of sales promotion

This can be controlled by restricting to 10 per cent of sales the amount which a company selling in Greece is permitted to spend under this heading. It can also be controlled by such measures as the following:-

- educating the public that poly-pharmacy is counter productive and dangerous,

- restricting, as at present, samples given to doctors to those needed for recognition purposes,
- by restricting what can be spent on hospitality provided for doctors,
- by limiting the value of any gifts given to doctors,
- by requiring any research undertaken by any doctor financed by a manufacturer to be cleared by an ethical committee or committees established for this purpose,
- by giving a statement to the manufacturer of each product when it is authorised for marketing, specifying precisely the uses for which it is appropriate, the side-effects and price. All written advertisements are required to include all this information in legible type of a specified size. Moreover, sales representatives are required to lay this statement before the doctor at the start of any discussion of it.
- by requiring any promotional material to be cleared by the National Drug Organisation,
- by ensuring that drugs are only prescribed for the approved indications.

The control of prices

At present prices are controlled by a committee responsible to the Minister of Trade and require the consent of the Minister of Finance and the Minister of Health and Social Security. This committee has not had access to expertise in pharmacology. For this and other reasons, we would propose that the committee should be made in future responsible to the Health Minister and should be serviced by the National Drug Organisation which is in a more favourable position to marshal relevant data.

For reasons which we do not understand, prices of products were raised in 1991 and 1992, so that by 1992, drug prices had been allowed to rise, compared with 1987, by about 325 per cent, while the consumer price index had only risen by about 200 per cent. This was despite a decree specifying that prices should not exceed the lowest of those in other countries of Europe.

In theory, prices are established on the basis of the cost of the basic ingredient with mark-ups for formulation, sales promotion, distribution and other costs. A premium of 14 per cent is intended to be given to the original manufacturer of the product. This procedure leaves prices subject to inflated transfer prices. But it also has had the effect of making the import of drugs more attractive to the producers than local manufacture, as the committee naturally finds it more difficult to establish the basic ingredient cost of drugs manufactured outside the country. This has played a part in depriving Greece of badly needed jobs as the percentage of sales manufactured in the country has fallen from 81.7 per cent in 1987 to 61.6 per cent in 1992.

In our view, the procedure of basing prices on transfer prices should be abandoned, with the encouragement this gives to imports. Instead we propose that prices should be

based on the average of the three lowest ex-factory prices in the Member States of the EC. A bonus of a maximum of 20 per cent should be given where the drug has been classed in category A in Greece's system of classification. If a new product is launched first in Greece and is neither a combination drug nor an existing drug with a new use, the price should be based on as assessment of the therapeutic gain compared with drugs previously used for that condition. We would however expect drug firms to declare profits and their books should be inspected if they declare losses. Losses suggest that they are inflating transfer prices to be able to report a loss.

In addition, we propose that drugs should be clustered into groups of drugs with equivalent action, though not necessarily biologically equivalent. The unified fund should reimburse pharmacists at a rate not exceeding 10 per cent above the lowest priced product in the cluster. The patient would have to pay any extra cost in addition to the 25 per cent co-payment based on the price received by the pharmacist from RHC. The margins for pharmacists should be degressive: the higher the price of the drug, the lower the percentage mark-up.

Where a new drug has been developed by research and development undertaken in Greece, whether by a local company or multinational, there should be a special "fast track" for examining it for registration i.e. permission to enter the market. The Health Ministry in dispensing money for research (see Chapter 10) should give some priority to applications for basic research which could contribute later on to the production of new drugs.

Hospital pharmacies

We have the impression that many hospital pharmacies are not well-organised computerized or safe: they are often left without proper supervision. Nor is the hospital pharmacist always involved in the stocking of drugs. There is a lack of control of prescribing especially of critical antibiotics, leading to a high rate of resistant organisms. All hospitals of any size should have a senior qualified pharmacist to devise and monitor systems for controlling prescribing behaviour. We would suggest that there should be two signatures for certain antibiotics and the monitoring of drug use by a committee established for the purpose in which the pharmacist should be a voting member. There should also be regular measurement of blood levels in the case of potentially toxic drugs.

CONCLUSION

Our proposals are partly aimed to cut out waste. But they are also aimed at protecting doctors and thus patients from undesirable sales practices. We discuss the possible savings in Chapter 11.

Part III

MAKING IT HAPPEN

Chapter 10

TRAINING, EDUCATION AND RESEARCH

We have set out above our vision of how the Greek health services might be structured in the long run. It is more difficult to specify how the transition might be achieved. In this Chapter we discuss the necessary changes in the training programmes to develop staff with the skills and orientation to make the planned service work as intended. In the following Chapter, we suggest how the transition might be accomplished. In this Chapter we discuss first the training of managers. We then turn to changes in medical education, particularly to produce the new family doctors and public health doctors. Finally we discuss the training of nurses and other staff.

DEVELOPING THE NEW MANAGERS

All those to whom we have spoken in the Greek health system have commented on the lack of a managerial culture in the NHS. Apparently this is the general picture in the public sector. Administration is seen as a bureaucratic function within the hospitals, and in so far as clinics and health centres are managed at all, it is doctors who fill the roles. This situation is not unusual in other health systems but it does mean that there is a significant lack of leadership within the Greek health system, other than medical leadership. There is an urgent need to develop a cadre of health service managers, who may come from a variety of professional backgrounds, to provide this leadership in developing health care services.

It should not be assumed, as has happened elsewhere, that this injection of managerial capacity into the health system can be achieved by transplanting managerial theories and managers from the private or non-health sectors. Many principles of management do of course apply across all types of enterprise. But managers in health services require a sophisticated understanding of health

care and an appreciation of the unusual part that doctors play in health care organizations. It follows that managers should be developed largely from among those already working in or with the system.

Thus a national strategy for management development in health services should be developed which should:-

- aim for an integrated management development programme on a local/regional basis so as to obtain the most cost-effective use of scarce resources and skills,
- encourage investment in Greek management development practitioners and Greek learning materials,
- involve managers and professionals from the health care system as both 'faculty' and 'trainees'.

Chapter 5 we commented on the need to create a new senior role within the Ministry (Personnel Director) to promote management training and development. Creating this management development strategy should be one of this individual's first tasks.

Needs Analysis

It is recommended that a needs analysis be carried out to identify the managerial skills which are particularly lacking in the Greek NHS. On the basis of the limited information we have been able to collect, there are likely to be needs in at least the following areas:

- basic managerial competencies: e.g. staff recruitment, selection and appraisal; budgeting; performance evaluation; delegation; information management;
- general management: e.g. the skills of managing a multi-disciplinary department or organization; 'business planning'; achieving change; public relations;
- financial management: e.g. accounting; management budgeting; costing; clinical budgeting; resource management.

Target Groups

There are different possible ways of defining target groups for management development in health care:-

- by organization type or level (Ministry, regions, providers hospitals, primary health care centres etc.).
- by profession (nursing, medicine, finance/accountancy, etc.)
- by level within an organization (senior, middle, first-line managers)
- by health care sector (primary care, mental health, health promotion, acute care, etc.).

Since activity on all fronts is not likely to be affordable or helpful, it is recommended that any national strategy should identify those target groups which are likely to have the greatest potential impact on the quality of management in the system. These

priorities should be established by those working in the system (not the academics) as they are the purchasers or clients of future management development programmes. It would be all too easy to assume that the greatest impact will be achieved through concentrating, for example, on the most senior managers who are also doctors working in hospitals. A more fundamental analysis of needs might reveal that, for example, middle managers in primary health care should have highest priority.

In anticipation of this process, it is recommended that the short-term strategy should focus on:-

- 'top' managers across the whole health care sector;
- 'middle' managers who are the people able to have the most immediate impact on quality and effectiveness;
- trainers in management development, both within the health service system and in universities etc.;
- professionals who are moving into general management roles;
- members of hospital boards and later members of regional health councils

LEARNING METHODS

The very few existing Greek programmes aimed at health service managers or professionals are full-time and thus require extended absences from the job. Those who go overseas for post-graduate education (in health economics, social policy, public health, etc.) are obviously absent from the system for extended periods of time. But the general trend in management development elsewhere, as programmes became more sensitive to the needs of organizations and individual managers, is towards part-time programmes which focus the learning on the manager's job and practical experience. This allows immediate transfer of the knowledge and skills acquired into the work situation. This trend is radically affecting MBAs or MHAs in many countries which are increasingly provided on a part-time basis. There is also a greater emphasis on continuing education for managers through seminars, short courses, modular programmes, open and distance learning, and so on.

Another aspect of the needs analysis should be the need for multi-disciplinary rather than single disciplinary programmes. If it is really management development we are considering (and not training in technical/professional skills), multi-disciplinary programmes tend to produce better outcomes. Participants learn about each other's skills and values, help each other to learn, and bring the real-life situation into the programme setting.

This is not to say that there is no place for management programmes aimed at particular professional groups. Experience shows that doctors in particular can benefit more from single-discipline programmes, particularly when the content is basic management skills such as time management, inter-personal relationships, appraising staff,

etc. The same argument can apply to other professional groups such as nurses. However, the more senior the participants and the more strategic the programme content, the greater the need to bring a range of professional backgrounds and experience into the learning process.

PROVIDERS OF MANAGEMENT PROGRAMMES

There is an urgent need to develop a wider range of management courses and programmes in Greece. These might be provided in the polytechnics, universities, technical institutes and in the private sector. Furthermore, the NHS itself should begin to generate management development activities using experienced managers and professionals in partnership with academics.

Potential providers should be able to demonstrate that the programmes have been designed to meet the real needs in the NHS. Potential evaluation criteria might include:-

The Programme

The target group(s) at which the programme is aimed;
Direct relevance of the programme content to the target group(s);
Entry requirements;
The catchment area/region served;
Market research carried out;
Linkages with other (possibly satellite) training centres in the area/region;
Links with the local practitioner and professional organizations;
Flexible delivery arrangements (part-time programmes, flexible entry requirements, etc.);
Programmes tailored to local needs;
A variety of learning approaches;
Multi-disciplinary programme participants;
Arrangements for external review and quality control;

The Programme Staff

Specific faculty expertise in health services management;
Participation of faculty in relevant research, consultancy and local and national policy development;
Professional development plans for faculty.

In the absence of any obvious immediate focus for taking these proposals forward, it is recommended that the Ministry establish a Management Development Task Force to produce the outline of a strategy and an implementation plan.

MEDICAL EDUCATION AND THE OUTPUT OF DOCTORS

As mentioned earlier, the most striking features are the over-supply of doctors in total, and the imbalance of too many specialists and too few family doctors. This situation is the result of the lack of a national plan to shape the health professions. Such a plan would link long-term plans for the development and reallocation of resources in the health care system to the education and training system. The need for this does not seem to be recognized and coordination between the Ministry of Health and the Ministry of Education seems to be absent.

There is a need to modernize and develop basic medical education along the lines of international trends with earlier patient contact, more interactive teaching and an emphasis on primary care and public health. The system for specialist training needs development, steering, quality control and integration into the overall manpower policy. The examination and licensure system, also needs to be linked to overall policies and goals.

Planning the health workforce

A plan for health professionals is an essential component of any attempt to implement a health policy. Qualified and skilled staff (such as doctors and nurses) form the most expensive part of the health care system. By clinical decisions, they influence the use of other resources and by their knowledge base they shape the overall performance of the system. The attitudes transmitted during the education process also strongly shape ethical behaviour and moral standards.

It is essential to link the different parts together:-

- the medical training system and the curriculum,
- the number of students,
- the number of posts for specialization,
- the entry of foreign students,
- the examination, licensure and continuing education system.

This seems to be no such linking at present.

The first step in the process is to formulate long-term goals for the development of different parts of the system (enhancement of primary care, the desired pattern of different medical specialists etc.). Of course this also has to be linked to structural planning on the national and regional level - the desired number of hospitals, the degree of specialization among them, the desired number of primary care facilities and so on. The planning of facilities needs to be linked to the likely available financial resources. From this process it is possible to identify needs for the reallocation of resources, especially manpower. Basically the policy decisions regarding number of medical students, and

the number of training posts in different specialties should be based on calculations of the affordable future number of doctors to staff the planned system. In view of the time it takes to train a doctor, planning needs to look ten to twenty years ahead. This structural planning should be used to determine the medical education training system.

The dynamics are also of great importance - retirement, part-time work, alternative medical specialty activities and so on. The overall composition of the work force - doctors, nurses and other type of personnel - is equally relevant.

UNDERGRADUATE MEDICAL EDUCATION

Admission Policy

There are seven medical faculties in Greece, with the largest in the University of Athens. A system is intended to operate which controls the number of entry posts. In practice, however, this number doubles or triples due to the influx of medical students from abroad, the so called "unfixed numbers". After the first year in medical school the law permits students from abroad to enter according to different social criteria, (students from families with many children, situations where a parent is sick or the student is sick etc.). The medical school seems to have to accept these students without the possibility of imposing rigorous examinations on them or testing their performance. Thus there is, in practice, no effective manpower planning: the situation is uncontrolled. In addition some students complete their whole undergraduate medical education abroad and then get licensed in Greece. The total production of new doctors is altogether about 1300 a year from all these sources.

We suspect that if calculations of requirements were made, they would show that entry to the profession should be at least halved for the next decade. In our view the Athens medical school with some 400 entrants is far too large and this is where cuts in entry should be concentrated. This could be achieved by raising the standards required for entry or by very stiff examinations at the end of the first year, as in France, and by particularly tough examinations for those attempting to enter after starting their education elsewhere. It seems most urgent to control the influx of medical students and graduates from abroad, which at the moment is the biggest source of production of doctors. There are both qualitative and quantitative reasons for this action. It will require strong concerted action by government to address this whole issue.

Curriculum

The Curriculum in the medical School covers 6 years using a traditional plan starting with the basic sciences and moving on to clinical training in the later part. They are exposed to too few patients and there is insufficient rotation between institutions. The sixth year is a clinical rotation in some main specialties, which is followed by a final ex-

amination. There is no specific teaching in primary care, nor any University department or professorship in that critical area. After the six years in medical school and examinations within the school the doctor gets a full and unconditioned license to practice medicine. There is no restriction on the number of times a student can re-sit the examination.

The curriculum in the medical schools should be modernized according to international trends with early clinical exposure, interactive teaching and introduction of important new areas such as, for example, medical sociology and medical ethics. **Of critical importance is the establishment in each medical school of departments of general practice**. As pointed out in Chapter 6 there should be at least six weeks teaching for all medical students in family medicine. As we stated in Chapter 4, departments of public health should be appropriately staffed by both medical and non-medical disciplines. There should be at least 4 weeks full-time teaching in both of the pre-clinical and clinical parts of the curriculum.

In our view, the graduate from the medical school should get a conditional license instead of as now a full and definite right to practice medicine. An internship of one year after medical school should be introduced, preferably performed in hospitals with good teaching capacity. It should include at least 3 months in internal medicine and 3 months in surgery. After the internship a national examination should be introduced. After this examination full licensure should be given.

Practice in rural health centres

The law requires doctors, normally immediately after licensure, to practice for one year in remote areas the primary care in which they have had no training. This system is organized by the Ministry of Health which regularly announces open positions from which the doctor can choose. There is a long waiting list for this practice in primary care although there are many unfilled post in remote areas. An alternative way for the doctor is to perform this required year of service is in the armed forces. We recommend that doctors should be given a short course in family medicine before they take up their posts.

POSTGRADUATE EDUCATION

There are specially designed posts in hospital departments for postgraduate training. There are national requirements for the length of training in the main specialties but no structured system of training in sub-specialties. The training is usually in only one hospital department. There are no specified theoretical courses, but the training is completed after an examination in front of a group of examiners named by the Ministry.

The postgraduate residency training program should be expanded with training

tracks in relevant sub-specialties. These should be defined by the national body we propose below. After specialist training these should be an examination set and supervised by the proposed national body. The system for allocating posts for specialty training should be linked to the calculated requirements for different specialties. Specialty training in primary care and public health should have the highest priority in future developments. We set out in Annex II the requirements for postgraduate training in public health.

A professional body of family doctors, with representation from the NHS authorities and medical schools, should be responsible for setting the examination for family doctors to gain approval for training and for certifying family doctors once they have been trained. In addition we would recommend an examination before family doctors are accepted as unified fund family doctors. This is partly because of the larger responsibilities which we recommend should be given to the new practitioners and partly because of the variety of educational backgrounds of doctors now registered in Greece. Such an examination would ensure that the protocols and uses of the new positive drug list have been fully understood.

A new independent national body, the Postgraduate Medical Council, should be created with an overall responsibility for the postgraduate education system. It should be linked to the Ministry of Health for technical support but should have functional independence. It would be for the Ministry to plan the requirements for different specialties. As we have pointed out more than once that there is over provision of the existing specialties. It is also certain that fewer demands will be made on these specialists in the future as family doctors expand their role and consider carefully whether it is necessary to buy from their budget a specialist's opinion. For these reasons, we expect that very few doctors will need to enter these traditional specialties over the next decade.

CONTINUING MEDICAL EDUCATION

There is no structured continuing medical education in Greece. The main activities of this kind are performed within the departments where the doctor works and at scientific meetings locally or nationally. Possibilities for attending international scientific meetings seem to a great extent to be dependent on subsidies from drug companies. There is no mechanism for re-licensure.

We would propose that a national system of continuing medical education should be introduced. The responsibility for this system should preferably be placed within the medical profession through the Pan-Hellenic Medical Association. A system which requires, for example, 50 hours of accredited continuing education per 2 years is preferred to the alternative of a relicensure mechanism. We would also propose that Regional Health Councils should set aside a small budget to finance medical staff attending selected international conferences in their specialty.

MEDICAL RESEARCH

Research and education are inseparable. We understand that government support for medical research in Greece is very limited and what there is only takes place in a few University Departments. There is apparently no systematically funded health services research in Greece.

Research can be divided into the following categories:-

a. Basic scientific research - the pursuit of knowledge (with or without specific applications or objectives in mind).
b. Clinical research - research involving patients, requiring facilities for patient care as well as research. Many of those engaged in the this type of research also need clinical skills.
c. Public health research - all strategic and applied research concerned with the health needs of the community as a whole.
d. Health services research - applied research concerned particularly with the effectiveness of service provision and administration and management.

The common objective of all these types of research is improved health and quality of life.

With advances in medicine and in knowledge of public health issues, funding requirements for research are continually increasing. Every country needs to consider a mechanism and structure for its support.

In other countries the main sources of funds for research are:-

- the pharmaceutical industry
- Charities e.g. for specific diseases such as stroke, mental illness, dysphasia, etc.,
- the central health ministry
- the local health departments
- the Ministry of Education
- Research councils

We did not obtain any information on the distribution or expenditures from these sources in Greece.

In all countries of which we have knowledge, complaints are made of inadequate funding, dismal research career prospects and the demands of the clinical care of patients inhibiting research activity. Furthermore there is a lack of awareness by Ministries and the Service of the importance of research and the time and resources required to promote it. Governments usually have not placed a very high priority on medical research in Europe or elsewhere and an even lower priority on health services research. A further problem is that findings from research are ignored or not always properly disseminated and therefore duplication occurs as well as the inappropriate or inadequate use of technologies, services or treatments. Several examples of this such as the exces-

sive use of antibiotics and ultrasound and the inappropriate use of mammography were brought to our attention in Greece. Thus a special focus in research should be technology assessment (establishing guidelines for the use of diagnostic and therapeutic procedures). Greece could gather together and use the growing international base of knowledge in this field of what is effective, appropriate and cost-effective.

For research to be most effective, two different approaches should be used: first, science-led research which emphasizes the role of the individual researcher in developing new lines of inquiry; and second, problem-led research which emphasizes the need to study the current health status of the population, and present methods of treatment as a means of both directing research towards problems with the most serious effects and ensuring that medical practice, whether existing or new, is of the highest standard possible.

A wholly science-led approach cannot be effective. Some priorities have to be set, particularly when good scientific ideas exceed the funds available to pursue them. The NHS has changing needs, and priorities must reflect these. The public rightly expects a response to new problems such as AIDS. A system which relies on the initiative of individual scientists develops gaps and these become self-perpetuating. Potential gaps need to be identified early if research is to be built up in the right specialties. Therefore, some setting of priorities and some emphasis on problem-led research is essential. A coherent means of setting priorities between the various research funding bodies must be established.

In Greece, as elsewhere, inadequate resources are devoted to areas which are less popular with researchers; a vicious circle results in which there are inadequate funds and good researchers migrate to other fields. Thus the research base is narrowed. Often this is stated to be due to inadequate research proposals being put forward in these areas - and thus the problem is self-perpetuating. There are particularly serious problems with the funding of health services and public health research, as well as clinical research. The NHS devotes far too small a part of its budget to trying to find ways to improve its own operations. Indeed, whatever reform the Government finally decides to undertake in Greece, there is a strong case for systematic research to see how far the desired improvements have in fact been achieved. A major problem in the support of research is the supply of manpower and there are major difficulties in providing a stable career structure for those in research outside the academic structure of universities.

There are two methods, by which the quality of research can be assessed. One can judge the quality of the methods being used and determine whether they are appropriate, or one can examine the consistency of the findings by comparing the results with those of similar research topics and those in related fields. If there are inconsistencies then clearly one would legitimately question the quality of the work. The problem with this, however, is that quality is difficult to define and is largely in the eye of the behold-

er. There are normally two stages involved in assessing the quality of a piece of research or a proposal. The first is a peer review of applications for research and the second is peer review of papers submitted for publication.

In a relatively small country, such as Greece, it is essential that an appropriate coordinating body for all research is established, for decisions on both priorities and funding. In view of the possible biases in the review of research proposals, it is suggested that the use of international reviewers should be encouraged. In small countries there are bound to be accepted schools of thought and conflicts between researchers and academics. It is only natural that this will influence the award of grants and research methods adopted. Some countries, such as Denmark, have introduced an international system of evaluating their medical research, and have found this beneficial.

The views of foreign referees are likely to be more objective and be less affected by personal relationships than are those of the same nationality. International reviewers are also likely to be beneficial for researchers as politicians are far more likely to listen to the views of foreign referees than domestic ones. We thus recommend not only the development of an adequate funding mechanism for medical research, with a clear distribution between basic, clinical, public health and operational research but also the use of an international group of reviewers to assure the originality and quality of the work. But once a decision has been reached to give a research grant to a doctor working in the NHS, we recommend that the grant should include a part-time salary to compensate the doctor for the loss of time to earn money from fee-for-service payments (if a specialist) or to pay a locum, if a family doctor or a salaried doctor.

MAKING CHANGE HAPPEN

To set out, as we have above, what we believe should be done is easy enough. The formidable task facing the government, if it accepts our approach, is to secure the necessary changes. The precedents are not good. The decision in 1983 to develop the rural health centres was not followed up by the intended rapid expansion of family doctors.

Our immediate concern is that a way should be found to develop rapidly the two related specialties of general practice and public health. Indeed our whole plan for reform has, as its foundation, the assumption that family doctors can be produced in large numbers over the next decade. Good doctors are unlikely to choose these two specialties with any enthusiasm, even if they became well paid, if, in their basic medical education, they inherit from their teachers the attitude that these are inferior subjects. But this is the current ethos of many of the teachers in the existing medical schools.

We were disappointed that the need for change in these directions was appreciated by very few in senior positions in the universities. We discussed the need for a professor of general practice with one of them in depth. But at the end of the discussion we felt

that we had failed neither to communicate our concept of what general practice consisted nor to convince him of the need to include the subject in the medical curriculum. But even if all the Deans enthusiastically supported change, we were left in doubt about whether they were in a position to achieve it. Even if medical schools were persuaded to advertise for professors in these two subjects, we fear that, using their traditional criteria for chairs, they would fail to make appointments.

It might help to widen perspectives for a study tour to be arranged for senior faculty to see developments in the path-breaking medical schools such as McMaster, Maastricht and some in the United Kingdom. A local committee might be set up to consider reforms in medical education with a budget enabling them to assess new developments elsewhere, but this would take time and the need for action in urgent. The position seems to us serious. If other Member States became aware in depth, of how some students entered medical schools, what was being taught, how it was taught and the requirements for licensure, there could well be initiatives to introduce special examinations for Greek doctors before they were allowed to enter unsupervised practice in their health insurance systems - the sort of restrictions currently being placed on students from third world countries.

We recommend that the government should establish a Medical Council with the power to validate courses in medicine, like, for example, the General Medical Council in the United Kingdom. A medical school judged to have an inadequate curriculum would be threatened with the withdrawal of funding. An additional power of the Council would be to deal with cases of individual doctors who engage in unethical or non-professional behaviour. The membership of this body would need to be carefully chosen. Fortunately, there are a number of ex-Ministers who see the importance of general practice. There are also some professors with substantial experience outside Greece who are also keen supporters. The members would need to have strong views about raising the ethical standards of the profession. A body of this kind, though independent of government, would need the concerted support of the whole government to enable it to exercise its powers effectively.

Another complementary approach, which we favour, would be to establish a new medical school in the Athens area, preferably in Piraeus. The reasons for this proposal is the great size of the present Athens medical school and the need to establish a school with an emphasis on primary care close to an existing medical school. We envisage groups of students in the early stage of their education being sent to diagnose and quantify the health problems of rural communities and trace their origin. Only in this way will they come to appreciate the central importance of public health and the family doctor's role in health promotion and prevention. The new school would attempt to attract a supportive faculty, including Greeks wanting to return home after practising for long periods abroad. We are not suggesting that this would be an only primary care

training school. We would however expect that half or more of the graduates would choose the specialty of general practice.

OTHER HEALTH PROFESSIONALS

An efficient health care system is highly dependent on an effective distribution of qualified personnel, in order to provide adequate services. They absorb about 60 per-cent of the total health budget and a division of labour is a prerequisite for efficient delivery. We have only had time to review the position of nurses. We regret that we are not in a position to make recommendations about paramedicals.

In Greece, the total number of specialised doctors (around 25,000) medical residents (about 7,000) and medical graduates (about 7,000) is nearly equal to the total number of nurses (about 40,000). In the National Health Service nearly half of the permanent nursing posts are vacant. There is no coherent plan and targets for education and training of manpower are lacking. The Ministries of Health and Education do not apparently cooperate to develop it.

Nursing Education

Nurses are being educated:-

- at the only university school (part of the School of Health Services) at the University of Athens in a four year course. The number of nurses with a university degree is about 150 - 180 nurses
- the majority of nurses (about 60 per cent) are trained for three years at a polytechnic school, followed by 6 months of practical training: many of those who enter this course have failed entry to university
- a third training course is provided by hospital nursing schools during a two year course: many of those entering these schools have not completed high school.

After graduation some 50-60 per cent of nurses leave the profession. Some 80 per cent of those who remain are employed by public, NHS hospitals, only 3.6 per cent in health centres and 10.9 per cent in private hospitals. There are several reasons for the low status of nursing and nurses. The relationships between doctors and nurses are often bad because of the over supply of doctors and the differences in education, status and remuneration. Because of nurse shortages in hospitals, there is no time left for continuing education or specialisation, although according to EU rules four specialities have to be offered. There is no formal curriculum and in the hospital schools, doctors are teaching what they think is important. There are very limited opportunities for training in primary health care, home care or public health, as the training programme is completely hospital-based.

Working Conditions

Hospitals have complete autonomy over their nursing programmes. Because of the surplus of doctors and shortage of nurses, there is no clear separation between the duties and responsibilities of each group. Unqualified personnel are often hired for nursing when shortages are acute. Instead of long-term planning, crisis management dictates who is doing what. Although a code of ethics for nurses exists, no disciplinary action is taken against unqualified nurses, the taking of bribes or negligence. Management training for nurses, post graduate education or promotion are rare in practice. There is an uneven distribution of resources and nurses are unwilling to work in remote areas. Despite the shortage, remuneration has not improved.

Midwives are being trained as specialised nurses but can only practice without obstetricians in remote areas: they rarely have backing or advice from hospitals or doctors.

Our recommendations

In order to improve both the quality and quantity of nursing within the Greek National Health Services, a policy should be formulated and implemented jointly by the Ministries of Health and Education. This policy should aim to increase the number of nursing schools and the number being trained. This would include the setting up of nursing schools at further universities. Specialised training in postgraduate two year courses should be offered especially in public health, primary practice and home care, in order to staff primary health care with well trained nurses.

At the other end of the spectrum, a large number of nurses with a shorter practical education will be required, especially in home care, public health and primary health care. Their training in hospital-based schools should be based on a national curriculum, emphasising simple and practical skills.

For both groups pay should be increased. Additional allowances should be paid to attract nurses to work in rural areas to redress the present geographical maldistribution. The lack of qualified nurses (only 30% qualified nurses in NHS hospitals), the low pay/low status situation and the low job satisfaction can only be improved by changing the doctor/nurse ratio in education, upgrading nursing education and adequate pay.

CONCLUSION

The development of training for managers, changes in the mix of health professionals and in the modernisation of professional education are central to our recommendations. The proposed reforms depend upon them. No health care system can function efficiently without trained managers. There should be fewer doctors and an increasing proportion of them should be specialists in general practice. There should be a major expansion in nursing education, supported by nurses trained to a national curriculum.

Chapter 11

THE TRANSITION

In this Chapter we describe how the transition to the new pattern of organisation and financing might be achieved. It cannot be done quickly. At the minimum it would take 10 years to complete the process. The success of the reforms will depend on building a consensus among the political parties on the broad lines which the reform should take.

Our package of recommendations cannot be identified with any particular ideology. They combine features of regulation with features drawn from the idea of an internal market associated with a stream of thinking in the United States, with the reforms of the British National Health Service. They are based on the experience of other countries. They piece together a whole series of reforms drawn from a wide variety of country experiences.

UNETHICAL PRACTICES

We cannot avoid starting the discussion of the transition without reverting to the subject of unethical practices. Reform becomes impossible if these continue. Why should any doctor wish to leave a hospital appointment as a specialist to retrain for our proposed system of general practice, where private practice on unified fund patients is forbidden, if the option is still available to continue to supplement legitimate income with substantial untaxed income from envelope payments, kick-backs from diagnostic centres and even from pharmaceutical firms? A family doctor service will be unlikely to treat all patients equally, if some patients are giving envelope payments and others are not.

We are well aware that the pay of doctors has failed to keep pace with increases in the cost of living, after substantial increases were granted nearly ten years ago. And we

understand that these practices have become much more extensive over the past nine years. We do not consider that most doctors in Greece are underpaid. (We mentioned earlier the need for higher pay for medical professors.) It is not valid to compare the earnings of doctors in Greece with those of doctors in other countries using current rates of exchange. The only relevant comparison is how doctors' earnings compare with average earnings within the country. Each country can only pay what it can afford to pay and it is the internal relativities which are relevant.

There is an international study* of doctors' earning in general practice in different countries. Their earnings were compared with the average gross national product per head. We have attempted this comparison for Greece in 1992 using an IKA doctor adjusting the earnings for 5.5 hours work up to eight hours and for a senior house officer with five years of experience**. The latter would see outpatients for primary health care as would a consultant. The fact that the figures for the other countries are for 1985 is not relevant as both the national product and doctors' earnings will have increased by 1992. We have made no allowance for actual hours of work. The comparison is shown in Table 12. On this basis, doctors doing primary care in Greece are among the best paid among these European countries. But even if Greek doctors were as poorly paid as those in Italy, this would not seem to us any cause for exoneration.

In other countries, medical associations have developed - and enforced - codes of ethical behaviour for their members which ban "fee splitting" or accepting a share of the fee received by another doctor in return for a referral. Accepting bribes is considered even more unethical. Commercial organizations such as drug companies and diagnostic laboratories typically look for ways around these prohibitions, as part of their process of business development. But the medical profession collectively accepts that one of the responsibilities of a self-governing profession is to maintain the ethical standards of its members. In other Member States accepting the notorious "envelopes" or "φακελάκι" would be considered grossly unethical conduct. Indeed, they are virtually unheard of in all the developed countries of the OECD.

Such practices strike at the very purpose of a National Health Service which is to provide equity in access for all citizens. If one patient gains priority, another loses it. Even more unethical is for a doctor's choices of or recommendations for patient care to be guided in any respect by the doctor's own prospect of financial gain. This is a breach of the trust which must underlie the practice of any profession.

These are not matters which ought, in our view, to be dealt with by government or by the criminal law, except in the last resort. A determined government could of course stamp them out. But the methods of doing so (for example, sending imitation patients

---

* Groenewegen, P., Van der Zee, J., Van Haalten R., *Remunarating General Practiotioners in Western Europe*, Avebury, Aldershot, 1991.

** The basic salary of 260.000 drachmas per month was multiplied by 14 for the number of months for which the salary is paid and the other payments were multiplied by 12.

or drug firm representatives to see if doctors yield to temptation) are as distasteful as the practices themselves. The failure of the professional bodies to make a stand may be because they are divided and in a position of rivalry. We believe that the Medical Council, which we proposed above should be established, should take the responsibility for enforcing ethical standards of behaviour. The sanction for breaches would be withdrawal of the right to practice for periods depending on the gravity and frequency of the offence(s).

FINDING THE ECONOMIES TO FINANCE DEVELOPMENTS ELSEWHERE

As we have made clear, the main targets for finding economies are prescribing and the use of diagnostic centres. Our proposals on this subject could be implemented without any reform of the NHS.

Prescribing

This is an area where early action by the Government can be taken. Reforms in this sector do not depend on reforms being in place in other sectors. The first step would be for the government to set up a committee to define a limited list of drugs for use under health insurance and a list of the drugs which patients can be safely allowed to purchase over the counter. The positive list would include a wide range of generic drugs, now out of patent, and describe them by their internationally accepted scientific names, so that they can be bought by international tender. The committee would have before them not just the WHO list of essential drugs but lists in use in other Member States, particularly the list used in Denmark. Seminars for doctors will need to be held to explain the uses of the list. Protocols might be useful showing the conditions which should be treated with particular products on the list.

Secondly, the statistics kept by Pharmetrica would be developed so that the prescribing of each doctor could be monitored and the drugs prescribed under health insurance separated from those prescribed in private practice. The initial uses of the list would be:

- to identify those doctors who appear to be prescribing an excessive amount of a named drug, thus suggesting some type of inducement to do so from the company concerned.
- to identify those doctors whose prescribing appears to be recklessly extravagant - for example, making large use of expensive third generation antibiotics.

The initial action would be for these doctors to be visited by representatives of the National Drug Organisation to show them that what features of their prescribing have been detected and to show them that they are out of line with the prescribing of other doctors. Where there is clear evidence of inducements, after warning, the case should go to the Medical Council.

Thirdly, action could be taken to reduce and control pharmaceutical sales promotion and revise the system of pricing. We estimate that at least half the drug bill could be saved in this way. By concerted action all these reforms could be completed within two years.

Diagnostic centres

The first step would be to select those centres which meet criteria of quality and competence. The next step would be to try and negotiate with these centres the new types of contract recommended above. The centres would know that failure to reach agreement would lead to the government strengthening its own provision and banning the use of private centres. At the same time, statistics should be developed showing which doctors use which centres and which doctors are associated with which centres as share-holders. The more expensive tests would require the authorization of a limited number of listed specialists. The aim would be to halve expenditure on diagnostic tests.

PLANNING THE REFORM OF THE NHS

If the broad lines in our proposals are accepted, there is a need for detailed work on implementation. This might be pursued by a local committee for the NHS. It might split up into different task forces for different areas of reform and make recommendations to the Minister on how each of the necessary preliminary tasks might be taken forward.

Planning the training

The Health and Education Ministries would need to enter into discussions with the universities and the polytechnics on the provision of training for managers and retraining of doctors as family doctors. It would be made clear that earmarked grants would be made available for this purpose.

Meanwhile it is proposed that a committee be set up to undertake the needs analysis for the management training. It would list those who will require training. Interviews would need to be arranged to assess the capacity of individuals for further development. This would depend on their basic education, their performance in their current jobs and their willingness to participate in the scheme for management development.

It will take time to arrange for the universities to reorient their medical courses to include a basic introduction to general practice. Moreover, starting the new proposed medical school cannot be done quickly. Meanwhile progress can be made by offering retraining to doctors currently working in primary care to upgrade them to be approved as generalists. The retraining will be shorter than will eventually be required for new entrants (approximately eight months to one year). The attraction will be the level of net remuneration which the government intends to provide which will need to be an-

nounced in advance. It should also be made clear that the opportunity to retrain in 8 months is an offer which will not be repeated. Once the retraining courses are completed, all future doctors newly entering primary care will have to be fully vocationally trained as family doctors. This will take three years.

Normally, doctors who have previously practised as internists (pathologists) will be expected to apply to be trained or upgraded as family doctors. Some paediatricians may also wish to train as family doctors /paediatricians who will mainly look after children within a group of family doctors. Some general surgeons and gynaecologists, if they have a generalist background, may also be suitable for training as family doctors. An examination will be necessary which will have to be passed for acceptance for training. The doctors currently working for IKA would be expected to form a high proportion of the applicants for training and hence form a significant proportion of the new family doctors.

It would seem possible for both the retraining programme for general practice and the management development programme to start within a year.

PREPARING FOR THE NEW ORGANISATION OF THE NHS

The legal status of hospitals and their employees

The Health Ministry will need to consider in depth the legal questions of how hospitals can be made more autonomous and how staff can gradually cease to be civil servants. We regard these changes as essential to having an efficient health service in the long run.

Developing a relative value scale for the payment of specialists

An initial step toward developing the new system would be to set up a group to work on the relative value scale for the future payment of specialists. It would be helpful for the group to have in front of them the scale now being phased into the Medicare scheme in the United States which was based on empirical data. The working group may wish to study the original data used to calculate the scale from the team based on Harvard University and led by Professor Hsaio which developed it. We stress again that we envisage a much simpler scale for use in Greece. Parallel with this work would be the recruitment and training of staff to process the claims. The scale should be prepared within 18 months.

Regionalization

While the unification of the main health funds could be accomplished relatively quickly, it will take time to create the new infrastructure. Unification must be delayed

until this is in place. After the government has determined the number and boundaries of the new regions, the new Regional Health Councils could be appointed within a year and their members given induction courses. Before they take responsibility for the services they will need to recruit and train staff. In particular, they will need to establish a register of patients and the doctors they have chosen as their primary care doctor. This register would be used for making the monthly capitation payments. The software for this might be developed by consultants under contract. The Councils will also need to build up an information base, with the help of the Health Ministry from which they can work out how to divide funds between hospitals.

We envisage the new system of distributing the money being introduced, using a phased approach. The first step would be for the unified fund, in conjunction with the Health Ministry, to define regional allocations and so that funds can be distributed among all the individuals and institutions providing care to the residents of a particular region in proportion to their shares of the regional workload.

Establishing the new system of primary care

During the transitional period, immediately after the unification of the insurers, it will be necessary for the unified fund to pay directly the costs of the existing polyclinics and health centres which are not yet within the NHS family doctor system. At the beginning of the reform process, one is confronted not only with the lack of family doctors, but also with the fact that in the urban areas, "primary care" is provided by clinics and hospital outpatient departments staffed primarily by specialists. They must, and will, continue to provide care for a time at least. The new family doctors cannot, like Athena, spring fully armed from the brow of an expert committee. But it is vitally important that any interim arrangements should point forward toward the ultimate objective, rather than creating new "facts" and entrenching practices that will block further development.

Thus it is important to move as quickly as possible to introduce the new system of paying for primary care even though there are very few doctors trained as family doctors. The new system of payment will transform the attitudes of doctors towards their patients. If they are to build up and retain a list of patients registered with them up to the maximum of 3000, they will have to make their services convenient to use and go out of their way to provide a friendly service. Existing doctors working for IKA and for those other funds which are in practice using doctors on a part-time basis in primary care will have to decide whether they want to join the new family doctor service.

Only doctors who are either fully trained or upgraded, or approved for upgrading, will be able to practise within the NHS and take on registered NHS patients. Doctors who have qualified in a particular specialty will be granted exemption from that part of the training which covers their own specialty. In the future, no additional specialists

should be allowed to have their work based in primary care. It is generally believed that specialists should be based on hospitals or surgical day clinics if they develop in future. The specialists currently working in health centres and polyclinics would have four options:

- to apply for training as a family doctor (particularly those with a general training) as described above,
- to enter hospital practice in their own specialty (those with narrow specialties),
- to continue working at their present locations if they are needed for investigations (radiologists and pathologists),

or

- to become wholly private doctors.

In the transitional period while full vocational training is being introduced, patients can register with upgraded generalists and other doctors approved for upgrading. During the transitional period while family doctors are being trained, there will be a mixture of trained family doctors, doctors waiting for family doctor training and other doctors (eg specialists) working in primary care. There will be a period when some patients are registered with family doctors and some waiting to register. We are quite clear that from the start patients must register with a named doctor not with a clinic, even though the doctor may still be working from one. All patients must feel that they have their own doctors, dependent on them for the continuation of their income. Registration with something anonymous such as a polyclinic would go against the spirit of the personal doctor system. Some of the family doctors will be working in clinics, some in outpatient departments and some may prefer to practice wholly from their surgeries at home. In each case they will pay rent for the use of the premises which they are using which will be reimbursed up to limits.

Before the new scheme starts each region will need to prepare a list of those doctors who have decided to participate as family doctors. Six months before the start, the names and places of practice will need to be circulated to all unified fund members, inviting them to choose their family doctor and report their choice to their regional health council. The task of circulating the members can be done by those Insurance Organisations which decide to join. The difficulty will be to circulate this information to OGA members, as no list of them exists. Application forms for the new service can be made available in the health centres and health posts and explanations of the new system conveyed through the local and national media.

Reforming the hospitals

We envisage that the delegation of greater powers to hospitals will be instituted gradually as each obtains a new qualified general manager with supporting staff. Thus, during the transition, there will be hospitals still reliant on the prefectures for authority

on how their funds can be used: once the Regional Health Councils are established, this function of giving approvals will be taken over by them. It will be for the Regional Councils to determine when the management of a hospital is sufficiently developed for greater powers to be devolved to its hospital board.

IMPLEMENTING THE REFORM

The first step would be to establish the unified fund and the new infrastructure. The new fund might well take over some of the staff currently working on health care for the existing funds. But it is important that all posts are advertised with job descriptions and all appointments are made on merit alone.

The second step would be to give existing insurance organisations the opportunity to decide whether they wanted to join the new scheme. Some of the smaller funds providing more generous benefits may decide that they do not want to join the new combined system. On the same day as the funds are unified, there would be a transfer of the subsidy from the hospitals to the unified fund and the fund would also receive the subsidies hidden and overt which the Ministry has been providing the Insurers for health care. This provides it with the initial funds to start distributing to the Regional Councils which in turn would make distributions to the hospitals and for primary care. The insurance organisations then start to pay over their health care contributions to the unified fund.

It would not be practicable to move in one step to allocating resources on the basis of the populations served as proposed in Chapter 5. Some regions are very poorly provided with health facilities while others are very generously endowed. Thus the ultimate principle should be introduced step by step over a period of ten years. In the first year, only 10 per cent of resources would be allocated on the new basis and 90 per cent on the old. In the second, 20 per cent would be allocated on the new basis. And so on, until 100 per cent of the funding is on the new basis.

It would be the difficult task of the unified fund to separate the funds for primary health care in each region. Part would be based on the target net income of family doctors. Secondly, sums would need to be allocated for family doctors' expenses and their two budgets.

A LOCAL EXPERIMENT?

One possibility would be to try out the scheme first in one of the larger islands, for example Crete. This would mean giving priority to training doctors and managers who are going to work there. It might be possible to start the trial wholly with trained family doctors, trained public health doctors and trained managers, instead of the phasing it in which would be inevitable if the scheme were introduced in the whole of Greece.

The case against a trial is that this would delay the complete reform, the need for which is, in our view, urgent. It could be interpreted as a lack of conviction by the government that it had planned the reform on the right lines. Moreover, it is difficult to find criteria by which to judge success. Teething troubles which, to some extent, will be inevitable, could be distorted by those who would see themselves as losing out from the reform as evidence of failure. On the other hand the public's judgement on the new family doctor system could be assessed by population survey. We therefore recommend that reform should be on a national basis with the possibility of some local variation in the precise ways the reform principles are applied.

CONCLUSION

We are well aware that introducing the reform depends on a large number of different preparatory activities, all of which have to be completed within a defined time scale. We do not underestimate the complexity of some of the questions which will need to be resolved. But by a concerted effort from all concerned, it should be possible to start implementing the reforms 2 years after the Government decided on the form they will take. It hardly needs to be added that this timetable is very tight.

CONCLUSION

We have produced a set of interlinked proposals based on our description and analysis of the current situation. Many of them do not claim to be original. They reflect, as the Minister has asked, general trends in the developments of health care systems of Western Europe, USA and Canada. Many of these proposals in some version have been put forward earlier by persons or groups active within Greece. A key issue seems to be how to implement a deeply needed process of change. Different groups and many vested interests seem to block reform. The decision-making process is highly politicised in Greece. We feel that more objective criteria for decisions on different levels in the system need to be developed. There seems to be a need for a broader health policy debate based on objective data and analysis of alternative options. We believe that it is essential to build a public consensus around the plan for reform so that it will not become the plaything of electioneering, as happened over many years in Australia.

The key features of our proposed reform are the following:-

- the strengthening and targeting of public health,
- the unification of the main insurance funds,
- the gradual removal of civil service status from hospital employees,
- the granting of greater autonomy to the hospitals while keeping them in public ownership,
- cutting down entry to the medical profession and particularly to the traditional specialties,
- reforming the medical curriculum,
- improving the quality of care,
- increasing the proportion, training and status of family doctors,
- creating incentives for a more cost-effective use of resources,
- strengthening medical ethics,

- increasing the status and, we hope, recruitment to and retention in the nursing profession,
- professionalising health management,
- introducing personalised family doctors for all joining the new scheme,
- creating work incentives for specialists.

In our view the costs of these reforms can be paid for by the recommendations which we have made to secure a more rational use of drugs and diagnostic tests.

We appreciate that we have set out a long agenda for reforms and that the whole process will take ten or more years to put into place. The urgent tasks which would seem to us to require immediate action are the following:-

- to start the retraining of existing doctors as family doctors,
- to initiate the postgraduate training for the specialties of family practice and public health,
- to reform undergraduate medical education,
- to start the management training,
- to establish and enforce the positive list for drugs,
- to establish the new Medical Council to impose ethical standards on the medical profession.
- to appoint and establish the Regional Councils and unify the main health funds.

It is critical that the public should understand the rationale for these reforms. They will involve considerable changes in the behaviour of patients which may not be popular at first. People are used to going direct to specialists, particularly at hospitals. They may well see the requirement to go first to a family doctor as an unnecessary restriction of choice. It will take time for public trust in the new trained family doctors to become established. Thus it is important that the advantages of continuity of care should be stressed and that the public should understand that the family doctor is concerned with their health in all its aspects - particularly the prevention of illness and the promotion of health. The government needs to convey the messages that the health care system should not be regarded as a repair shop, that there is not a pill for every illness and that people need to learn how to take responsibility for their own health.

We see all these reforms as interrelated. They fit together like pieces in a jigsaw puzzle. We hope the government will not choose only those pieces which are least contentious. We have throughout presented options. But we have not hesitated to express our own preferences or, at least, those of the majority of us.

We have no illusions about the difficulty of securing this transformation of the health services in Greece, where the traditions of a skilled and non-political civil service is not well established. To carry them into fruition will require strong determination on the part of government and a willingness to mobilise the requisite skills wherever they can be found.

Finally, we would like to thank again the government for the excellent arrangements made to prepare for our visit and for the magnificent support we have had from the research team and from the Greek Advisory Committee.

ANNEXES

STUDY VISITS

STUDY VISITS

- IKA Polyclinic (Pangrati)
- IKA Polyclinic Zografou
- Visits to IKA family doctors in their private surgeries.
- IKA Polyclinic (Zografou)
- Evangelismos Hospital (meeting with the President Mr **Theodorou**. Visits to clinical departments).
- Athens General Hospital (meeting with the President, Mr. **Papastratis**, visits to outpatients and Clinical Depts.
- Hygia Private Hospital (meeting with the President and the General Manager, visits to Clinical Depts.
- Evgenidion Hospital (meeting with the President, visits to Clinical Depts).
- Children's Hospital (meeting with the President, Mr **Danos**, visits to Clinical Depts).
- Heppokration Hospital (meeting with the President, visits to Clinical Depts).
- Alexandra Hospital (meeting with the President, visits to Clinical Depts).
- Onassio Centre (meeting with the general mamager, Professor **Condaratos**, visits to Clinical Depts).
- School of Public Health (meeting with Professor **Levett**, Professor **Kiriopoulos**, Professor **Trichopoulou**, Professor **Papaevangelou** and the public health director of Athens' district, **Tsandiris** M.D.)
- Health Centre of Nea Makri.
- Health Centre of Markopoulo.

PERSONS GIVING ORAL EVIDENCE

- Mr. **Kontos**, TEBE Governor.
- Dr. **Karagouni**, President of Panhellenic Medical Association. Dr. **Papanicolaou**, President of Athens Hospital Doctors' Union.
- Dr. **Androulakis**, Chairman of the Board of General Howpital of Piraeus.
- Prof. **Siafakas**, Chairman of the Board of Patra's Regional Teaching Hospital.
- Prof. **Papadimitriou**, Chairman of the Central Health Council.
- Prof. **Kavadias**, Chairman of the Board of the National Drug Organisation.
- Mr. **Solomos**, Governor of IKA.
- Dr **P. Avgerinos**, Member of European Parliament, Former Pasok Minister of Health
- Mr. **Magakis**, Former Pasok Minister of Health.
- Mr. **Floros**, Former Pasok Minister of Health.
- Mr. **S. Tzoumakas** (MP) and **F. Papadelis** (MP), Representatives of Pasok Party

- Mr. **A. Kamas**, Representative of 'Political Spring' Party.
- Mr. **Aravanis** (MP) and Mr. **Ziagos**, Representatives of Communist Party of Greece.
- Mr. **Adamopoulos** and Mr. **Balafas**, Representatives of Coalition of Left and Progress Party
- Ms. **Kypriotaki-Perraki**, Governor of OGA.
- Prof. **Proukakis**, Dean of Athens Medical School.
- Prof. **Moulopoulos**, Medical School of Athens.
- Dr **Panayiotopoulos,** Institute of Child Health, Athens.
- Professor **I. Iosifides**, School of Nursing Sciences, Athens
- Dr **Mercouris-Bothosakis**, Chairman of the Association of General Practitioners.
- Dr **Christos Lionis**, General Practioner, Crete.
- Dr **Papoutsakis,** Director, Public Health Directorate, Ministry of Health.
- Dr **Economou**, Clinical Pharmacist, Alexandra Hospital.

POST-GRADUATE TRAINING IN PUBLIC HEALTH

POST-GRADUATE TRAINING IN PUBLIC HEALTH

This consists of two stages. The first requires education in the scientific basis of public health medicine. A sound knowledge of clinical medicine is assumed.

The main topics of the first stage can be summarised as:

1. Epidemiology
   a. Epidemiology of specific diseases
   b. Measures of disease occurrence
   c. Design and interpretation of epidemiological studies.
   d. Epidemiological approaches to the assessment of health care needs, utilisation and outcomes.

2. Disease prevention and health promotion
   a. Genetics
   b. Nutrition
   c. Environmental determinants of disease
   d. Communicable disease
   e. Principles and practice of health promotion
   f. Screening
   g. Legislation
   h. Communication

3. Health information
   a. Population
   b. Sickness and health
   c. Applications

4. Statistical methods
   a. Principles
   b. Descriptive statistics
   c. Statistical techniques
   d. Design and interpretation of studies

5. Medical sociology and Health Psychology
   a. Concepts of health and illnesses
   b. Aetiology of illness
   c. Health care
   d. Deviance

6. Social policy and Health Economics
   a. Health service development
   b. Equality, equity and policy
   c. Health economics

7. Organisation and management of health care
   a. Understanding organisations
   b. Management and change
   c. Service planning
   d. Evaluation of health care
   e. Managing people
   f. Self-management

Following the theoretical education in the basic sciences and principles in-service training is required to develop the knowledge, skills and attitudes required by a Public Health Physician. This must be organised on an individual basis taking into account previous experience, special interests and needs, as well as local opportunities. At the end of the training period, the trainee should have acquired knowledge, skills and attitudes appropriate to a public health specialist. This may be tested by an examination consisting of the presentation of two extended written reports illustrating how a problem was identified and the task defined, its background, the action plan, the results and the discussion, interpretation and conclusions with its application to public health medicine practice and the outcome and lessons learnt. In addition an extended oral examination must be used.

To comply with current practice and to make the training in Greece comparable to the specialist training recognised within the EU this training needs to extend to a period of 4 years. The theoretical components of the training could be provided by the Athens School of Public Health which has a competent group of academics versed in some of these disciplines. We welcome the proposed reorganisation which has been announced. The School will need strengthening in some areas to fulfil these tasks. The major need will be to develop in-service training locations for providing the crucial in-service training in the application of the theoretical skills.

To develop this plan in Greece one will need to proceed in stages. The first stage will be the training of a group of future trainers and their placement in suitable locations to provide this to further groups of trainees. The first group of trainers should be exposed to such experience in the EU, in the UK and Ireland where such development has already occurred. After this initial stage suitable methods of accreditation, inspection, evaluation and examination of training and trainees will need to be developed. Models from other countries may be helpful.

TABLES

Table 1: Infant, perinatal and maternal mortality rates, 1985-9

	Infant mortality	Perinatal mortality	Maternal mortality
Belgium	9,31*	10,20*	3,96*
Germany	8,08	7,10	8,18
Denmark	7,92	8,61	5,23
Spain	8,66*	9,99*	4,76*
France	7,79	9,76	9,82
Greece	**10,41**	**12,78**	**5,38**
Ireland	8,48	10,93	4,12
Italy	9,56	6,06	6,08
Luxembourg	8,45	8,40	4,54
Netherlands	7,51*	9,53*	7,43*
Portugal	14,49	18,38*	9,24*
United Kingdom	8,96	9,09	7,78

* 1986-88.
Source: The third edition of the EU Atlas of "Avoidable Death" (in the press).

Table 2: Percentage of children immunised (1991)

Country	Diphtheria	Tetanus	Pertussis	Measles	Polio
Belgium	94,2	94,2	94,2	66,6	99,5
Germany	95,0	95,0	95,0	86,0	95,0
Denmark	97,0	97,0	94,0	86,0	97,0
Spain	98,7	98,7	98,7	98,0	98,0
France	92,0	92,0	89,0	77,0	92,0
Greece	**90,0**	**90,0**	**84,0***	**76,0***	**77,0**
Ireland	82,0	82,0	62,0	75,0	82,0
Italy	95,0	95,0	40,0	50,0	98,0
Luxembourg	95,0	95,0	97,0*	80,0	98,0
Netherlands	97,0	97,0	97,0	94,0	97,0
Portugal	96,0	96,0	95,4	96,4	94,9
United Kingdom	90,0	90,0	90,0	94,4*	95,0

*1992.
Source: WHO data base with corrections for Spain and Ireland.

Table 3: Avoidable mortality rates (1985-89)

Condition	Deaths in Greece	Percentage of the Greek mortality to the EU rate
Tuberculosis (ages 5-64)	298	93,8
Malignant neoplasm of the cervix uteri (15-64)	439	88,3
Malignant neoplasm of the cervix and body uterus (15-64)	439	88,3
Hodgkin's disease(5-64)	333	118,3
Chronic rheumatic heart disease (5-44)	24	40,5
All respiratory disease (1-14)	125	79,9
Asthma (5-44)	22	13,1
Appendicitis (5-64)	2	6,9
Abdominal hernia (5-64)	12	21,6
Cholelithiasis and cholecystitis (5-64)	37	38,7
Hypertensive and cerebrovascular diseases (35-64)	6.926	112,0
Cancer of the breast (25-64)	3.427	81,3
Ischaemic heart disease (35-64)	14.191	104,1
Peptic ulcers (25-64)	96	26,7
Maternal mortality	32	47,0
Perinatal mortality	7.680	109,6
All causes	62.917	58,7

Source: W. Holland, European Community Atlas of Avoidable Deaths, (third edition).

Table 4: AIDS cases and incidence rates per million population, by country and year of diagnosis reported by December 1987 and December 1992 and cumulative total, unadjusted for reporting delays (1987-1993), European Union.

	Year of Diagnosis				
	1987		1992		Cumulative Total (1987-30/6/93)
Country	**Cases**	**Incidence**	**Cases**	**Incidence**	**Cases**
Belgium	120	12,1	221	22,1	1.411
Denmark	100	19,6	197	37,9	1.225
France	2.232	40,1	4.439	78,0	25.459
Germany	1.078	13,9	1.403	17,4	9.997
Greece	**53**	**5,3**	**162**	**15,7**	**800**
Ireland	20	5,7	77	22,0	341
Italy	1.016	17,7	3.937	67,9	17.864
Luxembourg	3	7,5	12	30,0	67
Netherlands	241	16,5	481	31,6	2.678
Portugal	72	7,0	281	26,8	1.307
Spain	1.020	26,2	3.815	98,8	19.815
United Kingdom	669	11,8	1.330	23,0	7.699
TOTAL	6.624		16.355		88.663

Source: WHO-EU Collaborating Centre on AIDS, *AIDS Surveillance in the European Community Countries*, Paris, 1993.

Table 5: Health expenditure as a proportion of the gross domestic product

Country	**1971**	**1981**	**1986**	**1988**	**1989**	**1990**	**1991**
Belgium	4,2	7,2	7,6	7,7	7,6	7,6	7,9
Denmark	6,4	6,8	6,0	6,5	6,5	6,3	6,5
Germany	6,3	8,7	8,6	8,8	8,3	8,3	8,5
Spain	4,1	5,8	5,6	6,0	6,3	6,6	6,7
France	6,0	7,9	8,5	8,6	8,7	8,8	9,1
Greece	**4,0**	**4,5**	**5,4**	**5,0**	**5,4**	**5,4**	**5,2**
Ireland	6,6	8,8	8,1	7,3	6,9	7,0	7,3
Italy	5,5	6,7	6,9	7,6	7,6	8,1	8,3
Luxembourg	4,6	7,1	6,7	7,2	6,9	7,2	7,2
Netherlands	6,4	8,2	8,1	8,2	8,1	8,2	8,3
Portugal	na	6,4	6,6	7,1	7,2	6,7	6,8
United Kingdom	4,6	6,1	6,1	6,1	6,1	6,2	6,6

Source: OECD data base.

Table 6: Utilisation of services in 1989

Country	Home and office visits per head	Consumption of medicines per head(1)
Belgium	7,6	9,3
Germany	11,5**	12,2**
Denmark	5,6	6,1***
Spain	6,2	-
France	7,2	38
Greece	-	**21**
Ireland	6,6*	9,9**
Italy	11*	20,1
Luxembourg	-	-
Netherlands	5,5	8
Portugal	2,8	16,5
United Kingdom	5,7	7,5

*1988, **1987, ***1986, (1) in packages.
Source: OECD health data base.

Table 7: Indicators of provision and utilisation of inpatient resources European Union countries, 1989

Country	Inpatient care beds per 1,000	Inpatient days per head	Inpatient admissions per 100
Luxembourg	12,3	3,7	20,9
Netherlands	11,6	3,8	11
Germany	10,8	3,4	21,5
France	9,9	2,9	22,8
Belgium	9,8	2,6	22,8
Italy	7,2	1,8	15,3
United Kingdom	6,4	2	15,9*
Ireland	6	2,8	15,2*
Denmark	5,9	1,8	21,1
Greece	**5,1**	**1,3**	**12,6**
Portugal	4,6	1,1	10,6
Spain	4,3	1,2	9,8
EU Average	7,8	2,4	16,2

*1988.
Source: OECD health data base.

Table 8: Public opinion survey on health services in 1992 (percentage of respondents)

Country	Quality Good[1]	Services inefficient[2]	Less good in future[3]	Willing to pay more[4]
Belgium	92	37	54	47
Germany	91	27	53	32
Denmark	93	46	67	54
Spain	36	72	39	51
France	95	36	49	38
Greece	**25**	**82**	**47**	**65**
Ireland	74	58	65	37
Italy	34	82	55	52
Luxembourg	89	32	27	61
Netherlands	93	32	57	45
United Kingdom	81	43	64	54
EU (12)	71	50	53	45

1. "In general do you think that the quality of health care people receive is good?"
2. "Health services available to the average citizen are inefficient and patients are not treated as well as they should be".
3. "In the future the health care provided to the average citizen of this country will be less good because of rising costs".
4. "I am willing to pay more for health care benefits even if this means increased taxes".

Source: Ferrera, M., *EC Citizens and Social Protection: main results from a Eurobarometer survey*, Commission of the European Communities, Brussels, 1993.

Table 9: Drug expenditure as a proportion of Gross Domestic Product

Country	Year	Drug expenditure as % of GDP
Greece	**1991**	**2,0**
Germany	1988	1,8
France	1990	1,5
Italy	1989	1,5
Spain	1987	1,1
Netherlands	1990	0,8
Sweden	1989	0,7
United Kingdom	1989	0,6

Table 10: Positive and negative list of drugs in the European Union

Country	List	
	Positive	**Negative**
Belgium	Yes	No
Germany	Yes but from 1996	Yes
Denmark	Yes	No
Spain	No	Yes
France	Yes	No
Ireland	No	Yes
Italy	Yes	No
Luxembourg	No	Yes
Netherlands	Yes	No
Portugal	Yes	No
United Kingdom	No	Yes

Table 11: The promotion of the use of generics

Strongly	**Yes**	**No**
Germany	Denmark	Belgium
Netherlands	Portugal	Greece
United Kingdom	Ireland	Italy

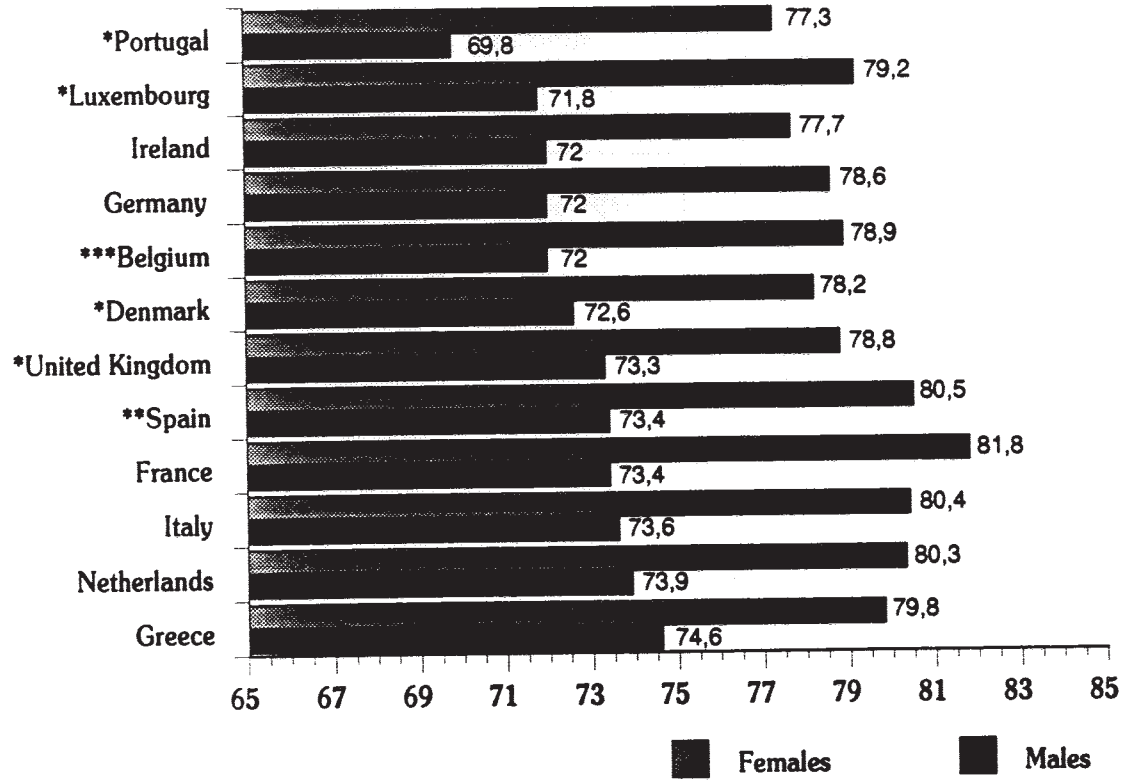
Table 12: Comparison of relative doctors' earnings in Greece (1992) with those in Europe for 1985

Country	**Doctor's income before tax divided by Gross National Product per head**
Greece	ΙΚΑ - 2,5*, S. Registrar (Επιμελητής Α) - 4,2
Germany	4,9
Netherlands	4,9
United Kingdom	4,4
Denmark	3,8
France	3,8
Belgium	3,1
Finland	2,9
Norway	2,9
Sweden	2,7
Italy	2,1

*The figure is 3,63 if adjusted for full-time employment.

FIGURES

Figure 1: Life expectancy at birth for Males and Females, European Union countries, 1990



*1991 **1989 ***1987.
Source: WHO Health for All Data-Base.

Figure 2:

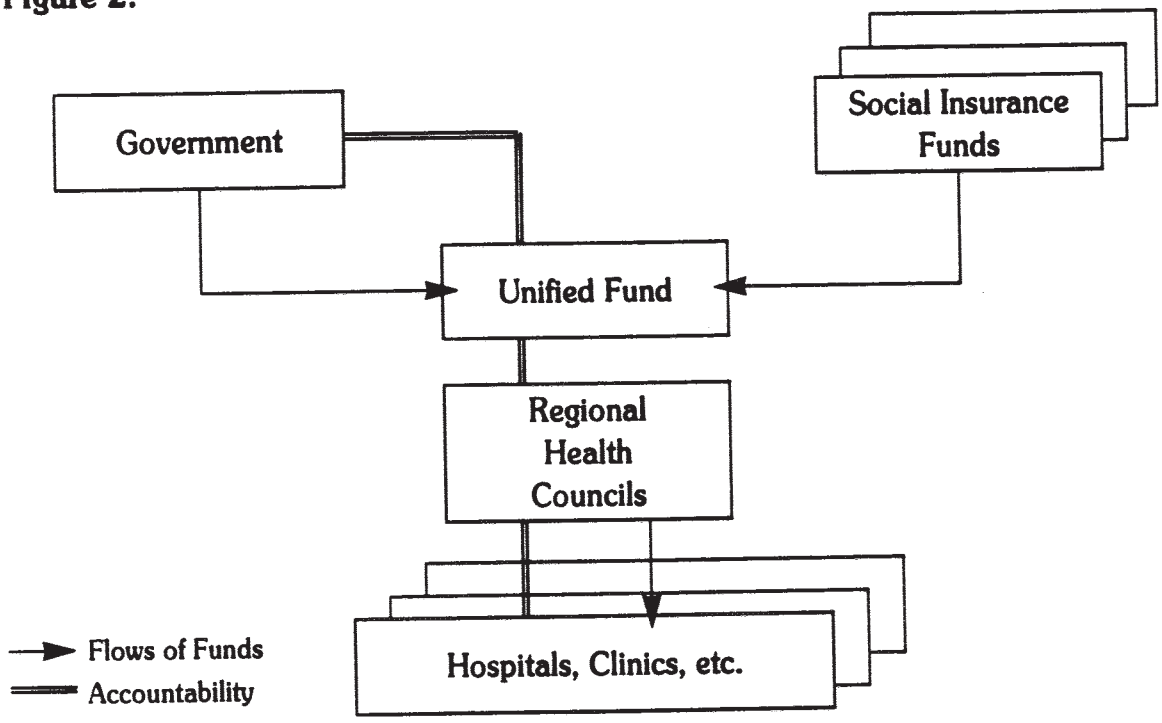


Figure 3A: Organisation at the Centre - Model A

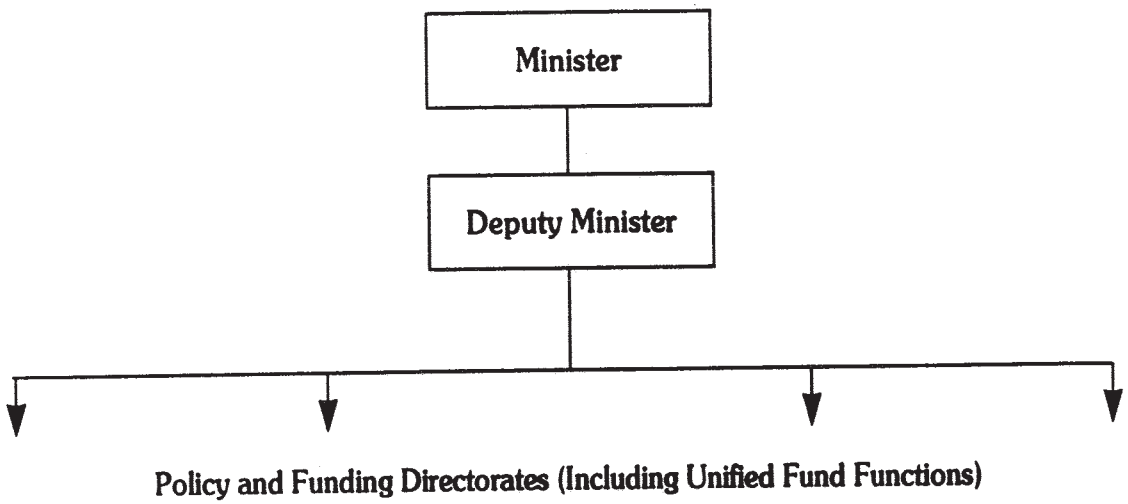


Figure 3B: Organisation at the Centre - Model B

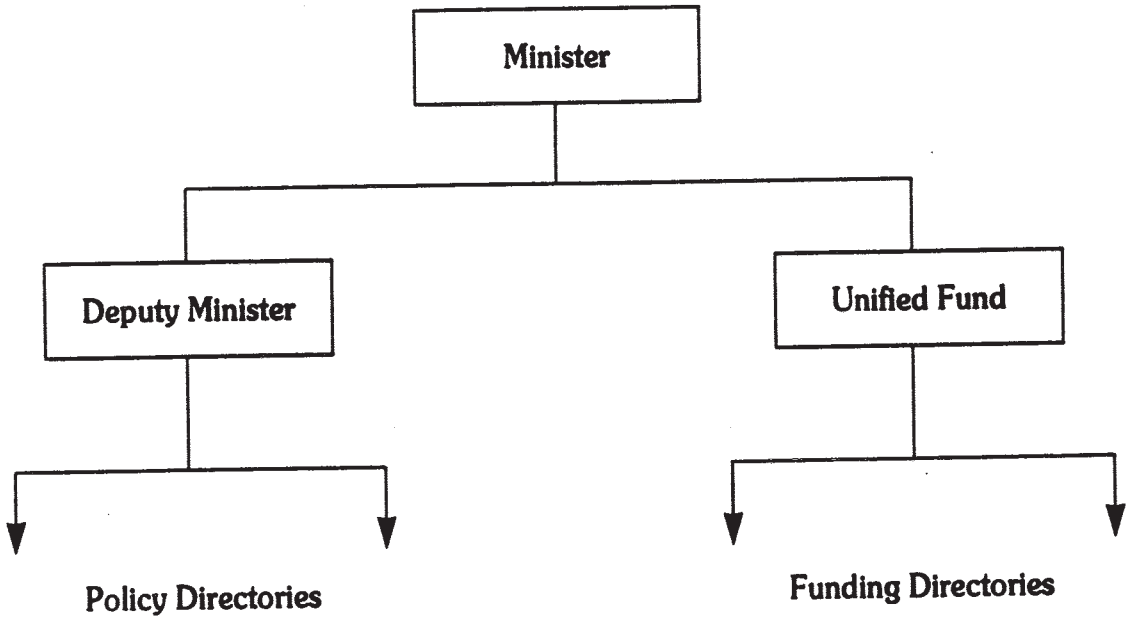
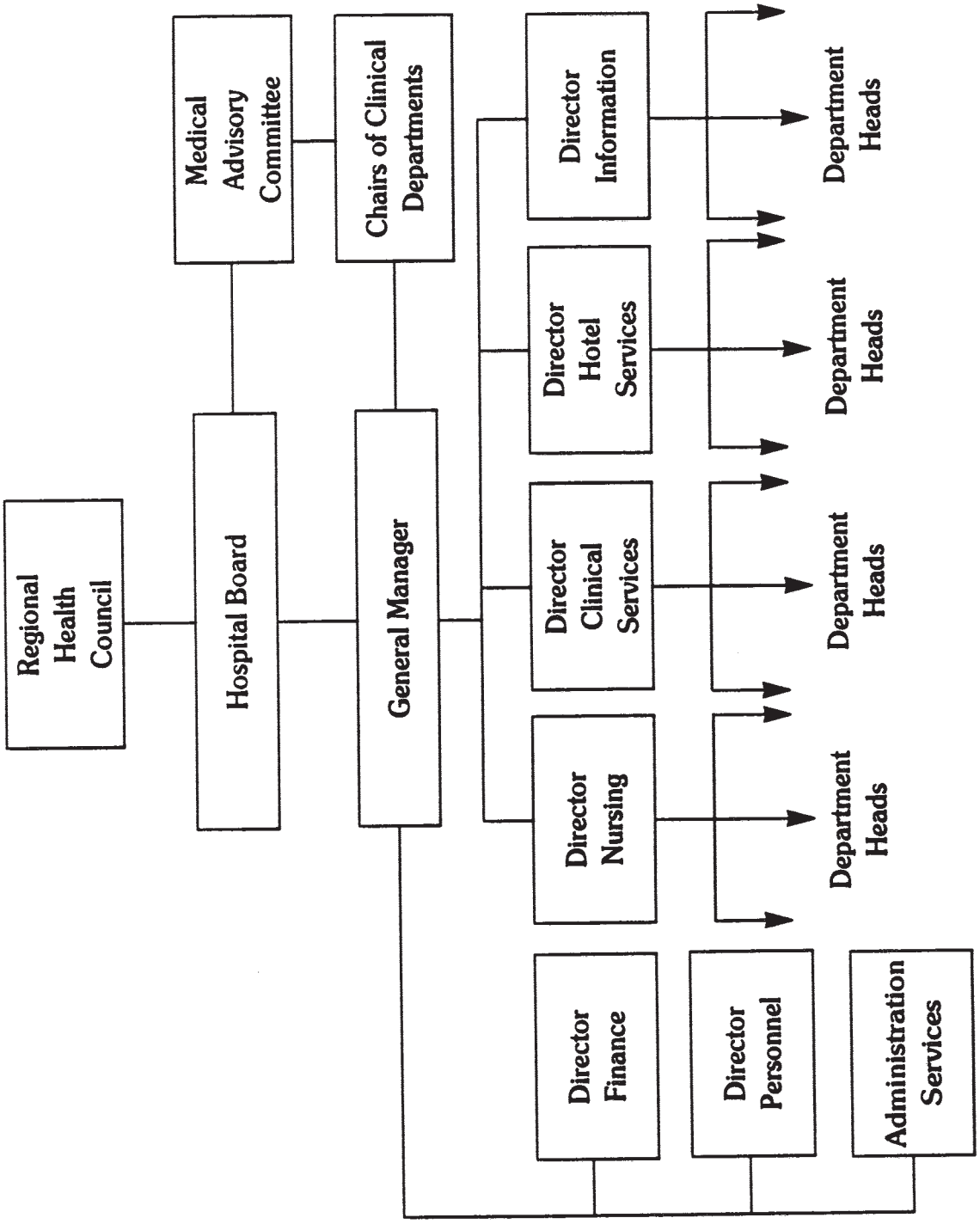


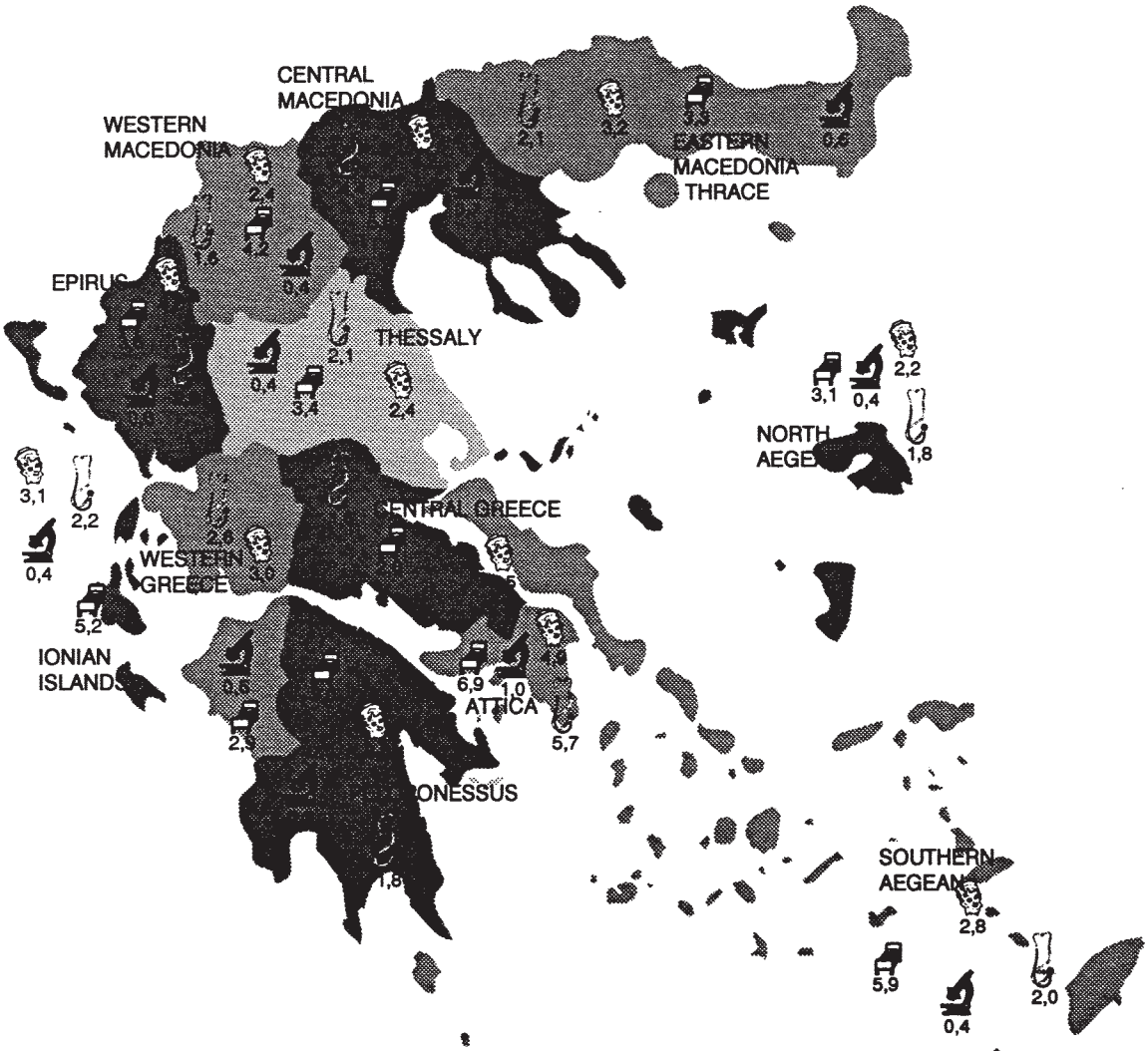
Figure 4: Example of a hospital's senior organisational structure



MEDICAL MAP OF GREECE - 1992

Medical Map of Greece 1992:

Medical, hospital, παραϊατρικό personnel and beds per 1000 inhabitans and per medical region.



Medical Region	Population
Attica	3.523.407
Central Macedonia	1.710.513
Western Macedonia	293.015
East. Macedonia - Thrace	570.496
Central Greece	582.280
Western Greece	707.687
Epirus	339.728
Thessaly	734.846
Peloponessus	607.428
Ionian Islands	193.734
North Aegean	199.231
Southern Aegean	257.481
Crete	540.054

Τα στοιχεία περιλαμβάνουν Νοσοκομεία του ΕΣΥ και του ιδιωτικού τομέα, Κέντρα Υγείας και Υγειονομικές Υπηρεσίες του ΙΚΑ.

ISBN 0-85328-207-2