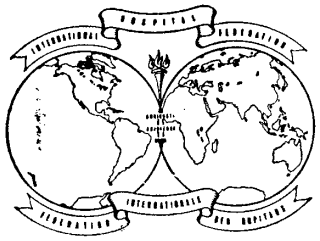

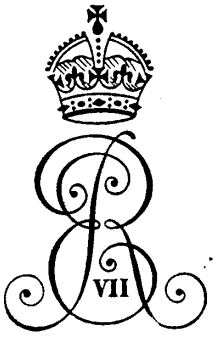

THE INTERNATIONAL HOSPITAL FEDERATION

in collaboration with

KING EDWARD'S HOSPITAL FUND FOR LONDON

The

HOSPITAL SERVICES

of

EUROPE

Report of the

THIRD EUROPEAN CONFERENCE

October 1966

INT

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THE HOSPITAL SERVICES OF EUROPE

REPORT

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THIRD EUROPEAN CONFERENCE

10–14 October 1966

held at the

HOSPITAL ADMINISTRATIVE STAFF COLLEGE

2 Palace Court, Bayswater, London, W.2

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THE INTERNATIONAL HOSPITAL FEDERATION

PRESIDENT:
EDWIN L. CROSBY, M.D.

SECRETARIAT: THE HOSPITAL CENTRE, 24, NUTFORD PLACE, LONDON, W.1

The International Hospital Federation, founded in 1929, *when it was known as the International Hospital Association, is a non-profit making, non-political federation of all who work in or for hospitals. The official languages of the Federation are English and French.*

In pursuance of its objectives, the Federation, which has its headquarters in London at the Hospital Centre, 24 *Nutford Place, W.*1., *maintains a library and information bureau on hospital matters; offers advice and assistance to members on their special problems and in particular arranges hospital visits in any member country to meet individual needs and furnishes personal letters of introduction.*

The Federation holds an International Hospital Congress every other year, at which representatives of all branches of the hospital service can meet their colleagues from other countries and discuss common problems. Since 1949 *these congresses have been held in Holland, Belgium, England, Switzerland, Portugal, Scotland, Italy and France.*

In the intervening years the Federation organises study tours of hospitals in order to give members first-hand knowledge of hospital work in different countries. Countries visited so far include: Sweden, Italy, France, Ireland, Germany, U.S.A., Belgium and Israel. Both congresses and study tours are open to non-members, but members receive priority in the allocation of places and pay reduced registration fees.

The Federation supports international study committees on current hospital problems and runs courses in hospital administration. It also publishes a quarterly international hospital journal, "World Hospitals" in English and French, with summaries in German and Spanish. This journal is issued free to members to keep them informed of the latest developments in the hospital world.

Membership of the Federation is divided into four categories:

(*a*) *National hospital organisations, governmental or non-governmental, including national associations of public or private hospitals, ministries of health, and any other organisations concerned with hospitals at national levels.*

(*b*) *Any other organisations, associations and institutions whose aims or activities are directly concerned with the hospital service including professional organisations, regional or local health authorities, groups of hospitals and individual hospitals.*

(*c*) *Members of all categories of hospital staff, or professions concerned with hospital work, of hospital management committees or boards and any other persons actively interested in hospitals and their work.*

(*d*) *Professional, commercial and industrial firms concerned with the hospital field and publishers of hospital journals.*

PREFACE

The first and second Conferences on Hospital Services in Western Europe proved so successful and the Reports* on them have had such wide circulation that a third Conference was held from 10th to 14th October 1966.

This Conference was convened under the joint auspices of the International Hospital Federation and King Edward's Hospital Fund for London and took place, as on previous occasions, at the Administrative Staff College of the King's Fund in Bayswater, London, W.2. Thanks are due to those who contributed papers and participated in the Conference; to the Hon. George Chubb,† Chairman of the Management Committee of the King's Fund, who opened the Conference and welcomed those taking part; to Sir Arnold France, who gave the opening address; to Mr. R. A. Mickelwright, who presided with his usual charm and authority; and to Dr. Neville Goodman for preparing and editing this Report.

Participants in the Conference were invited in their personal capacity and not as delegates, and this, combined with the informal atmosphere of the Staff College of the King's Fund in which they lived and worked together, created invaluable opportunities for frank exchanges of views.

The papers presented were circulated beforehand and in the sessions each author present explained and elaborated his paper, answered questions and invited discussion, which was often lively and always valuable.

Many of the participants—of whom a list follows—had been present at one or both of the two earlier Conferences. Newcomers included Mr. H. Simola from Finland; Mr. J. A. Robins and Dr. F. O'Siocfrada from Ireland; Dr. J. Assis dos Santos from Portugal; Dr. A. Serigo from Spain; and Mr. D. Macmillan and Mr. J. F. Milne from England and Mr. A. L. Rennie from Scotland. Dr. Ivo Margan was especially welcome

* The Hospital Services of Western Europe. Report of the Conference held in November 1962, London. (Out of print.)
Ibid. Report of the Second Conference, held in April 1964, London. Obtainable from the International Hospital Federation, price 10*s*.
† Now the Rt. Hon. the Lord Hayter.

as a participant from Yugoslavia, which had not previously been represented. Prof. R. E. Chester, besides contributing much to the discussions, gave a stimulating summary of certain points in the debates, which unfortunately cannot be reproduced owing to a failure of the tape-recording.

Dr. P. D. Bonnet and Mr. C. W. Churchill were present as Observers from the United States and Dr. Bonnet was good enough to give an informal talk on certain aspects of the hospital services in their country.

Dr. E. L. Crosby, President of the International Hospital Federation, was able to be present at the close of the Conference and also gave a short talk.

The theme of the Third Conference was a development of that of the Second Conference, at which the most important problems facing the hospital services in 1964 were examined.

The *pressure for more hospital services* was found to be the major problem and this subject was chosen as the theme for the Third Conference. The headings under which the participants were asked to set out their findings will be found on page 13.

Part I of this Report consists of a general report on the Conference by the Rapporteur on a subject-by-subject basis, setting out the main subjects discussed, the views of the Conference on these subjects and the conclusions reached. Part II consists of reprints of the Opening Address by Sir Arnold France and of the individual papers submitted.

PARTICIPANTS

Austria	*__Dr. ELLY E. KÖNIG,__ Oberregierungsrat der NÖ. Landesregierung, Minoritenplatz 8, 1014 Vienna.
Belgium	__Professor Dr. J. BLANPAIN,__ Directeur, Centrum voor Ziekenhuiswetenschappen, Université de Louvain, Vital Decosterstraat 102, Louvain.
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	__Dr. O. VAUHKONEN,__ Chairman, Foundation for Education in Hospital Administration, Et. Makasiininkatu 4, Helsinki.
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	__Dr. F. O'SIOCFRADA,__ Medical Inspector, Department of Health, Dublin.
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OBSERVERS

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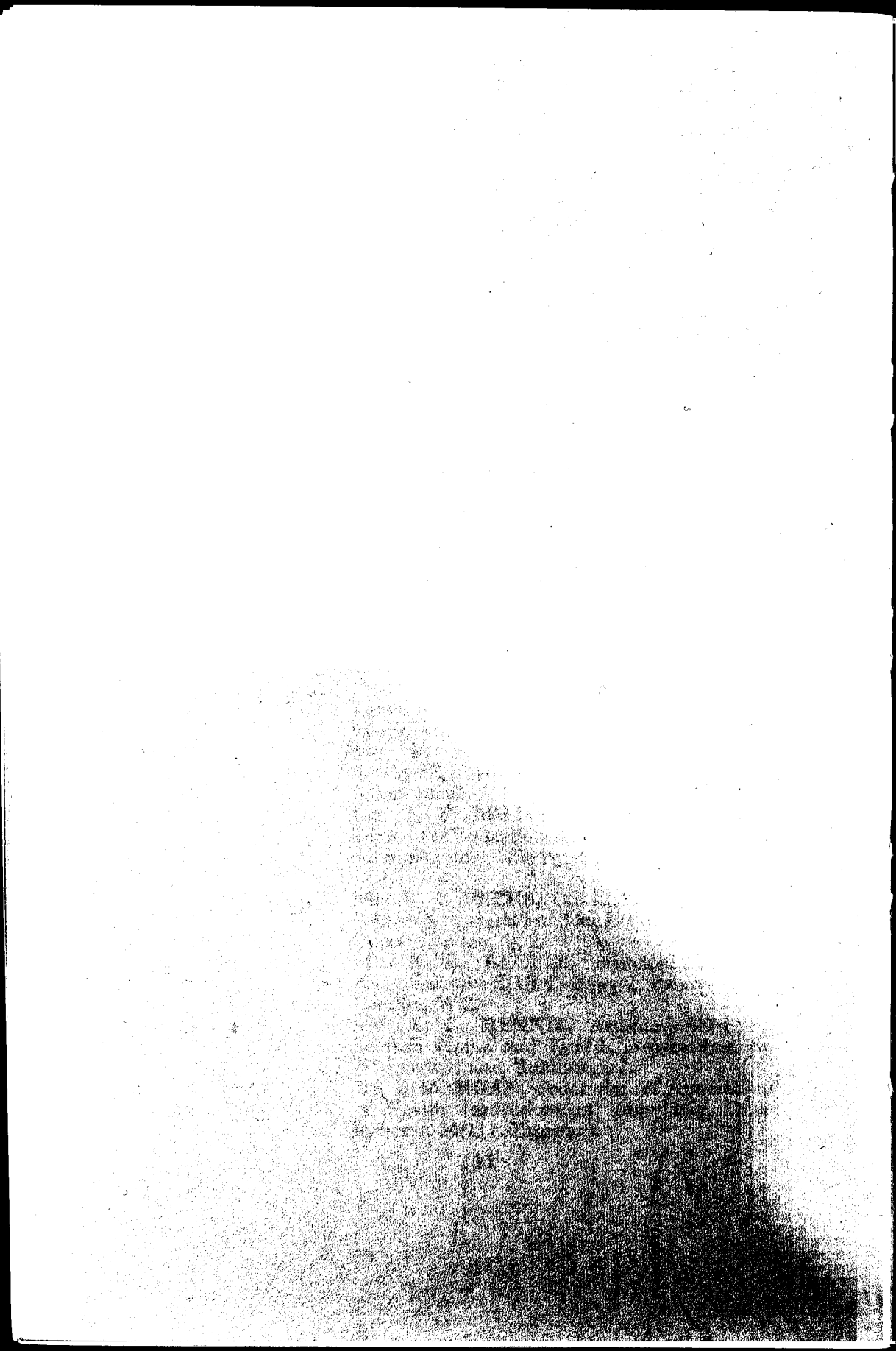
World Health Organisation	***Dr. F. BAUHOFER,** Regional Officer for Social Health and Medical Care, World Health Organisation Regional Office for Europe, 8 Scherfigsvej, Copenhagen Ø.
International Hospital Federation	**Dr. J. C. J. BURKENS,** President Designate, 2 Nieuwe Plantage, Delft, Netherlands. **Mr. D. G. HARINGTON HAWES,** Director General, The Hospital Centre, 24 Nutford Place, London, W.1. **Miss D. MAITLAND,** Editor, "World Hospitals", The Hospital Centre, 24 Nutford Place, London, W.1.

*Unable to attend.



THEME

The pressure for more medical services, including curative care of all kinds and medical care and for more hospital services of all types, including acute, mixed, long-term and psychiatric services.

(i) There seems to be pressure for more medical services and for more hospital beds in almost every country. Will you please enumerate the factors considered to be at work in your country causing this pressure and state who is behind it (e.g. the public, the medical profession, the Government). What is your assessment of the relative importance of these factors; which of them have influenced the development of medical care in the past; which have influenced its expansion and which have influenced its limitation?

(ii) What steps have been taken in your country to estimate the need for hospital beds and how has it been done? Can one expect a change in the needs of the future (increase or decrease)? What would provoke this change? Which factors are important in this respect?

(iii) Perhaps in your country there is more pressure for medical services in general, or for certain kinds of medical services, or perhaps the pressure is stronger for hospital beds in general or for specific kinds of beds (e.g. maternity, paediatric, chronic illness, new specialities, laboratory services, etc.). Please describe these special demands and the arguments used in support of them; also the methods used to assess them.

(iv) Are there any counteracting influences at work to prevent overburdening the country's labour forces and economy with too many medical institutions or agencies providing medical services? If so, where do they originate and what arguments are used? If powerful bodies such as Government departments, labour unions, or insurance agencies are involved, what means do they have at their disposal and what is the result of the efforts they make?

(v) Are there any statistics which indicate that the pressure for more medical services is increasing or declining? If so, will you please give details?

(vi) Please state what research, appropriate to the theme of this Conference has been undertaken in your country, e.g. average length of stay of patients in hospital, out-patient services, general practitioner services.

What is required in your reply to these questions is an objective statement of the facts as they exist in your country. If you wish to comment on these facts, please do so at the end of your paper.

PART I

THE PRESSURE FOR MORE HOSPITAL SERVICES

GENERAL REPORT

by

NEVILLE M. GOODMAN, C.B., M.D., Ph.D., F.R.C.P.

Introduction

The themes of the three Conferences held up till now on the Hospital Services of Western Europe form a loosely coherent and progressive whole.

The First Conference in November 1962 consisted of a comprehensive study of the hospital services of the area. The Second Conference in April 1964 attempted to define the changing problems in these services. The Third, in October 1966, selected one of these problems—pressures on the hospital services—and analysed it in greater detail.

An elaboration of this third theme, setting out the form in which the participants from each country were requested to submit their observations, is reprinted on p. 13, on a subject-by-subject basis.

INCREASED PRESSURE ON THE HOSPITAL SERVICES

It was assumed—and none of the participants disputed this assumption—that pressure for more medical and hospital services existed and had increased in all the participating countries. This was true, it seemed, for the hospital services taken as a whole, although the force of the pressures varied in different countries. The demand for certain services, however, had diminished in all countries and the pressures on different parts of the hospital service varied from country to country.

The evidence for such general increase in demand, both subjective and statistical, is set out in every one of the seventeen papers submitted to the Conference and printed in Part II of this Report. This pressure goes well beyond that which would be expected from the normal increase in population (see Table 1 on p. 35) and the increase in cost is far more than that represented by the diminution in the value of money.

Statistical evidence

Thus, in *Denmark*, every index of medical activity—the numbers of in-patients and out-patients, surgical operations, X-ray examinations, analyses, prescriptions and general practitioner consultations—'show a yearly increase as can be

very clearly demonstrated by statistical data from various sources'. In *France*, consultations of family doctors increased every year by 4%: hospital services increased from 53·4 to 56·5 per 1,000 pop. between 1959 and 1962: the number of patient-days increased by 9% between 1961 and 1963: and the increase in cost per patient-day is 5–6% each year. In *Germany*, the number of hospital patients per 1,000 pop. increased from 116 in 1955 to 129 in 1964: the numbers of treatments per 1,000 insured members in general practice rose from 4,220 in 1960 to 5,050 in 1964, and the expenditure from 354 to 455 DM per member over the same period. In *Ireland*, the number of hospital patients per 1,000 pop. increased from 68·5 in 1955 to 99·3 in 1964. In *Italy*, there has been a 'new dramatic increase in the use of pharmaceutical services of the order of 15–20% on a figure already high'. In the *Netherlands*, about 3·6% of the net national income was spent on health services in 1953 and in 1963 this figure had risen to about 4·9% (estimated). Here there is a definite shift towards the hospital at the expense of general practitioner services. The number of services by the general practitioner and his workload had not increased, whereas the number of patients referred to specialists had more than doubled in the last decade. In *Portugal*, the number of in-patients has increased by 207,400 and the number of emergencies by 305,724 between 1955 and 1964. Taking 1945 as a base-line (100), the consumption of medical care in *Sweden* had increased to 153 by 1958. In *Switzerland*, the number of consultations and visits by general practitioners and specialists rose from 602 per 100 pop. in 1952 to 629 in 1962, the number of operations from 6·56 to 9·08 and the number of blood transfusions from 0·76 to 2·78 over the same period. The growth of pressure on medical services in *England and Wales* is shown by a 32% increase in the number of in-patients; a 12% increase in out-patient attendances at consultation clinics and a 16% increase in those at emergency departments between 1955 and 1965. In every one of nineteen types of health services there was an increase in the rates between 1955 and 1965.* Finally, in *Yugoslavia*, if 1962 is taken as 100, by 1965 the index of

* With the exception of in-patient occupational therapy; and ante- and post-natal attendancies at Local Authority Clinics, now more often undertaken by family doctors.

treatments in health stations and polyclinics was 129 and in hospital institutions was 104.

Conclusions

Taken in isolation, of course, most of these figures merely indicate an increased use of health services. If the health services were not under pressure at the beginning of the selected period, or if capacity enlarged proportionately to the increased use, then increase in pressure on the services did not occur. But in fact, health services have always been under pressure, and expansion—though it occurs continually—has seldom kept pace with demand. The Conference was clear that the statistics quoted above and their own experience showed that demand was growing faster than supply and that therefore pressures on the hospital service as a whole were increasing.

FACTORS CAUSING INCREASED PRESSURE

No less than twenty-five factors influencing such an increase were mentioned in the papers presented and in the discussions.

Judging by the standard of the numbers of papers which mentioned a particular factor, the most common cause of increasing pressure was the *extension of free medical care to the individual* (14)*, whether by spread of health insurance to larger and larger proportions of the population or by the introduction or extension of free medical services. Closely linked with this factor was the *extension of sick benefits during illness or disability* (3), so that financial loss during illness was reduced or abolished.

For example, in *Norway*, the whole population is compulsorily insured, in *Yugoslavia* 98%, in *Denmark* 95%, in *Austria* 70%, in *Portugal* 23%, and in *Spain* 15%. In *France*, 80% of medical and 100% of surgical charges are repaid. In *Ireland*, 92% of the population are eligible for free or reduced cost hospital care, and, in *Sweden*, in-patient treatment is free but only 75% of out-patient charges, while in the *United Kingdom*, all health services are virtually free to the whole population, without insurance against ill-health.

* Numbers in brackets show the number of countries (out of 17) mentioning this factor.

That the increasing removal of financial obstacles to medical and hospital care results in increased use is common experience. Opinion, however, was divided on the question of whether such an extension of free care results in unnecessary use or misuse of hospital facilities.

Thus in *Finland* a survey had suggested that only 30% of in-patients had adequate medical reasons for admission, while in the neighbouring country of *Norway* a survey suggested that only 4% of in-patients in two large hospitals had been unnecessarily admitted.

[In making comparisons on this point, it is important to make clear whether medical only or medical and social reasons are being considered.]

By the same standard (i.e. the numbers of countries mentioning the factor), *the increased proportion of old persons in the population structure* came next in importance (11).* (A rising birthrate with an increase in infants and children was also mentioned by the Netherlands.)

Every country showed this rise in the ratio of the aged in their population, e.g. the percentage of over 65's in the population of England and Wales increased in the ten years 1955 to 1965 from 11·5 to 12·2. It was equally accepted that the elderly (and young children) require more medical and hospital care per head on average than those from 5 to 65. Graphs from Finland showed this very clearly and work had also been done in Sweden on this subject.

Progress in medical science, in specialisation and in teamwork, increased the number of investigations and the variety of treatments given per patient and was the third cause mentioned (10). *A higher and rising standard of living*, both demanding and permitting more to be spent on health came next (8), with side effects of increasing traffic accidents (5), the ailments of affluence (1), and drug addiction (1).

Fifthly, came *changes in social conditions*, largely the result of industrialisation and urbanisation (6), including the employment of women (1). These changes both diminish the willing-

* See also under Special Needs and Demands.

ness to undertake care of the sick person at home (6) and create new diseases (1).

Though *growth of the population as a whole* was only mentioned in about one-third of the papers (5), it is of course common to all and was presumably taken for granted.

Similarly, the *growth of public confidence in hospitals*, as the centres of medical knowledge rather than merely places for the poor to die in if they must, though also mentioned five times, is clearly a common feature in all countries.

Health education of the public (5) was also an important factor in increasing demand, by familiarising people with medical procedures and reducing fear of the hospital—though in some cases phobias might be increased (1), also with resulting increase in demand.

Pressures from the medical profession to increase facilities (4) arose either from a praiseworthy desire to do better for their patients or from prestige or financial inducements. Competition between public and private hospitals (1) brought pressure for similar reasons.

'Interest' or pressure groups concerned with special fields (3), both medical and lay, increased demand for the services in which they were interested. For example, in *Norway*, they were largely responsible for the creation of 110 specialised hospitals and nursing homes. *Sweden* considered that they performed valuable services if kept under reasonable control. The time had perhaps come when thought would have to be given as to whether some small saving in life or suffering, which was very costly in staff or money, was worth while compared to greater or more widespread benefits for the same expenditure in money or staff. Moreover, there is the problem of who will make the decision if a choice has to be made. This problem was already acute in more underdeveloped countries. It was in such fields as radiotherapy, heart surgery and renal dialysis that pressure or interest groups might waste money unless controlled by strict planning necessities.

The *medical screening* either of special groups such as school children, or to discover particular diseases, e.g. diabetes, cancer or tuberculosis, was mentioned as a factor three times; and

allied to this was the tendency *to seek medical care earlier* (1). Poor development of medical care outside the hospital was twice mentioned; *Finland* and *Yugoslavia*, for instance, were planning to develop health care outside the hospital in order to relieve pressure on the hospital.* Inefficiency of treatment (1) was also mentioned.

Conclusions

Clearly, the four main causes were felt to be the removal of direct financial deterrents to seeking medical care; the increased proportions of elderly persons in the population, with their greater needs; the greatly increased complexity of medical care, requiring more numerous and more complicated investigations for each patient; and rising economic, social and educational standards, with resulting increased demands.

To these must be added *population growth* and '*Spitalfreudigkeit*' or an improved public image of hospitals.

Negative factors

Besides the positive factors causing increased pressures on the hospital services, which have been enumerated above, there are certain negative factors, i.e. factors which limit capacity to meet increased demand. A number of these were mentioned in the papers and in the discussions. Chief among them were limitations in staff and in finance, and in failure to make better use of beds nationally or locally, by such administrative and planning methods as regionalisation, rationalisation, greater flexibility, etc.

(*a*) *Staff shortages*. A crude and undesirable brake on the expansion of health services is operated by limitations on staff and consequent bottlenecks of various kinds. Doctors, nurses and other staff may be insufficient in numbers to carry on planned or even existing services. This is particularly the case in *Scandinavia*, *Germany*, *Switzerland* and the *United Kingdom*, in all of which countries the ugly spectre of wards closed or services curtailed by shortages of staff has been seen.

In *Denmark*, for example, 40% of medical students withdrew

* See also 'Alternatives to Hospital Care', ed. N. M. Goodman, Committee of Experts on Public Health, Council of Europe, Strasbourg, 1963.

before qualification, and 33% of nurses are permanently lost to nursing. *Denmark* and the *Netherlands* hope to see an increase in male nurses. In the *United Kingdom*, although the number of nurses had greatly increased, with an ever-rising proportion of married women, demands had increased faster. *Belgium* had a shortage of trained nurses but not of auxiliary nurses or of doctors, who were very well remunerated. *Finland*, *Norway* and *Portugal* were short of nurses. In *Portugal*, which is also short of doctors, nurses had to leave on marriage up till five years ago. *Austria*, where nurses are recruited at 17, and *Ireland*, seemed to have no serious shortages of nursing staff. The *Netherlands* are considering lowering the age of entry to nursing: not more than 8% of married women are gainfully employed and there are problems over their refusal to undertake the less pleasant duties, such as night work, and in providing nurseries for their children. In *Switzerland*, one large hospital had 25% of foreign staff and 1,300 changes in a staff of 2,780 in a year. Nurses in Switzerland were very reluctant to devolve work, which might be done by others, on to non-nursing staff and studies were in progress to find out the extent to which this might be done.

In addition to general shortages, many countries had problems of maldistribution, especially of doctors. This was particularly true of the sparsely-populated northern areas of *Scandinavia*, including Greenland, for Denmark; and of *Spain* and *Portugal*. In *France*, there appeared to be a correlation between expectation of life and the ratio of doctors and pharmacists to the population in different areas, the probable explanation being that doctors and pharmacists tended not to settle so frequently in the poorer or more remote Provinces, which would *ipso facto* have a lower expectation of life. In all countries, it seemed that this maldistribution was not so much a question of remuneration but of social and educational amenities, and was particularly influenced by the doctors' wives.

(*b*) *Financial limitations*. It is obvious that 'perfect' or 'ideal' health services could and would absorb a very large proportion of a country's income, just as 'perfect' or 'ideal' defence or education or welfare could do so. It is equally obvious that such a solution is both chimerical and politically impossible. Indeed, priorities in spending a country's national income are the very

stuff of politics and the machinery for determining priorities at all levels is of the utmost importance and deserves the closest study.

Subject to such political limitations, therefore, most countries spend from 3 to 6% of their Gross National Product on health services.* Since public money from insurance or central or local taxation is in all the countries of Europe now the greatest financial contribution to the cost of health services, this is the main limitation on the growth of health services. It is not only a national political question but, as *Germany* and the *United Kingdom* pointed out, spreads down to regional and local areas and operates as between different health services, e.g. hospitals and domiciliary services. The allocation of a limited amount of public money between different types of health services must often involve political decisions.

(*c*) *Regionalisation, etc.* Hospital planning over larger areas is now accepted policy in the majority of countries. In some, it is just a policy; in others a national or regional plan has been produced, as in *France*, *Portugal*, *Spain* and the *United Kingdom*, but in none has it been completed. In some countries, where there are various and sometimes competing systems of ownership (e.g. private or profit-making, voluntary, religious, insurance, university, local authority, national, etc.) such as *Belgium*, *Italy*, the *Netherlands*, *Portugal* and *Spain*, there is a need for *rationalisation* and *co-ordination*. Everywhere the trend is towards *closure of small hospitals*, as being less efficient and economic than larger ones. This trend has been accelerated by improved communications and the realisation that many specialised departments may be needed for the diagnosis and treatment of a single case. But closing a local hospital, even when the need is obvious and imperative, is a most difficult operation because of the emotional feelings, and sometimes vested interests, involved. It was suggested that perhaps some ceremony, comparable to those when a hospital is opened, could be devised?

* E.g. Portugal 4·5%; Spain about 2%; United Kingdom 4·5%; Yugoslavia 5·6%, including sickness benefits. International comparisons of the percentage of the Gross National Products spent on health services are open to many fallacies. Prof. Brian Abel-Smith is currently engaged in studying this subject on behalf of the World Health Organisation.

Modernisation of hospital buildings may help in various ways. Better premises for out-patients and for services such as radiography and pathology may prevent bottlenecks. Better accommodation for medical (including married quarters), nursing and domestic staff may attract more staff and lessen shortages. Buildings designed in accordance with traffic-flow principles, labour-saving devices and materials which are more easily kept clean, all reduce waste of time and labour on non-essentials. Failure to make the utmost use of these modern aids to efficiency, as well as failure to improve hospital administration through better training, all increase pressures by reducing capacity to meet demand. *Ireland*, *Italy*, *Portugal*, *Spain* and *Switzerland* particularly stressed some or all of these factors.

THE ESTIMATION OF NEEDS FOR HOSPITAL BEDS

Methods

Medicine today has been described as an art struggling to become a science and the same might be said about estimates of the need of hospital beds. So many factors are involved that few countries possess sufficiently accurate and up-to-date statistics on these factors to be able to rely on rules or formulae, though such attempts are being made, by continuous, periodic and special surveys, e.g. in *Denmark*, *France*, *Germany*, *Sweden* and the *United Kingdom*. Other countries are content to try to iron out regional differences (*Switzerland*) or improve standards (*Spain*) and yet others rely primarily on the pressure of demand (*Ireland*, *Italy*, the *Netherlands* and *Portugal*). Indeed, the number of beds needed is so dependent on the use made of the beds that it has been said that 'the number of beds you need is the number of beds you have'.

Those countries which have attempted national planning of hospital beds have relied on the following: increases in total population and in population over 65; morbidity rates; number of existing beds per 1,000 pop. (bed factor); use of existing beds, e.g. occupancy, length of stay, waiting lists; density of hospital personnel (per 1,000 beds). Yet it was admitted that exact measurement of these factors is often impossible even in the existing position, still less for future needs.

Difficulties

For example, existing *waiting lists* may not reveal the extent of the pressure, because the wait for admission may be so long that general practitioners may feel that it is not worth while putting patients, especially geriatric patients, on to the waiting lists. And, in any case, the length of a waiting list depends on the extent to which it is pruned and kept up-to-date.

Predictions of future birth rates, and of population, are notoriously difficult to make even nationally, and still more difficult regionally. Bed needs for social reasons may vary with employment or changes in social habits. To foretell developments in medicine is impossible. Who could have foreseen the effects of vaccination against poliomyelitis and diphtheria; of early ambulation; of new methods of treating tuberculosis or mental diseases; or of the development of heart surgery, for example? Even bed occupancy and length of stay may vary for quite extraneous—and sometimes hidden—reasons; and it was accepted that use increases with available capacity.

It was therefore agreed that, although every effort should be made to provide the statistics necessary for the scientific calculation of bed needs, and, with their help, to move towards more scientific forecasts of them, yet the ancient standard of actual or apparent demand must for some time to come be a most important factor in regulating future supply. If a hospital is out-of-date by the time it is completed, as has often been said, the number of beds required in a country or region may also be out-of-date by the time they are provided.

The point was also repeatedly made that 'the bed' is losing its status as the sole, or even the most important, criterion of the available amount of hospital care. In the past, ward accommodation was both physically and in prestige by far the most important part of the hospital. But modern hospitals, like modern armies, have increased their 'tails' at the expense of their heads—the wards and the fighting troops—until now the tail tends to wag the dog. The development of out-patient clinics, of day hospitals, of all the numerous and complicated ancillary services, with the possibility of the creation of bottlenecks in any of them may, taken together, be a more important factor in the working capacity of a hospital than the number of

beds, which is becoming more and more merely an approximate indication of the size of the hospital.

Conclusions from estimates

The results of all these attempts to estimate future bed needs varied from country to country. On the whole, the less developed countries seemed to require more beds, while the more advanced felt they could manage by better use of existing beds and the development of other facilities both inside and outside the hospital.

But it became clear that the statistics of the total bed capacity of a country were almost meaningless without strict definition of what kinds of beds were included. Thus the borderline between hospital and institutional care of old people has been drawn at different points in different countries; and beds for the mentally retarded have in some countries been included in whole or part in the hospital services and in other countries in the educational or welfare services.

From the papers submitted, and subsequent information received, the following seems to represent the latest available figures for total bed ratios in the different countries:—

	Beds per 1,000 population	
Austria	9·87 + 0·83	in hospital developments in old people's homes.
Belgium	4·6	
Denmark	10·8	
England and Wales	9·8	
France	5·95	
Germany (W.)	11·3	
Greece	5·8	
Ireland (Rep. of)	20·8	(all types of institutions)
Italy	—	
Netherlands	4·78	(acute) + 0·81 geriatric
Norway	9·4	(including psychiatric, 2·2)
Portugal	5·4	
Spain	4·8	
Sweden	9·3	
Switzerland	11·9	
Yugoslavia	5·4	

This table bears out the above remarks, since the quantity and quality of the hospital services in the different countries clearly bears little relation to the stated bed ratios.

As to the future, *Austria* believed that they had sufficient hospital beds in general, at least in comparison with other countries. *Belgium* still has the question under study. *Denmark* considers that a 20% increase will be necessary over the period 1965–85, taking only the increase in population and the greater proportion of aged into consideration. In *France* the prime need is to raise the bed/population ratio in those regions where it is lowest, e.g. in the North, Brittany and Lorraine. *Greece* requires an increase in hospital beds, especially because the distribution is so geographically uneven. *Ireland* does not expect to have to increase the number of general hospital beds and *Italy* should have sufficient beds, except perhaps in the south, especially if the hospitals provided by various agencies are rationalised and if the unusual method of paying a lump sum to the medical staff for each person admitted as an in-patient is altered. The general bed/population ratio in the *Netherlands* has been stabilised since about 1960, thanks to increased bed-occupancy and shorter stay, but these factors have their limits. In *Norway*, the number of hospital patients has been estimated to increase by 16% over the next ten years, though this does not necessarily mean that a 16% increase in beds will be needed. *Portugal* will need an increase, both because the present figure is low and because the hospital admission figure is also low and is bound to increase. On the other hand, the length of stay is long and the turnover could be increased. *Spain*, also, thinks that an increase in the total number of beds will be necessary. *Sweden* has recommended a small increase in the total beds, from 9·3 to 9·7. In *Switzerland* in certain areas at least 'the demand for beds is decreasing because the length of stay is shortening more rapidly than the trend towards hospitalisation is increasing'. Indeed, some not very comparable figures show that an existing bed ratio of 11·9 might be decreased to 7·9 in 1980. In the *United Kingdom*, the total of 10·4 at the time of the 1962 Hospital Plan might be reduced by 1975 to 8·4. *Yugoslavia* needs an increase in total number of beds, which are considered to be insufficient at present.*

* See also: World Health Organisation; European Regional Office. 'Report on a European Symposium on the Estimation of Hospital-Bed Requirements, November 1965 (not for sale). And Powell, J. Enoch. 'Medicine and Politics', Pitman, London 1966.

We have seen that the total bed/population ratios have little meaning, either for international comparisons or even nationally, but if this general ratio is refined down into beds of different types of use, a somewhat clearer picture emerges. The Conference was asked to consider whether there were special demands for beds of a particular type, and here a considerable unanimity was found.

Geriatric

Almost every country mentioned the inadequacy of the number of beds for chronic, long stay and geriatric cases—there was some confusion of terms. This was considered to be partly due to the increased proportion of over-65's in the population, but also because of changes of social attitudes, e.g. higher standards of living demanded medical and nursing care for the elderly who had previously been left to suffer or die in their homes;* a better public image of hospitals had made it more acceptable to the younger members of the family to put the older members into hospital care—though perhaps the older members did not share this view—and smaller families and a lowered toleration of overcrowding militated against retaining the elderly in the home. The development of intensive courses of geriatric rehabilitation could only be located in hospital and it was being realised that many old people were being cared for in mental hospitals for which their condition was inappropriate.

Maternity

The realisation that hospital was the safest place for confinement, particularly for those women at special risk, together with a rising birth rate in some countries and financial advantages in others, brought particular pressure for maternity beds in ten countries. Even that stronghold of domiciliary confinements, the *Netherlands*, was feeling the pressure, though the number of specialised maternity hospitals had declined.

* In undeveloped countries of the world, care for the old and care for the mentally ill are almost the last type of health service to be developed. An index of this is that the proportion of persons certified as dying from old age or whose cause of death is uncertified, varies inversely as the provision of health care for the elderly.

Other needs

Pressure for beds for *Rehabilitation* as a specialty was noted in five countries (*Belgium*, *Denmark*, *Finland*, *Germany*, the *Netherlands*). *Casualties and Emergencies*, particularly those caused by traffic accidents, called for an increase in beds in *Finland*, *Germany*, *Norway* and *Portugal*.

In *psychiatry*, the northern tier of countries reported no great pressure and in three countries a considerable decline (*Denmark*, *Norway*, *United Kingdom*). Many of them are abandoning the concept of very large mental hospital-communities in the countryside in favour of psychiatric blocks in general hospitals. But *France*, *Greece*, *Portugal*, *Spain* and *Yugoslavia* need large increases in psychiatric beds.

Beds for the *mentally handicapped* are greatly needed, especially in *Ireland*, *Norway* and the *United Kingdom*, not so much because of a rise in mental deficiency as of an increasing rejection of the mentally sub-normal from the community, i.e. a change in social attitudes. Increased longevity as a result of antibiotics etc. was also a factor.

Italy and *Spain* considered that they needed more *paediatric* beds. *Germany* felt that there was a demand for beds for the *diseases of western civilisation*, e. g. diabetes, coronary disasters and the stress diseases; and several countries (*Denmark*, *Germany*, *Netherlands*, *Switzerland*) emphasised the need for more ancillary services such as pathology and radiology, rather than more beds.

COUNTERACTING INFLUENCES

In general, factors which operated to reduce pressures on the hospital services were conspicuous by their absence.

Except for the checks already mentioned under 'Negative factors', i.e. shortages of staff and money and failure to make the best use of beds and services, the only major counteracting influences were changes in the pattern of diseases.

For various reasons, certain diseases have become less common or have been artificially prevented or their course has been altered by new treatments.

Examples of the first group are the *infectious fevers*, which have greatly diminished both in incidence and severity in Western Europe. Immunisation against *diphtheria* and *poliomyelitis*; and more effective treatment with antibiotics against *staphylococcal* and *streptococcal infections* has very greatly reduced the need for hospital services for them. (Where such infections were often terminal, however, as in the pneumonias, antibiotic treatment has not lessened need.)

Reduction in the *enteric fevers* results both from improved sanitation and personal hygiene and from preventive immunisation; and the decline in *tuberculosis* is an example of multiple factors, i.e. raised social standards, preventive inoculation, purer milk and improved treatment.

The decline in the need for psychiatric beds has been mentioned above, though this is primarily due to more effective treatment preventing chronicity rather than to any decline in incidence in mental illness.

RESEARCH*

Type of enquiry

Research into hospital care can range from the purely statistical to the purely clinical, from the put-through of patients per bed per year to the appraisement of the quality of medical or nursing care in individual patients by an independent doctor or nurse of standing.

Both methods have their drawbacks. 'No purely statistical conclusion can ever in itself be final', as a great British medical statistician was fond of saying. We do not conclude, because the expectation of life of midshipmen is longer than that of admirals, that therefore being an admiral is a more dangerous occupation. Local enquiry so often reveals a factor undisclosed by the statistics, however refined, that it may be said that statistics of medical care merely indicate what questions ought to be asked.

On the other hand, clinical appraisal is merely personal,

* Statistics on the increase or decrease of pressures have been included and considered in the earlier part of this paper and will also be found in the individual contributions in Part II.

subjective and qualitative, even if finally expressed in numerical terms. Most enquiries, therefore, consist of quantitative measurements by statistics, with the possible errors in drawing conclusions from them clearly pointed out.

Planning: national and local

The Conference showed that all the countries represented accepted to a greater or less extent that planning is needed and that the more data that are available, the greater their accuracy and the less delay in producing them, the better the planning based upon them will be.

Two broad types of research were discernable. Research making possible the planning of a system of hospital care, as opposed to mere uncontrolled growth; and research into the activities and choices to be made within a hospital, one aspect of which may be called 'Hospital Activity Analysis'.

National surveys

Those countries—and they were the great majority—which had developed or were developing a national hospital plan were of necessity studying a vast range of questions varying from a survey of resources actually available, for example in the *Danish* survey of 1958 and subsequent years; the *Finnish* general hospital survey of 1960 and a special survey of mental hospitals not yet published; the *Portuguese* studies on district hospitals in 1961, municipal hospitals in 1962 and regional hospitals in 1966; and the *Spanish* census of hospital resources of 1963. In all cases, such national surveys are carried out by the Ministry of Health or similar appropriate central authorities.

Special studies

More specialised studies into particular areas or particular questions are carried out in a variety of ways and universities are coming more and more into the picture, with the establishment or enlargement of Departments of Social Studies or Social Medicine or similar disciplines. Thus, the Universities of Brussels and of Louvain are co-operating in studies on catchment areas; the use of hospital beds; the utilisation and the hierarchies of hospital staffs; and mental hospital services. The Department of Social Medicine at Uppsala University has

carried out an extensive study on a 1 in 365 sample of the whole population over 15, on morbidity and the expenses of health care. Similar studies in Great Britain and the United States will allow of international comparisons. Arising out of it, a report on the consumption of drugs in 1963 has already been published. The Departments of Social Medicine at Trinity College and University College, in Dublin, have jointly made a survey of general and geriatric hospitals in Dublin. Ireland has also set up a special central body, the Medico–Social Research Board, to stimulate, organise and co-ordinate surveys and statistical research.

In the *United Kingdom*, on the other hand, even specialised studies are more often made by unofficial bodies such as the Nuffield Foundation, by Regional Hospital Boards within the National Health Service and, more recently, by the Ministry of Health itself. Special notice must be made of the exhaustive Hospital In-Patients Inquiries of 1961 and 1962, resulting from a national sample obtained by questionnaire and published jointly by the General Register Office and the Ministry of Health.

More specialised inquiries were being held in *Belgium* into planning and use of medical services at a health centre, in collaboration with the World Health Organisation; in *Finland* into hospital utilisation and the selection of patients; and in *Switzerland* into nursing (also in collaboration with W.H.O.), including time-wasting by professionals doing work which less highly-trained persons could do; into bottlenecks, such as X-ray departments; and into the earnings of doctors.

Some future needs

Special points were made by the *Netherlands*, that research was badly needed into bottlenecks and into 'cost-benefit analysis', e.g. the relative value compared to the cost of a procedure, such as the anti-coagulant treatment of coronary infarction; and by *Sweden* that the measurement of quality of care in a hospital is most difficult.

Finally, the urgent need for more research and for more statistics was especially emphasised by *Norway* and by *Yugoslavia*.

Pressures

Pressure for more hospital services has increased beyond what would be expected from increase in population. This is true of all participating countries.

Causes

Many factors are responsible, the most important being the progressive removal of direct financial barriers to seeking medical care; the increased proportion of old persons, with their greater needs; the increased complexity of medical care; and rising economic, social and educational standards. Negative factors such as shortage of staff; financial limitations; and failure to make the best use of beds, were also important.

Bed needs

Estimation of needs for hospital beds is still largely empirical, though more and better statistics are making such estimates more reliable. Total bed/population ratios are often misleading and relatively useless for international comparisons. In general, countries with bed/population ratios of 6·0 or more per 1,000 do not consider that large increases in additional beds are generally needed. The use made of beds is at least as important as the number of beds. 'The bed' is losing its importance as a 'norm'. There is a trend away from smaller hospitals but distances and scattered populations impose their own necessities; and apart from this there are many difficulties in closing a hospital.

Special fields

Pressures vary according to particular medical fields, being greatest in geriatric, maternity, rehabilitation, casualty and the mentally handicapped. Pressure on psychiatric services is everywhere very great but the need for more beds has lessened in the northern tier of countries.

Counter-pressures

Diminished pressures on the health services are almost limited to the decline of certain diseases, such as tuberculosis,

poliomyelitis, and other infections, through prevention, treatment or other causes.

Research

Statistical and other research into hospital care and health services generally has rapidly increased in recent years but is still in its childhood. It is at present a most important aid—but no more—in decision and policy making.

All participating countries accept that a planned system rather than uncontrolled growth is necessary to make the best use of hospitals but the extent to which such a system has been adopted and enforced varies greatly between different countries as do the bodies carrying out the research needed for such plans. University Departments are entering this field to a greater extent. Hospital activity analysis and other operational research within hospitals is increasing but still more is needed, especially in view of the very large sums now spent on hospital services.

Table I

INCREASE IN POPULATION, 1956 to 1966

Country	Population		Percentage increase
	1966[1]	1956[1]	
Austria	7·2	6·9	4·3
Belgium	9·4	8·8	6·8
Denmark	4·6	4·4	4·5
Finland	4·6	4·1	12·2
France	48·7	42·7	14·1
Germany (Fed. Rep. of)	60·8	58·6	3·9
Greece	8·4	7·6	10·5
Irish Rep.	2·8	3·0	minus 6·7
Italy	50·0	47·0	6·4
Netherlands	12·1	10·7	13·1
Norway	3·7	3·3	12·1
Portugal	9·0	8·6	4·7
Spain	31·6	28·6	10·5
Sweden	7·6	7·2	5·6
Switzerland	5·9	4·9	20·4
U.K. (England and Wales)	47·4	43·7	8·5
Yugoslavia	19·0	16·9	12·4

[1] In millions, to nearest 100,000. Taken from *Whitaker's Almanack* for 1956 and 1966.

PART II

PAPERS PRESENTED AT THE CONFERENCE

OPENING ADDRESS

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Two years ago my predecessor, Sir Bruce Fraser, delivered the first paper to the Second Western European Conference of the International Hospital Federation. It is a great privilege for a civil servant to be asked to do so yet again at this your third Conference, and it is a particular pleasure to me to give the opening address because it also gives me the opportunity to welcome to this country so many of you who are visitors. These opportunities for interchange of views and experiences between countries of Western Europe are, I know, of great value. We have here a diversity of countries with different traditions in the pattern of medical care and also with different ways in which the provision of medical care is financed.

You have come to a Conference of which the theme is: 'The pressure for more medical services.' It will be of interest to consider whether these factors have any impact on demand. Does a greater emphasis on clinics and on preventive screening and treatment reduce the demand for medical care or does it reveal at an earlier stage more illness which would otherwise be concealed? Does the cost of medical care reduce demand by delaying or even inhibiting treatment where treatment is necessary, or does the cost deter calls for medical services which are unnecessary? These are problems with which we are all concerned today, and it will be helpful if this Conference throws some light on them and helps to show where pressures are greatest and where development is most needed. The choice of the theme for this Conference, in itself, shows very clearly the sort of problem that is confronting and bothering all of us today.

Our task in this country, and I suspect in yours as well, is to provide more and better medical care, more varied forms of care, and care over a wider field than has ever before been attempted. Our predecessors of a quarter of a century and more ago had to concern themselves almost entirely with the treatment of known illnesses and the prevention of infectious diseases; they were able to make only marginal incursions into

other forms of care. Today, we start with a greatly enlarged, and almost certainly widening, meaning to the concept of 'medical care'. Present-day medical services range from a variety of forms of preventive care, through treatment of disease when it occurs, to services which will help the patient to resume his place in the community. Medical services have become an integral part of our general welfare and social services. It is no longer sufficient simply to cure or alleviate the condition which is the immediate cause of a patient's admission to hospital. Care starts with the promotion of good health and, when illness intervenes, travels through the stages of diagnosis, treatment, after-care and rehabilitation until the stage is reached when the patient is restored to society or, in a minority of cases, kept under a specialised form of care which most befits his needs. This broader objective of medical care is not simply the expression of more enlightened views on illness, its aftermath and its effect upon the individual: it is also an economic and social necessity. We cannot afford to lose from the labour force the contributions of men and women who can be restored to active life, nor can we afford to assume responsibility for people who can be helped to fend for themselves.

The central problem facing every administrator is how to relate the provision of medical services to the ever-widening range of medical needs. Even if our resources and our knowledge were infinite, we would still be confronted with the same supply/demand dilemma that faces us in every large-scale economic or social activity. Changes in the size, structure and distribution of our population, in the incidence of disease and in its diagnosis and treatment, to name only three factors, are continuous. We probably recognise and can measure some of these factors more quickly than in the past, and this is a help in shaping the *supply* of medical services. But the assessment of *demand* is a far more complex issue. One thing seems certain. The demand for medical services rises with their supply and the standard of medical services seems to rise with the increase of resources.

Can demand ever be satisfied? Can it be measured? Is it reasonable to think, for example, that if we could succeed in abolishing all existing waiting lists, new ones, perhaps of a

different kind, would not arise in their place? Or is this illusory? Is demand, for all practical purposes, infinitely elastic so that needs must always be expected to outstrip the means of satisfying them? These are, I think, crucial long-term issues and there is no shame in admitting that we are still profoundly ignorant about the answers. But whatever the right answers may prove to be we have to decide now within the limits of existing knowledge how to handle the problems of meeting the pressure for more medical services, and it is about the way we are doing it that I would like to speak briefly this morning.

As this is a Conference on hospital services, I propose to concentrate on how we have tried to formulate plans for the future pattern and development of that service—certainly the most costly element of our National Health Service. Before doing so, however, I should say that our hospital planning has been done as an integrated part of our overall strategy for the provision of medical services; it complements our concept of how extra-hospital or community care should develop. Time, alas, does not allow me to say more about this, but I would ask you to keep it in mind during the rest of my talk.

We first published a national plan for the development of the hospital services in 1962. Although the basic principles have remained unchanged, the details have been revised from time to time in the light of experience and of changing needs, methods and concepts. A revised plan was published earlier this year. In England and Wales there are at present just over 2,500 hospitals of all kinds, providing some 500,000 beds. The fabric of many of these buildings is old—far too old to be acceptable. Even where the fabric is sound, their design is often a major obstacle to operational efficiency. And they are not always in the right place. The plan for the hospital service is thus fundamentally one of modernisation. We aim to modernise the structure of the service by putting better buildings and better supporting services in places that are more conveniently situated for the communities they serve and in a way that will cater more efficiently for the needs of those communities.

In recent years there has been a trend towards greater interdependence of the various branches of medicine and consequently an increasing realisation of the need to bring together

in one hospital a wide range of the facilities required for diagnosis and treatment. Hence the keystone of our hospital building programme is the creation of a network of district general hospitals each large enough to provide such a range. These will replace existing smaller hospitals unable to support the services now required. An average district general hospital will have some 600–800 beds, serve a population of between 100,000 and 150,000 and possess diagnostic and treatment facilities for in-patients and out-patients, units for maternity, geriatric and short-stay psychiatric patients, and facilities for the isolation of infectious diseases. We believe that this will prove to be the most effective method of making a comprehensive range of hospital care available to the population of a given district.

If, by a magic wand, as it were, we could transform at a stroke the hospital service from its existing pattern to this new one, the most obvious difference would be in the number of hospitals. The country might well be served by fewer than 1,000 hospitals compared with the present 2,500. Alas, we have no magic wands, and it will take many years to achieve our aim and we can never expect to achieve in full and on the ground the neat pattern of our logical plans. But I mention this transformation scene in order to bring out that the hospital plan involves not merely the replacement, but also the rationalisation of our hospital plant.

This makes the whole operation immensely more complicated, and brings in difficulties that do not arise simply from shortage of money. We become involved in a complex programme of land transactions, selling some sites, buying others; in the administrative, political and emotional difficulties of closing down small uneconomical, but often locally valued services; and in the disposal of redundant buildings, or else in finding efficient alternative uses for them. Moreover, this process of rationalising the jigsaw has to be carried out at two levels. We have to establish national standards from the centre and then methods of applying these standards to local situations. This is a task fraught with difficulties.

So far, although we can see many limitations in its adoption, we have had to use the number of beds as the principal indicator in this form of planning. At the time of the 1962 Hospital

Plan, there were no previous generally accepted norms for bed provision; the data available on real as distinct from expressed levels of demand, on scale of need for one type of bed as opposed to another, on the latent possibilities of more intensive use of beds and on the most effective role of the hospital bed in relation to other forms of care, were at best sketchy and at worst non-existent; moreover, it was impossible to foresee what effect improved buildings and equipment would have upon hospital efficiency and, in turn, upon bed requirements. After giving due weight to all the available information, we arrived at the following national standards with validity in relation to large divisions of the country and for the year 1975, but subject to variation in the light of particular local and regional needs:—

Acute beds	3·3 per 1,000 population.
Maternity beds	Sufficient for national average of 70% of confinements to take place in hospitals, a stay of ten days after confinement in normal cases and about seven ante-natal beds per 1,000 births: that is 0·58 per 1,000 population.
Geriatric beds	10 per 1,000 persons aged 65 and over.
Mental illness beds	1·8 per 1,000 population.
Mental subnormality beds	1·3 per 1,000 population.

Although our knowledge and experience continue to grow, we have not yet reached the stage of being able to improve on these broad lines of guidance. They are, none the less, too crude for present-day needs. If we are to spend our money wisely and put the right emphasis in the right places, we must resort to a more sophisticated instrument of measurement. Already it is apparent that our building programmes are not concerned exclusively with replacing beds, or increasing their number. At the moment we have about £170 m. worth of hospital buildings under construction. Some two-thirds of this is devoted to projects which include bed provision and the greater part takes the form, not simply of replacing old wards, but of replacing, improving and rationalising the whole range of facilities that

are necessary to maintain a hospital bed in use—the kitchens, the boilers, the engineering services, as well as the specialised diagnostic departments. This is why the average cost per bed in the programme is of the order of £10,000. But the remaining one-third of the work currently under construction is being devoted wholly to improving the supporting services without adding to or replacing actual bed provision itself—about half to out-patient departments, accident and emergency departments, operating theatres, and X-ray, pathology, radiotherapy, physiotherapy and occupational therapy facilities, and the rest to ancillary services such as engineering plant, kitchen and dining facilities, staff accommodation, and nurses' training schools. All this illustrates that 'counting beds' is far from the whole story, and that the increased pressure for more medical services finds expression and satisfaction, in significant, and possibly growing measure, in facilities that support rather than create bed provision.

There are also other reasons for moving away from the use of the hospital bed as the basic unit measurement and for thinking in terms of hospital services rather than hospital beds. As we pay much closer attention to precise forms of need and demand, it seems not always to follow that each person who occupies an in-patient bed actually needs full hospital facilities and nursing care. His needs might be adequately met as a day-patient or out-patient with help from the domiciliary health and welfare services. Or the provision of care and treatment in the home might alone avert the in-patient need of a person who would otherwise be in hospital for social rather than medical reasons. In-patient care is the most expensive form of medical service and it is a waste of money and hospital skills to provide this form of care when other and cheaper methods can achieve the desired result. There are also human as well as economic advantages because most patients prefer the familiarity of their own homes to the isolation and strangeness of hospital wards. We can therefore discern a number of emerging trends. The bed, as a numerical indicator of needs and progress, is likely to assume less importance. Growing attention will be paid to other factors affecting the total demand for beds, but which are crucial in themselves. I would mention only two: the extent to which we can maintain the significant trend towards shorter

'length of stay'; and the degree to which we can increase the flexibility of bed use—for example, by replacing separate open wards of 30 beds for men and women with 4 to 6 bed groups.

Turning to the different kinds of beds, our ideas about acute beds might well change more as regards their nature than their number. Some are likely to become more specialised in the sense that proper treatment for the patients occupying them will require a growing range of complex and expensive supporting services. At the other end of the scale, some acute beds seem likely to become less specialised—'second order beds' as some planners are terming them—and these could well be constructed and run more cheaply in a separate part of a hospital, or even off the hospital site altogether. Because of the pronounced growth in the population at the younger and older ends of the age scale, we must expect the number of maternity and geriatric beds to grow, both absolutely and as a proportion of our total bed provision. On the other hand, by rationalising their location and fostering other forms of care, it might well be that psychiatric beds will decrease rather than increase in number and proportion.

Overall, I might venture three generalisations. First, the hospital service might well be moving in the direction of fewer in-patient beds per head of population, although, of course, if the demographers are right, we shall have to increase the absolute number of such beds. Second, the balance between different kinds of beds—acute, maternity, psychiatric and so on—will be changing and, within any one kind, there will be a greater differentiation of type and use. And third, side by side with these developments, we might expect more day- and out-patient provision supported by increased home care and local health and welfare facilities.

If these trends are to be validated and to offer a general basis for new hospital designs, we must press on with research studies and practical experiments to test details and to clarify and refine choices. Various studies by Universities and Regional Hospital Boards are in train which will add to our knowledge of needs and demands in these respects. One of the most comprehensive is a four-year study of the case-load of hospitals in the

Liverpool Region. This will try to assess the extent to which local medical tradition and adverse social conditions cause increased hospital usage, the extent of unidentified and unmet need for hospital care, and the efficiency of the hospitals in the Region. The study will also make some comparisons with other Regions. Other projects include a study of the demand for out-patient services in the Oxford Region, and investigation into day hospitals and the extent to which they avert the need for in-patient admission.

Much of what I have already said is related in some way to hospital management. The effectiveness of the hospital service depends not only upon how hospitals are designed but also how they are operated. The complex organism of a hospital demands managerial vigilance and the preservation of a suitable balance between its constituent parts. We can glibly say that the fundamental objective of management efficiency is the optimum use of available resources, but what does this actually mean in terms of staff and facilities required for any given purpose? The truth is that we cannot yet supply the answer. We know a little but not enough.

Before the complete solution can be found we must establish the answers to a number of other questions. What are the clinical effects on patients of differing lengths of stay? What are the relative merits and disadvantages of alternative forms of care? What are the factors which cause regional and even local variations in intensity of bed use? How are bed-occupancy levels affected by admissions policies? I have enumerated a few of the unknowns, all of which are currently being investigated, but my list is by no means exhaustive.

Even though 'optimum use' is still very largely in the realms of theory, hospital authorities are already taking steps to re-deploy their resources to greater advantage. They will be helped in this task by a new automated system of medical record keeping which we call 'Hospital Activity Analysis' and which is gradually being introduced throughout the regions. This system provides a rapid feed-back to local and regional managers of information about patient care provided and the use made of beds by individual consultants, by specialty and by hospital. Managers will therefore have up-to-date knowledge of

the manner in which resources are currently being used and be aware in good time of situations which call for administrative action, for example, the need for re-allocating beds between specialties.

Clinical developments and changes in medical practice can have very marked effects on the requirements for medical, nursing and other staff, on hospital organisation and equipment and on public demand for treatment. These advances will often be linked with the use of sophisticated and expensive machines, the need for specialist facilities and technical assistants and the need for intensive care by doctors and nurses. Any new development obviously requires a fairly long period of trial to establish its value before being introduced as standard practice. It is only natural that both the public and the medical profession will urge that any system of treatment should be made available to all at the earliest opportunity. In an ideal world this would always happen as soon as the system had proved its worth. In our own imperfect world there may be delays arising from practical difficulties of money, trained manpower, equipment and accommodation, and a reluctance to risk jeopardising the care of the many for the benefit of the few.

I must now stress again that the hospital service is but one link in the chain of medical and social care. Each link is vital to the whole and no one service or part of it must be developed at the expense of another—to do so may be to the detriment of medical care for the community as a whole. We cannot predict what the requirements of the future will be. Who can say what medical advances will be made or when? Who can say what the eventual effect on public health will be of the many new features of social and industrial life? Of increased leisure, higher standards of housing and nutrition, diminished physical activity, mass-produced food, reduced atmospheric pollution, to list but a few? Our contribution to the future must be to ensure that the services and buildings which we provide now are sufficiently flexible of purpose to be capable of cheap and speedy adaptation to most new requirements as they appear.

In this address, I have tried to indicate what we are trying to achieve in the provision of medical services in this country, some of the difficulties which lie in our path and how much we

have yet to discover both about extent and forms of need for medical care and about the deployment of resources to maximum effect. The subsequent discussion at this Conference will show whether the problems of all of us here today are mutual or divergent. I am sure that the total burden of problems will be eased, if only a little, by the exchange of difficulties and ideas.

AUSTRIA

Dr. ELLY E. KÖNIG

What factors have contributed towards an extension of patient care?

The economic progress in Austria has led to a general rise in the standard of living. The gross national product rose from 177,500 million schillings in 1961 to 221,400 million in 1964.

The economic and social policy of the Austrian government has resulted in full employment and given the people the necessary social security.

In 1955 comprehensive legislation was passed on social insurance. The general social insurance law (ASVG), the industrial independent pension insurance law (GSPVG) and the agricultural subsidised pension insurance law (LZVG) were passed. These laws govern sickness insurance, accident insurance, pension insurance for workers and employees and also for self-employed persons.

In 1966 the social insurance was extended to cover self-employed persons in agriculture (Farmers' sickness insurance law—BKVG).

The proportion of insured persons in Austria has increased since 1954 from 4,881,000 with a population of 6,968,500 to 5,162,000 with a population of 7,215,300. Consequently the majority of the population is subject to compulsory statutory insurance. Moreover, under the welfare laws in force, provision is made for people belonging neither to a compulsory insurance scheme nor to a private sickness insurance scheme who are in need of care because of sickness or permanent infirmity. The hospitals law of 1957 obliges the provinces to make provision for the accommodation of poor patients. This law also obliges the central government, the provinces and the local authorities to contribute towards the upkeep of public hospitals.

These laws give the population a large degree of social security. There is no hesitation in submitting to medical treatment since payment of the costs appear to be guaranteed by the social insurance institutions.

Whereas in 1954 the social insurance schemes only provided

for 10,509,304 cases of medical treatment, this figure rose to 14,598,519 cases in 1963 although the number of persons covered had only risen by 281,000.

The development of social legislation was accompanied by a tremendous progress in medical science. Specialisation in this profession is leading to new methods of treatment and new fields of specialisation. Traditional surgery is being split up into chest surgery, neuro-surgery, abdominal, plastic and accident surgery. Specialised fields in internal medicine include cardiology, lung diseases, endocrinology, disturbances of the digestion and metabolism, etc.

What factors are at work to limit patient care?

The development in the field of drugs, in particular the production of antibiotics, has had a sensational effect on the treatment of patients. The length of stay in acute hospitals has dropped from 21 days in 1936 to an average of 18 days and down to as little as 13–14 days. Tuberculosis departments in hospitals and sanatoria have been closed down in recent years.

New prospects have opened up in the treatment of the mentally sick. Intake into establishments for the mentally sick has remained about the same numerically, but there has been a large reduction in permanent inmates. Doctors in such establishments are today achieving their aim of rehabilitating patients into society more frequently than before by a new attitude to their task and by means of the therapeutic facilities available. Patients who spend their whole lives in an institution for mental and nervous diseases are not found as frequently as they were a short time ago. The fact that this field was transferred from the welfare administration to the hospitals administration by the hospitals law of 1957 also took this development into account.

At present efforts are being made to treat persons suffering from a mental or nervous disorder as out-patients. Experiments are also in progress whereby such patients are either kept in the hospital at night and allowed to go to work under supervision during the day, or are treated in the hospital during the day and allowed to return to the family at night.

There are financial obstacles to the extension of hospitals. In

Austria public hospitals are the responsibility either of the central government, the provinces or the local authorities. Such regional bodies have in addition to running their hospital also to provide the public services provided by regional bodies not maintaining hospitals (streets, housing, drainage, water supply, etc.). Once a public hospital shows a loss, any extension to a hospital must be viewed critically.

What methods are used to estimate the need for patient care?

The need is estimated on the basis of experience both in the field of out-patient care and hospital beds. The Federal Ministry for Social Administration and the provincial health services in the individual provinces are in the course of their duties in the field of health able to conduct surveys through the officials responsible to them and to prepare comprehensive statistics. In addition Austrian social insurance bodies and other interested parties carry out their own research work in this field.

However, all these bodies are guided less by the figures obtained in this way than by the obvious needs which arise in a hospital or in general practice. As far as the number of beds or type of treatment is concerned, the observation of such need generally forms the basis for any new investment and as far as doctors in general practice are concerned, such observation leads to extensive co-operation on the part of regional authorities and social insurance bodies.

Is the present need for patient care met?

In the treatment of non-hospitalised patients, there is already a shortage of general practitioners. The rural areas of Austria are no longer as well supplied with doctors as they were about 10 years ago. The country doctors still in practice are overworked. Examinations are now carried out more in the hospitals.

The number of hospital beds available is now 76,742 for a population of 7,073,807. In comparison with other countries, one may say that the number of hospital beds is sufficient for the population. However, medical progress makes the regrouping or rearrangement of these beds necessary. Under the hospitals law, hospitals are inspected regularly. It has been ascertained

that a reorganisation of the hospital system is necessary. To meet the modern medical requirements, it will be necessary to build hospitals with internal medicine and surgical departments and also paediatric, gynaecology and above all eyes, ears, nose and throat departments, in addition to hospitals equipped with all specialised departments, first class equipment and laboratory facilities.

In Austria at present there are 144 general hospitals, 8 children's hospitals, 21 T.B. hospitals, 14 orthopaedic hospitals, 5 hospitals for obstetrics and gynaecology, 14 for nervous and mental disorders, 1 for skin and venereal diseases, 1 for alcoholics, 9 prison hospitals and 7 army hospitals, 24 convalescent homes, 14 homes for chronic patients, 11 maternity homes and 35 sanatoria.

A total of 70,627 beds are available in 308 hospitals for patients requiring hospital treatment. In addition there are hospital departments associated with Viennese old people's homes, with 6,115 beds.

Particular shortages exist in departments for geriatrics, urology, paediatrics and in departments for infectious hepatitis.

The excessive length of stay in hospitals and the consequent impression that there is a shortage of beds is largely due to the fact that patients no longer in need of treatment remain in hospital until they can receive the necessary care either in their own homes or in a home for chronic patients. The number of these patients also increases the average length of stay and cost of treatment.

Is the financing of patient care guaranteed at present? What changes are to be expected from the changes in demand already described?

It is evident that until a short time ago less attention was paid to the treatment of the sick than is the case today.

The increased demand caused financial requirements in the past to rise more sharply than did the national product. This trend is also to be expected in the near future. All State authorities and the social insurance bodies can as a result only find the additional finance required with extreme difficulty.

Special efforts are also needed to eliminate the danger, arising from the high social standard in Austria, of the misuse of health facilities.

This situation will probably change in the future because the activities of the health service are increasingly being directed towards preventive measures and specialised methods of treatment and are thus involving new costs. Although better economic results are achieved as a result of the improvement in the state of health of the population, the State authorities are only gradually coming to the conclusion that there should be a reshuffle in the allocation of the public funds available.

General statistical information on the development of patient care

In reply to the question on statistical material, documents and investigations on which the above views are based, are attached to this report.

The general picture shows a slight extension in hospital services for in-patients and a slightly greater increase in out-patient and general practitioner services. Although the material for the years after 1963 is not complete, it is thought that despite the increase in the number of days of treatment there has been a decrease in the number of cases of in-patient treatment.

AUSTRIAN HOSPITAL STATISTICS

	Population	Beds	Cases treated	Patient days
1961	7,073,807	53,394	822,370	17,476,305
1962	7,073,807	53,818	832,384	17,503,284

EXPENDITURE

	Total expenditure incl. investments (in schillings)	Running expenses excl. investments (in schillings)	Amount contributed to running expenses by regional authorities
1961	2,330,933,516	750,539,944	124,854,618
1962	2,626,535,253	773,373,370	130,388,074

ANNUAL REPORT ON AUSTRIAN HOSPITALS
1963–1964

Departments or specialties	Patient days		Beds	
	1963	1964	1963	1964
Surgery	3,878,958	3,766,620	11,476	11,219
Medicine	4,388,333	4,420,894	13,237	13,166
Obstetrics, Gynaecology	1,416,364	1,365,309	4,362	4,276
Neurology, Psychiatry	4,617,536	4,896,079	13,094	13,357
Infants	236,691	207,872	702	704
Paediatrics	1,018,440	1,070,287	3,309	3,208
Infectious diseases	339,529	480,483	1,795	2,119
Dermato-venereology	416,810	410,708	1,326	1,346
Ophthalmology	327,438	332,931	1,175	1,193
E.N.T.	355,743	360,366	1,251	1,166
Urology	256,354	266,480	725	889
Tuberculosis	1,792,372	1,745,773	5,780	5,781
Orthopaedics	189,964	196,635	576	609
Accident cases	855,018	924,936	2,424	2,731
X-ray and radiotherapy	53,998	53,163	200	200
Dental surgery	44,347	46,365	172	173
Mixed	1,741,531	1,917,813	6,063	6,300
Nursing mothers and wet-nurses	11,097	10,129	56	56
Institutions for the chronic sick	965,129	872,754	2,801	2,474
Hospital departments in old people's homes	1,941,862	2,181,160	5,939	5,999
Convalescent homes	341,090	370,083	1,230	1,273
Total	25,188,604	25,896,860	77,693	78,239

BELGIUM

Dr. A. V. PRIMS

I(*a*) The factors which have an influence on the demand for medical services and for more hospital beds in our country are:

1. *The medical profession*

The phenomenon of specialisation and the fact that there is no hierarchy in the Belgian hospital system mean that the specialists who work in the hospitals want all possible services.

2. *The owners of the hospitals*

The great majority of the hospitals are very small. Many of these hospitals want to come up to the mark by increasing the number of beds. The competition between the public and private hospitals on the one hand and the private hospitals among themselves on the other hand.

3. *The public*

The public too works towards the construction of more hospital beds via chosen organisations such as the Public Assistance Committees. The population becomes more conscious of the importance of health, and therefore consults a physician more readily than before. The consulting of the doctor is also promoted by the health insurance system which in Belgium is compulsory for 98% of the population and which intervenes in a large measure in the costs of medical treatment. The high standard of living permits the population to spend more on its health. Press, radio and T.V. very often treat health problems under the pressure of private organisations which want to influence public opinion and the public authorities and to draw attention to the special fields in which medical care still leaves much to be desired and could give better results.

4. *The Government*

The Government has promoted this trend by the introduction of the compulsory health insurance system which

since 1st January 1964 has been applicable to practically the entire population.

(*b*) Until 1960 attention was given particularly to the sector of the acute sick, but since then the other sectors have demanded attention, among other things because of the lengthening of the expectation of life, the increasing number of chronic sick, the new treatment possibilities and the 'new look' in the psychiatric sector, etc.

'Limitation' was mainly linked with financial resources but perhaps also with the shortage of manpower and efficient treatment facilities.

Limitation of expenses in connection with the building of hospitals is considered possible by:

1. Centralisation and regionalisation of the existing hospitals.
2. Construction of an extensive system of out-patient diagnosis and care.
3. Better organisation of home care.

II(*a*) In 1945 the Ministry of Public Health was entrusted with the accreditation of hospitals in connection with the application of the new health insurance act. First the general situation of the existing institutions was examined (geographical distribution, type of services, quality of buildings). Standards were established and in 1951 an investment programme was adopted in order to raise the number of beds per 1,000 inhabitants from 3·7 to 4·5 and this during a period of ten years. The division was as follows:—

Surgery	1·2%
Medicine	1·0%
Specialties	0·8%
Maternity	0·6%
Paediatrics	0·6%
Infectious diseases	0·3%

The breakdown of patient days which was noted down in the insurance institutions was a basis for this assessment, whereas the birth rate served as a basis for estimating the demand for maternity beds.

We possess now 4·8 beds per 1,000 inhabitants and we are wondering whether we should increase this number and to what extent. Studies are being made in different fields in order to collect the necessary data for planning.

(*b*) A study group has examined which data should be collected and which towns should be considered as centres. The same group is now looking for morbidity data concerning the hospitals. (A general and correct morbidity assessment is impossible at this moment because of the lack of diagnostic data.)

The Ministry of Public Health collects statistical material among other things about the average bed occupancy in acute hospitals (77% in 1964) and about the average length of stay (13·2 days in 1964).

On the national level one tries to know the origin of the patients in the hospitals, in order to obtain a better knowledge of the 'hinterland' of each hospital. In local studies the number of hospital admissions is also examined.

(*c*) One expects a further reduction in the average length of stay in acute hospitals and a greater number of hospital admissions because of the improvement of medical techniques, the extension of the compulsory health insurance system to new sectors of the population and the better coverage of the cost of in-patient care by the health insurance. This will lead roughly to a slight increase in needs which one could try to stem by promoting out-patient care and treatment by the family doctor.

There is an undeniable shortage of institutions for rehabilitation and prolonged hospitalisation. A geriatric hospital is in operation in Liège and a new pilot institution is under construction in Charleroi. The Government gives high grants (60% of the building costs) to promote new ventures so long as they conform to the standards laid down.

As regards the psychiatric sector, we are especially concerned with the modernisation of existing hospitals. The organisation of departments for acute psychiatry in general hospitals is encouraged. Experiments are being made concerning day hospitals, night hospitals and 'sector' policy. We are also aiming

at a higher number of psychiatrists through the Universities and by improving the status of these specialists.

On the national level we have no great need for any more maternity hospitals. Regional differences and birth rate play a role in this connection. The number of hospital confinements is very high (95%). The birth rate remains constant (16 to 17%). The average length of stay is between nine and ten days.

The improvement in the campaign against infectious diseases has brought a clear reduction in the need for beds for infectious diseases (0·1%).

III. The great shortage of beds for the chronic sick.

Conversion is necessary as regards psychiatric institutions.

In the acute sector there are problems in the big centres, among others, because of the coming of the population to these centres, the composition of the population, the housing situation and the attraction of large departments and specialists. The need for beds is higher than 4·5% but there is as yet no accurate estimate in this respect (5·5 to 6% or more).

In general one could say that the medical profession ask especially for acute hospital beds, whereas organisations and study groups want to give priority to certain types of services, such as open psychiatric departments, day and night hospitals and institutions for chronic diseases.

IV. It is anticipated that in the acute hospital sector—the only one where the problem exists at this moment—the subsidising of building work will be linked with hospital planning for which the criteria are being examined at this moment.

In the health insurance system rules are laid down in order to avoid the multiple repetition of medical treatment. The success of this regulation has been rather limited until now.

Competition is clearly growing between the preventive and the curative sectors in the medical services, especially concerning the recourse to paramedical staff. One sees also a definite shifting of nurses and other hospital workers towards the preventive sector, so that the hospitals have to contend with a shortage of staff.

V. The statistics which our country possesses are very poor

and not sufficient to justify scientifically a decrease or increase in the demand for medical services.

In the acute sector the number of hospital beds increased between 1963 and 1965 by 2,346.

VI. No studies have been made concerning average length of stay, use of medical services, etc. A study is now being carried out, in co-operation with the World Health Organisation, on the use of medical services in the framework of a health centre.

DENMARK

C. TOFTEMARK, M.D.

(i) A pressure for more medical services seems evident and can be illustrated among other things by a cry from overworked practitioners as well as dentists, and waiting lists for non-acute cases at all hospitals. Whether this condition is caused by quantitative diminishing effort by the profession or growing need or simply an accelerated demand may be discussed. It's an old Danish saying: 'The appetite grows when you are eating', which to a certain extent may hold true but quite a number more or less valid causes for pressure for more medical services can be enumerated:

(1) A population growth of 0·8% p.a.
(2) A relative and progressive preponderance in the older age groups which means that while persons > 65 years old today comprise 10% of the population they are estimated to amount to 15% in ten years' time.
(3) Rapidly increasing urbanisation and industrialisation.
(4) Increasing road traffic with consequent accidents.
(5) A wider knowledge about what can be achieved through medical care. Popular information spread through radio, television and the press—occasionally as a propaganda campaign—has its effects.
(6) The methodological medical examination of pregnant women and babies, schoolchildren, apprentices and soldiers.
(7) The practically cost-free access to medical care.
(8) An increasing part of the population is covered by insurance against loss of wages caused by illness.
(9) Regardless of improved living conditions in the so-called welfare state (money, food, housing etc. etc.) the population seems to be in greater need of medical consultation and advice. People are no longer satisfied to await onslaught of a serious illness before they want to see the doctor, but seek advice at an earlier stage—want a certain form of health-control.

The above mentioned may more or less cover *the general*

public, but within the population certain *pressure groups* especially interested in specific groups of illnesses such as tuberculosis, cancer, diabetes, coronary and rheumatic diseases, or deficiencies of various kinds may exert a certain pressure on both local and central government in order to obtain more medical facilities.

From *the medical profession* a pressure for a widened workfield, based on scientific discoveries and technical improvements, is obvious, but seems to be a want for qualitative expansion of their possibilities—counteracted by a wish for a quantitative diminishing of their workload—a course parallel to a general tendency within the majority of the population.

A factor of importance also is a growing demand for expanded education inside the medical world and organised at all levels—both before and after graduation—with the consequence that a greater proportion of the medical manpower—whole- or part-time—is engaged in educational work and thereby exempted from clinical occupation.

In Denmark *local authorities* are responsible for provision of a sufficient general hospital service. While the running cost to approx. 65% is reimbursed by the central government and 5% from insurance the rest, approx. 30% as well as the capital investment, rests with the local government and has to be provided by local taxation.

Being in close contact with their electorate, local authorities are apt to react to pressure for improved hospital facilities with due regard to the economic consequences. A certain competition between neighbours, cities or counties, can influence progress in this field.

The head of the national health service has a right and a duty to advise both local and central government as to which measures within the medical sphere are advisable or even necessary.

The central government—Denmark being a democracy—is supposed to represent and take care of all well-founded wishes for improvement of the nation's well-being. Its main concern must be to obtain an acceptable balance between pronounced demands and the possibilities to meet them, taking account of available money and manpower. This, of course, often involves

a decision of priority. In most cases the problem is not really: 'do you want it', as much as 'what price are you prepared to pay for it?'. (Do you want 'the second car' for all families or do you prefer improved conditions for mentally ill or deficient—or maybe a new medical school?)

It seems paradoxically to be a fact that in times with economical expansion and full occupation relatively less money is spent on medical care than in times of depression.

To assess the relative importance of all the above-mentioned factors appears to be somewhat speculative. One would assume that the preponderance rests with the medical profession as a whole, including the medical schools, both informing the general public of the possibilities for better results and—through the advice of the director-general of the health services—to influence the government to provide the legal and financial basis for the development of medical care, including the expansion of medical schools and scientific research.

Private means, funds etc. play a certain, but minor part.

Limitations of medical care seem mainly to stem from lack of money and manpower—and of knowledge!

(ii) In a recent research (1964) published in *Fra Sundhedsstyrelsen*, Ugeskrift for Læger no. 34, the national health service has made an analysis of the hospital system, its functions and its personnel followed by a tentative assessment of expansion of capacity and personnel for the next two decades.

The analysis was based mainly on statistical data contained in the yearly report, which each hospital is obliged to forward to the department of statistics within the National Health Service. Also other available statistical information—including a rather comprehensive *Hospital Survey of Denmark*, 1958—were used for the assessment.

For the period 1965–85, based solely on the calculation of the population increase and taking into regard the alteration of the age-group > 65 years old, an estimate of the need for an increase of 22% in hospital beds was reached.

An assessment of likely progress within the curative possibilities, including expansion of rehabilitation, led to believe

that a further increase of hospital beds of the magnitude of 20% will be needed.

A cautious calculation indicates that one-third of the existing 30,000 beds for somatic patients will need renovation with regard to wards as well as to treatment facilities.

In total: 22,500 new beds (and facilities) are needed during the next 20 years.

(iii) While the pressure for more hospital beds in general can be considered as satisfactorily met with, there exists a growing need for specific kinds of beds.

Admission to hospital of all pregnant women for delivery has recently been made financially possible. A proper screening by a gynaecologist during pregnancy can predict the possibility of complications—amounting to approx. 30% of all pregnant. These are considered as a first priority to hospital confinement —the expected normal cases are only admitted when there are vacant beds or for social reasons.

The total number of confinements in hospitals is rapidly rising (in some areas up to 95%). A demand for more gynaecological and obstetrical beds within general hospitals is evident, and the magnitude can rather easily be calculated by statistical means.

In consequence of the above-mentioned also more specialised beds for the care of new-born and small children are needed.

The heaviest problem is care of the elderly age-group. Long-stay departments are installed and new nursing homes created.

It is widely accepted that these patients should begin their hospitalisation in the general hospital for examinations and exact diagnosis and continue their treatment in nursing homes, equipped for treating illnesses of long duration and in close contact with the mother hospital.

Local authorities are widely occupied at present by assessing the magnitude of this need. Some few institutions of this kind have been put into operation, many more are planned, waiting for amelioration in the economic situation, to be built.

New specialities such as neurology, pathology and extended laboratory services are cramped into existing hospitals on a

more or less interim basis. In many cases a new specialist may be appointed 'without beds of his own' as a consultant to existing departments. As an example may be mentioned the specialist in physiotherapy, whose importance in rehabilitation of all kinds of patients is coming more and more in the foreground.

During later years there has been a trend to incorporate acute psychiatric beds in general hospitals—whereas previously mental patients were solely received in the state-owned and -run mental hospitals.

Seven such departments varying in size from 30 to 60 beds have been organised recently and an equal number are planned for. The evaluation of the use of such institutions varies among the psychiatrists—apparently they have been a great success with the patients, the population and the general hospital as such.

The demand for beds in mental hospitals has generally decreased in accordance with shorter length of stay.

While in 1952/3 approx. 12,500 patients were treated in state mental hospitals the number in 1962/3 had risen to approx. 19,000 in the same number of beds.

The average length of stay was 7% for more than 1 year, 75% for less than 3 months and 14% of these for less than 14 days.

Technical departments such as chemical and bacteriological laboratories and X-ray diagnostic departments are undergoing rapid growth. There are no exact figures available to illustrate the enormous expansion of laboratory analysis, but the number of laboratory technicians in hospitals has risen from approx. 1,000 in 1961 to approx. 1,500 in 1966.

A similar illustration may be gained from information from the customs department that in 1955 there was an import and consumption of X-ray films of 1 ton (worth 213,000 d.kr.) in 1960 it was 7 tons (381,000 d.kr.) and in 1965 was imported and consumed 14 tons (688,000 d.kr.).

(iv) The numbers of medical personnel of most categories have risen considerably during recent years.

The number of medical students is so high (approx. 1,000 yearly, of whom approx. 40% withdraw before graduation) that the teaching facilities are widely overburdened by lack of teachers and facilities.

There are three medical schools; the newest just opened a few months ago has so far a very limited capacity.

A modernised and somewhat simplified curriculum for the medical study is considered at present, and similar efforts are made to streamline the education of auxiliaries and paramedical personnel.

Nurses are scarce, partly because they are too attractive and leave active service to get married soon after they have completed their training. Some of those reappear as part-time helpers. Approx. 33% of those who have finished their education during the last 20 years are permanently out of service. Further, approx. 2,000 have taken up jobs outside this country, all of which leaves 12,000 for work in general hospitals, 2,000 in mental hospitals, and 2,000 for home-nursing and social work, a work-field which in the future will need a higher proportion of the total profession.

The number of nurses employed in hospital work has increased approx. 75% since 1950 and a similar growth-rate must be expected for the future, even if efforts are made to concentrate nurses' work on nursing, and getting others to perform duties which they are trained for and willing to perform at least just as well.

Male nurses have hitherto not been generally accepted, but there is a possibility that they, in the future, may undertake more responsibility and even be more willing than female nurses to compete for leading positions.

The employment situation, where only 0·5% of all registered workers are unemployed, has made the wage-level very unstable. Consequently the Government has found it necessary to enforce a licensing system on hospital building among other activities. This means that even if it is found possible—regardless of financial difficulties—to raise money for hospital enlargement and modernisation, the quota system prevents a growth according to demand. Efforts therefore have to be concentrated

on still more efficient use of available means in the form of a new approach to the solution of the arising problems.

(v) Numbers of surgical operations, X-ray examinations, analytical procedures, number of prescriptions, numbers of in-patients as well as ambulatory consultations in hospitals as well as in the practitioner's consulting-room show a yearly increase, which can be very clearly demonstrated by statistical data from various sources.

As already mentioned we do not find any reason to believe that this trend will stop in the foreseeable future.

(vi) In addition to what has been referred to previously it should be stressed that a comprehensive survey is published yearly by the National Health Service in *The Medical Report for the Kingdom of Denmark*. Part I is mainly concerned with an epidemiological report as well as with chronic diseases. Accidents, suicides and poisonings are reported. Certain measures against diseases and preventive health control are dealt with as well as public hygiene measures, and the activities of the medical officers are described.

Part II is a report on hospitals and other institutions for the treatment of the sick in Denmark. It gives a description of each existing hospital and its functions, tables giving number of employed persons in the individual hospitals, number of beds and occupancy, main diagnoses and operations for discharged patients in the individual hospital departments.

The report is written in Danish, but with a summary in English to which language also headlines etc. are translated.

(vii) An attempt has been made to push forward some 'facts' —even of very limited and dubious validity—into the limelight.

A comment might find a more suitable forum during a much-looked-forward-to discussion in the King's Fund College.

A few words in conclusion:

A well-known Danish politician once said: 'I have never heard that people could be cured by statistics.' This statement, which appears so true, is difficult to refute—and still!

Statistics are an essential tool for the combating of diseases, because real knowledge of the extent and spread of diseases can only be gained through the figures.

MISCELLANEOUS STATISTICS

Denmark area: 43,031 sq. km.
At 26th October 1960: population 4,585,256.
Population density per sq. km.: 106·6.
Population by sex and age:

	0–13	14–64	> 65	Total
Male	542,013	1,506,281	224,914	2,273,208
Female	517,212	1,532,094	262,833	2,312,048
Total	1,059,134	3,038,375	487,747	4,585,256

The population by age (estimated figures) at beginning of

	0–04	05–64	> 65	Total
1965	387,600	3,816,800	536,600	4,741,000
1975	438,000	4,010,200	671,400	5,119,600
1985	431,800	4,275,500	770,100	5,477,400

	New-born	> 65	Deaths	Total	Growth
Factual figures:					
1960	76,077	487,747	43,681	4,585,256	0·75%
1964	83,356	526,100	46,811	4,720,000	0·77%
Estimated:					
1975	90–95,000	671,400		5,119,600	0·8%
1985	90–95,000	770,100		5,477,400	0·8%

Number of doctors:

	Total	Gen. practitioners and pract. specialists
1950	4,895	2,286
1960	6,541	2,495
1965	app. 7,200	app. 2,400
1970	estimated 7,800	
1980	— 11,000	estimated 4,000

1963: 1 general practitioner per 2,170 inhabitants.

1980: 1 general practitioner per 1,430 inhabitants is hoped for.

Public expenditure—medical care (million d.kr.):

	State	Communities	State subsidy to sick-insurance
1959/60	319·6	306·4	77·5
1962/63	520·2	412·6	122·5
1963/64	614·3	452·5	
1965/66	budget 789·3	895·0	162·4

Running costs of state mental hospitals (million d.kr.):

1959/60		32,592
1962/63		35,274
1965/66	budget	49,962

Sick insurance:

Ninety-five per cent of the population benefit from the compulsory sick insurance, which for A-members (83·1% of the population) covers doctor's fee (general practitioners as well as practising specialists), total hospital bill, and part of cost of drugs, varying from 75% (vital medicine) to 25% (other prescriptions).

B-members: free hospitalisation, but only approx. 80% of the above-mentioned other amenities.

The actual contribution per member (above 16 years) is approx. 260 d.kr. per year.

X-ray examinations in the year 1962/63:

	In-patients	Ambulatory patients
In Copenhagen hospitals	228,763	125,233
In general hospitals (outside Copenhagen)	343,559	322,888
In minor hospitals	134,423	113,725
Total	706,745	561,846

Average length of stay within 7 representative general hospitals:

	1944/45	1954/55	1964/65
Surgical beds	18·5	14·6	11·1
General medicine	24·9	22·4	16·9
Total	21·7	18·5	14·0

FINLAND

PROFESSOR N. PESONEN

1. It is true that the demand for medical services has continued to increase in several countries. The same is true with regard to the need for hospital beds. This is the case also in Finland. There are several reasons for this state of things. With the development of medicine, more and more new diseases have come within the sphere of treatment, which has increased the demand for hospital services. As a small example may be mentioned the introduction of the operative treatment of heart defects. Further, better facilities are available today for the treatment of chronic patients. With the rise of the average age, the number of old people and, hence, that of the chronically ill increases, which exerts an increasing pressure on hospital services as well as on medical services in general. It is a well-known fact that people over 65 years need medical services 4–5 times more often than the age groups under 20 years. The rise in wealth and social status as well as health education also means increasing demand. People learn to know and to require the facilities offered by medicine today. Until recently the inefficiency of the methods of treatment has been a handicap, especially in the field of psychiatry, so that it has been difficult to meet the demand, although the number of hospital beds for mental patients in Finland is over 4 per 1,000—which must be regarded as a high figure. It is only lately that the situation has been facilitated, after new methods of treatment, tranquilisers and rehabilitative care have been introduced. Hence, it may be said that at least in this field the inefficiency of treatment has been one of the reasons why it has not been possible to supply the need and why pressure has continued to grow. In the degree that hospitals—psychiatric or others—are able to make the treatment more effective, the pressure for hospital services will naturally decline.

In this connection there is reason to draw attention to the fact that the regional distribution of medical treatment facilities may be unequal, which considerably increases the pressure in certain parts of the country. The hospital system is built on a communal basis in Finland as well as in other Nordic countries,

which means that the local authorities are bound to provide medical treatment facilities for local population, while it devolves on the State to grant subsidies and to supervise health services. This sytem also contributes to increase the demand, for when those in need of help are near at hand, the local authorities are prompted to make continued efforts to provide new treatment facilities. Hence, it may be said that the initiative activity has grown in the communal sector and the demand for the building of new hospitals has kept on increasing.

Finally, there is reason to refer to a factor that contributes to the increasing pressure for hospital services, viz. the so far relatively slight development of medical care outside the hospital. Pressure on hospitals can decrease to the extent that treatment facilities outside the hospital are developed and made financially at least as advantageous as hospital treatment.

In short, the factor causing the pressure is the public in the first place, the medical profession, including the administrative doctors, in the second place.

2. Foreign patterns and norms dictated by experience have formerly been followed to estimate the need for hospital beds, since no sufficiently extensive Finnish investigations to assess this need have been available. Efforts have lately been made to clarify the development of demand for hospital services by means of operation researches on hospitals. Government authorities have co-operated with local hospital authorities to carry out investigations of this kind in different parts of Finland. Researches of different degrees on pilot areas representing the utilisation of hospital services will give theoretical foundations for the estimation of future trends, though nothing certain can be said without prolonged observation. One of the view-points to be kept in mind in this kind of research is that it is expedient to use another classification of patients than the ordinary diagnostic one, for instance, as follows:

(*a*) Those in need of urgent treatment and those in need of less urgent treatment;
(*b*) Those in need of specific treatment and those not in need of it;
(*c*) Those in need of hospital treatment and those in need of medical services outside the hospital.

Demand has been decreasing:

(*a*) With regard to infectious diseases. The tuberculosis situation has been improving for several years. According to our estimate, some 3,000 tuberculosis beds out of the present 5,000 will be freed by 1970;

(*b*) With regard to psychiatric diseases. A decrease can be seen especially in the need for hospital beds.

In other respects the pressure for medical services seems to continue growing. There are many additional factors that will contribute to the demand for more and more medical services in the future. One of them is, for instance, the tendency towards early diagnosis of diseases; this is possible by means of various mass screening and periodical examinations. These examinations in themselves tend to increase demand and so do naturally the cases revealed through them that require hospital care and nursing. Health insurance and other similar systems further increase demand, since they remove the financial obstacles in the way of utilising services offered. There is also reason to point out the alarming increase from year to year of the victims of motor-vehicle traffic as one of the factors increasing the pressure for hospital services.

As regards the need of expansion of the hospital system, it seems it will be able to compete with other systems of medical care, especially from the viewpoint of doctors and nurses. A hospital is an ideal working place for trained medical personnel, as compared with health services outside the hospital. The organisation of these latter services is still underdeveloped in many countries, partly also in Finland, and in need of an urgent reorganisation.

3. As regards the pressure for specific kinds of services, it has been considerably difficult for us to supply the needs of the treatment of chronic patients in recent years. This problem has been referred to in point 1.

It must also be taken into account that extremely severe injuries occur in consequence of today's motor-vehicle traffic and their hospital treatment requires longer time, more efficient methods, more personnel. A considerable number of these patients remain permanently severely disabled and so are in need of continued medical care. Hence, chronic patients

cause particular pressure on the hospital system. This can be clearly seen also in the psychiatric section.

To remove this difficulty, measures have been taken to intensify rehabilitative activities, to train rehabilitation personnel (whose numbers do not nearly meet the demand), to find further forms of activity, to develop necessary institutions and facilities. It seems this sector of medical services is one of those that ought to be particularly developed in the future.

4. The medical services are obviously one of the most popular objects of consumption from the viewpoint of the population. Therefore the relative share of medical services in the total consumption of the population will continue to increase in the near future. The need for personnel, which, it seems, cannot be supplied in any country, is likely to keep on increasing. It seems that the personnel organisation of the hospital system in particular has not yet attained its best form. While more supervisors with a very high professional training (matrons, assistant matrons, head nurses, assistant head nurses) as well as special nurses are required, more nurses with basic training are also needed. On the other hand, it does not seem always possible to delegate tasks to less-trained personnel. This is apparently due to the opposing attitude of some professional associations; also it seems that employees can, more than employers, determine what kind of demands are to be set on their work. Especially during the last decade, active measures have been taken in Finland to increase the number of nursing personnel. The calculations made some ten years ago have not held good at all in this respect, but demands for additional groups of various kinds of workers are continually made. The sickness insurance act that took effect in Finland in 1964 aims in the first place at facilitating medical treatment given outside the hospital. There is reason to hope that the pressure on hospitals will considerably decline in the beginning of 1967, when doctors' fees will be included in the costs to be compensated by sickness insurance.

5. Statistics indicating the future pressure for medical services are available especially in the field of tuberculosis, where a decline in the pressure is clearly shown. Statistics indicate favourable development in the case of infectious diseases as well. In other sectors the figures show that pressure has con-

tinued to increase so far, but they do not give indications as to what may happen in the future.

6. Research undertaken so far has been limited to some operational researches on hospitals; for instance, a nation-wide research on hospital patients for the year 1960 is finished and some investigations on individual hospitals are either completed or near completion. A research on the psychiatric hospital care as a whole for the year 1960 will soon be finished. A few investigations have been carried out to analyse out-patient and general practitioner services in greater detail as well as general morbidity.

APPENDICES

'The level of hospital utilisation and the selection of patients in a Regional Hospital system.' Väänänen, I. S. *et al.* Helsinki, pp. 28 (neostyled).

'Utilisation of General Hospital Services in Finland, 1960.' Health Services Research of the National Board of Health in Finland, 1966, pp. 161.

'The Economy of Hospitals in Finland,' 1965. Finnish Hospital League, pp. 36.

FRANCE

MR. L. PEYSSARD

FOREWORD

In order to decide upon her Fifth Health Plan (1966–70), France carried out a vast investigation from 1964 to 1966 which corresponds to the theme of this Conference. The data quoted in my paper have been taken from the proceedings of the committees for the Fifth Plan. It should be noted that this plan provides for 13,000,000,000 francs under the heading of health and social investments, of which 9,000,000,000 are for the health sector. These investments are divided up in the ratio of one-quarter for the Paris region and three-quarters for the rest of the country.

In the pages which follow I have set out the principles which guided our planning. At the end of the paper I have added three appendices concerning general hospitals, institutions for the care of the mentally sick and cancer control.

THE UTILISATION OF HEALTH SERVICES IN FRANCE

1. Financially speaking, the utilisation of the health services is on the increase. This may be measured by the growing deficit of the Social Security:

Deficit for 1965	1,000	million francs
Estimated deficit for 1966	2,000	,, ,,
Foreseeable deficit for 1970	4,000	,, ,,

2. The reasons for this increase are:

The growing use of medical services (each year the French consult their doctors 4% more than in the previous year).

The growing use of hospital services (this rose from 53·4 to 56·5 per 1,000 population between 1959 and 1962). The number of patient days increased by 9% to 13% between 1961 and 1963.

The increase in the cost per patient day (+ 5% to 6% each year).

The growing use of drugs.

The increase in the cost of pharmaceutical products.

In addition, the population is increasing. It includes many children and old people and this puts a burden on the health services (at the last census in 1962 the population was 46,242,514).

3. The following serves to check the increase:
The reduction in the average length of stay in hospital,

31 days in 1931
26·1 in 1950
19·3 in 1962;

we should envisage a reduction of 10% to 20% between now and 1970.

An increase in the 'ticket modérateur' would also act as a check, but this would be a dangerous policy.

The utilisation of medical services has not yet reached its optimum level, at least in country areas. The use of drugs is certainly excessive, or rather it is abnormal and unevenly developed in certain quarters.

For the rest, the period of investigation, study and plan of action is just beginning.

ASSESSMENT OF NEEDS

4. The method adopted in France for assessing hospital bed requirements consists of comparing *by region* the number of existing beds with the number of beds needed, taking into account the *population*, the national average number of hospital cases (1·14), the national average length of stay (19·3) and the theoretical national average bed occupancy (74·4).

5. An increase in requirements is anticipated in the future; the determining factors are the attraction of being admitted to modern or renovated premises and the concentration in the hospital of the most skilled medical teams and equipment.

There is a clear relationship in France between the utilisation of hospital services per head of the population (and per year) and the index of hospital facilities.

In regions where facilities exceed 6·8 beds per 1,000 population, the utilisation of hospital services equals or exceeds 1·8 days per year.*

The lowest rate of utilisation is to be found in provinces with the lowest index of hospital facilities: Brittany, Auvergne, the Loire country, the North region, Limousin, Picardy, Poitou, Charente. These regions have less than 5 beds per 1,000 population.

The aim of the Fifth Plan is to develop facilities in regions where the average utilisation rate cannot be reached.

6. The number of general hospital beds per 1,000 population varies in France according to the region. In 1962 it was 8·85 beds in Alsace and 5 in the North region, and the national average was 5·95.

7. In 1959 the average bed occupancy was 79·4% for medicine, 71% to 73% for surgery and 54% for obstetrics. By 1963 the average occupancy in general hospitals had risen to about 85%. This is proof of the growing use of hospital services and also reduces the safety margin to 15%, which is not much. It is proposed to restore a wider safety margin by increasing facilities, so that by 1970 the average occupancy will be reduced to 74·4%.

THE DEVELOPMENT OF NEEDS

8. The need factor in France concerning medical care and hospital beds is a spontaneous movement on the part of the nation. It is not determined by pressure from the medical profession.

Pressure from the State, that is to say public opinion, contributes to it to a certain extent by the development of *maternal and child health services* under which prospective mothers and very young babies are compelled to undergo frequent and thorough medical examinations; by the development of *school and university health services* which insist upon periodical health certificates from the ages of 7 to 17 and even 23 (in the case of higher education). In addition, routine examinations are

*In 1963 the total number of patients admitted to hospitals of all types was 3,106,276; of these, 158,976 were in psychiatric hospitals and 37,864 in sanatoria.

required by the *military medical authorities* during compulsory military service and likewise by the *industrial medical services* of commercial and manufacturing companies. The Social Security Funds contribute to the last item.

All of this gets people in the habit of thinking about health and medical services. The public regards the development of medical care as the sign of an improved standard of living.

STATISTICAL RELATIONSHIPS

9. In France there is a relationship between the number of doctors and the expectation of life.

The expectation of life does not vary where there are more than 1·3 doctors per 1,000 population. It stands at about 69 years.

Where there are less than 1·3 doctors per 1,000 population the expectation of life is variable and may be anything from 65 to 69 years according to the region.

This demonstrates *the need* for doctors, particularly in Brittany, the North region, Lower Normandy, Lorraine, Upper Normandy and Alsace.

10. There is a similar relationship between the index of hospital facilities and the expectation of life. Where the bed/population ratio is higher than 7 per 1,000* the expectation of life, by region, is 67 years and over.

It is variable when the ratio is lower than this. But there is obviously a need for increased facilities in the North, Brittany, Lorraine, Upper and Lower Normandy.

11. There is a relationship between the expectation of life and the number of pharmacists per 1,000 population.

Where there are less than 0·34 pharmacists† per 1,000 population, the expectation of life is uncertain and varies between 65 and 69 years.

It is at least 67 years when the ratio is higher.

This demonstrates the need for an increased number of

* The average number of beds is 5·9 per 1,000 population.
† The average number of pharmacists is 0·33 per 1,000 population.

pharmacists, especially in Alsace, Lorraine, the North, Brittany, Upper and Lower Normandy.

MENTAL ILLNESS

12. In France the needs of psychiatry are the greatest and the most neglected, as regards consultant physicians, clinics and treatment areas in day hospitals, and hospital beds for short or long stays.

N.B. The expectation of life in France is 68 years.
The average number of doctors is 1·1 per 1,000 population.

The number of out-patients attending regional mental health departments rose from 88,000 per year in 1954 to 151,000 in 1961.

The total number of admissions rose from 49,305 to 89,910 by 1961. Neither the facilities nor the number of psychiatrists have kept up with this demand. In 1963 the number of patient days in psychiatric institutions amounted to 29,486,039. This has necessitated a very heavy building programme in this field (see Appendix II).

CONCLUSION

To sum up, health planning is based on definite principles, both as regards the recruitment of doctors and pharmacists and the setting-up, modernisation or conversion of general and specialised hospital beds.

First the facts: population by region, existing facilities, amount of use made of these facilities.

Then the forecast: population development by region (allowing for internal migration and urbanisation), increase in demand.

Three years of statistical studies form the basis of the decisions reached. The projects are divided, according to their size, into two or three five-year stages (1966–70; 1970–75; 1975–80).

APPENDIX I

GENERAL HOSPITALS—FIFTH PLAN, 1966–70

I

The hospital programme should take into account both the present qualitative and quantitative shortages and future needs.

It is quite likely that there will be an increase in hospital utilisation in the future:

—statistics available for a number of countries show a marked increase, but so far all of them seem to be keeping their heads above water, in spite of the reduction in the average length of stay;
—increased utilisation is brought about by an increase in the proportion of old people in a given population and this will be the case in my country for the next ten years (+1,200,000);
—the utilisation rate is higher in towns than in the country. We should therefore prepare for very rapid urbanisation;
—in addition, the fact that casual labourers are compelled to join the social security scheme for the agricultural professions will have a similar effect, especially as regards admission to medical wards.

According to the statistical studies, the number of patient days per head of the population should rise from 1·50 in 1962 to 1·65 (low estimate) or 1·95 (high estimate) in 1975. More rapid rates of growth have been noted in some special areas, but we are going ahead on the basis of the higher estimate of 1·95, bearing in mind the extent of our needs and what we are physically capable of carrying out.

II

The present position of hospital facilities is as follows:

(In beds)

Public sector	Existing number	Planned	Total
	(71%) 196,912 102,044 satisfactory (52%) 32,640 to be modernised (17%) 62,228 to be rebuilt (31%))	29,068[1]	225,980
Private sector	(29%) 79,763	16,263	96,026
Total for the public and private sectors	(100%) 276,675	45,331	322,006 general total

[1] Already financed and under construction.

The 1970 needs are assessed at 362,000, therefore the target is as follows:
—beds to be set up: 40,000 (362,000 — 322,000)
—beds to be rebuilt: 62,228
—beds to be modernised: 32,640

The following seems feasible, bearing in mind the credits available:

(*a*) to carry out the modernisation programme between 1966 and 1970
(*b*) to spread the building and rebuilding programme over two or three plans.

This leads to the following proposals for 1966–80:

Hospitals	(20,800 beds to be modernised)	(35,000 F per bed)
	(20,300 beds to be set up)	(76,000 F per bed)
University hospital centres	(11,200 beds to be modernised)	(35,000 F per bed)
	(27,400 beds to be set up)	(92,500 F per bed)

The beds to be modernised (32,640) have been divided up in the proportion of 65% in hospitals and 35% in university hospital centres.

APPENDIX II

INSTITUTIONS FOR THE CARE OF THE MENTALLY SICK—FIFTH PLAN, 1966–70

The Ministry circular of 15th March 1960 concerning the planning and equipment programme ratified the new standards: institutions with 400 to 600 beds, pavilions with 50 beds—25-bed ward units—abolition of large dormitories—percentage of single rooms—day-rooms—occupational therapy workshops; and established the 'sector' policy, under which the psychiatric institution takes its place as the treatment centre serving a given population side by side with the out-patient services proper (clinics—day hospitals—after-care centres—sheltered workshops). The best arrangement calls for districts with 65–70,000 inhabitants which have complete facilities centred on a 200-bed psychiatric unit.

Progress report and present position

In spite of some defects and delays, a considerable amount of work has been carried out. In the last 15 years, 12 new hospitals, 12,763 new beds and nearly 5,000 modernised beds have been put into service. Eighteen psychiatric hospitals are being constructed

under the Fourth Plan and we are in the process of drawing up the plans for 33 hospitals which will total over 12,000 beds. At the end of 1965 there will be only one 'département' without a psychiatric institution (Drôme), whereas in 1953 there were 19.

At the beginning of 1965, the position was as follows:

—number of beds in use in psychiatric hospitals (both public and private functioning as public): 92,478
—beds for the rehabilitation of alcoholics: 426
—beds in neuro-psychiatric departments of general hospitals: 1,300
—beds in private clinics: 6,000.

Average age of the facilities:

—less than 20 years old	20–25% of the beds
—between 20 and 40 years old	10% of the beds
—more than 80 years old	60–65% of the beds.

The situation is particularly serious in the Paris region where three-quarters of the ever-increasing needs have to be dealt with in antiquated buildings.

The rate of overcrowding remains high, averaging between 120% and 130%, but this rate is exceeded in many institutions and there have been cases of more than 200% overcrowding.

Needs

The number of patients in psychiatric hospitals continues to grow:

1900	64,977
1930	75,580
1954	105,036
1962	115,575
1963	117,462
1964	118,500

To conform to the standards recommended by the World Health Organisation (3 beds per 1,000 population), we should need at least 54,000 new beds by 1970, augmented by approximately 60,000 modernised beds.

On the assumption that needs will remain stationary (the number of patients under treatment fluctuating around 2·47 per 1,000 population) and proceeding with the rebuilding of only one-third of the old beds, we should envisage the construction of 36,000 beds and the rebuilding of about 20,000 beds.

But the upheaval in treatment methods caused by the development of chemotherapy and the systematic planning of the sector policy enable new working principles to be laid down.

The development of open departments, day hospitals and vocational re-training and after-care centres, as well as rehabilitation centres for alcoholics, should have the effect of modifying the problem of hospital facilities in the psychiatric field. Unfortunately, these systems have not been tried long enough to have any great influence on the trend of facilities under the Fifth Plan, but from now on it will be possible to provide treatment for many patients in these new services.

Drawing up a programme

On the basis of the World Health Organisation standard of 3 beds per 1,000 population, the bed shortage at the end of 1970 is assessed at 54,000.

Furthermore, approximately 60,000 beds are in need of modernisation.

It is proposed to spread the new building and renovation programmes over three plans (1966–80).

In addition, the emphasis is on the new systems of day hospitals and after-care centres. As I have said, the experiments being carried out at the moment are too recent for a conclusion to be drawn as to their exact influence on any reduction in the number of admissions to psychiatric hospitals. In view of the needs which cannot be satisfied at the present time, it seems reasonable to suppose that the setting-up of facilities in day hospitals and after-care centres will have very little effect on admissions to the traditional hospital, at least for the next few years. However, it seems vital to set up such facilities, since they meet certain requirements and correspond to the new trends in psychiatric treatment. This was the view expressed by several members of the co-ordinating group.

The projects for 1966–70 are therefore as follows:

	Millions of francs
—setting up of 18,000 beds (cost: 52,000 F)	936
—modernisation of 20,500 beds (cost: 38,000 F)	779
—2,000 places in day hospitals (cost: 22,000 F)	44
—3,200 places in after-care centres and sheltered workshops (cost: 35,600 F)	114
—2,500 beds in rehabilitation centres or units for alcoholics (cost: 50,000 F)	125
—170 out-patient clinics or parts of clinics (cost: 350,000 F)	59·5
	2,057·5

APPENDIX III

CENTRES FOR THE CONTROL OF CANCER —FIFTH PLAN, 1966–70

The organisation of the campaign against cancer which goes back to the ruling of 1st October 1945, has just been completed by decree No. 65-13 of 6th January 1965, and comes within the framework of the department of social health. It is based on the development of out-patient centres for early diagnosis of the disease, which constitute what might be called the secondary facilities. However, the entire campaign is still founded on the *regional cancer centres* with in-patient departments.

These number 18 with a total of 2,800 beds.
—2 are under construction (Dijon and Rouen)
—3 remain to be built (Clermont—Limoges)
—3 have to be rebuilt (Paris—Tenon, Caen, Rennes).

In addition to the transfer of the Gustave Roussy Institute in Paris which is necessitated by its present cramped accommodation, the Ministry proposes, during the Fifth Plan, 1966–70, to bring the country's cancer facilities up to strength by setting up two centres, and to improve the existing facilities.

The projects for 1966–70 are therefore as follows:

	Millions of francs
Transfer of the Gustave Roussy Institute (350 beds and laboratory)	60
Construction of 2 new centres and transfer of 3 centres (533 beds)	72
Extension of 2 centres	11
Purchase of high-voltage equipment	30
Setting-up of medico-dietetic annexes (200 beds)	10
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GERMANY

DR. S. EICHHORN

I. CLASSIFICATION OF THE DEMAND FOR MEDICAL SERVICES

Disease, suffering and physical injury can produce in individuals a subjective demand either for ambulatory treatment by a general practitioner or hospitalisation. The need for medical services is counted amongst the many personal needs of the individual.* In a classification according to subjectively experienced urgency it is one of the necessities of life. But at the same time the need for medical services falls within the category of needs relating to public welfare. The following three categories can be distinguished on the basis of urgency:

(*a*) On the basis of medical science ambulatory treatment or hospitalisation is necessary for the cure, improvement or alleviation of specific disease and ailments. This need for medical services based on objective medical reasons constitutes the group of objectively necessary requirements.

(*b*) In many cases of illness medical treatment is not necessary, viewed objectively. For a specific case, however, treatment may still be advisable for a number of different reasons. This type of need for medical services constitutes the group of conditionally necessary requirements.

(*c*) Finally, it may be a question of resorting to medical services even though this appears unnecessary on medical grounds either generally (objectively) or individually (conditionally). Such a need for medical services generally on a purely subjective basis and due to a variety of reasons, constitutes the group of superfluous requirements.

The subjectively experienced urgency of the need for medical services is not therefore necessarily in accordance with the significance attributed to this need in the public interest on the grounds of a decision of principle based on the ethics of our culture. The subjectively experienced urgency may be greater or less than the significance attributed to it in the public

* As opposed to social needs which result from the social community life of man. Example from the sphere of hospitals: isolation ward, prison hospital.

interest. For example, it is always greater when medical attention is demanded unnecessarily for a trifling complaint. It is less in all those cases where medical attention is not requested even though on medical grounds treatment is necessary.

For some of the needs for medical services, hospital treatment is necessary in accordance with the demands of medical science, while for the remaining needs attention by a general practitioner is sufficient (with the patient attending the doctor's surgery or the doctor visiting the patient at home). The type and number of diseases and ailments in which hospital treatment is considered necessary vary according to the progress of medical science.

II. STATISTICAL SURVEY OF THE DEVELOPMENT OF SUPPLY AND DEMAND FOR MEDICAL SERVICES

The following Tables 1 to 6 give a statistical survey of the development of demand for medical services in Western Germany. Despite inadequate and in some cases incomplete statistics the general trend of increasing supply and rising demand for medical services is clearly recognisable. The social health insurance statistics also show the varying degree to which these services are used by different categories of members.

Table 1

CASES AND DAYS OF HOSPITALISATION FOR PERSONS INSURED UNDER THE SOCIAL HEALTH INSURANCE SCHEME FROM 1950 TO 1964 (per 1,000 members)

Type of member	1950		1955		1960		1964	
	cases	days	cases	days	cases	days	cases	days
Total members (excl. pensioners)	88	2,043	92	2,056	87	1,893	83	1,884
Compulsory members (excl. pensioners)	90	1,998	95	2,107	90	1,900	88	1,873
Voluntary members	81	2,285	72	1,780	71	1,862	70	1,857
Pensioners	—	—	—	—	111	3,353	13	4,263

Table 2

HOSPITAL BEDS AND UTILISATION OF HOSPITAL SERVICES FROM 1900 TO 1964

Years	1900	1910	1920	1930	1950	1955	1960	1964
Bed factor (hospital beds per 1,000 inhabitants)	4·6	6·2	7·6	9·1	10·2	11·1	11·3	11·3
Hospitalisation frequency (patients per 1,000 inhabitants)	23·9	36·6	48·0	65·5	113	116	125	129
Hospital utilisation (days of care per 1,000 inhabitants)	—	—	1,880	2,540	3,440	3,497	3,582	3,568
Length of stay in hospital	—	—	39·2	38·8	32·9	30·1	28·7	27·7
Bed occupancy rate (in %)	—	—	72·5	94·5	87·5	86·4	86·5	86·6
Density of personnel (hospital personnel per 1,000 beds)	—	—	—	—	—	510	580	630

Table 3

MEDICAL AND NURSING PERSONNEL (per 1,000 inhabitants)

Year	1910	1930	1955	1960	1964
Total medical and nursing personnel	—	3·95	6·30	6·83	7·33
Doctors and dentists	—	1·15	1·66	2·01	2·00
Nursing personnel	1·07	1·78	2·53	3·01	3·24

Table 4

CASES OF TREATMENT IN PRIVATE PRACTICE UNDER THE HEALTH INSURANCE SCHEME FROM 1955 TO 1964
(per 1,000 members)

1955	1960	1964
3,750	4,220	5,050

Table 5

EXPENDITURE (IN DM) OF THE HEALTH INSURANCE SCHEME FROM 1955 TO 1964 (per member)

Expenditure of health insurance scheme per member	1950		1955		1960		1964	
	Members	Pensioners	Members	Pensioners	Members	Pensioners	Members	Pensioners
Total expenditure on services	117·06	54·77	190·35	94·08	354·22	241·54	455·18	344·08
Expenditure on in-patient treatment	22·48	18·01	32·99	27·74	54·39	71·41	73·77	113·22
Cash benefits (sickness benefit and home care benefit)	29·84	—	51·64	—	124·70	—	152·64	—
Treatment by doctors	26·19	9·91	44·82	24·66	71·26	61·43	87·73	81·35
Treatment by dentists	6·38	2·02	11·56	2·48	20·24	5·69	29·96	8·03
Treatment by other medical personnel	—	—	—	—	0·02	0·02	0·02	0·03
Expenditure on drugs and medical supplies	22·21	—	32·81	30·61	42·69	70·07	57·63	97·17
Expenditure on false teeth	—	—	5·49	0·81	10·40	8·09	12·75	10·50

Table 6

CASES OF UNFITNESS FOR WORK AND DAYS OF ABSENCE FROM WORK UNDER THE HEALTH INSURANCE SCHEME FROM 1960 TO 1964 (per 1,000 members)

Type of member	1950		1955		1960		1964	
	cases	days	cases	days	cases	days	cases	days
Total members	450	11,117	535	12,123	707	16,776	679	15,668
Compulsory members	500	12,029	610	13,626	832	19,575	889	19,543
Voluntary members	160	6,148	134	4,066	143	4,104	173	5,020

III. FACTORS DETERMINING THE DEVELOPMENT OF DEMAND FOR MEDICAL SERVICES

1. The following factors lead to an increase in the objectively and conditionally necessary demand for medical services:

(*a*) Development of medical science.
(*b*) Intensification of preventive medicine and rehabilitation.
(*c*) Development of medical technology.
(*d*) Increase in life expectancy, resulting in a rising proportion of old people in the population.
(*e*) Increase in the number of employed persons, particularly women.
(*f*) Intensification of work.
(*g*) Increase in traffic.
(*h*) General increase in susceptibility to disease as a result of the influence of civilisation.

2. The following factors can result in a necessary or an unnecessary demand for medical services:

(*a*) Improvement in social insurance benefits.
(*b*) Informing the public of treatment facilities.
(*c*) Increase in relief and welfare work by the State and charitable organisations and thus an increase in the supply of medical services.

3. The following factors generally result in an increase in the unnecessary demand for medical services:

(*a*) Increase in fear of illness and death as a result of popular science publications.

(*b*) Increasing need for reassurance, even for trifles.
(*c*) Increasing facilities for easing and improving life.
(*d*) Improvement of economic security in cases of illness.
(*da*) No direct financial burden as a result of illness.
(*db*) No loss of income because of illness.

IV. HOW IS THE DEMAND FOR HOSPITAL BEDS DETERMINED?

A. *Factors determining the demand for beds*

Starting from a specific area the demand for hospital beds (B) is determined from the following factors:

(1) Number of hospital cases (F).
(2) Length of patients' stay in hospital (V).
(3) Bed complement (A)—allowing for the necessary reserve capacity.

The demand is calculated from these factors as follows:

$$B = \frac{F \cdot \frac{\sum_{F=1}^{F=n} V}{F}}{365A} = \frac{\sum_{F=1}^{F=n} V}{365A}$$

Whereas the reserve capacity (bed complement) necessary for medical and nursing reasons can easily be determined and can be taken into account on a standard basis in calculating bed demand, considerable difficulties arise in calculating the number of hospital cases for which a stay in hospital is objectively or conditionally necessary and in determining the necessary length of stay for all these cases. Both determination of total number of hospital cases and the definition of the various categories of demand together with elimination of the so-called unnecessary demand raise a wide variety of problems. This is also true of the length of stay. Here too, practice has shown that the question of the necessary (from the medical and nursing point of view) length of stay is not easy to answer. As a result, even today there are still no genuine and generally valid reference values and principles for determining which patients really belong in the hospital and how long they should stay there.

B. *Bed factor calculation*

The method formerly used for calculating bed demand was to draw conclusions on future demand from macro-economic figures on the supply of hospital beds and the utilisation of hospitals in the past (bed occupancy and length of stay). The basis for this calculation is the so-called bed factor, i.e. the number of available beds per 1,000 inhabitants in a specific region. Example: in West Germany with 58·2 million inhabitants and a total of 658,000 hospital beds available the bed factor for 1965 is 11·3. If the number of inhabitants in a specific area is 200,000, with a bed factor of 11·3, bed demand is calculated at $11 \cdot 3 \times 200 = 2{,}260$ hospital beds. In some cases the bed factor is broken down according to the most important medical categories. Example: bed factor for surgery 2·2; for internal medicine including infectious diseases 2·4; for gynaecology/obstetrics 1·2; for paediatrics 0·6; etc. A further refinement is obtained by specifying the necessary bed capacity at normal occupancy rates, taking into account the existing occupancy rate, and then calculating the bed factor. Example: bed capacity = 300 beds; occupancy rate = 90%; population 43,000 inhabitants; bed factor 7·0; necessary bed capacity at normal occupancy rates (85%) = 320; corrected bed factor = 7·45.

C. *Analytical calculation of bed demand*

In view of the shortcomings in the method of calculating bed factors, the analytical method for calculating bed demand has been developed. It is based on a detailed analysis of the utilisation of hospitals in the present and the past. Starting from the number of hospital cases, the length of stay and the bed occupancy rate in the past, an attempt is made to determine the probable development of these three determining factors for bed demand and to take this into account in calculations, so as to obtain a closer approximation to actual necessary demand in the future. Four stages in the determination of bed demand can be defined:

(1) Complete information on the utilisation of hospitals in the present and past (analysis of bed supply, hospital

cases, length of stay, bed occupancy rate, movements of population).

(2) Complete information on the trends in the determining factors for bed demand.

(3) Allowance for non-quantifiable imponderables for future bed demand and observance of fundamental decisions of health and social policy.

(4) Final decision on the capacity considered necessary.

Only the first two stages are calculable. Stages (3) and (4) defy strict calculation and therefore mathematical formulae are ruled out.

1. *Number of hospital cases*

The basis for the demand for hospital beds in a specific area is the number of hospital cases, i.e. the number of patients who enter hospital for treatment within a specific period (generally one year). Data on hospitalisation frequency (number of hospital cases per 1,000 inhabitants) can be obtained from hospital and sickness fund statistics. To draw conclusions on future demand from the number of hospital cases in the past, the following factors must be taken into account:

(*a*) *Number of population*

The total number of patients who have to be admitted to a hospital is primarily influenced by the number of inhabitants. In determining bed demand it is therefore of particular importance to estimate population trends in advance.

(*b*) *Further development of medicine*

The constant development of medicine and medical technology has led to hospitalisation becoming superfluous for certain diseases, while other diseases, formerly considered incurable, can today be cured if properly treated. On the one hand, therefore, progress in methods of treatment and possibilities of treatment causes a shift in the division of duties between in- and out-patient care and on the other hand it is leading to additional demands on the hospitals.

(*c*) *Age structure*

Statistics indicate a rise of up to 40% in hospitalisation for old people. The reason for this is that the rise in life expectancy for

old people as a result of medical progress is accompanied by an increased susceptibility to disease and to some extent even different types of disease, leading to an increased need for hospital treatment. According to current calculations the proportion of the population over 65 years old in West Germany will increase from 10 to 15% by 1980. Similar differences can be noted in the hospitalisation frequency figures for babies. This indicates that an increase in hospitalisation frequency is to be expected both with the rise in the number of old people and with the rising birth rate.

(*d*) *Employment*

Undoubtedly going out to work puts a severe physical and psychological burden on the working population, a circumstance which is bound to result in an increase in hospitalisation frequency. In addition there is the ever-increasing risk of accident and in some cases also industrial diseases. The proportion of employed persons in the total population is also an important determining factor for bed demand. On the other hand there is the circumstance that the housewife who does not go out to work and is the centre of the family is unwilling to leave her family and therefore avoids going to hospital as far as possible. From this point of view the number of women employed (wives going out to work) plays an important part in assessing hospitalisation frequency. The increase in the number of married women going out to work will bring about a sharp increase in hospitalisation frequency for women.

(*e*) *Possibility of care at home*

Closely connected with employment is the question of the possibility of care at home in the case of illness, which depends on circumstances in the home. Even slight illnesses which with good care at home would normally only require a visit from the family doctor or local specialist can lead to admission to hospital in the case of people living alone. The lack of opportunity and also the growing unwillingness of the population to care for sick members of the family at home will therefore lead to an increase in hospitalisation frequency.

(*f*) *Traffic accident figures*

In investigating hospitalisation frequency special attention should be paid to the traffic accident figures in connection with

traffic density and traffic frequency in an area. The slightly higher hospitalisation frequency in a large town is not least due to the high accident rate on the roads. Important indications can be obtained from vehicle density and traffic frequency in addition to accident statistics.

(*g*) *Financing for hospitalisation*

The decision of an individual whether or not to attend a hospital in the case of illness is largely determined by whether and to what extent he will incur financial costs by a stay in hospital. Direct financial obligations act as a filter in the decision whether to go to hospital or not. Where the costs are paid by an anonymous body (health insurance or the State) it is probable that the hospital is used more frequently than in cases in which the patient has to bear all or part of the costs himself. This is clearly indicated by the lower hospitalisation frequency of those not subject to compulsory health insurance. Some influence is also undoubtedly exerted by the extent to which a stay in hospital will result in loss of earnings. Changes in the type and extent of social insurance benefits can thus considerably influence the demand for hospital services. Example: when the costs of hospitalisation for childbirth were taken over by the scheme, the number of hospital deliveries rose by more than 50%.

(*h*) *Present bed capacity*

Hospitalisation frequency in the past and present can be decisively influenced by bed capacity. Naturally the rise in utilisation is limited by the available capacity. On the other hand experience shows that the utilisation increases with the available capacity. Too high a bed capacity can stimulate excessive hospitalisation frequency, and too low a capacity too low a hospitalisation frequency. Regional comparisons and an analysis of length of stay and bed occupancy (inadequate bed capacity can partly be compensated for by excessive occupancy rates and by shortening the length of stay) can throw some light on this aspect.

(*i*) *Fundamental decisions of social and health policy*

Finally, fundamental decisions of social and health policy can also have a great influence on hospitalisation frequency. For example, whereas formerly old people were looked after by their

families, the view is adopted today that the care of old people could well come within the province of in-patient treatment and that beds corresponding to demand should be provided for this.

Similar considerations arise in connection with the doctor referring patients to hospital. In many cases the need for medical treatment can be met both in general practice and by hospitalisation. With the present unsatisfactory system of fees for house visits in general practice it is quite possible for the health insurance doctor to decide on hospital treatment unnecessarily. Changes in the legislation (higher payment for individual services, e.g. house visits) could lead to a change in hospitalisation frequency.

2. *Length of stay*

In addition to the number of hospital cases, the length of time patients stay in hospital also determines the demand for hospital services. Here too it is not sufficient in calculating bed demand to determine the length of stay in the past and present. Only an exhaustive analysis of the factors influencing the length of stay and consideration of their future trends can supply the answer. It is interesting to note that the determining factors for length of stay largely correspond to those for hospital frequency. These are as follows:

(*a*) *Type and severity of illness*

Length of stay in the hospital is primarily dependent on the type and severity of the illness. From this point of view specific types of length of stay can be allocated to specific types of illness and the different medical specialties.

(*b*) *Age of patients*

The age of the patient also greatly influences the length of stay. This is partly due to the fact that for the various age groups there are certain typical illnesses with varying lengths of stay and partly because the length of stay for some illnesses varies with the age of the patient.

(*c*) *Possibilities of care at home*

In general people living alone stay in hospital longer than those living with their family. The reason is primarily the lack of care at home and impossibility of convalescing after discharge

from hospital in the case of persons living alone. It has also been found that persons in employment stay in hospital longer than those who do not go out to work.

(*d*) *Financing the stay in hospital*

The average length of stay for patients belonging to the social insurance scheme is 15 to 20% higher than for patients not subject to compulsory insurance. Therefore those patients who do not suffer any direct financial obligation on admission to hospital are more inclined or more easily persuaded to remain longer in hospital. For all these patients the hospital possibly represents not only the place of treatment for their illness but also the place of convalescence. Days of convalescence in hospital may be medically justified or recommended from the social point of view or quite unnecessary.

Therefore when considering bed demand one should not without further scrutiny adopt the existing position as regards length of stay in hospitals in the area concerned, but must in each case ensure that the respective lengths of stay have not been unnecessarily lengthened or shortened as a result of the influence of any non-medical factors.

3. *Bed occupancy rate*

It is in the nature of disease that the annual number of hospital admissions are not uniformly distributed over the months, weeks and days of the year but can differ sharply from one period to another. In addition to these normal fluctuations there are even greater seasonal variations (e.g. catarrhal diseases in spring and autumn). The frequency of infectious diseases also varies. In many cases admission to hospital can be arranged for a specific date, but it cannot generally be postponed for long. Therefore in order to be able to accept all patients at any time the hospital must keep a certain reserve both in bed capacity and in the capacity of the treatment and nursing services. In the modern hospital with flexible bed facilities a bed reserve of 12 to 15% has been found sufficient.

It should be remembered that the occupancy rate should not only be specified on a standard basis. An analysis of the occupancy rate in the past can provide valuable information for the calculation of bed demand; for example excessive occu-

pancy indicates a latent demand while a low occupancy rate on a permanent basis indicates that bed capacity is excessive.

D. *Regional capacity of bed supply*

An analysis of the demand for in-patient hospital services shows that the total demand for hospital beds is far from uniformly distributed over the various medical specialties and differs greatly from one to another (see Table 7).

Table 7

STANDARD VALUE FOR THE BREAKDOWN OF DEMAND FOR BEDS

Specialties	Structure of demand as %
Surgery	29
Internal medicine	29
Infectious diseases	3
Gynaecology/obstetrics	8 + 7
E.N.T.	3
Eyes	2
Paediatrics	8
Radiography	1·3
Urology	3
Neurology	3
Psychiatry	—
Orthopaedics	2
Dental surgery	0·2
Dermatology	1·5
Total	100

For medical and nursing reasons and also on economic grounds it appears advisable not to provide certain special equipment and specialist beds everywhere, in view of the comparatively low demand, but to concentrate them centrally in a few places. It is therefore not sufficient, when calculating bed demand, to determine the extent of the demand for hospital services in the specific area. It is just as important to distribute the necessary bed capacity correctly to the various types of hospital (basic service—regular service—central service). Therefore bed demand in individual cases must be considered from several points of view and in several stages:

1. From the regional point of view:

   1*st stage:* Determination of the individual demand for the respective area

2nd stage: Determination of the duties of the individual hospitals

3rd stage: Distribution of bed capacity to the various hospitals

2. From the point of view of the individual hospital:

1st stage: Determination of the individual demand for the respective area

2nd stage: Determination of duties (medical and nursing objectives)

3rd stage: Determination of those moving out to other hospitals

4th stage: Determination of those admitted from neighbouring areas

5th stage: Co-ordination of own planning with the planning of other hospitals

6th stage: If necessary, correction of scope of duties

7th stage: Final establishment of total bed capacity and bed capacity broken down into medical specialties

E. *Need for doctors practising under the health scheme and in private practice* (general practitioners and specialists)

There are no investigations available into the demand for the services of doctors in general practice. Until a few years ago, admission to practice under the health scheme was limited to one doctor per 450 insured persons. This restriction has been lifted in the meantime. Any doctor (general practitioner or specialist) who fulfils the conditions for the practise of his profession can set up in practice. It is therefore up to the individual doctor to decide whether there is still a demand for medical services in the area concerned. A demand expressed by the ratio one doctor to 350 insured persons is generally accepted today.

V. WHO DETERMINES BED DEMAND?

As there is no legislation in Germany on the maintenance of hospital beds, the towns and districts and charitable organisations must take the initiative in building and managing hospitals. Therefore each hospital determines in individual cases whether and to what extent there is a demand for addi-

tional hospital beds, in conjunction with neighbouring hospitals. The determination of bed demand by the individual hospital is controlled by the fact that the Länder subsidise the building of hospitals from public funds and examine the question of demand when they receive financing applications for the hospital. There is for each Land a hospital plan which gives a very general estimate of the necessary number of hospital beds and their regional distribution (at district level). The plans of the individual hospitals must therefore fit into this general framework. If planning projects of individual hospitals differ from the Land plan, then generally neutral arbitrators are called in to settle the question.

VI. DOES THE INCREASE IN THE DEMAND FOR MEDICAL SERVICES AFFECT ALL FIELDS EQUALLY?

1. The increasing refinement of diagnostic and therapeutic methods is linked with increasing specialisation and leads to a growing demand for medical services in certain special fields, e.g. laboratory medicine, radiology, cardiac diagnosis. The intensification of preventive medicine and rehabilitation is also accompanied by an increase in special units such as cancer and diabetes advisory centres and spa therapy. In the hospital this development takes the form of an increase in the demand for certain specialist beds and treatment facilities.

2. The increasing incidence of the diseases of civilisation leads to a growing demand for special medical services, e.g. treatment facilities for diabetes, coronary thrombosis and stress disease.

3. The increasing relief and welfare activities of the state and the improvement in social insurance benefits, where these are of a special nature, also lead to an increasing demand in specific fields. Example: the payment of hospital costs for confinements is leading to an additional demand for maternity beds. Free advice for pregnant women is leading to a demand for advisory centres. Where the improved services are of a general nature (example: continued payment of wages to sick workers) the resulting additional demand covers all fields.

4. The fact that the public is now better informed about the

possibilities of hospital treatment, combined with the need they experience for 'reassurance' is resulting in people turning to medical services even in trifling cases. This relates more to general than specialist services. In the hospital this results in an increase in bed capacity in the basic disciplines (chiefly surgery and internal medicine, but also gynaecology and obstetrics, ears, nose and throat and eyes).

5. The rise in life expectancy and the resultant increase in the proportion of old people in the population is accompanied by an increase in the number of elderly patients. This leads to a demand for the necessary treatment facilities for in- and out-patients. At the same time, however, the demand for facilities for the care of sick elderly people (in nursing homes) also rises.

6. The increase in the working population and the heavier traffic are leading to a rise in accident risks at work and on the road and thus to a growing demand for emergency treatment for in- and out-patients. The rise in the working population also causes an increase in industrial diseases.

On the whole it is true to say that the increasing use of medical services in the recent past and in the future primarily affects specialised rather than general medical services.

VII. WHAT ATTEMPTS ARE BEING MADE TO LIMIT THE DEMAND FOR MEDICAL SERVICES TO THE NECESSARY EXTENT?

Whereas business concerns in a free market economy only take into account potential customers with adequate purchasing power in their plans to meet demand, when considering the demand for medical services account must be taken of all those potential users who will in the future have an objectively or conditionally necessary demand for medical services. A car factory produces only as many cars as it expects to find customers ready and able to pay for them. In the hospital the number of beds cannot be assessed according to the patients who are able and willing to pay for them, but must be estimated according to demand. The sorting of demand on the basis of purchasing power and price in the free market economy does not apply in the health sector. And it is this circumstance which makes the determination of demand in the field of health services a very difficult and responsible task.

The limited personal, material and financial resources in an economy and the constantly increasing individual requirements of all kinds together with the increasing duties of the public sector are the reasons why the medical services must be limited to the necessary extent. All the parties concerned agree on this: the general public, the doctors, the hospitals, the health insurance funds, the government, parliament and the political parties. If the medical services of all kinds have nevertheless constantly been extended and will continue to increase, even beyond the objectively necessary extent, the reasons for this are purely of a political nature. Public health welfare and relief are amongst the most popular and powerful political aims so that all political parties adopt them and often promote them beyond the necessary extent. Many attempts to reach a sensible limitation of the supply of medical services have been frustrated at political level.

Example: introduction of patient participation in costs under the health insurance scheme. It has been proved that a reasonable participation by patients in costs would lead to a reduction in the use of medical services and thus to an easing of the social budget, without endangering medical care for the population. However, it is not politically feasible to reduce a level of social services already achieved.

It therefore appears, apart from the ever-increasing possibilities of helping the sick, that there is a certain element of compulsion in the increase in the demand for medical services, due solely to the trend towards a constant improvement in social services which often therefore exceed what is objectively necessary. All sensible attempts to limit social services to the necessary extent are generally obstructed at political level. Since from this point of view the determination of the supply of medical services does not follow the objectively necessary demand but in the long run is a decision of principle in health or social policy, the supply will greatly exceed the genuinely necessary demand. This will lead to the utilisation of medical services even when there are no objectively necessary reasons for so doing; experience to date has shown that an existing supply is always utilised.

GREECE

DR. M. GERMANOS

1. It is an indisputable and accepted fact that we are going through a period which demands more and better organised medical services, and a larger number of hospital beds. Many factors have created the demand for increased and extended medical services, the most important of which are listed below:

First, there has been an endeavour to reduce to a minimum the general morbidity rate. Naturally, this has called for a better organisation of the Public Health Services by the application of wider and more effective measures of preventive medicine and hygiene (for example, environmental sanitation, control of contagious diseases, improvement of living conditions, control of infectious diseases carried by foreign bodies, health education of the public, a wider publication of measures for personal and social hygiene, special maternity and infant care, an improvement of the conditions of work, better preservation of foodstuffs, etc.). Naturally, the discovery of antibiotics and other drugs has made a considerable contribution during recent years. The reduction in the infant and crude death-rates and the increase in average life-expectation, which have caused a consequent increase in the diseases common to middle and old age, mainly malnutrition, heart diseases, diseases of the circulatory system, cancer etc. were the results of the above endeavours.

For some time, a 'Supreme Co-ordinating Committee', whose principal job is to study the problem of a general reorganisation of the health services, has been formed in the Ministry of Health. Despite the fact that no final conclusions have been reached, and that there is no clear indication of what they will be, we do not expect the Committee's conclusions to differ significantly from the ideas put forward in this report. Due to the extremely serious nature of the theme being discussed by the Committee, we do not expect them to reach final conclusions in the near future.

2. Due to a variety of factors, there is indeed a demand for an increase in the number of hospital beds. Among the main factors creating this need, the most important are:

(*a*) The enormous increase in the amount of laboratory research and diagnosis which cannot be carried out except in hospitals;
(*b*) The growth of public confidence in hospital treatment;
(*c*) The extension of health insurance and free medical care to all categories of workers;
(*d*) The increase in a large variety of accidents;
(*e*) The public's preference for hospital rather than home nursing;
(*f*) The education of the population to undergo regular health check-ups;
(*g*) The expansion and specialisation of medical science, which requires a greater number of hospital beds;
(*h*) The extension of social care for the aged and the chronic sick (nowadays the chronic sick and the aged must seek hospital care, since their families are occupied outside the home and do not have the time to nurse them).

3. In our opinion, there will be no case for a decrease in the number of hospital beds in the future. On the contrary, they are expected to increase due to the previously mentioned factors.

The number of hospital beds in Greece in relation to the size of the population is small according to generally accepted international standards (5·8 beds per 1,000 inhabitants). Of these beds, there are 3·7 beds per 1,000 inhabitants in general hospitals and 2·1 beds per 1,000 inhabitants in specialised hospitals (including hospitals for mental illness, children, tuberculosis, infectious and venereal diseases, obstetrics/gynaecology and sanitoria). It should be mentioned here, that of the approximate total of 50,000 beds, 17,000 are in private clinics.

It is beyond question that the existing number of beds is insufficient to meet present needs. Furthermore, the geographical distribution of hospital beds is very uneven, so that some areas, particularly in the case of general hospitals, have a much greater supply than others. Of course, this phenomenon is not peculiar to Greece alone. Apart from the unequal distribution of beds in the country, other factors create difficulties in the provision of comfortable and complete hospital treatment in remote country districts. These factors are the extent and

geological aspect of the country, its many islands and extensive mountainous areas, and the transportation network.

We must return to the subject of the uneven distribution of hospital beds. The biggest and best-organised hospitals are situated in the largest cities of the country, where are also the medical schools. This causes people from the provinces to seek better treatment and to travel to the large hospitals even for the treatment of simple diseases. To avoid this, we have decided to create large hospital units in the provinces (about 6), and this programme is already under way. It is difficult to foresee when this programme will be completed due to economic restrictions. Nevertheless, we hope that it can be quickly put into operation. This decentralisation should enable top-level medical personnel to serve in the provinces, something which does not happen at present, since physicians are unwilling to serve in the small ill-equipped hospitals.

The establishment of large provincial hospitals has another essential aim, which is the extension of pre-graduate and post-graduate training of medical students in hospitals, by the founding of new medical schools. From past experience, we have learned that this is the only way to attract physicians to the provinces. Obviously this will cause an additional financial burden, since these physicians will demand greater financial compensation.

4. Apart from general hospital beds, there is also a pressing need for beds in special hospitals, particularly psychiatric beds. There is no point in discussing this in great detail, but we can mention that the increase in mental illness appears to be caused by the following factors: —

(*a*) The increase in the population and its consequence;
(*b*) The problems of the post-war years;
(*c*) The increase in the number of those who use narcotics;
(*d*) The increase in average life-expectation and consequent increase in mental debility of the aged;
(*e*) The tremendous technical progress which has caused people to leave their more natural way of life to live under difficult conditions; and finally,
(*f*) The desire of patients and their relatives for better and more complete treatment.

5. Similar arguments could be used for the need to increase beds for obstetrics and pediatrics. Of course, there are very well-organised clinics for these two specialties in the large urban centres of the country. In addition, there are maternity and pediatric departments in the large provincial hospitals. Basically these units are operating quite satisfactorily. The necessity for an increase in the number of beds for obstetrics and pediatrics results from a growing opinion amongst the general public that confinements and the nursing of children should take place in hospital, where there are all the facilities for a safe confinement and protection of the children from infant and infectious diseases.

Nevertheless, a large number of confinements take place in Health Centres and in the home and the majority of children are cared for in their own homes. Despite the fact that the infant mortality rate has been considerably reduced, it is still high, due to the difficulties we must face in providing nursing facilities in the mountainous areas.

6. The rarer specialties such as neurosurgery, child-surgery, cardiosurgery, urology, orthopaedics, surgery of the thorax, plastic surgery and the laboratories for special research are situated in the large urban centres, as is the case abroad. An attempt has been made to establish clinics and laboratories for certain specialties in the provinces. Similar clinics and laboratories have been planned for inclusion in the hospital units described in paragraph 3.

7. The organisation of hospital care and medical care in general presents special difficulties in Greece. This is due to the mountainous character of the country and its many islands. Previously the problem was how medical care could be brought to the rural inhabitants, the mountain and island dwellers, or how quickly these people could be brought to the well-organised hospital facilities in the cities. The difficulties are caused by the lack of an adequate road network, means of transportation, and regular communications between the islands. From this point of view there has been considerable improvement. Today about 1,200 rural dispensaries, and 124 Health Centres have been established in mountainous and rural districts, to provide help and medical care. The Health Centres have a small number of

beds (usually 6–15), where confinements and some simple surgery can be carried out. In addition, the dispensaries and health clinics are concerned with environmental health conditions.

There is a further difficulty, caused by the reluctance of medical and nursing personnel to serve in the rural clinics, even though they are offered considerable financial reward.

8. In Greece, the insurance of the population has many aspects. One large insurance organisation covers both workers and employees of private companies. Civil servants are covered by a separate state insurance scheme. These three categories of workers are covered for complete pharmaceutical, medical and hospital care. A further insurance agency covers the rural population, but only for medical care and certain drugs and not for hospitalisation. An increase in hospital beds will be necessary when the rural population is insured for hospital care, in the near future. This was an added reason for our deciding to establish large hospitals in the provinces. There are also a number of small insurance organisations.

Of the total 8,500,000 inhabitants in Greece, about 7,000,000 are covered by social insurance (including the limited insurance for the rural population). A number of different opinions have been expressed as to whether there should be a general insurance system or not. This subject is continually under discussion, and we hope that such a system will soon be realised.

9. Naturally these observations have been based on statistical research into the average length of hospital treatment, and the number of patients visiting out-patient clinics. It may be interesting to note that the average length of hospital stay is 17 days per patient. However, this average hides wide fluctuations, since in the large state hospitals where the medical schools are situated, the average exceeds 20 days due to:

(*a*) The greater length of time spent on examination of the patient's general condition (laboratory examinations, etc.) and
(*b*) The detention of certain cases for the purpose of giving instruction and demonstrations to the medical students.

10. One of the most pressing problems is the transportation of patients. Obviously we are faced with many difficulties in transporting patients from remote rural, mountain and island districts. In winter some of the mountain areas are cut off by snow and bad weather conditions. An attempt has been made to use helicopters in such emergencies, but unfortunately the number of helicopters at our disposal is very limited.

For the critically ill, helicopter transportation is available, but we hope that in the future we shall be able to organise this service better and to combine it with a system of hospital ships. Of course all these things have been planned for the future and we cannot estimate when they will be achieved, and a comprehensive transport system established.

IRELAND

MR. JOSEPH A. ROBINS AND DR. F. O'SIOCFRADA

As in other countries there has, in recent times, been increasing pressure in Ireland for more medical services and particularly for more hospital beds. It is estimated that at present there is a total provision of approximately 59,300 beds in the various hospitals and homes under public authority and private control. These figures include every type of hospital as well as institutions for old people, mentally handicapped, deaf, blind and epileptics. The provision of 59,300 beds represents 20·8 beds per 1,000 of the population.

INFLUENCE OF POPULATION STRUCTURE AND DISTRIBUTION

This exceptionally high provision of beds is probably due to a variety of reasons but it is likely that the structure of the Irish population is one of the major factors. Since early in the last century emigration has been a normal feature of Irish life. It has tended to reduce the numbers in the active age groups since, in the main, those who emigrate are the young and the able-bodied. It is estimated that at present about 42% of the population falls into the dependent age groups, namely those under 15 years of age and over 65. This percentage is higher than that of most, if not all, other European countries. Since the very young and the elderly are the most vulnerable where ill-health is concerned this population pattern obviously influences in a significant way the demand for hospital beds. There is a heavy demand for children's beds and waiting lists for admission to children's hospitals and children's units are not unusual. The greatest pressure for hospital beds comes, however, from the aged. In active care hospitals there is usually a large proportion of elderly patients. A recent survey conducted in 14 general hospitals in Dublin revealed that about 38% of the patients then undergoing care were over 60 years of age. It is of interest, too, that an appreciable number of the patients occupying the 19,000 beds in public and private mental hospitals could more appropriately be accommodated in geriatric institutions.

It is considered that the distribution of the population in Ireland has also contributed towards the demand for hospital care. Ireland is a largely agricultural community with a sparse and scattered population outside the main urban centres. Out-patient services cannot be readily availed of by many patients living long distances from hospital centres and this situation adds to the pressure for beds. One category of patient particularly affected by remoteness from specialist medical care is the maternity patient. If she is to have obstetric care of a high standard this can best be provided in the Irish situation in maternity hospitals and homes in urban centres. At present only about 10% of confinements take place in the patient's home as compared with over 30% ten years ago. In planning for the future it is assumed that ultimately not more than 5% of confinements will take place in the home.

OTHER FACTORS

Apart from the influences of population structure and distribution it is considered that other factors have contributed to the increasing demand for hospital beds.

Post-war developments in regard to social services in other European countries and particularly in neighbouring Britain considerably influenced policy in regard to the extent to which the State should participate in the provision of health services for its citizens. Irish economic factors have not, however, permitted the provision of free health services on the same scale as in some of the wealthier countries. Nevertheless, under legislation introduced in 1953 and amended on a number of subsequent occasions approximately 90% of the population is now entitled to hospital and specialist services free or at a charge not exceeding 10*s*. a day for in-patient services. Where the service of a general practitioner is concerned approximately 30% of the population is entitled to it free of charge. The fact that so many persons are entitled to free or low cost services must be regarded as an important factor in the pressure for increased hospital facilities.

In the case of the upper income group not covered by the foregoing provisions, the Government established in 1957 a

system of voluntary health insurance whereby persons in that group could insure themselves with a non-profit-making organisation. The insurance coverage given extends to hospital in-patient services only and its aim is to reduce the financial burden which hospital treatment would impose on persons in the upper income bracket. It is probable that this provision, too, influences the demand for hospital care but in view of the small percentage of the population to which it relates it is not a significant factor.

As elsewhere the advances of medical science in the diagnosis and treatment of disease are an important influence in the increased pressure for hospital treatment. In Ireland the benefits of new methods of diagnosis and investigation are being made more readily available by the development of out-patient departments and various categories of community clinics. A school medical service involving the periodic screening of elementary schoolchildren for aural, ophthalmic and other defects also gives rise to pressure for hospital beds to enable treatment to be given to children requiring it.

TRENDS IN BED DEMAND

No attempt has been made to estimate the country's overall need for hospital beds. Generally speaking the number of beds provided has been determined by the demand for them. Where maternity beds are concerned it has, however, been possible to estimate local requirements on a long-term basis by calculations based on the trend in population, the prevailing birth-rate (which has in the past been fairly static) and on the assumption, already mentioned, that about 95% of all confinements will, in the future, take place in an institution.

Where hospital services generally are concerned the present tendency is for an increasing number of persons to seek hospital care. The following statistics relating to the number of in-patients treated in Irish hospitals (with the exception of a small number of private hospitals) are relevant. All categories of hospitals with the exception of infectious diseases (including tuberculosis) orthopaedic and mental hospitals and county homes (institutions for the old and the destitute) are included.

Year	Number of patients	Average annual increase % approx.	Number of patients per 1,000 of population
1951	181,800	—	61·4
1953	201,600	5	68·5
1957	229,400	3	79·5
1960	241,100	2	85·1
1962	266,100	5	94·2
1964	282,900	3	99·3

Where orthopaedic and infectious diseases (including tuberculosis) institutions are concerned there has been a marked decline in the demand for beds and some institutions formerly used for these categories of patient have now been closed or are being used for other health purposes. The decline in the number of tuberculosis patients undergoing institutional care has been particularly dramatic. In 1956 there were 5,900 patients in sanatoria. At the end of May of this year it had declined to 1,109. Where institutions for the mentally ill are concerned there has been a significant decline in recent years in beds occupied because of greater emphasis on out-patient care and the earlier discharge of patients from hospital. The number of mentally-ill patients undergoing care in local authority institutions declined from 20,046 on 31st December 1958 to 17,694 on 31st December 1965. This represented a percentage decrease during that period of 11·7.

It will be noted from the foregoing table that the number of patients treated in general hospitals increased from 181,800 in 1951 to 282,900 in 1964. It is of interest that despite an increase of over 100,000 patients treated there was no significant increase in the number of hospital beds provided. This was made possible by a reduced average duration of stay in hospital and a consequently higher turnover of patients per hospital bed.

As regards likely future needs for hospital beds it is hoped that where general hospitals are concerned fewer beds will be required as the patient's average duration of stay decreases and as domiciliary health services are improved and developed in accordance with a recently announced Government plan. These domiciliary services, which will include the provision of nursing care and home help assistance, should, in particular, make it possible to reduce the number of elderly persons

occupying hospital beds by enabling some of them to be discharged sooner or to avoid the necessity for entering hospital by receiving treatment in their own homes.

As already indicated it is expected that the demand for maternity beds will increase in the future. The demand for tuberculosis beds and other infectious diseases beds is expected to continue to decline sharply. So too, with the increasing emphasis on treating the patient in the community, will, it is hoped, the requirements of mental hospital beds.

It is proposed, however, that there should be increased institutional provision for mentally handicapped patients. Last year a Government Commission which enquired into the problem of mental handicap recommended improved services for the care and treatment of these patients. At present over 7,000 such patients are maintained in institutions. The Commission estimated that there were over 17,000 persons in the country suffering from various degrees of mental handicap and, while it emphasised the desirability of community care, it accepted that in many instances it would not be possible.

COUNTERACTING INFLUENCES TO REDUCE BURDEN TO ECONOMY OF HEALTH SERVICES

It has been recognised at Government level that having regard to the size and population of the country there is an excessive number of local authorities responsible for the provision of the health services. In a White Paper published earlier this year the Government announced its intention to transfer the administration of the health services from the existing authorities to a small number of special regional boards. In administering the services the object of a regional board will be to view these services as a unit designed for the region as a whole. It is expected that under these new arrangements the health services generally, and the hospital services in particular, can be provided on a more effective and economic basis. In the future provision of hospital services there will be greater emphasis on the large comprehensive hospital serving a wide area rather than, as hitherto, on relatively small units serving local communities. In the long term the effects of this policy will be to reduce the number of hospitals now providing services.

Statistics are collected annually by the Department of Health in regard to patients treated in local authority hospitals. Calculations based on them provide a picture of the average length of stay, average cost of maintaining a patient and other information of value. The Hospitals Commission, a statutory body with certain functions in regard to non-public authority hospitals, prepares a similar annual figure in regard to these hospitals.

Earlier this year the Minister for Health established a corporate body, the Medico–Social Research Board, financed by public funds, the aim of which is to organise surveys and statistical research in relation to the incidence of human diseases and in relation to the provision and operation of various aspects of the health services. The Board is now considering the programme it should undertake. It is probable that one of its first surveys will be an investigation into medical and social aspects of hospital in-patients.

Recently a general hospital and geriatric survey was carried out in the Dublin hospitals as a joint study between the Departments of Social Medicine and Social Studies in Trinity College and the Department of Social and Preventive Medicine in University College, Dublin. The report of the survey which is now available contains a wide range of information about the adult hospital population at the time of the survey. It includes statistics regarding the sex, age and duration of stay of patients. Figures are given as to the number of patients who could be treated on an out-patient basis if the requisite facilities were available. The report also contains facts and figures about the medical and social conditions of elderly patients and deals with the question of how many of them might more appropriately be maintained elsewhere than in a general hospital.

ITALY

DR. ROBERTO DONATI

I. For several years we have had in Italy, as in other countries, an increasing pressure both for more medical services and for more hospital beds. Furthermore, the depressed parts of our country, namely the south and the islands, are beginning to demand the provision of these services along modern lines, and this will be followed by signs of pressure for increased services.

There are several factors causing the pressure for modern medical services in our south and in the isles, and for more medical services and more hospital beds all over the country. Some of these factors are manifestations of the legitimate needs of the people, but others are motivated by particular forces as I will explain.

The first group of factors comprises:

—scientific progress
—economic improvement
—social improvement
—cultural improvement

As a result of scientific progress, modern medical techniques, both diagnostic and therapeutic, require such a complexity of equipment for the treatment of almost every type of human illness that it is impossible for a single person, endowed only with medical knowledge, to act on his own, as was the case in the past. Hence the ever-increasing need for teams of specialists and for expensive equipment which are only available in our modern hospitals.

Scientific progress has also demonstrated the importance of treating illnesses formerly considered of little importance and has revealed that there is a great need for medical care in the older age groups of the population, as they tend in any case to have poorer health and are also increasing in number with the longer life expectancy.

The economic improvement of the country and of the people is both a direct and an indirect cause of the increasing demand for medical care. Direct, because the increased pace of life

causes an increase in the number of pathological conditions, and indirect, because the better-off members of the population become more interested in their health and so demand more medical services.

Social improvement means the raising of the social level of large sections of the population to the level formerly reserved for a limited number of affluent citizens. Since the demand for medical services increases geometrically with the raising of the social level, the total volume of the demand for medical services consequently increases in proportion to the number of people who rise to a higher social level.

Cultural improvement has also a real influence on the demand for medical services, as it has on other services connected with the aesthetic side of human life. Cultural improvement affects all social classes and in each case the broadening of their knowledge and the attainment of a higher cultural level lead to an increase in social needs. Among these needs medical care, if not the first, is certainly one of the most pressing.

The second group of factors, which may vary from country to country, includes in Italy:

—Pressure by the medical profession, owing to the fact that any increase in the number of treatments and admissions to hospital means a corresponding increase in our doctors' income.
—Pressure by the public, owing to the fact that the free medical assistance given by social insurance organisations to the majority of the Italian people encourages them to ask for medical care even when it is not strictly necessary.
—Pressure by our Government, itself continuously subjected to demagogical and electoral pressures and to demands from trade unions.

In my country a hospital doctor receives a fixed salary (in the past very low but now being substantially increased) and also a lump sum (on the average £10–12) for each person hospitalised. A general practitioner is either paid according to a tariff for each treatment given, or receives a yearly sum for each person who is registered with him.

The conditions created by this system of paying hospital doctors lead them to encourage an ever-increasing number of

patients to have in-patient treatment, patients for whom hospitalisation if not strictly useless (as hospitalisation is never useless for a patient even if the illness is slight) is certainly not a justifiable charge on our national economy. The doctors approach these patients either directly, if they come to them for treatment, or indirectly, through their assistants working in the hospital out-patients departments or, more probably, the out-patients departments run by the social insurance organisations.

The method of paying general practitioners for each treatment given inevitably inflates the number of treatments because of the extreme ease of obtaining them (completely free) and because of the doctors' strong interest in increasing them.

The alternative method of payment by a yearly sum means that the doctor has no interest in treating patients himself, but makes it extremely easy to ask for hospitalisation whenever a case presents even the minimum degree of complexity.

It has already been pointed out how pressure from the public is due to there being no charge for medical treatment which results in a general abuse of the right to such treatment. The remedy is easy and consists in the levy of a small payment. Demagogical and electoral reasons obstruct this very reasonable remedy. The same demagogical and electoral reasons push our Government towards an extension of free medical benefits far beyond our financial resources, thus creating a permanent situation of crisis for the whole medical and hospital organisation of our country.

The degree of pressure exercised by the objective factors of progress on demand for medical services and for hospital beds is certainly greater than that exercised by the unjustified factors described above. It is, however, very difficult to make an exact evaluation even on the basis of statistical data. Empirically I think the relative importance should be assessed at about two to one.

If the medical situation is influenced by several factors towards a progressive increase, it is also influenced negatively by some important factors such as the slow evolution of the general public; the limited means available for the development of

medical services; the still undeveloped health consciousness of the people in some parts of our country and the insufficiency or obsolescence of medical equipment.

II. So far no serious attempt has been made in Italy to estimate the need for hospital beds. We have only made a comparison between the data given by W.H.O. and the data from the different parts of our country. These are collected by our Ministry of Health which as yet, has a very rudimentary organisation for this task.

Hitherto the assessment of the need for new hospital beds has been left to the administration of each hospital, in relation to the local pressure. Where the means available have been adequate, as in the best developed parts of the country (chiefly the North and the Centre-North), progress has been about at the average European level. Elsewhere progress has been slow.

Nowadays we are talking a great deal about programmes—national, regional, and local. We are also beginning to set up organisations to develop programmes of every kind including programmes for hospital care. We are only now beginning to do this so we have very little to say about it but much to learn.

In any case, our need for hospital beds in the future will show a marked increase as a result of the change-over from a state of gradual development to a state of violent advance in all sections of our national life. In such a situation the influence of the forces described above also increases progressively.

As I have already said, the increased tendency to seek hospital treatment for illness previously treated at home is due to medical progress and also to the lack of help at home as a result of the decreasing number of the family's members remaining at home. It is also due to other motives which cannot be objectively defined. Therefore no standard system can be employed to determine our need of hospital beds. We can only estimate the need by comparing the situation that we wish to evaluate with one that we feel provides an ideal standard, basing our opinion mainly on actual experience of real situations.

This is not the perfect way to act but it is the only possibility if we desire practical results. All our attempts at drawing up

programmes for hospital development must be based on this criterion. Naturally the definition of the ideal standard, being subjective, must conform to basic principles: i.e. a national level, a regional level or a local level. For an evaluation of the Italian need for hospital beds we must consider moreover the determining influence of the medical profession, which is due to the system, already described, of paying hospital doctors. If in the future, as is desired by some of those directing governmental policy, the present system is altered and hospital doctors are only paid a fixed salary (however high) all the calculations of our need of hospital beds will be modified and perhaps, at least in the highly developed parts of our country, the actual number of beds will be sufficient to satisfy the demand for several years.

III. The pressure for medical services in Italy is chiefly for hospital services, using this term in the widest modern sense, i.e. as clinical organisations for hospitalised patients and for out-patients.

The work done by our general practitioners is sufficient and corresponds to the need of our people. Although the quantity and the quality of our medical services both diagnostic and therapeutic are in a considerable part of the country not below the average European level, yet throughout the rest of the country they are totally insufficient. We chiefly need hospital beds and modern medical equipment. Secondly, we need out-patient services equipped with modern means of medical investigation and treatment. Thirdly, as regards hospital beds, our greatest needs are for chronic illness, maternity, paediatric and new specialties.

In our country there is a great insufficiency of hospital beds for chronic illness because hitherto Italian citizens have not had the right to hospital assistance for the chronically sick. This lack is remedied, from time to time, by a limited grant which our municipalities are empowered to give. The solution of this serious problem will open the way to the consequent problem of the availability of hospital beds for the chronically sick. Our need is enormous as we are practically at zero.

The need for hospital beds for maternity, for paediatrics and for new specialties is the same and is the result of the progress in

medicine. The measure of this need is shown by the actual level of these services in the richest part of our country.

The fulfilment of these needs is limited and conditioned by the scarcity of the means at our disposal, but the public is slow to become aware of them because of the reluctance of surgeons and physicians to recognise the necessity for, or at least the utility of, every new medical specialty.

IV. In Italy there is no actual tendency to overburden the country with too many institutions or agencies providing medical services. There has, however, been a tendency in the past for some of the big social insurance organisations to set up their own specialised hospitals, and they still tend to maintain their own out-patient services. The first tendency has been stopped and it seems that soon social insurance organisations will be compelled by law to give up their hospitals which will become autonomous institutions, like all the other hospitals in our country. The second tendency, on the other hand, still continues and causes a considerable dispersion of resources.

Except for these examples, we have no other instances of abnormal pressure on our medical services, unless we include the pressure strongly exerted by hospital doctors for an ever-increasing hospitalisation for personal, financial reasons. The practical brake on this pressure is unfortunately the same as that which hinders hospital development, i.e. the lack of money for hospital needs. A radical remedy will be a change in our system of paying hospital doctors.

V. As already said, we have not yet many statistics concerning the need for medical services. As work is still being done on the most recent statistics, I hope to be able to bring some useful data to the Conference.

VI. The same applies to point VI. At present I can only give the following data relating to the year 1964.

(1) Pharmaceutical services:

Average number of prescriptions per insured person	10·55
Average total cost of prescriptions per insured person	Lit. 7,553.=

(2) General practitioner services:	
Average number of visits per insured person	8·26
Average total cost of visits per insured person	Lit. 4,733.=
(3) Hospital assistance:	
Average number of admissions per 100 insured persons	10·85
Average length of stay in hospital days	13·34
Average cost for each admission	Lit. 66,652.=
Average cost of hospitalisation per insured person	Lit. 7,305.=
(4) Out-patient services:	
Average number of out-patient attendances per insured person	2·68
Average cost of out-patient care per insured person	Lit. 8,000.=

We do not yet have the definite data for 1965. Nevertheless, we can say that while we have noted a steady, though not very high, increase in the demand for general practitioner services and for hospitalisation, we have observed a worrying new dramatic increase in the use of pharmaceutical services of the order of 15% to 20% on a figure already very high.

NETHERLANDS

PROFESSOR J. B. STOLTE

PRELIMINARY REMARKS

The pressure for medical services is a sociological phenomenon and as such perhaps somewhat better understood if seen in its socio–economic context. Therefore a few preliminary remarks upon the socio–economic pattern of the Netherlands seem to be appropriate.

1. The image of the Netherlands has changed considerably since the Second World War, particularly in the eyes and minds of the Dutch themselves. After a period of hesitation and resistance they have cut the strings with the colonial, imperial past. At the same time the country has changed from a mainly agricultural and seafaring one into an industrial one and by doing so created enough demand for labour to absorb not only the continuous increase of the labour force caused by the high birth rate but also the influx of people from the former colonies who preferred to immigrate to the mother-country. In 1964 there were no less than 613 unfilled vacancies per 100 persons unemployed!*

2. The Dutch have lived for the last 50 years in a typical 'bourgeois' social structure with very few large fortunes and a rather even distribution of spendable income. The pattern has become even more pronounced after the Second World War as devaluation and progressive taxation furthered redistribution of income. Refraining from a value judgment upon all this, I think it is fair to state that parallel to it, class conflicts have lost much of their impetus and irrational side-effects. Therefore socio–economic problems are tackled more and more rationally and solving them is looked upon as a technical job . . . by the 'technicians' that is. At the same time, however, the gap between the existing political parties (of which there are quite a few) and the electorate is becoming ever wider as is also the case with the gap between the union officials and the labour force. Last year brought us a lot of 'poujadism' as a result.

* One must take into consideration that only about seven per cent of married women are employed.

This would not have happened perhaps if the results of the 'technical' approach had been more satisfactory. It has become more and more clear in the last decade, however, that in a small country like the Netherlands, the 'tools' of the 'technicians' are too clumsy as yet to ensure a relatively steady course for the country's economic development. Neither Government nor the parties have been able to make the seemingly erratic course of socio–economic policy of the last few years clear to the public. The unions, having been involved through their experts in plotting the course and in defending the necessary corrective measures, are losing their grip on the members and losing members as well. People have learned to expect a maximum of social security, a diminishing number of working hours and an ample spendable income. Everyone is loath to give up even a little bit of the newly won smaller and bigger luxuries.

3. The insufficiency of the instruments at the disposal of economists and politicians could well be at the root of the matter. Broadly speaking the goals are known and there seems to be a substantial body of knowledge about the ways and means that will bring these goals within reach. However, the information upon which the decisions have to be made is far too slow in coming to the disposal of the decision makers. This is even more so in respect of additional information upon which the course will have to be readjusted in time. Then again there is only limited knowledge about the interdependence of the many processes, so that the consequences of decisions taken in one field upon the events in other fields come quite often as a surprise (and seldom a pleasant one).

As to the all-important problem of priorities, the decision still has to be left to the politicians. The technicians have no answer to it and withdraw themselves behind the smoke-screen of the untouchability of value-judgment.

As long as these difficulties have not been overcome we will have to muddle through with the means at our disposal, knowing that the results of our efforts will be as far from the ideal as was the case with the entrepreneurs throughout the Europe of the late eighteenth century, who knew quite well that without the provision of adequate health services for the entire population an increase in welfare was impossible but who could

not implement it as they did not know how to manage large organisations.

THE PRESSURE FOR MEDICAL SERVICES AND HOSPITAL BEDS

4. In the Netherlands as elsewhere there is pressure for more medical services and for more hospital beds. The causes seem to be manifold, the factors at work diverse. Demand is increasing because of expanding population, a rising percentage of old people, and a growing willingness to make use (perhaps even to the point of abuse sometimes) of the achievements of modern medicine. The fact that cost as a barrier has been removed almost completely through insurance also has caused an increase in demand for curative medicine.

An interesting phenomenon may be mentioned here. Demand has outgrown supply, as is shown by hospitals' waiting lists, overcrowded surgeries of general practitioners and substantiated complaints of the medical men in the curative field that they are becoming more and more over-burdened, but neither the public nor the press are really clamouring for more facilities. The health problem is not a political issue of any importance any more, now that the glamour of a National Health Service has worn off somehow even in the opinion of the Labour Party. There has been some complaining from employers and from social insurance people that those who are gainfully employed had to stay away from work too long because of waiting for an operation for hernia or varicose veins.

Perhaps the complaints about long waiting in out-patient departments that have not yet taken on an appointment system comes under the same heading, but this of course is mainly an organisational problem.

The discussion about need and supply of medical services is left to the initiated. On the one hand one finds the medical profession putting on pressure for more facilities and personnel, on the other hand the sick funds, the Government and the unions, are concerned about cost and therefore try to keep expansion of the health service in check.

5. The medical profession claims that there is a shortage of doctors, particularly in the curative field. Indeed there are less

general practitioners than a few years ago and the increase in the number of specialists is outdistanced by the growth of the population. Both the Government and the sick funds are convinced that the number of general practitioners is too low. One of the causes seems to be that planning of the training of doctors has misfired. In the early 'fifties the Government tried to dissuade young people from studying medicine, with a certain amount of success. Only ten years later a shortage of doctors began to cause concern and a seventh medical school had to be established.

Most prognostic studies have shown, however, that the capacity of the seven medical schools will be still too small to provide enough doctors to keep up present standards. The faculties have stated that they cannot take on more students and the Minister of Education has backed them up by introducing a bill to fix the maximum number of medical students, but it was rejected by a very large majority; the paradoxical situation of a shortage of doctors and a *numerus fixus* for medical students appeared unacceptable, the more so as there were very many young boys and girls applying to enter and a *numerus fixus* has never existed in the Netherlands. Of course the faculties are not happy with the fact that they will become overburdened. An eighth medical school is asked for in some quarters, but the economic situation at the moment is rather unfavourable for taking on such a costly project. It will not be easy to find the manpower for the new school.

6. Both Government and the unions are uneasy about the rising costs of the health service. In 1953 about 3·6% of the net national income was spent on health, in 1958 this had risen to 4·4% and in 1963 to about 4·9% (estimate). More than half of this amount is paid through (mostly compulsory) insurance, affecting the payroll directly. It has been stated quite recently by the Minister of Social Affairs and Health that the insurance premium has reached its maximum height. Both the sick funds and the medical profession are of a different opinion. They have pointed out that expenditure of households on health (including the premium) takes less than expenditure on tobacco and sweets and that household expenditure on clothing and footwear has increased considerably more in the last ten years

than that on health care. The same holds good for expenditure on household articles and on luxuries.*

[Perhaps one may draw attention to the fact that there is a difference in attitude in respect of expenditure on health care or tax money as opposed to expenditure out of the household budget. The alternatives are more assessable in the latter case. In the welfare state with its system of a relatively high minimal income and an insurance premium adjusted to the height of income (making for redistribution of income again) a raising of the insurance premium brings forth ear-marked money, whereas the amount of tax-money to be spent on health care has to be fixed in competition with equally worthy objects on political grounds.]

The sick funds, in opposing the idea that the insurance premium has reached its limit, nevertheless side with the Government and the unions in pointing out time and again, that the pattern of health care in the Netherlands is intricate to the point of being chaotic. Because of that co-ordination is considered to be necessarily insufficient, making for an inefficient service.

The rebuttal of this allegation only comes forth slowly and hesitantly, possibly because no one really feels responsible for the health service as a whole. Those who oppose the allegations of the Government, the unions and the sick funds do so by defending the way their own part of the service is rendered, quite often putting the blame on other parts of the service at the same time. Here perhaps lies the main task of a Public Body as proposed by the Minister of Social Affairs and Health, consisting of representatives of all professions and institutions working in the health service. Of course such a body would have to make communications and co-ordination throughout the service its business. It may be that in a society as complicated as the present one, private enterprise cannot keep its prominent part without accepting overall responsibility for the efficiency of the whole service, preventing waste on the one hand and filling unacceptable gaps on the other. It is the philosophy of the

* In 1958 the total expenditure on health care per head of the population amounted to about 125 florins (as against f. 148 in the U.K. and f. 301 in the U.S.A.). In judging these figures one has to take into consideration that differences in purchasing power are not reckoned with.

Dutch that only when private enterprise clearly fails in achieving this, Government has to step in.

ESTIMATION OF THE NEED OF HOSPITAL BEDS

7. The expenditure on hospital and specialist care has risen steeply, so that at the moment about half the money of the sick funds goes in that direction. Consumption of hospital services has increased by 50% in the last 15 years. The financial side of the problem is important, but the main difficulty lies with personnel. There is not enough manpower to begin with, and the hospital service (in its stricter sense) has to compete with domestic health care and with institutional care for the chronically ill in getting its meagre share. Providing the most expensive labour and intensive type of care, the hospital service has caught the attention of the insurance people, the unions and the Government, who have joined forces to curb its (excessive?) growth. Apparently with some success, as the number of 'acute' hospital beds per 1,000 inhabitants after rising from 4·46 in 1955 to 4·78 in 1960 has remained virtually the same in the subsequent years. In a blue book from the Ministry of Social Affairs and Health (1966) it is stated that possibly the present ratio is about right as the number of patient-days has been increasing progressively less. Indeed the number of in-patient-days (acute hospitals) per inhabitant increased gradually from 1·36 in 1952 to 1·6 in 1959 and has risen very little since then. However, it is clear that with the existing high occupancy* rate the fact that the number of hospital beds per 1,000 inhabitants has remained virtually stable is at the root of the stabilisation of the hospitalisation rate.

8. Building of hospitals in the Netherlands is for a large part left to private initiative. All plans, however, still have to be put before a ministerial commission which advises the Government on the acceptability of the addition of more hospital accommodation. In spite of several studies the commission has no more scientific yardstick at its disposal to measure the need of hospital accommodation than the following rule of thumb:

4 beds per 1,000 inhabitants in rural districts;

* In the last ten years it has been about 88%.

4·5 beds per 1,000 inhabitants in non-industrialised towns;
5 beds per 1,000 inhabitants in industrialised areas.

There is some indication, however, that the present ratio—resulting from the application of the above-mentioned rule of thumb—at least ensures that all pressing need of hospitalisation can be taken care of at a reasonable rate. There is no indication that any accident case or acute surgical or medical case is being hospitalised too late on account of a lack of beds, and the overall and detailed figures on mortality from such conditions are low.

There is a feeling among the 'initiated', however, that quite a few of the less pressing indications for hospitalisation cannot be taken care of at a satisfactory rate. Here a problem of priorities arises, as there are no lives at stake but 'only' discomfort and possibly incapacity to work. The treatment necessary to cure the ailments in question is costly both in terms of money and use of manpower. Again the economic law that no sacrifice of means or effort can be taken back applies, so that every time an irrevocable decision has to be made upon what to spend it; and there are many worthy goals to choose from.

THE PRESSURE FOR OTHER MEDICAL SERVICES

9. In every field of human enterprise the optimum results should be striven for with the means available. In this respect there is some doubt as to whether the structure of the health service as a whole and of the hospital service in particular ensures a maximum efficiency, particularly among the sick funds, the unions and the Government. They are right, of course—but one has as yet to come across a human enterprise of which this cannot be stated. Almost everyone seems to be convinced that although there is perhaps no pressing need of more acute hospital beds, there is definitely a need of more outpatient facilities and of more laboratory and X-ray accommodation. The first is advocated because it is expected to diminish the need of hospitalisation. Up to a certain point this will be the case, namely when hospitalisation primarily for diagnostic purposes is still a normal procedure. This, however, is seldom seen any more in the Netherlands. Therefore expansion of outpatient accommodation will possibly lead to a larger proportion

of cases being detected in which hospitalisation for treatment is considered necessary, making for greater pressure for more hospital beds. The pressure for more laboratory and X-ray facilities seems to be caused primarily by the fact that the development of so-called modern medicine involves an ever more extensive use of them. In some (medical) quarters a certain doubt is beginning to emerge about the necessity for some or perhaps much of what is done in this way. Evaluation of the methods used is called for. It is suggested that the real clinical value of at least some of the examinations is doubtful, and that fashion and 'épater le bourgeois' play too large a part.

10. There is some debate about the need of beds in psychiatric hospitals, as there is also quite a difference of opinion about the advisability of having (more) psychiatric beds in general hospitals. The Minister of Social Affairs and Health has stated recently that there is no pressing need to alter the present ratio of beds in psychiatric hospitals of about 2·25 per 1,000 inhabitants.* Indeed it has been established that about half the patients have been resocialised within six months in the last few years whereas formerly the percentage was far lower. This is not only due to the modern approach of psychotherapy and drug therapy combined, with its stress on the 'therapeutic community', but perhaps even more so to an extensive system of after-care. There is some indication that after-care could yet take an even more important part. In this respect it should be mentioned that the day-hospital movement has just recently touched the Netherlands. Only very few day-hospitals for psychiatric patients have been established as yet. There seems to be some doubt about the efficiency of this kind of treatment.

11. Opinions differ about the real value of psychiatric departments in general hospitals, which in spite of that are increasing in number and extent, albeit slowly. The pressure to establish this kind of facility seems to originate mainly with freelancing psychiatrists. It is argued that by hospitalising psychiatric patients in a general hospital the stigma of the psychiatric hospital may be avoided. It is also stated that because of the localisation of the general hospital the ties with the family are more easily maintained. In former years an argument could also

* This figure does not include institutional accommodation for the mentally deficient, amounting to about 1½ beds per 1,000 inhabitants.

be found in the fact that the sick fund insurance did not cover hospitalisation in a psychiatric hospital but this is not the case any more. (It has been argued by some that the inclusion of hospitalisation in a psychiatric hospital has increased the demand for this type of care. No proof has been provided however.) There is some reason to believe that at least some of the psychiatric departments in general hospitals were established because of the lack of coverage of hospitalisation in a psychiatric hospital. An important point seems to be also, that psychiatrists practising in town did not like to 'lose' their patients when hospitalisation became necessary. This may be seen as one of the instances in which the pressure for more beds originates with certain specialists.

Opposition against the establishment of psychiatric departments in general hospitals comes mainly from the psychiatrists working in psychiatric hospitals. They state—and quite often rightly so—that many of these departments are too small, that they have not enough facilities for the different kinds of treatment that are necessary, that there are not enough personnel with the right kind of training to create a real therapeutic community and they point out that the psychiatric hospital has gained a different image in the last decades, which has done away with much of the former stigmatising of its patients. As long as many psychiatric hospitals are tucked away pretty far from the bigger centres of population, they will have difficulties in defending their stand, as this localisation makes for difficulties in respect of after-care and of taking care of acute psychiatric disorders. This results in the frustrating situation that the psychiatric hospitals are taking care of almost all chronic cases in the country whereas many of the more acute and therefore promising cases are treated elsewhere, to be referred to them only when the prognosis is shown to be less favourable. The fact remains that the accommodation and equipment of quite a few psychiatric departments in general hospitals are not what they should be. It is interesting that criticism in respect of this has been very mild . . . as yet.

12. Both the Minister of Social Affairs and Health and the social insurance people are convinced that there is ample room for more rehabilitation facilities both inside and outside hos-

pitals. This is a new field, having been opened in the Netherlands only some 20 years ago. The main difficulty lies in the lack of manpower, both medical and physiotherapeutical. Another problem, however, arises from the fact that the other specialists seem to hesitate in accepting the position of rehabilitation as a specialty in its own right. This has led to an interesting reaction from the group of medical specialists in rehabilitation. They have acted as a pressure group, trying to get the Government to take on their thesis that a network of specialised rehabilitation hospitals should be established all over the Netherlands, independent from the other institutes for curative medical care. This would, however, take the specialised medical and other personnel away from the general hospitals and thereby be detrimental to the indoctrination of the medical and nursing professions with the idea of rehabilitation itself.

13. The ratio of (acute) hospital beds per 1,000 inhabitants in the Netherlands is, of course, influenced by the fact that only 1 in 4 deliveries takes place in hospital. There are some indications, however, that the percentage will increase, one of the reasons being that recently the system of covering the costs for those who are insured with the sick funds has been altered, so that it has become less difficult to have a normal delivery in hospital. Also there is an acute shortage of maternity nurses with the Cross organisations. In spite of the fact that perinatal mortality of both mothers and children is amongst the lowest in the world, gynaecologists are trying to point out that it would be even lower if most deliveries were to take place in hospital. All this will bring about quite some pressure for more maternity beds in the near future in spite of the fact that the 'pill' is becoming quite popular.*

The percentage of hospital confinements is increasing already in the large cities, due to housing conditions in particular. As time and again it has been shown that the large cities set the example for the whole country to follow, it is to be expected that the Dutch system of domestic obstetrics, providing an excellent service at relatively low cost, will sooner or later be replaced by

* The birth rate went down from 20·7 per 1,000 inhabitants in 1964 to 19·9 in 1965.

the system of institutional confinements. This will be an example of the influence of changes in financial arrangements far beyond the intended consequences. Again planning will be shown not to have taken into account all the intermingling factors.

It is an interesting fact that together with the mounting pressure for obstetrical beds the number of specialised obstetrical hospitals has declined. In 1961 there were 10 such clinics in the Netherlands with about 1,019 beds, whereas now there are 7 with about 650 beds. The phenomenon is unexplained as yet, but it would be worthy of a profound study. The fact that the occupancy rate in these clinics is relatively low (77%) is an important factor perhaps. With births being as unpredictable as they are, a certain amount of accommodation remaining idle is unavoidable, also because of the fact that some of it must be available at any time to take care of acute cases. In small institutions, with a highly qualified working force this is a costly business. As until recently people themselves had to pay for a normal confinement taking place in a hospital, the hospital could only charge the patient what the market would bear. This may be considered as an example of the phenomenon that demand for hospital care is far from inelastic.

14. The pressure for hospital accommodation for people with prolonged illness is quite strong. Those who are concerned about the cost of the hospital service quite often argue that many of the patients concerned do not need the expensive type of care provided by the acute hospital. By transferring them to a cheaper kind of accommodation one could economise without causing hardship and the money saved could be used to better purposes. However, although the simple kind of care indeed will be cheaper, the sum total of costs will not be lower and acute hospital care as such will become even more expensive when the 'diluting' influence of the somewhat less laborious cases is taken away. Others rationalise their position in respect to the problem by pointing out that these long-stay patients are cluttering up the acute hospitals, making it difficult sometimes to find a bed for those in need of it because of an acute illness with a better prognosis. There are quite a few members of medical staffs in hospitals amongst them. Perhaps the fact

that their interest and training are focused on the acute case is at the root of it.

Some medical specialists and some people from the field of social medicine, however, had become aware of the real problem, that of the tremendous increase of patients with prolonged illness in the last three decades. These patients survive much longer and there are more of them because the average age reached has become very high* and old age has its infirmities. Several surveys showed that between 1·3 and 3·2% of the population of 60 years and over were in dire need of hospitalisation because of prolonged physical illness and between 0·5 and 1·5% because of prolonged psychiatric disorders. From the younger ones 0·2% were in need of hospitalisation because of physical illness of long duration. Some of these people were in general hospitals. Quite a few of them could be reckoned to belong to the neglected ones. Many were staying at home either with their families or on their own; these were the forgotten ones. Neglect of those in hospitals (and many old people's homes) was demonstrated by the fact that almost nothing was done to reactivate these patients. The doctors were not aware of this aspect of care and the nurses just did not know about it. However, under the influence of what was happening in Great Britain more insight into the problem and its solution was gained, resulting in more interest and better care. Still there is a lot to be done yet, both inside and outside the general hospital. Reactivation in the hospital is hampered through lack of trained personnel and sometimes by the ignorance of certain specialists. Another difficulty lies in the fact that from the start the pressure from those seeking recognition *and registration* of their specialty under the title of geriatrics has met with resistance from different sides. It is pointed out by many medical specialists that the diseases considered as 'geriatric' by the geriatricians have been taken care of by them for a long time already. It is said then, that their own task lies with the treating of illness, whereas the so-called geriatricians should

* From the other side it is argued that the patient has to be treated as a whole, pointing out that the illness-centred approach has led to the present situation of neglect. The answer, of course, is team-work, but the medical men in the Netherlands have been conditioned during their training to bear undivided responsibility, correlated with undisputed authority. It will take some time before the idea of working together as a team will be accepted and put into practice.

confine themselves to ameliorating the condition of the patient by applying their reactivating techniques.* This should begin during the hospitalisation in the general (or special) hospital and continue after the patient has been transferred to the nursing home (this being a hospital specially equipped for treating patients with illnesses of long duration). These hospitals must be equipped with everything needed for reactivation therapy proper, but they also must have a homely atmosphere conducive to mental activity and a feeling of psychic well-being, so important with people who have to stay a long time.

The number of beds established for this purpose is growing. Whereas in 1961 there were only 0·55 beds per 1,000 inhabitants, in 1962 there were 0·61, in 1963 just 0·69 and in 1964 the figure of 0·81 was reached. A lot of building is going on, and the goal of 1·5 beds per 1,000 inhabitants will possibly be reached in the next decade, provided the scarcity of personnel does not thrust a spoke in the wheel. It has to be pointed out, however, that a large proportion of the present accommodation is in a rather poor condition, consisting of somewhat renovated antiquated hospital accommodation or 'upgraded' old people's homes. It is a pity also that there is no clear-cut division of labour between general hospital and 'nursing home' on the one hand and between 'nursing home' and old people's home on the other. In a few instances this has been overcome by bringing all three under the one Board. By close co-operation with extramural activities a kind of closed circuit is installed providing as much freedom to the individual as his condition allows him, giving him assurance meanwhile that if he is in need of any kind of assistance it is within his reach. In the last few months co-operation on the basis of a clear division of labour between the general hospital and the 'nursing home' has been threatened by the proposal of a new law. This law introduces a national insurance scheme covering 'heavy medical risks'.† Its aim is to remove the financial burden from the families of patients with costly illnesses, particularly those of

* In 1940 about 7% of the population of about 9 million were 65 years or older, in 1960 slightly more than 9% of about 11½ million and in 1980 there will be about 13% of about 14½ million.

† The title is perhaps an unhappy one. Not the danger to life or health is meant, be it an acute or chronic one, but the heavy financial burden attached to certain instances of illness through their long duration.

long duration. The insurance will possibly cover the costs of hospitalisation in a 'nursing home' from the start, both with patients coming under the sick funds' insurance schemes and with the others, whereas hospitalisation in a general or specialised hospital will only be covered by it after the first year, the first year being covered by the sick funds' schemes, be it only for those who are insured that way. In this way financial factors will influence the decision on the kind of institution the patient will be treated in, to perhaps too large a degree. As it is important to assess the medical problem completely in a general hospital before referring the patient to a 'nursing home' (lacking comprehensive diagnostic facilities), the new law will at least have to be amended in such a way as to ensure this.

Consideration will have to be given also to the fact that the law proposes to provide for coverage of the costs of both institutional and domestic care of those who come under the category of heavy medical risks. It is proposed to extend the cover of risks gradually, starting with 'intramural' (i.e. institutional) care. This would possibly create a rush for institutional care, however. The consequences of this rush both financially and in terms of happiness of the people at issue will have to be considered carefully before taking a decision.

Hitherto most of the risks involved have been taken care of through social assistance. A few years ago a new law brought tremendous relief in this respect. However, a means test is still enforced. Because of that people of the upper-middle and upper classes are burdened still with the heavy costs of prolonged illness with their nearest relatives, causing almost unbearable hardships in the long run. Among others there is still resistance because of the alleged aspect of charity. Then again there is the problem of division of authority. It will be difficult for the officials of the social service to use the same criteria for their decisions in these matters as the people in the curative field and the sick funds, as the problem is viewed from quite a different stand. It is a matter of conjecture whether the image of the socio-medical conditions at issue will alter in the long run because of the change of administration or not. The tendency will perhaps be to include even more conditions in the definition of 'heavy medical risks' to bring them within the benefit of the

law in question, thus extending even more the influence of the medical profession on society. The drift towards a 'doctor-ridden' society is not without its dangers!

15. It is the intention of the Minister that admission to an institution for the care of the mentally deficient will also come within the scope of the law on heavy medical risks. This brings the problem of the precise nature of these institutions to the front. This is an undecided issue in the Netherlands. Some of these institutions have applied for recognition as medical institutions with the authorities whereas others have not. The difference in point of view is shown also in the type of man or woman who is in charge. Sometimes it is a medical doctor, in other cases a pedagogue.*

There are 40 institutions, taking care of 10,943 mentally deficient that are certified according to the law on the insane. They consider their inmates as 'patients'. There are 137 institutions, taking care of 6,483 mentally deficient that are not registered under the same law. Most of them call their inmates 'pupils'. Of course in the certified institutions part of the treatment will be educational and in the non-certified ones there is medical attendance. There is some doubt, however, about the adequacy of the education and on the other hand even more on the medical part of the 'treatment' in the respective institutions. Under the new law it is to be expected that all institutions will apply for the certificate. The need for a multidisciplinary inspection, in acknowledgement of the multidisciplinary character of these institutions, will become even more pronounced than it is now already. Again, if the new law starts by covering institutional care only, there will be tremendous pressure for institutionalising the mentally deficient. The consequences could become insurmountable, from the point of view of personnel in particular.

THE BURDEN OF THE HEALTH SERVICE ON THE COUNTRY'S LABOUR FORCE AND ECONOMY

16. In the last few years the future need for medical personnel has been studied intensively. A report, prepared by an academic

* The problem of the exact nature of this kind of institution is also seen with the 'schools' for the blind and deaf, be they boarding-school or not. It is not clear whether they will come under the law in question.

commission under the chairmanship of Professor G. Goudswaard has been published recently. Of necessity it takes a lot of assumptions for granted. One of these is that the influence of progressive urbanisation will not be very important, another that although the growing percentage of old people will be accompanied by an increase in the demand for medical care the concentration of the demand in old people's homes and 'nursing homes' will bring compensation through a more efficient use of medical manpower. The report does take into account that the 'productivity' of the doctor will lessen because of shorter working hours and earlier termination of his career, as he will not be able to exclude himself from the general trend in this respect. Shorter working hours will increase by 10% the number required to provide the same service in the period from 1962 to 1982. The earlier termination of careers will cause an increase of 6%. The increase of consumption of medical services is estimated somewhat arbitrarily at 6%. As in 1962 the ratio of doctors to population was 1·11 per 1,000, it should be 1·38 in 1982. This figure was tested in the following way: by comparing regional figures a ratio of 0·450 general practitioners per 1,000 of population was considered to be at the saturation point of demand. The number of specialists needed was related to the size of the hospital service. By extrapolating the number of in-patient days per head of population from the period 1955–61 the number of specialists was expected to increase by 29%, bringing the ratio from 0·367 in 1962 to 0·466 per 1,000 inhabitants in 1982. Taking into consideration that perhaps the number of specialists will increase slightly more than the number of hospital beds because of the increasing degree of specialisation, the ratio was rounded off to 0·500 per 1,000 of population. The ratio of doctors training in hospitals for their specialist degree ('assistants') per 1,000 of population, treated in the same way, would have to increase from 0·105 to 0·135. The other parts of the medical working force (controlling doctors, medical officers of health, school doctors, industrial doctors, etc.) are expected to increase at a lower rate from a ratio of 0·262 to 0·295 in 1982 or perhaps slightly more, so that the sum total of 'assistants' and 'other' medical personnel will add up to about 0·450 per 1,000 of population. As the sum of 0·450 + 0·500 + 0·450 is 1·400 the result of this approach

is virtually the same as that of the first one. The difficulty will be to provide enough training facilities. There is as yet little danger of overburdening the country's labour force and economy by a surplus of doctors. However, if the tendency to avoid general practice and to prefer entering one of the specialties or a job in social medicine develops, the balance between the categories of medical personnel will be disturbed. In the long run this will be followed by a change in the pattern of medical service. Whether this will be to the good or otherwise is unknown, as we do not know where the right balance is to be found to produce the maximum of medical service with the minimum of waste in terms of manpower and means. It is my feeling that the service would deteriorate if the ratio of general practitioners to population were to decline significantly, and that it would become more expensive. I cannot offer proof, however.

17. There are not enough nurses in the Netherlands. In the year of the last census (1960) there were 28,718 nurses and 17,132 student nurses. Of the graduate nurses 14,854 were working in general and specialised hospitals, and 8,258 in psychiatric hospitals. Of the student nurses 12,445 worked in general and specialised hospitals and 4,687 in psychiatric hospitals.

The number of all nursing personnel (including student nurses and practical nurses) in general and specialised hospitals increased from 24,533 in 1955 to 30,398 in 1960 and to 34,624 in 1963. The ratio of these nurses increased from 2·07 per 1,000 of the population in 1955 to 2·55 per 1,000 in 1963. From these figures one may take it that the inclination to enter the nursing profession has not lessened. The demand for these nurses has increased because the ratio of beds per 1,000 of the population in this kind of hospital has gone up from 4·46 in 1955 to 4·78 in 1963 and because of the increase in number of nursing personnel per bed from 0·463 in 1955 to 0·535 in 1963. In the blue book of the Ministry of Social Affairs and Health it is estimated that the number of nursing personnel will have to increase at an even higher rate, as a ratio of 3·25 per 1,000 of population is aimed at for 1980. This goal will be very difficult to reach. At the moment 98% of the nursing personnel in general and specialised hospitals are girls. To form this nursing

force one out of every 12 girls of 18 years old had to become a student nurse in 1960. In 1980 it would have to be 1 in 9! It is suggested, therefore, that more married women should take up nursing (again). As yet this is not very popular with the Dutch. Not quite 7% of married women are gainfully employed in the Netherlands. The situation in this respect has been described admirably by B. L. Donald in his treatise on 'Manpower for Hospitals'. Some people have suggested conscription as an answer to the problem, but there is very little chance that the idea will be accepted. There are as yet very few auxiliary nurses in general and specialised hospitals. The girls willing to enter this profession are encouraged to take up nursing in 'nursing homes' and old people's homes. Only recently has it been made possible to get a balanced training to become an auxiliary nurse in hospital.

Gradually more men are taking up nursing as a profession. In psychiatry the male nurse is a fully accepted institution already, but the image of the non-psychiatric nurse is still that of a female one. However, as the image changes and more men enter the field, chances are that the shortage will become less acute, particularly in the higher ranks, where the difficulty is greatest. Of course in trying to get more nursing personnel the health service is in competition with others on the labour market. At the moment the situation is unfavourable as the labour market is highly over-taxed already. As automation in industry will possibly lessen the demand for labour in the near future, there should come a better chance for the health service for recruiting the personnel needed. However, the policy being to shorten working hours because of the fact that industry is needing ever less labour will counteract the recruitment of people for the service-rendering professions. In our times society is still stamped by the mark of production in terms of industrial production of goods, the 'production' of services being considered somehow a second-rate activity. As long as that is the case the pace will be set by industry and the primary and secondary conditions of labour prevalent there will have to be adopted, however opportunistic they may be.

18. The health service does get a substantial slice out of the net national income, in that it has to compete with other needs.

The demand for medical services, for the clinically urgent ones in particular, is pretty inelastic. Those providing these services have a quasi-monopolistic position. Both sides of the market therefore are in a peculiar position in respect of the setting of prices and tariffs. As the Government has to see that all citizens are able to purchase the medical services they need, it cannot avoid the issue of prices and tariffs in this field and leave it to the interplay of both sides, particularly so because too high a price would either endanger health care or divert too much money from other important issues.

There are some mechanisms at work to prevent prices and tariffs from rising beyond an acceptable point. The law on the compulsory sick funds system stipulates that the sick funds and the professions (doctors, midwives, physiotherapists) have to agree on the tariffs for the work to be done. The general practitioner is paid a capitation fee, whereas the specialist is paid a fee for service, both for in-patients and out-patients. The fees agreed upon are ultimately subject to the approval of the central government. At the moment there is a controversy between the sick funds and the general practitioners about their fee, the general practitioners asking for an increase of about 30%. One of the main difficulties lies with the provision for retirement. The sick funds are willing to establish a pension scheme, whereas the doctors take the stand that the obligatory setting apart of part of their income is against the free entrepreneurship of their profession. Whether they will be able to hold this position is somewhat doubtful as seemingly quite a few among their ranks are of a more realistic opinion.

The increase of about 13%, offered by the sick funds is considered too small by the National Association of General Practitioners, the argument being that it will not attract enough young doctors to join their ranks. They also state that the consumption of general practitioner services has increased considerably, as people have become more medicine-conscious and because of the growing number of old people, needing more medical attention. Therefore, more general practitioners are needed to provide at least the same level of service. Contrariwise, the sick funds have pointed out that another factor has had a decreasing influence. The percentage of young children

has gone down, causing a decrease in demand. They also drew attention to the fact that the undisputed increase of the demand for medical care had been accompanied by a definite shift from the general practitioner service to the specialist service.

In the last decade the number of patients referred by the general practitioner to a specialist has more than doubled, whereas the number of services rendered by the general practitioner has not grown substantially. In a study initiated by the National Association of General Practitioners it was shown that during the period 1959–61 the workload of the general practitioner in respect of the number of people on his list had decreased slightly. At the moment it will be about four services per head per year, on the average.

The controversy has not been resolved yet. However, the offer of the sick funds has been accepted for the time being and negotiations go on.

On the whole the system has worked in spite of the difficulties. However, it is fair to state that the tariffs were fixed rather arbitrarily at the start and that they have mostly been adjusted from time to time according to the general upward trend of wages and salaries. A few instances of a claim for more fundamental changes have occurred. A real endeavour to set all tariffs in such a way that they would induce a 'right' balance between the strengths in manpower of the different parts of the medical labour force and an efficient use of their energy has not (yet) been forthcoming. Some problems could perhaps be solved that way. It is argued by the general practitioners that their pay is not attractive enough, compared with the income of specialists and doctors in social medicine, taking into consideration their workload and the inconveniences they have to suffer. If this is true—and the problem should be studied conscientiously—then the pay should be adjusted as otherwise the general practitioner service would dwindle. With one provision, of course, that proof is furnished that the present system is indeed better than one without the same proportion of general practitioners. I have mentioned already that I have a feeling that this is so.

Then again it is felt that the capitation fee system induces the general practitioner to refer more patients to a specialist than is

really necessary. This is unproven, but again it is clear that the way wages are calculated is of tremendous consequence. Another instance is found in the structure of the tariffs fixed for specialists. They favour the more costly in-patient treatment instead of out-patient work. Whether this is to the bad, again is unknown. It should be studied.

19. A large percentage of the money spent on health care is used for buying hospital services. As these services are quite often indispensable, here even more than with other medical services the Government has to guard the citizen's interest against over-charging on the one hand and against an insufficient service through lack of funds on the other hand. As the use made of hospital beds is almost proportional to the number of them, it is also necessary to prevent over-burdening the nation's economy by over-building, while on the other hand the authorities have to see to it that deficiencies of private initiative in providing hospital beds and building the right kind of hospitals in the right places are made up for.

Until now the Government has been able to regulate private activity through its grip on the building market. Only those buildings that have been accepted as suitable and necessary can be erected. In the case of hospitals permission is granted by the Government on the advice of a ministerial commission. The criteria used are necessity, serviceableness and lack of extravagance. The local state of the building market is also taken into consideration, so as not to drive up prices too steeply. In terms of money, building in the health sector took 63 million guilders in 1958, 101 in 1960, 85 in 1962, 181 in 1964 and 215 in 1965, so that in 1958, 2·7% of all the money spent on building was used in the health sector as against 4·1% in 1965. In terms of real 'production' of building space the result in 1965 was more than three times that in 1958. This was necessary to make up for arrears caused by the Second World War, and for the increase of population, and also to attain a certain degree of 'slum clearing' in the hospital field.

As the arrears in building of houses, factories, schools, etc. are gradually being caught up with, the grip of Government on building is loosening. The Minister of Social Affairs and Health is of the opinion that it will not be wise to remove all control

from the hospital field. He has therefore announced the introduction at an early date of a licensing bill for hospitals. It is somewhat doubtful, however, whether this is really necessary. In the Netherlands private bodies financing the building of hospitals have to attract money from the money market by loan. The main concern with those providing the loan money is that there will be an uninterrupted flow of income insuring regular payment of interest and redemption. In this respect one has to take into account that hospital tariffs have to get the approval of a unique body, the Central Commission for Hospital Tariffs. It consists of representatives of the sick funds and other insurance companies on the one hand and representatives of the hospital associations on the other, assisted by three independent 'wise men' of great repute. It is based on the Law on Hospital Tariffs of 1965.* Negotiation on hospital tariffs is institutionalised through this body, so that the Government has very little to do with it. The two parties have agreed upon the principles upon which to decide the requests for a tariff by individual hospitals. The application of these principles in fixing the tariff will ensure that all real costs are covered, including interest and redemption . . . but only when 'production' is at the 90% level of occupancy or thereabouts. Because of this it will be next to impossible to lend money to build a hospital in a city or district where there is no real need for it.

20. With the safeguards mentioned there is little danger of overburdening the country's economy through overdevelopment of the health service, nor is there much chance of disturbing the balance through overcharging. Concern seems to be more appropriately directed to the health service getting a reasonable part of the nation's budget. Everyone seems to be convinced that an adequate health service is vital for present and future generations to live, thrive and to contribute to the economic and social development of the country. There are as yet no yardsticks, however, to decide upon what really is a 'reasonable' part. The problem of priorities also is unsolved. Medical and health services are considered to come under the category of consumption only. Lip service is paid to the part they play in the nation's economy, but it is not really taken into consideration in weighing the importance of the service.

* Before that the Government itself had to decide directly about hospital tariffs.

NORWAY

DR. HERBERT PALMER

The topic set for the Conference is very extensive. It is formulated in such a way that pressure for more medical service of all kinds is stated as a fact. It is also obvious, however, that the expression 'pressure' may imply a graduation, particularly as far as the different kinds of medical service are concerned. If one gives the expression 'pressure' a mathematical content it may be positive as well as negative.

It is obvious that to elucidate this topic, extensive and detailed statistics over a longer period are necessary. Furthermore, the statistical data must be of such a quality that they allow a real valuation of the pattern of development and form a basis for prognostic reflections.

I regret to say that as far as Norway is concerned the public health statistics are deficient and incomplete, particularly the hospital statistics. In addition they are not available until 2–3 years after the situation on which they are formed.

The public statistics are mostly concerned with mortality, but today with our therapeutic and partly prophylactic approach it is morbidity, and its consequences, that are of the foremost interest.

By this I mean that the Norwegian statistical basis is not the best to give a satisfactory illustration of the problems for this Conference. I have, in parts, had to make a succession of calculations myself, without being a statistician. I have also sometimes had to make use of impressions, which is not a reliable means of measure. Because of this, what I bring forward here must not be interpreted as the complete documentation it should be.

The present topic—as it is formulated—can be divided into two parts. The first comprising the medical services as a whole, the second comprising hospitals with the somatic and psychiatric sides. When one talks of pressure for increased medical services it may not be possible to differ markedly between these two parts. History reveals that there has always been a constant

pressure for increased medical services. This is because illness always has afflicted mankind and medicine has made progress.

No detailed statistics are necessary to verify that in the last hundred years there has been a steady, even rapid, development and that the medical services have become very extensive, particularly during the last 20 years—after the Second World War.

For instance, in this period in a small country like Norway with 3·7 million inhabitants, 37 new general hospitals have been built, and in addition many have been extended, some considerably. The total number of beds has increased by 23,600 for hospitals and nursing-homes, but for homes for the aged the number of beds has increased by 6,060 since 1955. Furthermore, the number of doctors has in the same period increased from 2,332 to 4,565; of these, 855 and 1,850 respectively have worked full-time in hospitals.

The question in our country today is probably first of all—to what extent, and not least in what way, is there a further need for more medical services? Such a need will always exist as a consequence of medical developments.

From having had a mainly healing objective, development has made the prophylactic side of the medical services more and more prominent. Health-checks of certain groups of people (industrial workers, schoolchildren, sportsmen, pregnant women, infants) have great significance. Even more effective are examinations of people in order to find certain illnesses (tuberculosis, cancer) or signs of illness on the whole, biochemical registration of the population (as has been started in Sweden).

The concept of medical care and medical services has in this way been extended to comprise both healthy and unhealthy people, in other words the whole population.

Several factors become obvious in the complex reflected by the pressure for increased medical services including more hospital beds.

It may be difficult to arrange these factors in the right sequence as far as historical background and importance are concerned.

They work rather strongly into each other.

1. *The development of medicine and the practical results*

The relationship with such basic natural sciences as chemistry and physics has had an enormous significance not only for development on the research side, but also for its practical execution. The technical element of practical medicine has had great consequences for the building and management of hospitals. It contributes to the pressure for medical treatment that has changed in quality, and lays great claim to economic investment. The technical element will, however, probably in the long run be conducive to a more rational hospital service. But what medical science at any time can give people, what medicine can offer the population, will, of course, be a fundamental factor in an extended medical service.

2. *Social understanding and improvement of social welfare*

In order to make up one's mind about what to do, one must first of all realise and understand the present situation. This is a process of development that increases in the life of the population together with the degree of public awareness, what one might call the current of civilisation.

In such development there are always certain people who are in advance of their time and represent motive power.

They may locally, and in a minor way, put their ideas into practice. In our country, as in so many other countries, we find that certain people have been pioneers in the field of medical care.

One may be permitted to say that at a relatively early date the negative influence of illness on the community was generally understood in Norway. One realised also, in the political sphere what illness and death meant in suffering and financial loss to the individual and the community, even if one did not have concrete calculations about it. The Swedes, L. Goth. Nilsson and Olof Wilander, Örebro, showed in an estimate in 1964 that if one omitted all medical care, it would cost the community at least double what it costs to maintain the great and financially very demanding medical machinery.

A parliamentary commission proposed as long ago as 1885 a system of compulsory health insurance for people in the lower income group, but this plan was unfortunately not realised then. It was only on 18th September 1909 that the Norwegian Parliament passed a Bill about compulsory health insurance for the above-mentioned group of the population. This Act was put into effect on 3rd July 1911—more than 55 years ago. At the same time the opportunity for voluntary health insurance within certain limits was given to other groups of people.

This Act was an important event in the social life of the nation. It meant that, for a great part of the population, doctor and hospital treatment was secured. In principle also the hospitals were assured of their financial foundation. It must be added that some agencies, public and private, had had their own health insurance from earlier days.

The laws concerning health insurance have since been changed many times and extended to greater groups of the population. The existing Act came into force on 2nd March 1956 and includes the whole population so that everybody automatically becomes a member of the health insurance system. By that date the insurance system was in fact already so well developed that the changeover went smoothly.

The system of health insurance now comprises the following benefits:

(*a*) All medical treatment.
(*b*) Dental treatment (disease or extractions).
(*c*) Treatment in hospitals, sanatoria and maternity homes.
(*d*) Nursing in the home.
(*e*) Drugs of particular importance (insulin, vitamin B_{12} etc.) according to a list.
(*f*) Assistance by midwife.
(*g*) Physiotherapy when ordered by a doctor.
(*h*) Speech therapy.

It is obvious that this health insurance arrangement has been and is a very important factor in the increased pressure for more extensive medical services. The fact that people financially have the opportunity to seek medical treatment is, of course, crucial. The National Health Insurance Institution proceeds along

highly democratic and liberal lines. Important points are that the patients at any time have a free choice of doctor and that the doctors are paid for each service. This shows that the expression 'socialised medicine' is unsuitable. The expression 'social medicine' is, on the other hand, more appropriate.

In 1964, 1,920,000 inhabitants were direct members, of these 1,200,000 had the right to receive sickness benefit during illness. 1,775,000 inhabitants were family-members.

In 1964 the incidence of disease averaged 4·6 per 100 members with average duration of 42 days in each case.

3. *Public and private enterprises*

The authorities have in addition to the system of health insurance also initiated other measures. Looking back to get the historical continuity we see that Norway's first Lunacy Act of 8th August 1848 made the Government build quite a few mental hospitals. The Health Act of 16th May 1860 about *Boards of Health and measures relating to epidemic and infectious diseases* led to the foundation of large and small infectious diseases hospitals, admittedly over a long period of time.

The Acts for *leprosy* of 26th May 1877 and for *tuberculosis* of 8th May 1900, which allowed compulsory placement in hospital, led to the foundation of leprosy and tuberculosis hospitals.

An Act of 1949, which became law on 1st July 1950, about *institutions receiving the mentally deficient for nursing, protection and training*, has made the care of the mentally deficient financially secure. It has meant a considerable increase in accommodation for them, almost explosively. In 1940 there was accommodation for 480, at the end of 1964 for more than 5,000.

These legal measures had partly curative, partly prophylactic elements.

Other public enterprises have a largely prophylactic purpose such as *diagnostic units for diseases of the lungs* (mass miniature radiography service), *mother and child welfare, examinations of schoolchildren, etc.*

Public vaccination against various contagious diseases has a purely prophylactic aim.

In Norway vaccination against smallpox and poliomyelitis is the most usual. One may, however, expect that vaccination against other diseases may become popular owing to the increasing and rapid communications with other countries by air-travel.

Yet another public enterprise must be mentioned, that is *the rehabilitation and education* of the injured and ill. This has led to the building of special clinics and special wards in hospitals. At the moment one is also discussing how to make ordinary patients active with physical training so that they may return to their previous work more quickly and safely. This will mean new demands on the medical service in the hospitals, but at the same time it will shorten the time of convalescence with its considerable claims on doctors and sickness benefit.

Such an enterprise—which already is in use in Great Britain —was one of the main topics at the Norwegian Hospital Association's general assembly in 1966 where the Minister of Social Affairs gave one of the introductory speeches on this topic.

Humanitarian and other private organisations have initiated many of these enterprises, and they have done and do considerable work to combat and treat diseases. The Norwegian Medical Association took the initiative in 1887 in the fight against tuberculosis, and later on the Norwegian Women's Public Health Association and the National Society against Tuberculosis were leading partners in the campaign both on the curative and the prophylactic side.

The same applies to the *care of the epileptic.* The Norwegian Deacons Association opened in 1893 the first home for epileptics. In 1949 the Norwegian Parliament passed a Bill about *institutions for the treatment and care of epileptics* and made the running of these financially secure. This has increased the accommodation for epileptics from 66 to 174.

Norway is a seafaring nation. In 1920 the Norwegian Red Cross started to improve *hygienic conditions* on board ship for sailors. There is a line of development from this to the medical offices for sailors which the Government has established in Norwegian and foreign ports. We have, in 1966, five of these in Norwegian ports and four in foreign ports.

Just before 1900 some private people began to acquire hospital accommodation for the disabled. The first clinic was completed in 1902.

On 19th June 1936 a Bill was passed about *the care of the disabled.* A new act of 5th December 1958 extended the medical and other contributions to the disabled. This has meant six new institutions for treatment with a total of 250 beds. At the same time several orthopaedic hospital wards have been established.

Not less than 20 humanitarian and other organisations all over the country work to establish special hospitals, wards and nursing-homes for certain illnesses; they also help with health examinations amongst the population and give support to research programmes to establish a scientific basis for practical, medical treatment.

There is a certain amount of co-operation between different organisations working for the same end, particularly in the care of the mentally deficient, epileptics and in the campaign against cancer. In addition there are several local and smaller organisations working to increase medical facilities for larger or smaller groups of patients.

Among the categories of illness that are dealt with in this way by different organisations and associations are: alcoholism, asthma and other kinds of allergy, cerebral palsy, diabetes, epilepsy, heart diseases, impairment of hearing, cancer, diseases of the lungs, multiple sclerosis, poliomyelitis, rheumatism, disability and other handicaps, mental deficiency. These various organisations have, during the last 20 years, laid the foundation for the building of 110 special hospitals and nursing homes. There is therefore no doubt that these organisations have formed and do form a considerable pressure group both by the practical measures they take themselves and by their direct influence on the authorities. Their significance, however, goes much further, namely as creators of public opinion.

There has been and is excellent co-operation between the central health authorities, county and local authorities and these organisations and associations.

The Norwegian Public Health Service have themselves been a considerable 'pressure institution'.

4. *Representatives of the medical profession*

Experience shows that in most cases it is representatives of the medical profession who raise the question of developing the health services and the hospital services. There are doctors in and outside public service, and as far as hospitals are concerned the hospital doctors themselves usually take the initiative.

And this seems reasonable—as few others can see the full picture of the development of medicine and its practical consequences.

It is therefore self-evident that the doctors, with their responsibility towards sick people and the public's state of health as a whole, put forward the proposals they consider necessary on behalf of medicine and their patients. In the above-mentioned organisations and associations, doctors also play an active part.

In this connection I also include nurses in the medical profession. With their social and nursing responsibility they have often taken the lead in building health institutions. This is often the case in the remote districts where, in a country like Norway with its far-stretching and peculiar geography, often sparsely populated, smaller institutions are necessary. Here there has in many cases been co-operation of fundamental importance between the district medical officer and the nurse. There is also very often close co-operation between hospital doctors and nurses to improve the quality of the existing medical institutions in order to make them better treatment centres and increase their capacity.

5. *Information*

A factor which particularly in recent years has contributed to the pressure for increased medical services is the far-ranging flood of information which is addressed directly to the public. This relates to the health service generally, but more often it concerns special illnesses:

(*a*) Articles in the daily press.
(*b*) Articles in weekly papers, the colour magazines.
(*c*) Special papers on health.
(*d*) Booklets from the health authorities, the insurance authorities and from the already mentioned associations.

For example, the National Insurance Institution issues

not less than 16 booklets which are distributed free of charge and give information about what benefits are available during illness, for accidents, injuries and disablement of various kinds. In an Act of 5th December 1958 about the disabled it is even stressed in para. 13 that doctors who examine or treat disabled persons must give them or their relatives all necessary information about their rights and help in obtaining them. Teachers who give lessons to the disabled must instruct them similarly.

(*e*) Radio programmes and (*f*) Television.

Programmes about illnesses and their treatment, prophylactic measures and the detection of illness (e.g. cancer) are usually made easy to understand. They often have a considerable appeal by giving direct and concrete impressions.

It may not be possible to show in figures the effect of this information, but undoubtedly the use of these mass media has a considerable influence on the public. This is proved by the great attendance at public examinations (e.g. for cancer in women).

(*g*) To this must be added the influence on the public of meetings arranged by these various associations. Here one often addresses certain groups of patients—diabetics, rheumatic patients, asthmatics, etc. Such meetings have a restricted information value, but are undoubtedly of importance.

Inevitably this information activity has certain disadvantages as it may create anxiety and also, to some degree, neurosis. It will make a greater number of people than necessary go to doctors and hospitals. This is obvious. When this is pointed out, it is often said that in that case it is a noble misuse.

6. *Increase of certain groups of patients*

(*a*) *Traffic injuries.* These have an upward tendency and make great claims on the necessary service.

In 1947 Norway had 640 severely injured, and in 1965, 3,325. To this must be added a presumably much larger number with minor injuries, who do not need hospital treatment, but doctor's help for minor surgery.

(*b*) *Psychiatric illness at an early age* seems to increase. No extensive statistics on this are available; limited material, however, shows an increase of about 20% in 10 years.

(*c*) *Drug addiction.* Here also the general impression is that the number of drug addicts and misusers of drugs is growing. There are unfortunately no statistics about this. Experts presume that drug addiction is part of the general misuse of drugs. There is considerable pressure on the doctors to prescribe the so-called tranquillisers. If doctors, in their hurry, are careless about this, it will lead to a greater influx of patients, now also to be treated for the effect of the drugs. During the period 1952–62 the sale of pharmaceutical products increased by about 130% (90% of the products sold in a chemist's shop in Norway are pharmaceutical preparations).

Some years ago the Government founded the first hospital for drug addicts with 36 beds. This is now not enough, and plans for extension are under consideration. The treatment of these patients before, during and after the active illness, is very demanding and an increased staff of doctors is needed.

7. *The increase of the population*

It is reckoned that the population increases about 8% in a 10-year period. This is partly due to a greater number of births, partly to an increased length of life.

8. *The increased length of life*

This causes increased pressure for medical services—particularly hospital services—as the older people fill the hospitals to a greater extent than the younger.

By their very nature, all of these factors lead to an expansion of medical services and all experience confirms this. Most of these factors are significant.

Very few factors can be said to have *reduced the pressure* for an increase in the medical services. Not until one can talk of full satisfaction of all needs can one talk of pressure having been removed. A development in this direction may indicate a reduced need. This is not the case for the time being. The

considerably higher standard of living in recent years, better standards of hygiene and the many measures to prevent illness could lead one to expect that there would be less illness and therefore less need for curative medical service. This is not so. The nature of the illnesses changes. Better hygiene, vaccination, etc., have reduced the number of infectious diseases, but in their place the illnesses of the welfare society have appeared.

The following, however, represent a clear decline:

A. *The decline of infectious diseases*

This includes several of the *acute infectious diseases* such as scarlatina, pneumonia, diphtheria, typhoid, paratyphoid, venereal diseases. Because of this the need for infectious diseases hospitals is small, although they are maintained to a certain degree for emergencies. They are usually filled with medical patients.

(*a*) Poliomyelitis must be mentioned separately. The last epidemics caused 11 polio hospitals to be built during the years 1949–57. The need for these has decreased with vaccination, which presumably is the reason why there have been no epidemics in recent years, only scattered cases. The polio hospitals are today used for other purposes.

(*b*) There is a very marked decrease also in chronic infectious diseases like leprosy and tuberculosis. Whilst in Norway in 1865 there were 2,682 cases of *leprosy*, there were only 7 cases in 1965, of these 3 were in hospital.

In 1950 there were 6,170 beds for 5,643 tuberculosis patients needing hospital treatment, in 1960, 3,340 beds for 2,468 patients and in 1963, 1,612 beds for 1,118 patients still needing hospital treatment.

In point of fact there are more beds for tuberculosis than needed. Hence it follows that hospitals and particularly nursing homes for tuberculosis are being discontinued. One must, however, be careful not to presume that tuberculosis is no longer a current disease. Now and then a few cases occur. These patients are now admitted to the wards for lung diseases built in connection with general hospitals.

B. *The influence of drugs and other treatment for mental diseases*

This is probably a disputed question, but there seems to be a declining need for beds in psychiatric hospitals. This is proved by the fact that the degree of overcrowding has decreased steadily during the last five years. This percentage is, however, on the average 2·1 and in certain mental hospitals the overcrowding is still about 40%. The use of tranquillising drugs is presumed to be a contributory cause.

The accommodation situation may also be explained by the fact that previously the mentally deficient were placed in psychiatric hospitals. They are now placed in special institutions for the mentally deficient. Apart from that, it is estimated that the number of cases of real psychosis is relatively constant. In 1950 there were 48 cases per 10,000 inhabitants; in 1964, 45·9 per 10,000 inhabitants. The decrease may be due to the fact that the figure for 1950 included some mentally deficient.

Regarding neurosis there is no certain survey, but one has the impression that the number of such patients seeking treatment is increasing. During the Second World War, when to survive was the main thing, the number of patients with neurosis dropped considerably.

C. With the liberality shown by the National Insurance Institution a certain degree of exploitation by the public cannot be avoided: first of all by seeking medical help unnecessarily; secondly some patients with illnesses difficult to control, where largely subjective symptoms are predominant, may extend the period of illness longer than necessary and receive sickness benefit, which is free of tax as well.

The first tendency is limited, as the patient himself must pay a small fee for consultations and visits in the home. It is usually 2–3 n. Cr. for a consultation and 5 n. Cr. for a visit in the home. These sums are small enough not to prevent anybody from seeking medical help, but big enough to restrain from greater abuse. Psychologically these small sums also have the effect of giving the doctor respect so that the patient does not look upon him as merely a distributor of prescriptions, and so that the patient does not feel he is perfectly within his rights

more or less to demand prescriptions for various remedies. Examination, diagnosis—and the doctor—still decide which treatment is to be recommended. That many doctors do not demand this additional fee from patients with chronic diseases is a different matter.

The other tendency—to prolong the period of sick-leave—is counteracted by the fact that the local offices of the National Health Insurance Institution have their own supervising doctors. When they find the period of sick-leave abnormally long, they summon the patient for an interview. Experience shows that only two-thirds of those called answer the summons. One-third fail to appear, but return to work without more ado.

Numerical statements of the number of consultations and visits in the home by a doctor would confirm the pressure for the ordinary medical services. Unfortunately there are no such statistics for the whole country. The local office of the National Health Insurance Institution in Bergen, however, has produced exact statistics for Bergen city.

Table 1

	1952	1955	1958	1961	Increase
Consultations (in thousands)	590	633	711	735	24·6%
Visits in the home (in thousands)	75	84	95	86	—
Number of patients admitted to hospital (in thousands)	9·7	11·8	12·9	16·8	86·3%
Number of patient days in hospital (in thousands)	228	250	285	344	57·4% decrease
Average length of stay	24·3			20·5	15·6%

Statistics like these from Bergen, however, do not reflect the situation as it is in the country as a whole. Even if the need for medical services probably is more or less the same all over, it is not possible everywhere to meet this need. There is a great difference between town and country. In the towns it is easier both to consult a doctor and to be visited in the home.

This difference will to a certain degree decrease with better

communications, particularly as so many people have their own cars. This will also explain the general impression that the number of visits in the home is decreasing, whilst the number of consultations is increasing. With these reservations, the situation in Bergen gives an impression of the tendency in the country as a whole.

As far as hospital accommodation is concerned there are statistics going back to 1963. (During the preparation for a Hospital Act to be promoted more accurate statistics have been prepared; they are, however, not yet published and have not been available for this paper.)

Table 2 shows the development and the present situation.

Table 2

ACCOMMODATION IN HOSPITALS
(in brackets number of beds per 1,000 inhabitants)

	1927	1945	1963
Ordinary hospitals and cottage hospitals	10,742 (3·86)	15,208 (4·97)	21,528 (5·48)
Obstetric hospitals	305 (0·11)	553 (0·18)	827 (0·23)
Hospitals and homes for tuberculosis	4,376 (1·57)	5,129 (1·67)	1,622 (0·44)
Leprosy hospitals	138 (0·05)	113 (0·03)	3 (0·001)
Mental hospitals	5,368 (1·93)	6,073 (1·98)	7,986 (2·2)
Homes for mentally deficient	106 (0·038)	349 (0·11)	2,940 (0·80)
Hospitals for alcoholics	120 (0·043)	165 (0·05)	791 (0·21)
Hospitals for epileptics	66 (0·022)	68 (0·022)	174 (0·047)
Hospitals and homes for the mentally deficient	323 (0·11)	485 (0·16)	4,131 (1·13)
Nursing-homes and relief institutions			1,773 (0·48)
Special hospitals			1,895 (0·52)

	1955	1963
Homes for the aged	17,576 (5·2)	23,636 (6·6)

The development is more explicitly shown when the number of beds per 1,000 inhabitants in 1927 is stated as 100%:

	1927	1945	1963
Ordinary hospitals and cottage hospitals	100	128·8	142·7
Obstetric hospitals	100	163·6	209·0
Hospitals and homes for tuberculosis	100	106·4	27·4
Leprosy hospitals	100	60·0	2·0
Mental hospitals	100	102·6	114·0
Nursing-homes for the mentally deficient	100	300·0	2,005·0
Hospitals and nursing-homes for alcoholics	100	137·5	660·0
Hospitals for epileptics	100	100·0	213·6
Hospitals and homes for mentally deficient	100	145·5	1,027·2

These figures can only be said to be a way of expressing the pressure for increased hospital accommodation, not an indication of the pressure itself. It is well known that several factors limit the practical realisation of demands: availability of finance, political disagreement and lack of understanding, limited building possibilities (shortage of labour) etc., without prejudice to these questions here.

Attempts made to estimate the real need for hospital beds of every kind, have not been based upon extensive analyses. Too many assumptions have come into play. In 1946 the Director General of the Norwegian Public Health Services requested the various counties to draw up a *requirement plan* for hospital beds of every kind—i.e. both a quantitative and qualitative plan—and this plan was not to be seen in relation to the possibility of its being realised. In this way a plan for the whole country was drawn up, but because of the lack of an analytical foundation, the material showed only a very great need. Especially it showed the acute need for hospital beds to be provided in the post-war period.

Based on the situation in 1960 Hans Th. Waaler has, on behalf of the Norwegian Public Health Services, made an analysis of the *number of patients* who will need hospital treatment until 1970, seen in relation to the increase of the population and the changes in age-distribution. As the starting point for this prognostic analysis he has used a forecast made by the National Bureau of Statistics for the population state in 1970.

Waaler shows what influence age has on the hospitalisation frequency. Based on this age-analysis and the age-distribution of the population, Waaler reached the following results (published in 1965):

1. That the *number of patients* will increase by 16% during a period of 10 years where *non-psychiatric hospitals* are concerned. Eight per cent of these 16% will be due to the total increase of the population, whilst 8% will be due to the changes in the age distribution.
2. That as regards *psychiatric hospitals* the *number of patients* will increase by 10% during a period of 10 years without taking into account nursing-homes and homes for the aged. Because of this, Waaler regards this figure as probably greatly underrated.

   This conclusion applies to the general prognosis for both somatic and mental diseases.

It is obvious that there will be a future need for more hospital beds generally to meet an as yet unspecified demand, not least because many hospitals will become obsolete, but also to keep pace with the increase of the population and the fact that the span of life is longer.

On the other hand no definite facts are available on the future need for a modified, qualitative expansion of the hospitals, i.e. of special hospitals and special wards in the somatic hospitals. An examination of these conditions is, however, at the moment in preparation by the Norwegian Public Services. Such an estimate has been submitted as far as mental hospitals are concerned.

A. SOMATIC HOSPITALS

All medical expansion shows a marked specialisation. The professional domain widens, specialties and subspecialties (superspecialties) are created. This has already led to a considerable subdivision of hospitals into special wards. The so-called 'mixed hospitals', i.e. hospitals with a mixed clientele working as one single hospital ward—have been reduced in number. These hospitals are in general small having about

30–60 beds. They usually change to trisected hospitals, i.e. hospitals with one department for internal medicine, one surgical department and one section for radiology. For some time this has in a way been a Norwegian standard type of smaller hospital (district hospital).

Developments have, however, made this kind of hospital obsolete, and one must now establish a minimum type of hospital with more departments. The type of departments may be a matter of argument, but it has been suggested that they should contain a department for internal medicine, a surgical department—including an obstetric ward—a children's department, radiological section, anaesthetics section, clinical laboratory including blood-bank.

Cottage hospitals (from 10 to 40 beds) have been omitted in this connection. They are still necessary in Norway with its geography and large rural areas. There has in fact been an increase in the number of these in later years, so that there are now 97.

A steady subdivision into more special departments occurs in the larger hospitals, but the demand is expected to be considerably greater without it being possible to give exact figures.

The following is, however, in the plan for the further expansion of the hospital system in Norway:

(*a*) Hospitals and nursing-homes for long-term patients.
(*b*) Direct relief hospitals for the acute hospitals.
(*c*) Greater out-patient departments connected with the hospitals. In Norway the system of closed polyclinics is still used, except for injuries.
(*d*) Sick-hostels (for cases of observation and subsequent treatment).
(*e*) Teaching hospitals (for the education of doctors, education of specialists, post-graduate education of the general practitioners, post-graduate education of specialists, education of other health and hospital personnel, nursing staff, assistant nurses, medical technicians, etc.).

The expansion of hospitals for long-term treatment, nursing-homes and other relief institutions is the most urgent of these

schemes. The question of incorporating preventive medicine in the hospitals' domain of work so that the hospitals get preventive as well as curative tasks has not yet been taken up seriously in Norway.

Many things point towards such a line of development, which will have several consequences, not least regarding the hospitals themselves with their architectural design and organisation, and also as far as manpower is concerned.

B. MENTAL HOSPITALS

Before 1920 psychiatric hospitals were undifferentiated hospitals (lunatic asylums) which nursed and treated all kinds of psychiatric diseases and divergences, the insane and the mentally deficient. A radical change has occurred particularly in the last 20 years with the specialisation in the treatment of the great psychiatric categories in conjunction with the scientific progress in this field. This has also led to new legislation. The old Insanity Act of 1848, which subsequently was amended by the passage of Acts of 1949 for the mentally deficient and epileptics, and of 1957 for the drug addicts, was replaced by an Act of 28th April 1961 for the *psychiatric health service.*

This Act presupposes a complete change in the psychiatric health service. The mental hospitals will change their function from having mainly intramural tasks to form the *centre* for extensive activity which will also comprise extramural tasks:

(*a*) Preliminary help.
(*b*) Out-patients.
(*c*) The supervision of psychiatric nursing-homes, private and family nursing.
(*d*) Day-hospitals.
(*e*) Night-hospitals.
(*f*) After-care homes.
(*g*) Long-term hostels.
(*h*) Rehabilitation.
(*i*) Sheltered workshops.

In this way psychiatric hospitals will provide complete care from the beginning of a mental disease till the patient—to the

extent to which it is medically possible—is free of symptoms—or so much improved that he can manage on his own in the community. The objective one hopes to achieve in the future is to make the psychiatric polyclinics the centre and the wards a necessary alternative for use when polyclinic treatment cannot be applied or does not help.

The psychiatric health services comprise institutions for adults (I) and for children and adolescents (II).

I. INSTITUTIONS FOR ADULTS

1. *Psychiatric hospitals*

Whilst the demand in the 1950s was presumed to be 30 beds or more per 10,000 inhabitants, the development of medical methods of treatment has meant a quicker turn-over of patients, and the use of other kinds of institutions has made it possible to *reduce the demand* to 23–24 beds per 10,000 inhabitants. In practice a yearly addition of 80–90 beds will, however, be needed to keep pace with the increase in the population.

2. *Psychiatric nursing-homes*

Their work is the nursing of the long-term patients. It was previously assumed that there would be a need for 10 beds per 10,000 inhabitants, but the increasing length of life and a reduction in private nursing will demand an increase of 12–15 beds per 10,000 inhabitants per annum.

3. *Psychiatric clinics and mental-homes*

Their task is to treat less serious disturbances of the mind and serious disturbances where one may hope for a quick improvement. This is assumed to require 5 beds per 10,000 inhabitants, which means an increase from 870 to 1,500 beds during the next few years. The following plan has been drawn up:

(*a*) A psychiatric department with polyclinic and possibly a day-hospital at every central hospital.

The psychiatric department must have at least 30 beds to allow a satisfactory classification of the patients.

(*b*) In the counties where there is no central hospital *a psychiatric polyclinic* should be connected to one or more of the larger county hospitals, with an observation ward of 10 beds.
(*c*) Special wards for neurosis should be established where conditions allow this.
(*d*) Mental homes should preferably provide long-term treatment for neurosis and neurasthenia.

4. *Psychiatric polyclinics*

There is a great and urgent need for these institutions which should not be difficult to establish. Where this development has not been as quick as one could wish it has been due to the scarcity of qualified personnel, and the speed of the expansion depends on this personnel.

5. *Day-hospitals*

The essential condition for treating a patient in a day-hospital is that the distance from his home is short. It is anticipated, however, that day-hospitals will be established in connection with all psychiatric hospitals and clinics.

6. *Night-hospitals*

These are institutions where the patient spends the night in sheltered surroundings, whilst the day is spent at work or in school, etc. It is presumed that such institutions will be established as part of a step-by-step discharge from a psychiatric hospital.

7. *Organised after-care with after-care homes and protected hostels*

Institutions of this kind are under preparation. At the moment there are 4 of these in Norway, but it is difficult to give an opinion about the exact demand.

8. *Sheltered workshops*

The need of these is obvious. Some psychiatric hospitals have them, but more are needed.

9. *Rehabilitation institutions*

Rehabilitation measures have for a long time been carried

out in psychiatric hospitals, but separate rehabilitation institutions and sheltered workshops are needed.

10. *Private- and family-nursing*

This form of nursing has been reduced. In 1945 23·3 patients per 10,000 inhabitants were being looked after in this way, in 1964 it was 14·2. It is estimated that this kind of nursing will still be suitable for a few psychiatric patients, probably about 6 per 10,000 inhabitants.

11. *Rest homes for those suffering from nervous complaints* do not seem to be needed.

II. INSTITUTIONS FOR CHILDREN AND ADOLESCENTS

Besides the treatment of mentally ill children and adolescents, child and adolescent psychiatry also covers advisory activities in behaviour difficulties, development—and adaptation problems. It also plays an important part in preventing mental illnesses in adulthood taking the long view.

1. The main cornerstone in this treatment is *psychiatric polyclinics for children and adolescents.*

   According to plan at least one such polyclinic will be established in connection with the largest hospital in every county.
2. *Separate departments for child-psychiatry and adolescent-psychiatry.*

   The theory is that such departments should be established in regional parts of the country (with several counties involved in the same department). To both, polyclinics and wards must be attached.
3. *Child-psychiatry treatment homes and adolescent-psychiatry treatment homes.*

   These homes should be small with 10–15 beds.
4. For patients where the diagnosis and treatment are particularly difficult *The State Centre for child and adolescent psychiatry* in Oslo with 42 places has been established. A children's department with 21 places will be opened in 1967/68 and then a department for child psychosis (12 places) and a department for adolescent psychosis (38

places). *The State's central team for child and adolescent psychiatry* was set up in 1962; this is a mobile polyclinic serving the whole country.

By 1969 there should be 19 polyclinics, wards with about 200 places and treatment wards with 350 places.

The care of the mentally deficient

As late as 1950 the care of the mentally deficient was on a purely nursing plane and only 780 patients were treated in mental homes. Since the Act of 1st July 1950 concerning the mentally deficient there has been an expansion which in Norway one might call almost an explosion as mentioned earlier. The number of places for the mentally deficient increases at a rate of 400 per annum, and if this continues, the problem of accommodation will be solved in 10–15 years.

A completely developed differentiated system of care for the mentally deficient will cover about 3 per 1,000 of the population or about 10,000–11,000 individuals.

With the basic changes taking place in the care of the mentally deficient—founded on medical, genetic, biochemical, psychological, sociological, pedagogical, social and rehabilitation criteria—the demand will not only be for more accommodation, but also for many more nursing personnel of every category.

In Norway it is compulsory to submit all hospital and connected projects to the Norwegian Public Health Services, for approval. This ensures co-ordination of the projects and creates a general survey. In this way the question of too many medical institutions hardly arises.

New projects in relation to the personnel situation have, however, not really yet been considered. This is probably because the personnel problem has not been as critical in Norway as in many other countries, nevertheless, it is difficult in certain sectors of the hospital system. This applies to nursing personnel, and a considerable extension of schools for training nurses is necessary. It also applies to medical technicians, so more educational capacity is needed here as well. On the other hand, hospitals are now introducing efficiency methods of

various kinds, at the moment more or less subject to the situation.

There is an urgent need for a body to administer research into hospitals and hospital functions. Work has been going on in this field for years, but so far there has been no positive result. This question is, however, of such vital importance to both the hospital system and the community, that a solution must be found. One must then attempt to work out a proper basis for investigation, not only to get a complete picture of the pressure and demand for medical and hospital services, but also to find practical solutions.

PORTUGAL

DR. JORGE ASSIS DOS SANTOS

I. DETERMINING FACTORS FOR THE INCREASE OF MEDICAL SERVICES, I.E. HOSPITAL SERVICES

1. The increase in medical services, i.e. hospital services, has intensified in Portugal in the past 10 years, due to the following reasons:

(*a*) Economic development of the country, followed by an improvement in the standard of living of the population, mainly as a consequence of the execution of the 'Plans for Economic Development' and the impact of war expenses (Angola 1961); a decrease was registered on the primary sector of the population, in comparison with the other sectors of the population (decrease of 6·1% from 1950 to 1960);

(*b*) Improvement of hospital accommodation, through the building of new hospitals and the modernisation of those already in existence (Appendix I);

(*c*) Improvement of the hospital system as a whole by the setting up in 1962 of a central service to guide, co-ordinate and control all hospital activities—the Directorate General of Hospitals, dependent upon the Ministry of Health, which has delegates in the three hospital regions of the country; also created in 1962, the Bed Bureau Service attached to district and regional hospitals has the function of distributing patients to the most suitable hospitals, in order to achieve the maximum economic and social efficiency (Appendix II) in relation to the number of patients distributed by the Bed Bureau, and issuing legislative directives concerning hospital regionalisation (Law No. 46 301 of 27th April 1965);

(*d*) Improvement of internal hospital administration, mainly because of the issue of regulations resulting in: reform of hospital finance, support leading to more regular and effective municipal participation (Law No. 46 301 of 27th April 1965); establishment of a scale of fees for hospital services (ministerial decree of 18th June 1965); revision

of the rates of pay of hospital staff, granting of monetary additions to the basic salary, in accordance with income, to all the medical, nursing and ancillary staff (ministerial decree of 6th June 1966); increase in the number of hospital staff where there is a lack of adequate services (doctors, nurses, ancillary staff) by the allocation of special funds for scholarships;

(*e*) The financial agreement of 1st September 1965 between the Ministry of Health and the Ministry of Social Security for the purpose of hospital treatment (in-patients) of Social Security beneficiaries, since this Ministry has its own medical services only for ambulatory care (out-patients departments and diagnostic centres); from that first period till the end of 1966, the agreement covers the treatment of only 2,255,000 of the Social Security beneficiaries (including their families) and only in departments of general and specialised surgery, the enlargement of the rest of the hospital services being foreseen in 1967;

(*f*) The development of the transport system and mobility of the population on the one hand, and industrial development on the other hand, both lead to an increase in the number of casualties (either road or industrial accidents) (Appendix III) and affect the growth of the emergency department of the Lisbon Civil Hospitals, which is the biggest centre for emergency treatment in the country.

2. The factors indicated in (*a*) and (*b*) of the previous section seem to be the most important, since the implementing of the recent agreement with the Social Security (*e*), with all its important financial and medical care implications, is only in its initial stage; similarly, because of the factor referred to in (*d*)—improvement of internal hospital administration—one would expect a large contribution in the future, since its effect has not yet been seen, due to the short period of time.

3. All the factors referred to previously have had great influence on the development of the medical services in this country; but there are also some negative factors to be considered which, in a sense, have limited expansion. These are as follows:

(*a*) The absence of social security systems covering the total population (9,200,000 people, excluding the Portuguese overseas territories);

(*b*) The Government policy, only recently revised, which gave priority to the building of small rural and municipal hospitals, with poor standards of efficiency from the medical and social points of view and no facilities for improvement of the medical work, rather than the building of large district and regional hospitals;

(*c*) The shortage of staff: in Portugal there are 7,976 doctors, which means one doctor for 1,146 people; and there are 8,894 registered nurses, which means one registered nurse for 1,027 people (situation in 1965);

(*d*) The lack of properly organised medical courses, both inside and outside hospitals, resulting in the great shortage of specialists (there are only 2,879) and the unequal distribution of doctors through the country, deprives rural zones (69% of the total number of doctors live in Lisbon, Oporto and Coimbra, the three biggest cities, where there are Medical Schools, and they serve only 34% of the total population).

II. RULES FOR HOSPITAL PLANNING

1. The estimate for hospital bed requirements was made, up to now, according to an old Law (No. 2 011 of 2nd April 1946), which was based exclusively on the existing population in each hospital area—region, district or municipality.

A new Law (Decree-Law No. 46 308 of 27th April 1965) prescribes new rules for the modern conception of hospital planning, taking into consideration not only the population served, but also patient care, the average length of stay, bed occupancy and other elements considered to be of interest in this connection. The acceptance of these new principles has resulted in the approval of the building of 6 new district hospitals to replace the old ones. At present, out of a total of 24 district hospitals, only 7 are accommodated in modern buildings, either totally or partially.

2. The emphasis is, therefore, placed on the district hospital

(general hospital) planned in accordance with the following conditions:

(*a*) Population to be served: from 100,000 to 300,000 people;
(*b*) Minimum number of beds: 300;
(*c*) Distance from the hospital, by road, to the farthest point of the area served: 40 to 50 km.;
(*d*) Nature of medical care: all general medical services, surgery and specialties with the exception of those to be worked out on a regional level, such as: radiotherapy, neuro-surgery, cardio-vascular surgery, plastic surgery, burns centres;
(*e*) Permanent facilities for the treatment of emergency cases;
(*f*) Existence of psychiatric services: in-patient departments; clinics; and day hospital.

3. In spite of the fact that the medical and social services of Portuguese hospitals are still considered to be inadequate, especially in the district and municipal hospitals (see Appendix IV showing the long length of stay and the low bed occupancy), it is thought that hospital planning, in the next 10 years, will also be directed towards an increase in the number of beds, not only because this is low in actual numbers (2·47 general beds per 1,000 population) but also because our figures of hospital admissions are too low by European standards (36·33), (taking into consideration only the general hospitals and excluding the sector of private hospitals). See Appendices VI and VII for the number of beds and hospital cases (situation in 1965).

(*a*) The Plans for Economic Development have already ensured the financing of the construction of 6 new district hospitals, as previously stated. On the other hand there are measures in hand to improve the medical organisation of these hospitals, and especially to organise medical courses in order to bring the doctor closer to the hospital, gradually encouraging him to change from general practice, which is becoming more and more difficult, to specialised and mainly hospital medicine.
(*b*) The serious problem of the municipal general hospitals (234 hospitals, with 8,984 beds, corresponding to 40·8% of the general hospital beds) will be solved by a partial

change-over to out-patient services: health centres for prevention and treatment in medicine, surgery and some specialties; dispensaries for tuberculosis; psychiatric clinics; maternal and child health centres; dental clinics.

In-patient services; obstetrics; rehabilitation centres; centres for geriatric and chronic diseases; psychiatric units; convalescent centres.

III. PARTICULAR EXAMPLES OF PRESSURE ON MEDICAL SERVICES

1.

(*a*) There is a general demand for all hospital services, but this is especially intense in the large centres particularly with regard to emergency services, orthopaedics and obstetrics, where the present resources are shown to be alarmingly insufficient for the needs.

(*b*) The need to develop mental services is also striking. There are only about 9,600 beds in 28 hospitals, which means 1·1 beds per 1,000 population, when there ought to be 27,000 beds, in order to reach the rate of 3 beds per 1,000 population, which is recommended by W.H.O. The plans provide for a rate of 1·5 beds per 1,000 population, which means an immediate increase of 4,000 beds.

(*c*) Other important needs concern services for the rehabilitation of the physically handicapped, chronic patients and old people. In this field, the South Regional Centre with 250 beds is already finished, and the building of the North and Central Regional Centres is under way.

2. This state of affairs is the subject of considerable study. The aim is to allocate the main role to district hospitals and to change the nature of the municipal hospital, in order to obtain greater medical and social efficiency.

There are great difficulties and the progress will necessarily be slow, since the majority of hospital beds in Portugal are owned by private institutions (508 general and special hospitals, with about 30,500 beds). The State has 48 hospitals with 19,000 beds.

3. Reports on particular deficiencies in some sectors of hospital activity are confirmed by:

(*a*) Long waiting-lists in hospitals, including psychiatry;
(*b*) High percentage of childbirth at home (see Appendix VIII);
(*c*) High rate of hospital admissions and bed occupancy in some specialties, compared with the general number;
(*d*) Unequal distribution of hospital beds through the country (see Appendix VI).

IV. MEASURES OF CO-ORDINATION IN ORDER TO AVOID THE MULTIPLICATION OF MEDICAL SERVICES

1.

(*a*) The Ministry of Health and the Ministry of Social Security try to avoid the duplication of services, having made an agreement to treat Social Security beneficiaries in the hospitals on a financial basis acceptable to the hospitals. Conformity in the work and categories of social security doctors and hospital doctors is being considered as a second step.

(*b*) On the other hand, the Law 2 115 of 18th June 1962 appointed a Government Council of Social Affairs which has, among other objectives, the task of co-ordinating the achievements of social security with those of health.

2. Inside the Health Ministry, efforts have also been made to avoid duplication of services: the Directorate-General of Hospitals ensures good co-ordination of all the curative activities; it supervises the psychiatric hospitals and tuberculosis centres in addition to the general hospitals. The new principles of hospital planning give priority to the building of district hospitals—large units with a minimum of 300 beds. New laws were passed to regulate the opening of new private hospitals, subjecting them to technical and economic conditions; the hospitals which belong to voluntary associations, supported in part by the State, can only be built after authorisation by the Ministry of Health, according to the Decree-Law 46 308 of 27th April 1965.

3. The reasons given for avoiding duplication of services are of an economic nature: better use of the existing personnel, material and financial resources, provided that satisfactory hospital conditions are ensured for the patients.

4. The Trade Unions are dependent on the Ministry of Labour and Social Security and do not have their own medical services, their members being treated by the Social Security or by the hospitals. The Insurance Companies do not, as a rule, have their own medical services, except those specialising in industrial and road accidents, which have in-patient services, permanent emergency departments, etc.

V. STATISTICS ON THE INCREASE OR DECREASE IN MEDICAL SERVICES

Pressure has been exerted in order to increase the medical services, i.e. hospital services. Obviously the first result of that pressure is the increase in hospital efficiency from the economic and social points of view. So, the average length of stay in the hospital has been gradually reduced though at present it is high (see Appendix IV); the percentage of bed occupancy is too high (see Appendix V); there is an increase in the number of hospital cases, both in the emergency and in-patient departments (see Appendix IX); increase in the number of patients sent by the Bed Bureaux to the three categories of existing hospitals (see Appendix II); increase in the patients treated by the Social Security out-patient department, when related to the total number of beneficiaries (see Appendix X); increase in the hospital estimates and the corresponding bed/population ratio.

VI. STUDIES OR RESEARCH CARRIED OUT IN PORTUGAL CONCERNING THE CONFERENCE SUBJECT

1. In the Directorate-General of Hospitals there is a central service of statistics which annually collects the financial elements relating to the patient and medical statistics of all hospitals, public or private, including the average length of stay and out-patient department attendances.

2. Special care has been taken in making general inquiries in the hospitals, mainly to assess their organisation and medical efficiency. In 1961, an inquiry was carried out in the district hospitals; in 1962, in the municipal hospitals and in 1966, in the regional hospitals.

3. The creation of Bed Bureaux is very important for controlling the pressure on the hospital services and estimating precisely the existing resources in each hospital region and district, and their principal requirements.

4. The preparatory studies on the formulation of the past two 'Plans for Economic Development' (1965–67 and 1967–72) brought about an exhaustive investigation of the hospital situation in this country. These Plans show the proposed building and renovation of the majority of district hospitals. To establish an order of priority for this building, studies were made bearing in mind, among other things, the number of hospital cases and the amount of work carried out by the hospitals already in existence.

APPENDIX I

NEW HOSPITALS AND REBUILT HOSPITALS

Year	New hospitals	Rebuilt hospitals
1955	11	7
1956	9	2
1957	1	2
1958	7	6
1959	8	3
1960	2	6
1961	6	5
1962	5	3
1963	—	2
1964	2	1
1965	6	5
	57	42

APPENDIX II

BED BUREAUX (NUMBER OF PATIENTS)

Region	1963	1964	1965
North	8,807	6,922	7,806
Central	4,711	10,268	10,020
South	12,003	12,942	12,078
Total	25,521	30,132	29,904

APPENDIX III

BONE SURGERY AND HEAD INJURIES IN THE EMERGENCY DEPARTMENT OF HOSPITAL S. JOSE IN LISBON

Year	Total	Per day
1945	12,965	36
1955	18,772	51
1964	22,513	62

APPENDIX IV

AVERAGE LENGTH OF STAY IN GENERAL HOSPITALS

Year	Regional hospitals	District hospitals	Municipal hospitals
1955	26·10	17·20	22·67
1959	21·62	15·77	19·15
1964	24·64	15·26	14·08

APPENDIX V

BED OCCUPANCY IN GENERAL HOSPITALS

Year	Regional hospitals	District hospitals	Municipal hospitals
1955	93·38	67·63	52·60
1959	93·92	68·05	54·72
1964	100·06	77·45	50·87

APPENDIX VI

NUMBER OF BEDS IN GENERAL HOSPITALS—1964

Hospital region	Number of beds	Per 1,000 inhabitants
North	6,454	1·97
Central	3,923	2·23
South	11,618	3·00
Total	21,995	2·47

APPENDIX VII

HOSPITAL CASES IN GENERAL HOSPITALS—1964

Hospital region	Per 1,000 inhabitants
North	29·49
Central	36·06
South	42·25

APPENDIX VIII

CHILDBIRTH AT HOME—1964

Total number in the country	221,736
Total number at home	166,997
% at home	75·31

APPENDIX IX

CASES TREATED (GENERAL HOSPITALS)

Year	In-patients (number of patients)	Emergencies (number of patients)
1955	233,307	364,964
1959	285,639	484,940
1964	319,747	593,128

APPENDIX X

SOCIAL SECURITY MEDICAL SERVICES

Year	Number of members[1]	Number of out-patients
1955	431,229	1,460,201
1959	608,009	1,955,319
1964	1,042,420	3,251,967

[1] Excluding families.

SPAIN

DR. A. SERIGO

1. Medical services in Spain are affected by special circumstances. The country is going through a period of great economic development and rapid industrialisation. Moreover, the flow of rural populations to the cities is very intense and has exceeded all forecasts.

Nevertheless, at least one third of the population of Spain still lives in rural areas and the situation is not the same in the whole country because there are considerable regional and personal differences with regard to the distribution of the national income.

We believe that the causes of the increased demand for medical services are the following, and in this order:

(*a*) Economic development.

As living standards rise there is an increased demand for services, including health services, in accordance with the well-known economic law of Engel.

(*b*) Industrialisation—a consequence of the above.

Families living in urban areas make greater use of medical services, especially hospital services and we believe that the causes are: difficulties arising from the smallness of urban dwellings; the fact that often the whole family works and cannot care for the sick; less solidarity and neighbourly help in urban society than in rural society.

(*c*) The tremendous development of social security. While there is an increased demand for medical treatment, its cost is reduced because of the facilities offered by the social security.

(*d*) A general reason: greater confidence in medicine, surgery and scientific progress.

It is difficult to define the relative importance of these factors as really they are linked together, but it is possible that the order given shows approximately how far they stimulate greater use of the health services.

In the past, the economic factor put a limit on the use of

services and this is where charity came in. Present expansion is mainly due to sociological changes in Spanish society caused by higher living standards and rapid industrialisation.

II. At the end of 1963 an important survey was made of hospital resources, and all hospitals were classified in accordance with the needs of the geographical area in question.

Then Draft Regulations were drawn up to facilitate the proper functioning on Spain's hospital network, a difficult matter because there is no National Health Service in the country and the organisations engaged in this work are numerous.

The third phase has been the working out of a general requirements plan which could be included in the Second Economic and Social Development Plan (1968–72). The trend in this requirements plan (investment and upkeep costs) has been to improve existing facilities rather than to provide more beds at unsatisfactory standards.

The need for hospital beds is fundamentally related to natural population growth and to intense internal migratory movements closely linked to centres of industrialisation and development.

We believe the trend will be an increased demand for hospital beds, although, as we said, this will not be a good thing until the existing ones are functioning at satisfactory standards. (See paragraph I for the reasons for the increased demand.)

III. In general, the demand for hospitalisation for surgical treatment has reached a peak in Spain and is unlikely to increase much in the future. On the other hand demand is increasing for beds for chronic mental conditions and maternity services.

The reasons listed in paragraph I explain this trend. Hospitalisation was necessary in the past as it is now for serious surgical treatment, but at present it is difficult to handle a chronic disease or childbirth at home.

Two methods have been used to study this tendency: examination of the occupancy figures for different hospitals and

Table

AVERAGE FIGURES FOR DIFFERENT TYPES OF HOSPITALS, 1962

Number of centres (average number of beds per centre)	Centre	Number of beds	Number of admissions	Number of discharges	Number of patient days	Average length of stay	Bed occupancy	Bed/ patient turnover
39 404	Provincial hospitals	15,770	129,402	122,834	4,106,270	31	71	16
10 499	Clinical hospitals (Teaching)	4,998	47,434	43,851	1,371,334	30	75	10
4 780	General private hospitals	3,122	31,863	29,796	868,437	27	76	10
23 35	Municipal hospitals (sample only)	820	5,123	4,917	96,918	24	32	7
16 8	Emergency maternity centres (sample only)	139	2,943	2,940	13,005	4·4	25	21
40 270	Social security	10,830	280,549	276,882	2,400,306	8	60	25
27 7	Private surgical hospitals (sample only)	212	4,745	4,675	37,735	7	48	22
27 644	Regional psychiatric hospitals	17,405	15,775	10,860	5,864,156	371	92	0·91
10 866	Church psychiatric hospitals (sample only)	8,663	1,958	1,939	3,019,845	1,020	95	0·34
11 491	Private psychiatric hospitals (sample only)	5,405	2,192	1,757	1,749,106	799	88	0·41
4 368	PANAP (State) psychiatric hospitals	1,474	707	586	490,765	695	92	0·49

departments and the number of requests for admission to the different types of hospitals and to the various departments in each hospital.

IV. The technical services of the Secretariat of the Central Hospital Co-ordinating Committee are seeking increased co-operation from the hospital in order to avoid an unnecessary increase in expenses and the number of beds. The idea is to make a rational use of existing resources in accordance with the paper submitted to this Conference on General Aspects of Medical Care.

However, it is a difficult task, as it is hard to act 'technically' in such a 'political' matter as the building of hospitals.

V. The increase in the number of hospital beds in the country is remarkable; the 1949 hospital census gave 127,343 beds; the figure now is 155,039, and the ratio of beds per 1,000 inhabitants has risen from 4·43 to 4·80. However, we must point out that in the last census (1964) the definition of a hospital was narrowed and many asylums excluded.

In the light of the social security figures and those of the State Central Health Services, it may be said that the demand for beds has been very high in maternity and psychiatric departments.

VI. Using the 1963 hospital census we have deduced some facts summarised in the attached table under different types of hospitals. We do not yet have sufficient details on the working of out-patients departments or the general practitioner services.

There are further data in the paper submitted to this Conference on the Hospital Services in Spain as given on page 183.

GENERAL ASPECTS OF MEDICAL CARE

Before studying the problems of the structure of hospital services in any country, it is interesting to deal with what might be called the general aspects of medical care—which might serve us as a guide throughout this analysis.

1.2. *Changes in Medical Care*

1.2.1. *The development of medico–surgical techniques*

The great progress in the field of treatment during the last

25 years has produced a real technological revolution in the field of medical care.

The consequences of this revolution have been:

(*a*) More efficient care;
(*b*) A rise in the cost of this care;
(*c*) The inevitable necessity of shift work;
(*d*) A greater preoccupation with the psychological and social aspects of medicine.

1.2.2. *The impact of the industrial revolution and social changes. The right to medical care*

It is evident that medicine, as a human activity, cannot remain outside the evolution and transformation which modern states are undergoing. The industrial revolution which gradually reaches all countries, has had the following results:

(*a*) First of all, greater evaluation of human work while a level of full employment is being maintained in every country.
(*b*) Greater pressure from the working classes demanding higher wages and social benefits.

The development of social security is a result, in a large measure, of the phenomenon of class struggles and social friction. Medicine, from the point of view of human relationship, has suffered the consequences of an excessively bureaucratic system which has altered the positive relationship necessary between the patient and his doctor.

In a parallel way, the idea of welfare services suffers a radical transformation. A paradox occurs: the poorer classes see their financial position improved but medicine, as it becomes more expensive, continues to make a strong impact in the family circle. The fact is that in modern states the population is entitled to medical care not because a person belongs to a certain social stratum, but because he is a citizen of the country and because the State subsidises the medical care services more and more with payments from its own budget. This is the fundamental principle of a National Health Service of which many varieties may exist which we shall not stop to analyse.

2.1. *Fundamental principles of a good Medical Service*

The consequence of the facts already analysed has been the necessity to plan medical services with greater efficiency and economy.

Experience has demonstrated that expenditure on services increases in a greater proportion than the cost of living. The Dobler Commission in France estimates that the French Social Security Sickness Fund doubles its expenses every ten years. The Beveridge Report calculated once that the cost of the English National Health Service would not exceed £170 million per year, and at present it amounts to £1,000 million.

The problem of reducing expenditure on medical services is difficult. It is even difficult to avoid an increase, because at the same time as there is greater demand from the population (corresponding to its higher standard of living and to its greater facilities and effectiveness), the increase in productivity (which is possible in industry through technological improvements and the substitution of men by machines), is much less in medical care in general and in hospital care in particular. For this reason, the demands for increased wages by the personnel are not easily offset; in highly developed countries, staff costs account for over 50%, and sometimes even as much as 70% of the cost of in-patient care.

In order to establish an adequate plan for medical services, it is necessary to meet the following requirements:

2.1.1. *Unity in medical care*

The first basic principles that must be followed are:

(*a*) It is not possible to separate preventive medicine from curative medicine or rehabilitation. They are different facets of the same medical activity seen in their temporary aspect. It is not necessary to point out the great importance of prevention in the field of communicable disease or of rehabilitation of the locomotive or mental systems of patients, because this is too well known. A good system of medical care must link in a harmonious way the different activities of preventive medicine, medical care and rehabilitation, in order to form a functional whole. Furthermore, the system must at all times try to promote community health.

(*b*) Liberalisation of medical care. It is not possible to retain the idea of using the expensive methods of modern medicine only for a part of the population. This classic idea is in opposition to the present trends of medical care and to the efficiency and management of the system.

(*c*) Harmonious running of the whole. Even, if this aspect of medical care relates mainly to flexibility, as we shall see below, the different services which go to make up medical care must be parts of a whole functioning in a co-ordinated and harmonious way.

2.1.2. *Graduation of Medical Services*

This is a basic point on which it is necessary to insist. First of all because there must be a graduation between the illness, the intensity of the treatment, the kind of centre which provides treatment and its cost.

In this connection we must consider:

(*a*) Kind of centres. In theory it is possible to establish a chain composed of:

General Medicine—Home Care—Out-patient Services—General and Special Hospitals—Convalescent Homes—Institutions for the chronic sick—After-care and rehabilitation centres.

Schematically we can say that, in general, those activities which do not require admission to hospital, or those which concern the treatment of chronic sick persons, entail lower maintenance costs than those which demand admission to hospital, or which concern the treatment of acute cases. In general, with logical exceptions, mainly of a psychological or socio-economic nature, it is advisable to have patients treated in out-patient departments or by means of general medicine. Patients must be conveyed from one centre to another or to their home in accordance with this principle, but this is closely related to the flexibility and social and economic integration of the system, with which we shall deal later.

(*b*) Regionalisation and hierarchical organisation of medical care. This principle is closely related to the considerable specialisation which medical science is undergoing. Specialisation requires expensive equipment and competent staff. All

these services must be set up and maintained in order to treat illnesses of possibly low incidence or prevalence. This makes it necessary for the centres to be used by a greater number of the population (regionalisation) and for them to be graded according to the extent of their treatment facilities and for these to be available to the whole population. This point is closely related to the flexibility and management of the system.

A seemingly paradoxical consequence of what has been said is the present tendency to integrate into the general hospital many services which used to be housed in special hospitals (tuberculosis, mental illness). In this way, general hospitals are able to treat a greater number of complaints and to have a more complete picture of disease.

2.1.3. *Flexibility of the system*

According to the previous principles, patients must be conveyed from one centre to another or be given a certificate of discharge, when required, in the easiest possible way. This is a prerequisite of the medical care system which necessitates:

(*a*) Harmonious co-operation between the centres.
(*b*) The certainty of being covered for the expenses incurred.
(*c*) A social welfare system capable of dealing with the visiting of patients at home.

2.1.4. *Balance and uniformity in the system*

In order that the whole medical care system may function according to the rules that we have indicated, it is essential that there should be no obvious difference in the standard of medical care provided by the institutions. If this is not so, there might be less flexibility and transfers would be difficult. Consequently, it is necessary to reach a minimum standard that must be maintained.

2.1.5. *Social integration*

This is one of the principles which is most often forgotten, as the aim of the different centres and of medical care is to integrate the individual into society, by restoring an active member to the community.

This principle of social integration or rather 'social reintegration' is of great importance and any action which

prevents or disturbs it falls down on an essential point. Quite often the fault occurs in this respect through an excessively protective paternal or passive attitude. This is a fault that can be imputed to a kind and purely protective action. 'I cure you and I help you, so that you may be independent and be a useful member of society' might be the motto of this principle which can be applied with full force to rehabilitation.

2.1.6. *Economy in the system*

This principle is more or less the result of everything that has been said previously. If all the principles are followed, the system will naturally function with the greatest efficiency and economy.

When we talk about illness, it is not only necessary to consider the cost of medical care but that of the illness itself.

A patient is a consumer of services, the cost of which per day (in-patient care) is closely related to the amount of care he receives. But at the same time he is a member of society who is temporarily unable to work and he is therefore an unproductive element. The important thing is not what he costs but what he does not produce and consequently re-integration into his normal work or a new job which is more suitable is of the greatest importance, not only from the economic point of view, but also from the psychological one.

If we spend little in preventing or treating his illness, we prolong his stay in hospital and this makes his treatment more expensive; or we may even run the risk of turning him into a chronic patient and in that case he will be a consumer of services all his life and a liability to the country.

This is always serious, and not only from the point of view of Christian charity, but it is even more serious in a developed country with a higher rate of employment, in which case the impact of loss of labour is quite considerable.

For this reason, health investment is one of the most important items for any government.

It is clear that in order to achieve greater economy in medical care the following are necessary:

(*a*) Adequate medical techniques.
(*b*) Concentrated care of the right kind. Avoidance of a prolonged stay. Certificates of discharge and transfers at the right moment.
(*c*) Unity, gradation and flexibility in the system.
(*d*) Social integration as soon as possible.

3.1. *General observations*

Any system of medical care in its widest aspect—preventive and curative medicine and rehabilitation—will be more efficient and will cost less in relation to its general functioning and results obtained, if these principles are adhered to.

First of all, for adequate planning, the basic health needs must be met, bearing in mind the tendency that must never be fostered, on the part of the population, to make increased demands for unnecessary treatment. An increase in the number of beds and hospitals should not be the goal itself, unless these are put to better use for the discharge and 'turnover' of patients and their re-integration as useful members of society.

1. HOSPITAL SERVICES IN SPAIN

1.1. *Social and economic considerations*

Before dealing with the problems of hospital service in Spain, we must outline the most interesting socio-economic data.

In 1960 the average yearly income 'per capita' in Spain was 18,057 pts., namely 300 U.S. dollars. In 1963 the income was 23,000 pts. or 385 U.S. dollars.

But neither the regional nor personal distribution is regular.

1.1.1. *Regional distribution*

From the regional standpoint the problem in Spain is similar to the Italian, or to the French one (to a lesser extent). In countries with a socialist economy like Yugoslavia, the problem is also similar. The North of Spain and the Mediterranean Coast are richer and more industrialised than the Middle and the South of the country (with the exception of Madrid) where the economy is mostly agricultural. Agricultural productivity in Spain appears to be low and dependent on climatic factors.

Of the 50 Spanish provinces only 17 exceed the average income of 300 dollars and only some of them, like Guipuzcoa, are fully developed, the average income per capita and per year being more than 525 dollars (1960).

1.1.2. *Personal distribution*

The distribution of agricultural profits, capital and work is not satisfactory enough to avoid social tension. The Government is aware of these problems and tries to arrive at a more equitable distribution of the national income (see following pages).

1.1.3. *Agricultural production*

The problem of Spanish agriculture is a serious one. As far as the areas of cultivation are concerned, an ideal line traversing Spain would divide it into two halves: the Northern part, with small landed properties where the application of modern mechanical methods of cultivation is difficult, and the Southern part with large landed properties (latifundium) where there is a tendency towards the monoculture of cereals, vines and olive trees. Only the East coast, with horticultural and fruit-growing areas, can be considered as balanced from the agricultural and social standpoint.

As a result, Spanish agricultural productivity is low and subject to climatic conditions.

From the previous statements one can draw the following conclusions:

(*a*) There is a growing movement of capital from the rural areas to the industrial ones.
(*b*) There is a migratory tendency on the part of the agricultural population towards the industrial provinces of Spain and Central Europe.
(*c*) There is a decrease in the labour force and low productivity in the small agricultural concerns, the owners of which are not rich.

1.1.4. *The plan for economic and social development*

The Spanish Government has adopted a plan for economic and social development during the four years from 1964 to 1968.

The plan which is similar to the French one, is compulsory for the public sector.

Its objectives are:

1. An increase in the national income at a cumulative rate of not less than 6%.
2. A better distribution of incomes with a reduction in capital benefits and an increase in labour ones.
3. A decrease in the primary sector (agricultural) of the economy and an increase in the second (industrial) and third (services).
4. Setting up zones of industrial expansion and development in suitable geographic areas.
5. An increase in the educational services and the so-called 'Policy of equal opportunities'.
6. The improvement of agricultural undertakings, the rationalisation of the industrial ones and an increase in exports.
7. A free competitive market.
8. The development of social services, including health services.

The plan came into operation in 1964 and after a year its results are most favourable: the rise in the national income was 6·7% in 1964 and the per capita income reached 425 dollars per year.

The rise in the income from work was higher than the rise in the income from capital.

Nevertheless, the development has two main disadvantages:

(*a*) The inflationary trend, which is now being controlled.

(*b*) The fall in agricultural productivity due mostly to the migration of workers, which is not balanced by mechanisation, rationalisation and capitalisation.

Generally speaking, the results are promising if the negative trends can be corrected, and foreign trade develops. The balance of trade is not favourable but it is helped by the income from tourism and the money sent home by emigrant workers.

1.2. *The Spanish population and its public health services*

Compulsory sickness insurance was set up in Spain between 1942 and 1944. That insurance and the economic development

in Spain since 1950 gave rise to important alterations in the Spanish public health system.

The Spanish population can be divided into three main groups, namely:

1. Those covered by the welfare services, i.e. people with insufficient means, who up to now were the responsibility of the local authorities (municipal and provincial) or the 'Directorate-General of Welfare Services' which comes under the Home Office.
2. Those covered partly by the Social Security.
3. The remainder of the population, employees, owners of small businesses, civil servants, etc., not covered by the Social Security. This group may be covered by independent insurance.

The present tendency is to reduce welfare services and to increase the number of persons covered by the Social Security (compulsory insurance) by including the small farmers, civil servants, soldiers, etc.

It is now apparent that the complexities of modern medicine, specialisation and high prices give rise to this tendency. But the problem remains unsolved in the case of prolonged illness, incapacity following medical and surgical treatment (not accidents at work) and mental illness.

The Spanish Social Security does not want to increase the already high contributions payable by the insured persons because higher contributions would lead to higher prices of products and finally to inflation.

Inflation is a hazard of developing economies. Because of it the value of the money paid to the insured decreases. This is the reason why the Spanish Social Security has changed the traditional system of capitalisation by distribution.

1.3. *Spanish hospitals*

1.3.1. *Hospital Census in Spain*

There is a résumé of the last census (1964) in Table 1 (see overleaf:

Table 1

BED DISTRIBUTION IN SPANISH HOSPITALS

1964 Census, Data—November 1963

Spain's population on 1st July 1964 = 31,339,000 inhabitants

Specialty	Number of hospitals	Number of beds	Rate per 1,000 inhabitants
General medicine	222	36,254	1·15
Surgery	769	34,112	1·08
Maternity	194	4,190	0·13
Paediatrics	23	1,432	0·04
Psychiatry	124	39,329	1·24
T.B.	58	15,057	0·48
Homes	112	4,226	0·13
Others	37	4,793	0·15
Total	1,539	139,393	4·44
Ownership	**Number of hospitals**	**Number of beds**	**Percentage of the total**
Civil service (State)	160	27,271	19·06
Provincial	121	40,456	29·0
Municipal	155	6,967	4·9
Social security	56	11,939	8·5
Mov. Party (Chronic)	44	2,134	1·5
Red Cross	38	1,822	1·3
Church	93	17,006	12·2
Private	868	31,668	22·7
Foreign	4	130	0·1
Total	1,539	139,393	99·8

African provinces (and Ceuta and Melilla) and military hospitals are not included.

1.3.4. *Comparison of data with other countries*

The comparison of data concerning hospital beds in Spain and in other countries reveals as might be expected, the figures of an underdeveloped country on its way to development.

There is no definite parallel between the number of hospital beds required and the health situation of the country. Different factors (cultural, social, psychological and economic), with little, if any, relation to the standard of public health, have to be taken into account.

The demand for beds varies and depends on the demographic and socio-economic structure of the population and on their

use of the hospital services. One of the problems is the bed distribution by type (mental illness, T.B., etc.) and by area (urban, rural, etc.).

1.3.5. *Bed distribution by province*

The number of beds per 1,000 inhabitants in Spain is related to the socio-economic development in the provinces. The more industrialised an area is, the higher its number of beds per 1,000 inhabitants.

From Asturias in the North of Spain to Cataluna and Madrid (areas with high standards of living), the bed population ratio is higher than in the remaining provinces.

There are three areas with a relatively high bed population ratio: Madrid and Guadalajara, Cataluna and Balearic Islands, and the Basque and Navarre provinces.

1.4. *The cost of hospital services in Spain*

The cost of hospital services has been calculated from the data of the recent hospital census.

The available data were obtained from only 1,394 centres with 132,226 beds.

It is difficult to make an accurate assessment, but their costs can be calculated at about 3,983,810,000 pesetas per year.

On the basis of this figure, the cost of maintaining all the hospital beds in Spain is more than 4,200 million pesetas (with a probable error of between 10–15%).

If the national income in Spain is about 600,000 million pesetas, hospital maintenance accounts for nearly 0·7% of that income.

1.5. *The modernisation of hospitals*

In Spain the authorities responsible for hospitals are numerous: ministries, Social Security, local authorities, private bodies, etc. In the last few years a plan for the rebuilding and modernisation of hospitals has been worked out. This programme is a limited one but in some ways it is very interesting.

There is a complete network of hospitals belonging to the Social Security, which had nearly 14,000 beds in 1965. Three 'Hospitales Clínicos Universitarios' have been erected in

Madrid, Valencia and Granada and several hospitals have been either built or modernised for the welfare authorities (in Valencia, Oviedo and the so-called 'Gran Hospital de la Beneficencia General del Estado' in Madrid, etc.); psychiatric hospitals have been built in Huesca, León, Murcia, etc. This shows the interest of the Spanish authorities in the planning of hospital services.

The plan for economic and social development allocates important sums of money to the new hospitals.

1.6. *Difficulties of the hospital services in Spain*

The Spanish hospital service, owing to its complex structure and because of the social and economic evolution of the country, has some difficulties, mainly due to:

1. The great number of hospital authorities.
2. The different groups into which the Spanish population is divided: people covered either by welfare services, sickness insurance or private medical services. Each of these groups receives medical treatment in different hospitals, belonging to local or national welfare authorities, Social Security or the private sector.
3. A record of all the hospitals in the country was, therefore, necessary. That list had to include the name, address, number of beds, type of activity, catchment area (national, regional, provincial or local) of the centre, the standard of treatment and the ownership of the hospitals.
4. A national plan of hospital requirements and hospital regionalisation based upon that record should be prepared.
5. Regulations governing the essential points of hospital organisation, running and staff, should be issued.
6. Training courses in hospital management should be set up.

A Law on Hospital Co-ordination was approved in 1962 and this led to the setting up of a Central Committee and a series of local committees. There is also a Technical (Work) Secretariat attached to the Directorate-General of Health.

This Law has the following main aims:

1. To keep the system of multi-ownership of hospitals in Spain.

2. To set up a co-ordinated hospital network including treatment, teaching and research work. The national hospital record forms the basis of hospital regionalisation in Spain.
3. To make all the hospitals available to the entire population.
4. To prepare a General Statement of Requirements, forbidding the construction of new centres not included in the plan. To get funds from the national budget.
5. To enact Regulations governing the functions of hospitals.
6. To improve medical training by means of adequate courses.

After two years of intensive work, the General Plan and Regulations for Hospitals have been drafted.

This legislation awaits the Government's approval which is expected to be given this year.

SWEDEN

MR. GUNNAR HÖGBERG

(i) *Factors producing pressure*

In Sweden the number of beds for somatic care increased from 802 per 100,000 inhabitants in 1940 to 930 in 1963. The corresponding rates for mental care were 387 in 1940 and 472 in 1963. The number of visits to surgeries and home calls for every 100 persons covered by National Health Insurance increased from 207 in 1958 to 231 in 1963. The relative demand for medical services has thus outstripped the increase in population. What, then, are the factors which influence this demand?

One highly significant factor is the change in the age distribution of the population. Owing to the low birth rate (16·2%) and the high average longevity (71·2 years for men and 74·7 years for women), an ever larger part of the population will consist of persons in the older age groups. According to a survey carried out in 1961, persons between the ages of 70 and 79 demand four times as much medical care as those aged 20 to 30. Greater demand for medical services therefore follows automatically from the population shift towards higher age groups.

Another important demand-generating factor is the higher standard of living. The material conditions of persons in the age group which demands the most medical care will be further improved by the recently enacted supplementary pensions scheme (ATP). The probable consequence will be to increase demand even more.

As a matter of course, the demand is also increased by Sweden's compulsory scheme of National Health Insurance. Hospitalisation is completely free for two years per illness for persons under 67 and for 180 days for persons over 67. Seventy-five per cent of the fee for out-patient care is refunded according to an official schedule of rates. Generally speaking, the combination of a high living standard with National Health Insurance means that very few persons are deterred by financial reasons from seeking medical care when they need it.

The need for hospital beds is influenced by changes in residential and family patterns. Society's increasing urbanisation has reduced the scope for taking care of sick relatives in one's home. The attitude towards care of sick relatives, perhaps old people in particular, has changed in so far as it is nowadays much preferred to have them looked after in hospitals or nursing homes.

Medical progress works in two opposite directions. There may be less need for care because the individual can be more quickly restored to full health. On the other hand, medical progress may also give rise, directly and indirectly, to a greater need for care. An example of the latter is the prolongation of chronic morbidity, which in turn increases the need of beds for long-term care.

A factor of added importance in recent years is the tendency for persons who suffer from certain diseases to organise interest groups. In acting on behalf of their members, these organisations exert pressure on the authorities to have their special needs satisfied. Examples are the Swedish Association against Rheumatic Diseases and the National Association of the Handicapped.

No investigations of the relative importance of the factors enumerated above have been made. It is also very difficult to make estimates in this regard. In my opinion, however, the most important factors are the changing age distribution and the higher standard of living.

(ii) *Estimation of bed-needs*

The National Board of Health is the State's principal instrument for governing, superintending and promoting the activities of hospitals and other institutions in the health field. The Board also estimates the need for hospital beds and issues recommendations to the appropriate authorities in this respect. The Director-General of the Board, Dr. Engel, gave an account of Swedish bed ratios at the Western European Conference in 1962.

Hospital beds in proportion to population as recommended by the Swedish National Board of Health

	Beds per 1,000 population
A. Somatic Hospitals	
Non-specialised (residual small hospitals)	0·2
Surgery	1·3–1·4
Medicine	1·4–1·5
Gynaecology	0·3–0·4
Obstetrics	0·5
Otorhinolaryngology	0·15–0·19
Paediatrics	0·3
Orthopaedics	0·3–0·4
Long-term care	0·25
Long-term care in nursing homes	3·75
Lung diseases (decreasing)	0·4
Contagious diseases (decreasing)	0·2–0·3
Psychiatry (minor psychiatry)	0·3
Total	5·72–6·26

B. The most specialised service (Regional Hospitals)

	Beds per 100,000 inhabitants
Plastic surgery	5·5
Thoracic surgery	5·5
Neurosurgery	4·1
Radiotherapy (cancer clinics)	8
Neurology*	12–16
Dermatology*	15 (rural areas)
Urology	30 (big cities)
	(undetermined)
	Beds per 100,000 children under 15 years of age
Child surgery	100 (densely populated areas)
	20 (sparsely populated areas)

* To be divided between regional hospitals and the large central hospitals.

C. Mental Hospitals and institutions for mental delinquency

	Beds per 1,000 population
Mental hospitals	3·6
Mental deficients with other handicaps, delinquents and low-grade deficients (idiots)	0·3
Nursing homes for mentally diseased	1·0
Mental deficients:	
Nursing institutions (external schools included)	1·2
Total	6·1

The above figures are based on planning experience of the past 15 years and are revised from time to time. The decline of infectious diseases and the increase in medical services for the aged have made it necessary to undertake the revisions.

At present the number of beds available for acute cases appears to be inadequate. However, the shortage is more apparent than real, in that many of the acute beds are occupied by patients who should more properly be looked after in nursing homes for long-term care. Various studies have shown that a large proportion of these beds are in fact so occupied. In addition, some wards have to be closed intermittently on account of staff shortages.

If the necessary added provision is made for long-term patients and extra staff can be employed so as to keep all the wards open, an increase in the number of acute beds will probably not be required. This likelihood is enhanced by the continuing reduction of the average hospitalisation period and the improved facilities for out-patient treatment.

(iii) *Special needs*

The pressure for more medical services is greatest in long-term care. This is related to the altered age structure of the population noted above.

An enquiry into the estimated future need for doctors, over which Dr. Engel presided, sought to measure the trend in

consumption of medical services in Sweden. In the table below, this trend is shown as a weighted total index for the period from 1940 to 1958, with 1945 as the base year (100).

Table 1

Year	General hospital, epidemic and lung T.B. care	Care of chronic sick	Mental care	Out-patient care	Total
1940	77	83	90	—	—
1945	100	100	100	100	100
1950	118	145	114	125	121
1955	130	209	128	147	141
1956	133	222	135	151	146
1957	136	230	137	156	150
1958	139	238	135	161	153

It will be noted from the table that long-term care has increased at a greater rate than all the other types.

Reference is also made to the paper read by Dr. Engel at the first Conference in 1962, in which he broke down the demand for medical services by age groups.

The index is calculated on the use of hospital facilities, other institutional care, and medical consultations of all kinds.

Table 2

NUMBER OF CONSUMER UNITS IN DIFFERENT AGES

Age	General hospitals, T.B. and contagious diseases	Long-term diseases	Mental diseases	Out-patient care	Total
0–9	0·63	—	—	0·35	0·4
10–19	0·47	0·02	0·01	0·27	0·5
20–29	0·78	0·02	0·27	0·53	0·5
30–39	0·82	0·03	0·49	0·73	0·6
40–49	0·90	0·09	0·90	0·83	0·8
50–59	1·29	0·21	1·30	1·24	1·2
60–69	1·74	0·69	1·87	1·68	1·6
70–79	2·00	2·09	2·15	2·07	2·0
80–	1·37	6·85	3·01	2·30	2·4

(iv) *Planning*

In Sweden responsibility for the planning and expansion of medical resources for acute care is vested in 25 county councils and the four largest cities. To deal with more specialised

services, the county councils have merged into seven regions, with one regional hospital in each.

The State has been chiefly responsible for the care of mental illness, but responsibility will be transferred to the county councils as from 1st January 1967.

Every major category of medical care thus comes under the jurisdiction of a single authority, which facilitates uniform planning.

The county councils and largest cities have very ambitious plans in train for the construction of new hospitals and the reconditioning of old ones. Between 1964 and 1965 their investments in medical facilities increased from SKr 350 million to 500 million. If all the desired ends could be reached, they would require an investment volume in excess of SKr 1,000 million for 1967 alone, equivalent to an increase of more than 100% for the two-year period, 1966–67. The Government has not found it possible to achieve rapid expansion on this scale within the limits imposed by the available resources of labour and capital. Hospital construction has therefore been made subject to starting permits. Construction already under way has committed a total investment of SKr 825 million for 1966–67. In consequence of the Government's decision, medical investments are permitted to increase by only 30% during this two-year period, equivalent to construction valued at no more than SKr 325 million.

Before the National Labour Market Board consents to grant a starting permit, there must be consultation with the National Board of Health. The guide lines drawn up by the Medical Delegation of the Ministry for Social Affairs mean that starting permits should be chiefly approved in respect of nursing homes for long-term somatic cases and the mentally ill, as well as for construction projects needed at teaching hospitals in order to meet established targets for enlarged medical training. Consideration shall also be given to the partial replacement of worn-out hospital buildings by new or reconditioned buildings.

(v) *Trends*

The trends in in-patient care are shown by the Board of Health statistics pertaining to the period from 1950 to 1963.

Table 3

SURVEY OF DEVELOPMENT OF IN-PATIENT CARE, 1920–63

Year	Care of somatic diseases						Care of mental diseases						
	General hospital and similar care	Care of lung diseases	Epidemic care	Maternity care	Care of chronic sick	Total, somatic care	Psychiatric clinics	Mental hospitals	Mental nursing homes	Total, mental care	Care of mentally deficient	Care of epileptics	All in-patient care
Beds (official number at end of year)													
1920	16,084	5,162	6,327	599	—	—	—	—	—	—	—	—	—
1930	22,670	7,414	6,753	1,228	3,902	41,967	137	15,606	—	—	—	—	—
1940	27,002	9,286	6,779	2,674	5,332	51,073	407	21,865	2,401	24,673	—	—	—
1950	31,351	8,546	5,131	3,733	9,175	57,936	698	24,022	4,206	28,926	11,417	953	99,232
1960	36,755	5,528	3,524	3,532	18,647	67,986	1,468	26,586	6,354	34,408	13,318	969	116,681
1962	38,092	4,605	3,485	3,472	20,494	70,148	1,893	27,007	6,834	35,734	13,737	1,005	120,624
1963	38,648	4,563	3,448	3,489	20,778	70,926	1,984	27,206	6,837	36,027	14,275	1,005	122,233
Admissions													
1920	175,363	11,649	33,203	23,100	—	—	—	—	—	—	—	—	—
1930	273,369	15,322	21,765	31,954	—	—	287	6,867	—	—	—	—	—
1940	387,579	19,257	32,393	78,035	—	—	1,304	7,112	(955)	—	—	—	—
1950	620,870	15,626	56,204	121,097	13,295	827,092	5,228	14,528	(1,320)	—	1,635	157	(849,960)
1960	760,082	15,730	42,769	111,353	27,151	957,085	12,818	24,785	3,983	41,586	—	—	—
1962	781,042	15,464	36,217	117,064	28,563	978,350	16,366	31,372	4,040	51,778	2,366	265	1,032,759
1963	804,672	16,022	36,026	125,612	28,912	1,011,244	18,331	33,331	4,090	55,752	2,047	299	1,069,342
Bed-days (1,000)													
1920	5,219	1,715	811	218	—	—	—	—	—	—	—	—	—
1930	7,201	2,546	1,010	387	1,219	12,363	48	—	—	—	—	—	—
1940	8,608	3,054	1,135	807	1,747	15,351	74	9,307	(536)	—	—	—	—
1950	9,714	2,420	781	1,013	3,054	16,982	216	9,841	(1,224)	—	—	—	—
1960	10,499	1,160	660	850	6,139	19,308	420	9,885	2,141	12,446	4,669	347	36,770
1962	10,536	976	610	860	6,764	19,746	485	9,709	2,383	12,577	4,808	341	37,472
1963	10,617	940	603	885	6,893	19,938	522	9,584	2,370	12,476	4,770	351	37,535

Year	Care of somatic diseases						Care of mental diseases						
	General hospital and similar care	Care of lung diseases	Epidemic care	Maternity care	Care of chronic sick	Total, somatic care	Psychiatric clinics	Mental hospitals	Mental nursing homes	Total, mental care	Care of mentally deficient	Care of epileptics	All in-patient care
Per 100,000 population													
Beds													
1920	272	87	107	10	—	—	—	—	—	—	—	—	—
1930	369	121	110	20	63	683	2	254	—	—	—	—	—
1940	424	146	106	42	84	802	6	343	38	387	—	—	—
1950	445	121	73	53	130	822	10	340	60	410	162	14	1,408
1960	490	74	47	47	249	907	20	355	84	459	178	13	1,556
1962	502	61	46	46	270	925	25	356	90	471	181	13	1,590
1963	507	60	45	46	272	930	26	357	90	472	187	13	1,603
Admissions													
1920	2,970	197	562	391	—	—	—	—	—	—	—	—	—
1930	4,451	250	354	520	—	—	5	112	—	—	—	—	—
1940	6,083	302	509	1,225	—	—	20	112	15	—	—	—	—
1950	8,811	222	797	1,718	189	11,737	74	206	19	—	23	2	(12,061)
1960	10,136	210	570	1,485	362	12,764	171	331	53	555	—	—	—
1962	10,302	204	478	1,544	377	12,905	216	414	53	683	31	3	13,622
1963	10,550	210	472	1,674	379	13,259	240	437	54	731	27	4	14,021
Bed-days													
1920	88·4	29·0	13·7	3·7	—	—	—	—	—	—	—	—	—
1930	117·2	41·5	16·4	6·3	19·8	201·2	0·8	—	—	—	—	—	—
1940	135·1	47·9	17·8	12·7	27·4	240·9	1·2	146·0	8·4	—	—	—	—
1950	137·9	34·3	11·0	14·4	43·3	241·0	3·0	139·7	17·4	—	—	—	—
1960	140·0	15·5	8·8	11·3	81·9	257·4	5·6	131·8	28·6	166·0	62·3	4·6	490·3
1962	139·0	12·9	8·1	11·3	89·2	260·5	6·4	128·1	31·4	165·9	63·4	4·5	494·3
1963	139·2	12·3	7·9	11·6	90·4	261·4	6·8	125·7	31·1	162·6	62·5	4·6	492·1

Table 4

MEAN BED-DAYS PER PATIENT

Year	General hospital and similar care	Care of lung diseases	Epidemic care	Maternity care	Care of chronic sick	Total somatic care
1920	29·8	147·2	24·4	9·4	—	—
1930	26·3	166·2	46·4	12·1	—	—
1940	22·2	158·6	35·0	10·3	—	—
1950	15·8	154·8	13·9	8·4	229·7	20·5
1960	13·8	73·7	15·4	7·6	226·6	20·2
1962	13·5	63·1	16·8	7·3	236·8	20·2
1963	13·2	58·6	16·8	7·0	228·0	19·4

Beds, admissions, bed-days

The table shows the number of beds which, in accordance with administrative decision, were intended for the specified medical services *at the end of the year*. The figures on admissions and bed-days pertain to operations *during the year* and as such do not completely match the number of beds. All the ratios shown in the bottom half of the table have been computed on the basis of national population at year-end.

Trends for 1950 to 1963 are given below in index numbers, which relate to the absolute numbers set forth in the upper half of the table.

Table 5

Beds	1950	1960	1962	1963
Care of somatic diseases (total)	100	117·3	121·1	122·4
General hospital care and similar	100	117·2	121·5	123·3
Care of lung diseases	100	64·7	53·9	53·4
Epidemic care	100	68·7	67·9	67·2
Maternity care	100	94·6	93·0	93·5
Care of chronic sick	100	203·3	223·4	226·5
Care of mental diseases (total)	100	119·0	123·5	124·5
Ditto, at psychiatric clinics	100	210·3	271·2	284·2
Ditto, at mental hospitals	100	110·7	112·4	113·3
Ditto, at mental nursing homes	100	151·1	162·5	162·6
Care of mentally deficient	100	116·7	120·3	125·0
Care of epileptics	100	101·7	105·5	105·0
All in-patient care	100	117·6	121·6	123·2
Admissions				
Care of somatic diseases (total)	100	115·7	118·3	122·3
General hospital care and similar	100	122·4	125·8	129·6
Care of chronic sick	100	204·2	214·8	217·5
Care of psychiatric clinics	100	245·2	313·0	350·6
Care at mental hospitals	100	170·6	215·9	229·4
Bed-days				
Care of somatic diseases (total)	100	113·7	116·3	117·4
General hospital care and similar	100	108·1	108·5	109·3
Care of chronic sick	100	201·0	221·5	225·7
Care at psychiatric clinics	100	194·4	224·5	241·7
Care at mental hospitals	100	100·5	98·7	97·4

Each year the National Insurance Board publishes extensive statistics on the operation of National Health Insurance. The following table is taken from its report for 1963.

Table 6

VISITS TO SURGERIES AND HOME CALLS PER 100 INSURED PERSONS, BY SEX AND AGE OF PATIENTS

Age	Visits per 100 insured			
	Men	Women	Men and Women	
			1963	1958
Below 16	—	—	125·0	109·7
16–19	138·5	170·3	154·0	173·0
20–29	163·4	231·7	196·9	
30–39	200·5	272·0	236·0	209·5
40–49	238·5	311·9	274·9	245·9
50–59	272·9	349·0	311·1	289·0
60–66	328·3	360·9	345·2	320·9
67 and older	280·1	332·4	308·9	269·7
16 and older	229·9	295·0	262·8	239·5
All persons	—	—	231·6	207·3

Plans are also in hand to keep continuous statistics on morbidity pertaining to all persons born on the 15th of the month, covering about one out of every 30 insured persons.

(vi) *Research*

Since 1963 the Department of Social Medicine at Uppsala University has conducted a study on morbidity in Sweden, the use of different medical services and the costs which illness incurs for the individual and the community. The researchers have collected all available data on morbidity and medical expenses for all persons over 16 born on 15th February in any year. The body of data thus covers 1/365 of the population older than 16, or about 15,000 persons. In regard to persons under 16 a different sampling principle has been observed for various reasons. Instead, the parent's date of birth is determinative, and only the children of persons born on 15th February are included.

All the data are in and are now being processed. In spite of their extensive scope, they do not give a complete picture of morbidity and medical care events which befell the sample members during 1963. The study will therefore be augmented with an interview survey, for which about 3,000 respondents will be selected. Since similar studies are in progress in Britain

and the United States, comparisons will be made wherever possible. Up to the present only two interim reports have been published. The one pertains to dental practices and costs, a subject that may be regarded as of no more than peripheral interest in the present context. The other interim report deals with the consumption of drugs in 1963. This survey is meant to determine the individual consumption of such drugs which are available free of charge or at reduced prices under National Health Insurance. The terms of reference adopted in this survey are to study the consumption of drugs in relation not only to various demographic and socio-economic factors, but also to morbidity and to the consumption of other medical services. However, this more penetrating analysis of the research findings has not yet been completed. The result achieved so far has a more limited objective. It is chiefly a tabulation of the drug survey findings, which seek to shed light on the differences existing between various groups of persons in regard to the consumption and costs of the drugs covered by National Health Insurance.

Table 7

AVERAGE NUMBER OF BENEFIT-ENTITLING DRUG CHARGES BY SEX AND AGE: AVERAGE PER PERSON QUALIFYING FOR BENEFITS

Age	Men n = 3,696	Women n = 4,983	Men + women n = 8,679
16–19 (n = 599)	3·0	3·6	3·3
20–29 (n = 1,229)	3·4	3·9	3·7
30–39 (n = 1,302)	3·9	4·7	4·4
40–49 (n = 1,598)	4·9	5·8	5·4
50–59 (n = 1,542)	5·9	7·6	6·8
60–69 (n = 1,279)	7·6	8·2	7·9
70–79 (n = 831)	8·0	10·1	9·3
80– (n = 299)	8·7	9·4	9·1
Total (n = 8,679)	5·5	6·4	6·0
16–44 (n = 3,969)	3·8	4·5	4·2
45–66 (n = 3,221)	6·0	7·3	6·7
67– (n = 1,489)	8·5	9·5	9·1

The 40,396 verifications in the drug survey refer to 51,886 charges for drugs which qualify for benefits. (There may be several charges against the same prescription.) On the average,

every person in receipt of drugs has been charged six times. The average comes to 3·1 charges per person in relation to the statistical universe. This two-to-one difference in averages, of course, arises from the fact that only about half the persons in the universe have received benefit-entitling drugs.

As shown by Table 7, the average number of charges per consumer is greater for women than for men. This holds true,

Table 8

AVERAGE NUMBER OF BENEFIT-ENTITLING DRUG CHARGES BY SEX AND AGE: AVERAGE PER PERSON IN THE NATIONAL POPULATION

Age group	Men n = 8,242	Women n = 8,319	Men + Women n = 16,561
16–19 (n = 1,404)	1·0	1·8	1·4
20–29 (n = 2,634)	1·2	2·3	1·7
30–39 (n = 2,634)	1·6	2·7	2·2
40–49 (n = 3,081)	2·2	3·4	2·8
50–59 (n = 2,838)	2·8	4·6	3·7
60–69 (n = 2,174)	4·3	5·0	4·7
70–79 (n = 1,348)	4·3	6·9	5·7
80– (n = 448)	5·5	6·5	6·1
Total (n = 16,561)	2·5	3·8	3·1
16–44 (n = 8,313)	1·5	2·6	2·0
45–66 (n = 5,872)	3·0	4·4	3·7
67– (n = 2,376)	4·8	6·4	5·7

moreover, for all age groups. The tendency for men is for charges to increase in number with rising age. The same holds true for women and both sexes taken together except for the age group of 80 years and older. On the average, persons aged 67 and older consume twice as many benefit-entitling drugs (in terms of charges) as do persons aged 16 to 44 years.

Since 1964 the Board of Health has collected special statistics on diagnosis and operations administered to all patients admitted to hospitals in the Malmö and the Uppsala regions—a sample representing 20% of the country's population. The data lends itself to various tabulations, among them the distribution of diseases by age groups and by duration of stay in hospital. Analysis of the data is expected to provide a basis for hospital planning.

Individual hospitals receive continuous statistics on diagnosis and the county councils are provided with summary reports covering the whole medical field. Similar statistics have been maintained for mental hospitals since 1962, covering about 50,000 individuals per year.

In addition to the studies mentioned above, the findings of several studies of more limited importance have been published. One such study is that by Dr. Leif Hallberg relating to acute surgical and medical cases in Göteborg from 1959 to 1965.

SWITZERLAND

DR. JUR. F. KOHLER

A. INTRODUCTION

I. In contrast to the first two meetings a very detailed questionnaire dealing with the theme of the Conference was submitted to the participants in the Third Western European Conference. I think it is right to follow this questionnaire as closely as possible in the following remarks about Swiss conditions, and this is all the more justified because rapporteurs were asked to give factual information and to leave a general commentary to the end of the report.

II. Since the basic features of health and hospital services in Switzerland were dealt with exhaustively in the first two Western European Conferences it is superfluous to deal with the matter again now. I would merely remind you that the degree of autonomy of the 25 Cantons and half cantons is particularly great in the sphere of health services and hospital institutions. This explains, by the way, why it is not always very easy to give an over-all picture for the whole of Switzerland as regards these problems or to provide valid statistical information for all Switzerland en bloc.

It is very important to realise when forming a judgment on the basis of the following remarks that with the exception of the big University hospitals out-patient departments play a very minor role in Swiss hospitals.

B. THE FACTS

I. There seems to be pressure for more medical services and for more hospital beds in almost every country. Will you please enumerate the factors considered to be at work in your country causing this pressure and state who is behind it (i.e. the public, the medical profession, the Government). What is your assessment of the relative importance of these factors; which of them have influenced the development of medical care in the past; which have influenced its expansion and which have influenced its limitation?

1. The most important factors leading to an increased pressure for more medical services and more hospital beds are indeed the same in Switzerland as in all the other countries of Western Europe.

   They can be summarised as follows:

   —*The growing proportion of old people in the population* which is shown in Table 1 (enclosures 1 and 2). In the last 100 years the population has doubled almost exactly, while the number of inhabitants over 65 years of age is four times bigger.

   —*The modernisation of hospitals*, which are becoming more and more health centres for the whole population and are no longer the places where people go to die. In Germany the general attitude towards hospitals is termed as 'Spitalfreudigkeit', an expression which can approximately be translated as 'trend towards hospitalisation'.

   —*Disappearance of the patriarchal structure of the family and change in living conditions* combined with the impossibility of obtaining domestic servants. These factors are of great importance to the problem of the care of the old and of the chronic sick. The increase in the number of families in which both man and wife have jobs outside the house may also play a part here, although this particular development has not been so spectacular in Switzerland—at any rate up to now—as in other countries.

   —*The tremendous advances made in medicine* together with the fact that the ordinary people are *better informed* on medical subjects (e.g. preventive medicine, for instance, in the schools).

   —*The expansion of social insurance.* It may be pointed out in this connection that *health insurance* is not compulsory in the whole of Switzerland, but it is left to the cantons to make it obligatory or not. Nevertheless, 80% of the population is today insured against illness. The amendment to the Swiss Federal Law on sickness and accident insurance, which came into force on 1st January 1965, involves considerable improvements for the insured person, and these will once more increase the need for medical services and hospital arrangements.

Table 1

INCREASE IN THE POPULATION OF SWITZERLAND SINCE 1860

TOTAL POPULATION

			Cumul.			Cumul.			Cumul.			Cumul.			Cumul.			Cumul.	
	1860	1900	%	1910	%	%	1920	%	%	1930	%	%	1941	%	%	1950	%	%	1960	%	%
0–14	740,898	1,028,438	36·0	1,173,240	14	50·0	1,083,294	7·7	42·3	998,391	7·8	34·5	943,762	5·5	29·0	1,110,731	17·7	46·7	1,275,016	14·8	61·5
15–19	243,657	315,512	29·0	356,520	13	42·0	386,901	8·5	50·5	363,122	6·1	44·4	340,371	6·3	38·1	327,809	3·7	34·4	427,051	30·3	64·7
20–64	1,394,413	1,778,227	27·5	2,005,755	13	40·5	2,183,163	8·8	49·3	2,425,082	11·1	60·4	2,616,533	7·9	68·3	2,823,226	7·9	76·2	3,172,754	12·4	88·6
65 & over	127,817	193,266	51·0	217,778	13	64·0	226,962	4·2	68·2	279,805	23·3	91·5	365,037	30·5	122·0	453,226	24·2	146·2	554,240	22·3	168·5
	2,506,785	3,315,443		3,753,293			3,880,320			4,066,400			4,265,703			4,714,992			5,429,061		

Swiss

			Cumul.			Cumul.			Cumul.			Cumul.			Cumul.			Cumul.	
	1860	1900	%	1910	%	%	1920	%	%	1930	%	%	1941	%	%	1950	%	%	1960	%	%
0–14	718,219	925,283	28·8	1,020,384	10·3	39·1	983,487	3·6	35·5	943,037	4·1	31·4	907,580	3·8	27·6	1,074,146	18·4	46·0	1,197,129	11·4	57·4
15–19	231,309	273,586	18·3	295,012	7·8	26·1	343,321	16·4	42·5	320,294	6·7	35·8	326,561	1·9	37·7	306,120	6·3	31·4	379,356	29·8	61·2
20–64	1,317,436	1,549,383	17·6	1,682,163	8·6	26·2	1,941,189	15·4	41·6	2,188,007	12·7	54·3	2,469,821	12·9	67·2	2,628,288	6·4	73·6	2,744,443	4·4	78·0
65 & over	125,525	183,767	56·4	203,723	10·9	67·3	209,938	3·1	70·4	259,540	23·6	94·0	338,187	30·3	124·3	420,992	24·5	148·8	523,394	24·3	173·1
	2,392,489	2,932,019		3,201,282			3,477,935			3,710,878			4,042,149			4,429,546			4,844,322		

% underlined denotes decrease of population.

Table 1—*continued*

INCREASE IN THE POPULATION OF SWITZERLAND SINCE 1860

FOREIGNERS

						Cumul.			Cumul.			Cumul.			Cumul.			Cumul.		
	1860	1900	%	1910	%	%	1920	%	%	1930	%	%	1941	%	%	1950	%	%	1960	%	%
0–14	22,679	103,155	354·8	152,856	48·2	403·0	99,807	34·7	368·3	55,354	44·5	324·0	36,182	34·6	289·4	36,585	1·1	290·5	77,887	112·9	403·4
15–19	12,348	41,926	239·5	61,508	46·7	286·2	43,580	29·1	257·1	42,828	1·7	255·4	13,810	67·8	187·6	21,689	57·1	244·7	47,695	119·9	364·6
20–64	76,977	228,844	197·3	323,592	41·4	238·7	241,974	25·9	213·5	237,075	2·0	211·5	146,712	38·1	173·4	194,938	32·9	206·3	428,311	119·7	326·0
65 & over	2,292	9,499	314·4	14,055	48·0	362·4	17,024	21·1	383·5	20,265	19·0	402·5	26,850	32·5	435·0	32,234	20·1	455·1	30,846	4·3	450·8
	114,296	383,424		552,011			402,385			355,522			223,554			285,446			584,739		

	0–14				15–19				20–64				65 and over			
	Swiss	Foreigners	%	%	Swiss	Foreigners	%	%	Swiss	Foreigners	%	%	Swiss	Foreigners	%	%
1860	718,219	22,679	96·94	3·06	231,309	12,348	94·93	5·07	1,317,436	76,977	94·48	5·52	125,525	2,292	98·2	1·8
1900	925,283	103,155	89·97	10·03	273,586	41,926	86·7	13·3	1,549,383	228,844	87·1	12·9	183,767	9,499	95·1	4·9
1910	1,020,384	152,856	87·0	13·0	295,012	61,508	82·7	17·3	1,682,163	323,592	83·9	16·1	203,723	14,055	93·5	6·5
1920	983,487	99,807	90·8	9·2	343,321	43,580	88·7	11·3	1,941,189	241,974	88·9	11·1	209,938	17,024	92·5	7·5
1930	943,037	55,354	94·5	5·5	320,294	42,828	88·2	11·8	2,188,007	237,075	90·2	9·8	259,540	20,265	92·8	7·2
1941	907,580	36,182	96·2	3·8	326,561	13,810	96·0	0·4	2,469,821	146,712	94·4	5·6	338,187	26,850	92·6	7·4
1950	1,074,146	36,585	96·7	3·3	306,120	21,689	93·6	6·4	2,628,288	194,938	93·1	6·9	420,992	32,234	92·9	7·1
1960	1,197,129	77,887	93·9	6·1	379,356	47,695	88·6	11·4	2,744,443	428,311	86·5	13·5	523,394	30,846	94·4	5·6

% underlined denotes decrease of population.

—*The Federal Invalid Insurance* introduced in 1960 is of particular importance, since, among other things, it covers the full costs of treatment of congenital defects. The importance of this can be seen from the following figures:

> 'In 1965 40% of patients with 45% of all patients' days (days of nursing care) in the Children's Department of the Insel Hospital were persons insured under the Invalid Insurance.'

—*The increase in prosperity* which enables the population to insure themselves properly against illness and accidents and to consult a doctor or enter a hospital without becoming involved in too great financial difficulties.

2. It will be seen from the facts enumerated under I. that the authorities, the population and the doctors are jointly responsible for this development. It can actually be said that in a democracy like ours the will of the Government and of the authorities is similar to the will of the population. It seems to me that it is almost impossible to evaluate the various single factors, and the more I consider the matter, the more convinced I am that we are confronted with an over-all phenomenon in which the component factors are interdependent and closely interwoven one with another. The most important factor, however, as regards the necessity for providing additional hospital beds is the growing number of old people in the population.

II. What steps have been taken in your country to estimate the need for hospital beds and how has it been done? Can one expect a change in the needs of the future (increase or decrease)? What would provoke this change? Which factors are important in this respect?:

1. In this connection I must refer to what I said at the first two West European Conferences and remind you that because of the autonomy of the cantons in Switzerland there is *no regional planning* for the hospital services *covering the whole of Switzerland.* Each canton is responsible for its own arrangements, and some of these member-States have achieved quite considerable results in the sphere of planning. I would

mention especially the Cantons of Zürich, Aargau, Thurgau, Solothurn and Waadt (Vaud).

2. The figures ascertained and published by Dr. H. Büchel, Cantonal doctor in Zürich, are applicable—practically speaking for the whole of Switzerland provided regional peculiarities are taken into consideration. Reference can be made in this connection to the figures in Table 2 (Enclosure 3), which call for the following short commentary:

—The decreasing number of beds for *general hospital cases* is, among other things, the result of the decrease in infectious diseases. This affects the medical and pediatric departments of the hospitals and also to a considerable extent institutions for treatment of tuberculosis.

—A further important factor in the decrease of this category of beds is the more *active treatment* and the *shortening of the time spent in hospital* which results therefrom. Dr. Büchel remarks as follows (*Veska Zeitschrift*, 5/1964, pp. 432–3):

> 'The demand for hospital beds is decreasing because the length of the average stay in hospital is shortening at at a rate more rapid than the rate at which the "Spital-

Table 2

HOSPITAL BED/POPULATION RATIO
(according to Dr. H. Büchel, Zurich)

Requirements per 10,000 inhabitants	1950	1960	1970	1980
General surgery	25	24	22	20
General medicine	28	22	18	14
Obstetrics	8	7	6	6
General hospital care	61	53	46	40
Specialties	5	5	5	5
Total	66	58	51	45
Beds for chronic patients Requirements per 10,000 inhabitants	1950	1960	1970	1980
Swiss average	19	25	30	34
Beds for psychiatric cases Requirements per 10,000 inhabitants	1950	1960	1970	1980
Swiss average*	36	34	32	30

* 3–4 for acute cases.

freudigkeit" (trend towards hospitalisation) is increasing.'

He proves this assertion by the following figures regarding the Canton of Zürich:

Average length of stay in days	1950	1960	1961	1962
Canton Hospital, Zürich	19·3	16·1	15·7	14·8
Canton Hospital, Winterthur	20·9	17·7	16·9	16·4
Zürich Regional Hospitals	22·0	19·3	18·2	17·3

Yearly patients per 100 inhabitants	1940	1950	1960
Canton of Zürich exclusive of patients from other Cantons	7	8	9

It is unlikely that there will be any considerable increase in the number of patients per 100 of the population in Switzerland especially because a large number of doctors have no access to the hospitals and consequently many patients are treated by the doctors as ambulant patients who would otherwise be hospital cases.

—The increase in the number of beds for the *chronic sick* was given under I./1. I may add—with reference to Dr. Büchel—that persons of over 65 years of age have increased in the last 20 years by approximately 200,000, which is the equivalent to an additional demand for 5,000 to 6,000 beds for the chronic sick.

—The decrease in the number of psychiatric beds is due to the more active treatment which leads to increased numbers of discharges from psychiatric hospitals (cured, out-patient-treatment, sheltered workshops).

There is no question of a general 'Spitalfreudigkeit' in the case of psychiatric patients in Switzerland. There are still considerable prejudices against the psychiatric hospital, and this can be attributed in part to an obvious backwardness as far as building and equipment of these hospitals are concerned.

3. Finally, mention should be made of the actual conditions existing in 1964 as compared with the figures of the desirable number of beds given by Dr. Büchel.

Hospital beds per 10,000 of the population in 1964
(VESKA Statistic)

General hospitalisation	68*
Hospitals for chronic sickness	12*
Tuberculosis cure establishments	8
Psychiatric hospitals	31

* Compared with the official figures, 5% of the beds for general hospitalisation already occupied by chronic patients have been included under the heading 'hospitals for chronic sickness'.

III. Perhaps in your country there is more pressure for medical services in general, or for certain kinds of medical services, or perhaps the pressure is stronger for hospital beds in general or for specific kinds of beds (e.g. maternity, paediatric, chronic illness, new specialities, laboratory services, etc.). Please describe these special demands and the arguments used in support of them; also the method used to assess them.

The replies to these questions have already been given under II. Some remarks are called for only on the question of *laboratories*.

The advances made in medicine go hand in hand with the increase in laboratory tests carried out. In that respect developments in Switzerland are no different from those in any other country. There are no details available covering the whole of Switzerland from which statistics can be supplied. From a report for 1964 which forms the basis for the setting up of central laboratories (central chemical laboratory, central haematological laboratory) at the Insel Hospital it can be seen that according to figures based on English and Swiss experience *the number of analyses demanded by hospital doctors has increased by about* 20% *per year since* 1947. Thus one has to reckon that the figures for analyses will double within each period of five years.

Assuming an expansion of the Insel Hospital to 1,600 beds and 630,000 nursing days (which includes consultations by ambulant patients) we can anticipate the following development:

1968 700,000 chemical and haematological tests
1973 1,400,000 chemical and haematological tests

IV. Are there any counteracting influences at work to prevent overburdening the country's labour forces and economy with too many medical institutions or agencies providing medical services? If so, where do they originate and what arguments are used? If powerful bodies such as Government departments, labour unions, or insurance agencies are involved, what means do they have at their disposal and what is the result of the efforts they make?

I confess that I can only with some difficulty understand the scope of this question, no doubt because it only bears a limited relation to Swiss conditions. I must in this context particularly refer to what was said at the first two West European Conferences as regards Swiss health and hospital services, and I find that:

1. Switzerland has for decades been experiencing a period of prosperity, too rapid economic expansion and a tremendous shortage of manpower. This shortage of manpower is particularly noticeable in hospitals and similar health institutions, and it hits especially hospitals in remote districts, psychiatric institutions and hospitals for the chronic sick. These external factors make it impossible from the outset that too many medical institutions of any kind can exist. This applies also to the profession of doctor, and in this connection I would —since former remarks related more to hospitals—refer to the statistics as regards doctors given in Table 3.
2. The lack of regional planning for the hospital service in the whole of Switzerland leads to a situation in which the means available in the widest sense of the term (money, medical arrangements of all kinds and manpower) are not used everywhere to the best effect and most economically. Duplication of medical institutions sometimes results in overwork of the staff and an excessive burden on the economy. A more centralised solution of the problem could perhaps do something to remedy the situation. Such a solution would, however, be bound up with considerable disadvantages, amongst which I would mention excessive centralisation and a swelling of the number of officials

Table 3

STATISTICS CONCERNING DOCTORS

	1964	1963	1962	1957	1952	1942
Practising physicians	5,143	5,092	5,133	4,694	4,236	3,468
Hospital doctors (including senior physicians)	2,560	2,489	2,362	2,060	1,743	1,074
	7,703	7,581	7,495	6,754	5,979	4,542
Number of doctors per 10,000 inhabitants	8·9	9·0	8·9	8·8	8·7	8·4

COMPARISON OF MEDICAL SERVICES IN TOWN AND COUNTRY

Region	1940		1964	
	Absolute number	In %	Absolute number	In %
Town (communities with more than 10,000 inhabitants)				
Population	1,389,200	32·9	2,534,200	43·9
Practising physicians	1,951	55·6	3,455	67·2
of which: general practitioners	772	39·6	981	28·4
specialists	1,179	60·4	2,474	71·6
Inhabitants per doctor	712	—	733	—
Country				
Population	2,837,200	67·1	3,235,800	56·1
Practising physicians	1,561	44·4	1,688	32·8
of which: general practitioners	1,190	76·2	1,234	73·1
specialists	371	23·8	454	26·9
Inhabitants per doctor	1,818	—	1,917	—
Total				
Population	4,226,400	100·0	5,770,000	100·0
Practising physicians	3,512	100·0	5,143	100·0
of which: general practitioners	1,962	55·9	2,215	43·1
specialists	1,550	44·1	2,928	56·9
Inhabitants per doctor	1,203	—	1,122	—

employed, accompanied by a simultaneous decrease in local initiative which is so important in hospital construction.

The fact that various cantons begin to realise the importance of *cantonal regional planning of hospital services* may be mentioned as one of the ways in which the State exercises a counteracting influence on overburdening medical institutions.

3. It cannot be denied that the improved insurance protection given by the expansion of social insurance has led to a

greater burden being placed on medical institutions of all kinds. This applies to a great extent to the demand made on the services of doctors who are consulted much more frequently when the patient is aware that the consultation will not involve any great financial consequences for himself. The representatives of the doctors, therefore, put forward the claim that the 'franchise', i.e. a minimum fee which the patient has to pay himself, should not be fixed at too low a sum. Up to the present, however, they have not obtained complete satisfaction in this respect.

4. The view is held in many circles that it would be worth while investigating the problem of shortage of manpower and overwork of *nursing staff* by undertaking a careful study of the subject. This view is based on the—probably correct—idea that better organisation of ward management and nursing administration would lead to a more sensible division of work between qualified and non-qualified nursing personnel and hence to an easing of the burden of nurses. This study devoted to preventing overwork of staff, which was started in Spring 1966, is the joint work of the Swiss Federal Health Office, the Swiss Red Cross and the Nurses' Professional Association. The result of the study will certainly be of great interest to the whole of the hospital world.

V. Are there any statistics which indicate that the pressure for more medical services is increasing or declining? If so, will you please give details.

1. Up till quite recently I should not have been in a position to give comprehensive information in reply to this question since information for the whole of Switzerland was not available apart from the very carefully prepared Statistics of the Swiss Hospital Association (VESKA), which, however, do not cover all hospital institutions in Switzerland. Fortunately a publication written by Dr. P. Vuilleumier (*Schweizerische Aerztezeitung*—Swiss Doctors' Journal—39/1965, p. 873 *et seq.*) fills an important gap by providing extraordinarily valuable material concerning the scope of medical activity in Switzerland.
2. The VESKA statistics deal with financial and economic aspects in particular. Consequently it is outside the scope of

the present work to repeat them here, particularly as the details of the number of days of nursing care have no scientific statistical value since the number of institutions taken into account varies each year.

Table 4

MEDICAL ACTIVITIES IN SWITZERLAND FROM 1942–62 WITH REFERENCE TO THE INCREASE IN POPULATION

Medical activities and proportional figures	1942	1952	1957	1962
Number of consultations and visits	22,000,000	29,000,000	32,000,000	35,000,000
per 100 inhabitants	513	602	624	629
Number of operations	165,000	316,000	388,000	505,000
per 100 inhabitants	3·85	6·56	7·57	9·08
Number of caesarean deliveries	634	1,824	2,262	3,787
per 100 inhabitants	0·81	2·18	2·49	3·82
Number of eye operations	3,650	6,080	7,670	8,960
per 100 inhabitants	0·85	1·26	1·50	1·61
Number of surgical biopsies	(1947) 56,040		(1958) 109,730	135,940
per 100 inhabitants	1·24		2·11	2·45
Number of blood transfusions		36,516	83,540	154,692
per 100 inhabitants		0·76	1·63	2·78
Number of X-rays taken		453,969	779,269	968,484
per 100 inhabitants		8·30	15·5	20

3. Details of doctors' work given in Table 4 can be supplemented as follows:

   (*a*) The number of *X-ray pictures* taken cannot be ascertained. All that is known is the number of X-ray films imported from abroad for medical purposes, i.e.:

1960	2,701,200
1961	3,135,750
1962	3,209,750

   A modest amount of Swiss-produced film has to be added to these figures.

Dental treatments amount to approximately 11,000,000 which is equivalent to 1·96 per year per head of population.

Physiotherapy and massage treatments amount to approximately 0·95 treatments per year per head of population.

(*b*) The figures in Table 4 show how much medical services have increased during the last 20 years, and it can be assumed with certainty that this trend will continue. It is a striking fact that technical services, above all, have increased. Most of these have to be given in hospitals or similar institutions and this indicates a considerable growth in hospital medicine. The increase in visits and consultations of doctors, though constant, takes a more steady course.

(*c*) The figures published in Dr. Vuilleumier's work were ascertained in the following way:

A number of doctors, as representative as possible, from one Canton were asked for statistics and the results were multiplied by the number of doctors practising in Switzerland, taking account of regional peculiarities as far as possible. As a check on this, statistical details of one of the largest health insurance institutions in Switzerland were evaluated and calculations made to apply them to the whole population of the country. The comparison of the two results shows that the basis of calculation used here is a very reliable one.

The same procedure was followed with the hospital services for which 39 hospitals and similar institutions of the Canton of Waadt (Vaud) were asked for their cooperation.

C. CONCLUDING REMARKS

It seems to me that after setting out these facts and statistical material it is superfluous to give a long commentary. The participants in the Third Western European Conference are experts, and for experts 'facts and figures speak for themselves'. There is a danger too that in a commentary truisms and

platitudes would find a place. The reader who peruses this report with 'a pinch of salt', and takes into account typical Swiss conditions on which it is based will have the consolation of reaching the conclusion that the problems and the tasks which they raise for us are the same everywhere.*

* I am particularly grateful to my collaborator, Mr. E. Röthenmund, Head of the Patient Service, for his cooperation in the matter of statistical information.

UNITED KINGDOM

MR. F. R. REEVES

The fundamental nature of the theme for the conference and the specific request for an objective statement of facts will be regarded as injunctions to speak plainly and to the point. This paper will, therefore, strictly follow the briefing notes. An attempt will be made to answer each of the questions posed, if possible by reference to statistical data and such comments as are necessary will be given in the conclusion.

It should be mentioned that all the statistics quoted refer only to England and Wales, excepting those concerning the insured working population, which include Scotland. Visitors to Britain should also be reminded that for an understanding of the factors affecting the demand for medical care, an appreciation of the comprehensive provision of health and welfare services by the State is essential.

1. THE DEMAND FOR MEDICAL CARE

1.1. *Evidence of increasing pressure*

The pressure for more medical services is shown by a 26% increase in the number of spells of certified incapacity commencing in the periods 1953–54 and 1960–61 and recorded from claims for sickness benefit by the insured working population,[1] and by a 32% increase in the number of in-patients, a 12% increase in the number of out-patients attendances at hospital consultative clinics and a 16% increase in the number of attendances in accident and emergency departments between 1955 and 1965.[2] [3]

On the other hand, the total number of days of incapacity per employed person at risk has remained almost unchanged, the average daily number of occupied beds has declined by 7%, owing to a reduction in the mean duration of stay for almost all departments and the number of patients receiving home nursing by local authority nurses has declined by 26% during the period 1955 to 1965.

1.2. *Factors affecting demand*

1.2.1. *Population change*

The home population increased by approximately 7·5% between 1955 and 1965.[4] As can be seen from Appendix E, the largest relative increases were in the elderly and in children under five. Table 1 shows that these groups have hospitalisation rates for males which are above the rates for all ages.

Table 1

HOSPITAL IN-PATIENT ENQUIRY 10% SAMPLE OF DISCHARGES AND DEATHS FROM HOSPITALS IN ENGLAND AND WALES, 1961, BY AGE GROUP AND SEX

Age groups	Males		Females	
	Number of discharges and deaths	Rate (spells) per 10,000 population	Number of discharges and deaths	Rate (spells) per 10,000 population
0–	17,609	973·0	11,603	676·7
5–	22,026	646·3	16,832	518·3
15–	40,955	467·0	116,322	1,334·0
45–	43,476	795·8	42,067	706·6
65–	29,580	1,451·0	35,815	1,095·1
All ages	153,646	715·0	222,639	972·0

Source: Ministry of Health and General Register Office.[5]

In the working population it is apparent that the frailty of the over-forty male must be taken into account! Table 2 shows that his spells of incapacity increases steadily until retirement.

Table 2

SPELLS OF CERTIFIED INCAPACITY, ALL CAUSES AMONG MEN IN AGE GROUPS FROM 40 TO 64, PER THOUSAND PERSONS AT RISK IN THE RELEVANT AGE GROUP, 1958/59, 1959/60 AND 1960/61

Year	Age group				
	40–44	45–49	50–54	55–59	60–64
1958/59	359	368	389	430	469
1959/60	339	342	355	398	432
1960/61	378	382	402	453	483

Source: Ministry of Pensions and National Insurance.

Table 3

DISCHARGES AND DEATHS IN SELECTED DIAGNOSTIC GROUPS FOR PATIENTS RESIDENT IN CONURBATIONS AND RURAL AREAS, CLASSIFIED BY SEX AND SHOWING RATE PER 10,000 POPULATION. ENGLAND AND WALES, 1961.

(Hospital In-patient Enquiry 10% Sample)

Diagnostic group	Conurbations				Rural areas			
	Males		Females		Males		Females	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Benign and unspecified neoplasms	1,118	14·5	3,433	40·4	495	11·0	1,225	27·7
Inflammatory and other diseases of central nervous system	11,165	15·1	1,272	15·0	429	9·5	470	10·6
Diseases of eye	1,473	19·1	1,810	21·3	612	13·6	590	13·3
Diseases of ear and mastoid process	765	9·9	715	8·4	232	5·2	180	4·1
Diseases of circulatory system	6,117	79·2	5,906	69·4	2,069	45·9	2,021	45·7
Hernia of abdominal cavity	2,785	36·1	994	11·7	1,226	27·2	372	8·4
Diseases of urinary system	1,114	14·4	1,288	15·1	424	9·4	419	9·5
Diseases of male genital organs	2,361	30·6	..	..	944	21·0	..	..
Diseases of breast and female genital organs	..	..	6,911	81·3	..	..	2,551	57·7
Diseases of bones and organs of movement	2,131	27·6	2,610	30·7	1,007	22·4	1,066	24·1
Congenital malformations	1,027	13·3	699	8·2	412	9·1	249	5·6

Source: Ministry of Health and General Register Office.[5]

1.2.2. *Better provision of medical care*

A factor which appears to stimulate the demand for medical care is improved or more accessible provision of services. More hospital beds, more qualified medical practitioners, trained nurses and other auxiliary staff, an even distribution of services and better communications may be expected to encourage the public to seek medical attention for disabilities which might formerly have been suffered untreated. The difference between hospitalisation rates of patients residing in conurbations and those of patients from rural areas for the diagnostic groups shown in Table 3 may well be attributed largely to the greater accessibility of medical care in the conurbations.

1.2.3. *Miscellaneous factors*

Other factors causing pressure on medical services are no less important but must be briefly stated. They include:

(*a*) A rising birth rate, from 15·0 per 1,000 population in 1955 to 18·0 in 1965.
(*b*) Earlier marriage and a higher rate of employment of women, leaving fewer women in the home to nurse elderly relatives (Appendix F).[6]
(*c*) The elimination of cost as a barrier to treatment since the creation of the National Health Service.
(*d*) Removal of the fear of loss of income through hospitalisation, as a result of the provision of social security benefits during unemployment and sickness.
(*e*) New complex medical, surgical and anaesthetic techniques which have made possible curative therapy for people suffering from previously incurable, fatal and disabling conditions, e.g. intermittent renal dialysis, surgery of the newborn, open cardiac surgery.
(*f*) Increases in the ailments of affluence and in motor vehicle accidents (deaths in the I.C.D. cause groups E 810–E 825 and E 830–E 835 rose from 4,923 in 1955 to 7,271 in 1964).[6]
(*g*) More public confidence in hospital care in consequence of the advances in medicine and health education through mass media.

Although, in the past, the medical profession was directly responsible for the expansion of hospital provision by establishing nursing homes and special hospitals and although the public influenced the supply of medical care in the nineteenth century by the organisation of provident societies and by discouragement of 'outdoor relief', it cannot now be shown that either the public or the doctors are consciously behind any present pressure on medical services.

1.3. *Relative importance of factors influencing the development of medical care*

Advances in medical knowledge, as a feature of the development of civilisation itself, appear to have been of prime importance. The other principal factor is considered to be the stirring of the social conscience which has brought about the Welfare State.[7]

The decline in infectious diseases and the improvements achieved in maternal and child welfare can be attributed mainly to these two factors. However, although the effect of scientific and social progress may be a reduction in the need for some medical services, and in particular for the hospital bed as the fundamental unit of medical care, a compensating demand may be anticipated from the possibilities of secondary and tertiary preventative care, i.e. from 'the secondary prevention of the progress of disease and of the continuation of illness by early detection and treatment' and from 'the tertiary prevention of deterioration, of relapse and of disability and dependency by (anticipatory) medical and social care'.[8]

2. THE NEED FOR HOSPITAL BEDS

2.1. *Estimates of need*

Routine statistical reports and sample surveys provide the basic data for official estimates. For the computation of bed requirements for psychiatric care cohort studies have been used.[9] [10]

The Nuffield Provincial Hospital Trust has financed a succession of studies to assess need, and the provision of services to meet the need.[11] [12] The more recent of the studies,[13] [14] [15] and

a study conducted by the Oxford Regional Hospital Board[16] have been based on analysis of the residence of patients treated in a group of hospitals rather than on investigation of the need for medical care of a defined population. The number of patients requiring in-patient care is taken to be the number treated in hospital plus the number waiting to be admitted.

2.2. *Future needs*

The factors which are at the present affecting demand are likely to determine future needs. Changes in the age and sex structure of the population, natural increase and migration, progress in medicine and shifts in medical fashion, varying social habits, urbanisation and the sedentary life, the impact of mass media and social and economic policy all require consideration. The growth of social medicine since 1943[17] and the attention which is now being paid to the prevention and early daignosis of disease, the follow-up of hospital treatment[18] and the development of community care should lead to a further decline in bed occupancy associated with a reduction of duration of stay of in-patients and an increase in out-patient attendances.

On the other hand, a reduction in the fatality rate for a disease may result in prolonged treatment and the heavy use of facilities and the expectation of longer life from progress in medicine may be nullified by social habits.

3. SPECIAL DEMANDS

The high percentage bed occupancy in geriatric units indicates the strong demand for the in-patient care of the elderly and suggests the need for special studies.[22] It is to be noted, however, that the need for care is often for social rather than clinical reasons.[19]

Special demands for maternity beds and for in-patient accommodation for the mentally sub-normal must also be noted. In estimating the requirements of both types of bed, the influence of the community services on the duration of stay is an essential factor to be considered.[23]

In regard to pressures for special types of service, it is to be

implied that a particular demand is stimulated by the commercial marketing of drugs.

4. COUNTERACTING INFLUENCES

The proportion of the national resources which can be devoted to the health and welfare services is determined annually by the Government. During periods of economic instability, the expansion of these services will, therefore, tend to be restrained, as can be seen from the limited capital available for the building of new hospitals in the decade following the Second World War.

Other influences have been full employment and the earlier marriage of women, which have depleted the pool of labour available to hospitals.

5. STATISTICS AND RESEARCH

The principal sources of statistics and the research which has been undertaken are detailed in Appendix H.

6. CONCLUSION

Hitherto, estimates of the future demand for medical services, and in particular for hospital beds, appear to have been based largely on the use made of the services provided, after taking into account the state of the waiting lists and the data on population, mortality and morbidity provided by the General Register Office. The unreliability of waiting lists as indicators of unmet need, even after adjustment for the extent to which general practitioners have modified demand in view of the lists, is the principal weakness of this method. Treatment may not be sought owing to the age of the patient or because facilities for treatment are not easily accessible. The symptoms of disease may not have been recognised by the patient or his doctor or the patient himself may simply ignore the symptoms and fail to consult his doctor. Demand may be stifled by habit.[21] Against these factors, tending to increase the estimate of real need, must be set the consideration that patients are sometimes

in hospital for social reasons. One study estimated that approximately 0·2% of acute beds per 1,000 population were occupied for reasons which were not strictly medical.[15]

Regional differences are also important. Social circumstances, such as income, education and occupation obviously affect demand. That migration is a factor is apparent from the data in Appendix G.[20] However, it is difficult to ascertain the population served by a hospital and to determine the need for which provision is required. If the level of provision is based on the national average of the utilisation of services, demand in some regions will be reduced merely by a restriction of services.

Finally, in estimating hospital bed requirements for a community, the nature of the existing provision will affect the optimum percentage occupancy. The larger the hospital, the higher should be the occupancy. Moreover, the size of wards, the allocation of beds to specialties, the provision of auxiliary services and the staff available are also factors to be considered as they will affect flexibility in the use of beds.

It will be seen that in England and Wales there are still many unanswered questions. However, as we persist with our studies, we may take comfort from the words of that very practical seventeenth-century philosopher and scientist, Sir Francis Bacon:

> 'If a man will begin with certainties, he shall end in doubts; but if he will be content to begin with doubts, he shall end in certainties. . . . They are ill discoverers that think there is no land, when they can see nothing but sea.'

APPENDIX A

SPELLS OF CERTIFIED INCAPACITY COMMENCING IN EACH PERIOD AND NUMBER OF DAYS OF INCAPACITY RECORDED, INSURED WORKING POPULATION OF ENGLAND, SCOTLAND AND WALES, WITH CORRESPONDING CRUDE AND STANDARDISED RATES, 1953–54 TO 1960–61

(Estimated on the basis of a 5% sample of claims to sickness benefit)

		1953–54‡‡	1954–55	1955–56	1956–57	1957–58	1958–59	1959–60‡‡	1960–61
Spells commencing in period (thousands)	M	4,651	4,984	5,148	4,765	6,729	5,869	5,474	6,064
	F	1,918	2,054	2,036	1,905	2,675	2,166	2,022	2,193
Inception rate per 1,000 persons at risk*	M	324	345	354	325	456	395	366	402
	F	348	380	381	361	513	427	405	443
Standardised for age†	M	323	344	352	324	454	394	365	401
	F	349	380	381	360	508	424	402	440
Days of incapacity in period (millions)§	M	186·8	186·5	187·7	179·5	202·7	198·8	195·0	199·9
	F	93·9	90·3	87·6	82·9	89·7	83·7	79·9	79·1
Per person at risk	M	13·0	12·9	12·9	12·2	13·7	13·4	13·0	13·3
	F	17·1	16·7	16·4	15·7	17·2	16·5	16·0	16·0
Standardised for age	M	...	12·8	12·7	12·0	13·4	13·0	12·6	12·8
	F	...	17·0	16·7	16·0	17·4	16·9	16·6	16·7

* The method of estimating the population at risk is explained in the Introduction and Notes to the Digest of Statistics. (See 'Source' below.)

† Age standardisation: the rates which would have been experienced, given the rates observed for each age group, in a population with an age distribution the same as that found in 1951.

‡‡ 53 weeks. Each statistical period ended on the Saturday preceding the first Monday in June.

§ Weekdays.

Source: Ministry of Pensions and National Insurance: Digest of Statistics analysing Certificates of Incapacity. June 1958–June 1961.

Note: ... In all tables signifies either 'not applicable' or 'separate figures not collected'.

APPENDIX B

APPENDIX B

AVERAGE DAILY NUMBER OF OCCUPIED BEDS, NUMBER OF DISCHARGES AND DEATHS AND AVERAGE DURATION OF STAY OF IN-PATIENTS IN NATIONAL HEALTH SERVICE HOSPITALS, ENGLAND AND WALES, BY DEPARTMENTS, 1955, 1960 AND 1965

Department	Average daily number of occupied beds			Discharges and deaths*			Average duration of stay in days		
	1955	1960	1965	1955	1960	1965	1955	1960	1965
General medicine	29,605	29,503	30,029	485,785	542,643	621,897	22·2	19·9	17·6
Paediatrics†	4,527	4,208	4,197	95,571	108,566	144,275	17·7	14·2	10·6
Infectious diseases	4,688	3,458	2,699	82,771	68,000	61,050	20·7	18·6	16·1
Diseases of the chest	26,086	14,851	10,819	68,106	82,098	94,024	139·8	66·3	42·0
Dermatology	1,839	1,786	1,617	21,277	22,214	21,998	31·6	29·4	26·8
Neurology	790	987	1,136	12,977	18,235	22,223	22·2	19·8	18·6
Cardiology	426	425	508	5,604	6,867	10,239	27·7	22·6	18·1
Physical medicine	177	309	387	2,431	3,436	4,424	26·6	32·9	31·9
Venereal disease	143	79	54	2,160	1,345	1,039	24·1	21·6	19·0
Rheumatology	...	...	714	...	...	7,081	...	...	36·8
Geriatrics	...	17,726	26,790	...	73,939	111,781	...	...	...
Chronic sick	50,814	36,928	27,993	107,536	66,326	47,216	...	...	...
General surgery	30,358	28,861	28,458	811,324	861,031	963,817	13·7	12·3	10·8
Ear, nose and throat	4,801	4,581	4,425	300,166	300,391	309,253	5·8	5·6	5·2
Trau. and orth. surgery	15,532	15,933	16,418	217,869	267,455	330,793	26·0	21·8	18·1
Ophthalmology	3,163	3,316	3,293	88,569	96,342	108,913	13·0	12·6	11·0
Radiotherapy	1,443	1,606	1,600	25,449	30,177	32,717	20·7	19·5	17·9
Urology	1,146	1,154	1,322	24,585	30,919	41,096	17·0	13·7	11·7
Plastic surgery	1,161	1,252	1,334	24,016	29,574	35,457	17·6	15·5	13·7
Thoracic surgery	1,868	1,802	1,740	21,627	27,246	34,210	31·5	24·2	18·6
Dentistry	209	293	380	20,291	29,984	42,559	3·8	3·6	3·3
Neurosurgery	663	862	1,002	13,004	19,188	23,983	18·6	16·5	15·3
Gynaecology	7,995	8,192	8,668	261,098	310,653	390,760	11·2	9·7	8·1
Obstetrics	13,619	13,394	13,990	411,557	474,260	596,516	12·1	10·3	8·6
Special care babies	1,250	1,732	2,078	26,358	44,436	59,073	17·3	14·3	12·8
Child psychiatry	8	18	400	26	61	1,131			
Sub-normality	52,923	57,186	57,815	4,685	7,469	11,624			
Mental illness	151,734	140,575	128,568	111,349	144,977	169,779			
Other specialist	4,134	3,044	2,379	31,337	26,838	25,037	48·2	41·5	34·7
Convalescent	5,264	5,780	5,382	113,506	127,890	124,415	16·9	16·5	15·8
General practitioner	6,578	7,408	7,804	176,135	218,354	257,448	13·6	12·4	11·1
Other‡	3,105	3,043	3,129	84,809	95,152	112,405	13·4	11·7	10·2
All departments	426,049	410,292	397,128	3,651,978	4,136,066	4,818,233			

* Discharges and deaths are shown against the department under whose care the patients were immediately before discharge.

† In hospitals having no paediatric department and in children's hospitals 'paediatric' patients are shown under the specialties concerned.

‡ 'Other' includes beds in private wards and staff wards and all unclassified beds. Sick staff treated in their own quarters are not included.

Source: Ministry of Health.

APPENDIX C

MISCELLANEOUS HOSPITAL STATISTICS, NATIONAL HEALTH SERVICE HOSPITALS, ENGLAND AND WALES, 1955, 1960 AND 1965

(Thousands)

Type of service	New patients[1]			Total attendances[2]		
	1955	1960	1965	1955	1960	1965
Consultants' clinics	6,787	7,123	7,490	27,645	29,063	31,013
General practitioners' clinics	120	124	151	379	393	471
Accidents and emergencies[3]	4,728	5,521	6,947	11,561	12,290	13,385
Physiotherapy:						
Individual in-patients	587	764	979	7,896	9,217	11,056
Individual out-patients	750	823	789	11,139	10,351	10,068
Groups of in-patients	296	302	295	2,952	2,620	2,250
Groups of out-patients	197	216	226	2,587	2,489	2,583
Radiotherapy:						
In-patients	24	28	34	318	352	350
Out-patients	84	75	86	692	727	745
Occupational therapy[4]						
In-patients	139	142	127	3,574	3,681	3,124
Out-patients	19	23	32	480	709	938
				Units/Requests		
Radiology: Units[5]				21,264	21,788	27,704
Pathology: Requests (excluding post mortems)				..	18,988	28,562

[1] New out-patients are those whose first attendance falls within the year of review. Persons attending different departments are counted as new patients in each department.

[2] Out-patient attendances are counted for each one of a course or series of attendances. Persons attending different departments are counted in each department.

[3] Emergencies include patients who come to hospitals unannounced and are seen and treated otherwise than at a consultative session.

[4] Occupational therapy figures exclude psychiatric hospitals.

[5] Units are primarily but not wholly, based on the time required for an examination.

Source: Ministry of Health.

APPENDIX D

MISCELLANEOUS HEALTH SERVICE STATISTICS, ENGLAND AND WALES, 1955, 1960 AND 1965

(Thousands)

Type of service	1955	1960	1965
Pharmaceutical services: prescriptions[1]	226,116	218,685	244,346
General dental services:			
Courses of treatment	7,935	11,539	15,868
Emergency treatment cases[2]	1,989	2,074	1,824
Ophthalmic services, sight tests	4,770	5,451	6,115
Local health authority clinics:[3]			
Ante-natal: women attending	313	337	275
Post-natal: women attending	46	43	27
Child welfare: children attending	1,296	1,499	1,948
Home nursing: patients nursed by local authority nurses	1,148	898	852

[1] Prescriptions dispensed by chemists, drug stores and appliance contractors only, i.e. excluding prescriptions dispensed by hospital pharmacies. Sample 1m.

[2] Emergency treatment only. If a dentist comples a full course of treatment following emergency attention, this will be recorded under 'Courses of treatment'.

[3] Local health authorities provide a wide range of health and welfare services including health visitors, home helps, chiropody, recuperative holidays, training centres for the sub-normal, occupational facilities for the physically handicapped, clubs and residential accommodation for the elderly, the mentally ill, the sub-normal and others, ambulance services to facilitate attendance at day hospitals and out-patient clinics, special housing and a school health service. All these services are mainly expanding and relieve considerably the pressure on hospitals.

Source: Ministry of Health.

APPENDIX E

ESTIMATED HOME POPULATION, BY SEX AND AGE-GROUP AS AT 30th JUNE OF EACH YEAR, ENGLAND AND WALES, 1955 AND 1965, SHOWING PERCENTAGE INCREASE IN THE PERIOD

(Thousands)

Age group in years		1955	1965	Increase in 1965	
				Persons	% of 1955
0–	M	1,682	2,110	428	25·45
	F	1,601	2,003	402	25·11
5–	M	3,447	3,478	31	0·90
	F	3,296	3,313	17	0·52
15–	M	8,976	9,723	747	8·32
	F	9,168	9,455	287	3·13
45–	M	5,251	5,713	462	8·80
	F	5,912	6,138	226	3·82
65–	M	2,033	2,203	170	8·36
	F	3,075	3,626	551	17·92
All ages	M	21,389	23,227	1,838	8·59
	F	23,052	24,536	1,484	6·44

1965 discrepancy in total is due to rounding.
The home population excludes members of the Armed Forces serving overseas. It includes all members of all Armed Forces stationed in England and Wales.
Source: General Register Office.

APPENDIX F

PROPORTION OF SPINSTERS MARRYING IN AGE GROUPS UNDER 21, PER THOUSAND AT ALL AGES, ENGLAND AND WALES, 1951–55 AND 1964

Age	1951–55	1964
Under 18	28	77
18	58	92
19	100	137
20	124	151

Source: The Registrar General's Statistical Review of England and Wales for the year 1964.

APPENDIX G

ESTIMATED RATES OF NET ANNUAL MIGRATION, PERSONS OF ALL AGES, INCLUDING CHILDREN, REGIONS OF ENGLAND AND WALES, 1959–64

(Thousands per year)

Regions	Within England and Wales	External to England and Wales	Total
Wales	− 1	− 1	− 2
Northern	− 7		− 7
North West	−12	5	− 7
East and West Riding	−11	5	− 6
North Midland	6	7	13
South West	25	3	28
West Midland		19	19
South East		89	89
England and Wales		127	127

Source: National Plan.

APPENDIX H

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YUGOSLAVIA

DR. IVO MARGAN

To the very current problem of whether there is an increased pressure on the part of the citizens who demand a greater number of medical services, care or hospital beds in Yugoslavia, the majority of health officers would reply, without delay, affirmatively.

However, it is far more difficult to list all the reasons and factors which are the cause of this pressure.

They probably lie in the failure to compromise on the needs and possibilities of the particular field. Since there are no absolutely recognised criteria or standards for the appraisal of needs, nor any criteria for the evaluation of the work of health institutions, we ought still to keep in our mind the fact that any evaluation on our side, regardless of the number of available data, will hold, to a certain extent, some elements of a subjective appraisal.

Having in mind the essential data on the use of health services it is obvious that parallel to the increase in the number of the insured and members of their families, there is also an increase in the total mass of the insured cases, medical assistance and other health services which the health institutions provide for the insured, as well as an increase in the total sum of reimbursements and health insurance.

Among the more important factors of the pressure we will have to name the cases of working inability. They are constantly on the increase.

If we compare the number of cases of working inability with the number of days of working inability, then we can see that the average duration of one case of illness is constantly on the increase. This also conditions the increase in the average percentage of absences from work. The greatest increase in absence from work is recorded in civil engineering, agriculture, housing, forestry and mining.

The use of health services in polyclinics and health stations

is also in constant increase. The increase is bigger than the increase in the average number of insurees, i.e. insured persons.

Among the diseases which most often cause pressure on the health service we can mention, on the basis of data collected during the first check-up, diseases of the respiratory organs, which make up to one fourth of the total number of diseases so that they are at the top of the causes related to absence from work and lost working days. Diseases of secondary occurrence are those of the digestive organs which are mostly caused by irregular nutrition of the population, which is invariable and incomplete from the physiological point of view. Diseases of the nervous system and senses, as well as those of psychosis and psycho-neurosis, are in the third place. The increase in the number of these diseases from one year to another is likely to be caused by the changes in the social structure of the population in connection with the rapid industrialisation and all the problems caused by migration from villages to towns. A tendency of increase is also indicated by the diseases of the locomotive organs, a high percentage of the diseases of the skin and subcutaneous tissue, accidents, poisoning and injuries at work and outside work especially in traffic. The diseases of the heart and blood circulation press also upon the health service considerably.

In the hospital service we have a moderate increase in the number of cases and days of treatment per year. If we observe the conditions in the Republic of Croatia, which may be considered characteristic of Yugoslavia, then we can see that the occupancy of beds in the hospital gives a more adequate picture of the pressure of patients on the hospital service. The occupancy of beds was, for instance, in 1963 in general hospitals, if we count 365 days as a 100% occupancy, 97·7%, or if 320 days mean a 100% occupancy, 111%. If we express such occupancy (320 days equal to 100%) according to the standard number of beds, then it amounts to 138%. In special hospitals there is (365 days equal to 100%) 102·2%, or (320 days equal 100%) 116·3% bed occupancy. If we count on the standard number of beds, then such occupancy amounts to 122%.

Besides an insufficient number of beds the pressure on hospital beds is conditioned by unused possibilities of home treatment

and a lack of efficiency on the part of general practitioners. The slow and indolent treatment of patients in the hospital contributes in a certain number of cases to such conditions.

A special problem arises regarding the so-called social cases who solve a number of their living problems by prolonged hospitalisation.

When evaluating the needs in hospital beds we used indicators such as morbidity in the hospital and extra-mural services having in mind age structure, statistical and vital events in the population, access to medical help, mortality according to age structure, organisation of work in the hospital, equipment in the hospital and the application of technical devices. As there is a constant necessity for an increase of hospital beds these indicators have always been taken into consideration whenever plans of developments in the Republics have been drawn up. An important role in it is then played by the personal estimate of experts in Health Centres who plan the network of health institutions and draw up a schedule of health service activities. This evaluation is of particular importance when related to the specific conditions of a certain area.

Besides a 'normal' increase in all kinds of beds in general hospitals at the moment a special necessity is felt for an increase in the number of beds in maternity wards owing to an increase in the number of prospective mothers seeking help at the hospitals. The need for an increase of beds is felt as well for mental patients and the continued detection of fresh cases of tuberculosis and their prolonged hospitalisation is creating a constant need to provide more beds for this purpose.

The most frequently occurring diseases in the hospital service could be listed as follows: diseases of the respiratory system, diseases of the digestive organs, deliveries, disturbances of pregnancy, delivery and childbirth, infectious diseases, accidents, poisoning and injuries, diseases of the genito-urinary system, diseases of the nervous system with psychosis and psycho-neurosis, diseases of the circulatory system and neoplasms.

Available data represent also a great percentage of the so-called mature population. Such a structural change in the

population increases the pressure upon the health service by the pathology of the older age groups.

Among the factors mentioned it is important to note an enormous decrease in mortality from infectious diseases and tuberculosis from 1957 until the present day; this has created a greater pressure, particularly of consumptive patients, on health institutions.

A constant increase in general and health standards, the raising of the cultural level of the population and the educational level and, at the same time, the understanding of health needs, increase also the demands on the health service.

Besides, the lack of efficiency of the Health Centres and a misinterpreted independence regarding the activity of particular health institutions, led to a duplication of check-ups and other investigations, unnecessary strolling of patients from one health institution to another, as well as to increased administrative manipulations.

The insufficiently elaborated system of financial operations based on the principles of income in some cases made it possible to increase the number of check-ups or services by unjustified calls on the patients several times or by providing unnecessary sorts of services in order to obtain a greater profit. Owing to the same reasons unnecessary stays of 'more expensive cases' occurred in the hospital departments.

This, however, does not mean that the insured are saddled with an excessive number of health institutions. The constantly present process of administrative or functional integration of health institutions, the function of Health Centres and the system of financing based on the principle of income avert an irrational planning of the network of health institutions.

Among the less important causes of pressure we might mention the fact that a certain number of farmers employed in the towns or on the State-owned farms try to make use of their insurance rights for the work on their private properties. That is the reason why they require sick leave from the health service so frequently.

Another similar reason is the rather high percentage of sick leave caused by the long procedures necessary for the granting

of invalid and other pensions. In the course of these procedures many candidates await the result while on sick leave.

All the mentioned elements causing pressure on the health service of Yugoslavia are no doubt very interesting not only from a medical point of view but also from an economic aspect. We have at our disposal a sufficient number of statistical data in favour of these statements. A checking up of these data has been carried out by means of a questionnaire addressed to the health institutions in the Republic of Croatia.

Naturally the pressure described might be alleviated and many difficulties might be solved better if only there were more interest in a scientific investigation of this field. So far, however, the work in this field has not been satisfactory.

HEALTH INSURANCE FROM 1962 UNTIL 1965
THE REPUBLIC OF CROATIA
(Utilisation)

Indicator	Year	Absolute number	Index
Cases of working inability: Illness, injury, isolation, care of family members and people accompanying patients	1962	961,797	100
	1963	1,048,210	109
	1964	1,369,242	142
	1965	1,293,361	134
Days of working inability: Illness, injury, isolation, care of family members and people accompanying patients	1962	16,938,852	100
	1963	14,880,811	88
	1964	17,424,081	103
	1965	18,870,507	110
Absence from work: Percentage of daily absence from work	1962	5·55	100
	1963	4·81	87
	1964	5·30	96
	1965	5·53	100
Number of prescriptions	1962	13,951,611	100
	1963	9,976,717	72
	1964	11,788,626	85
	1965	12,980,342	93
Pregnancy and delivery cases	1962	17,005	100
	1963	17,457	103
	1964	16,850	99
	1965	18,820	111
Days	1962	1,474,224	100
	1963	1,432,951	97
	1964	1,618,271	110
	1965	2,132,315	145

TREATMENT IN GENERAL HEALTH STATIONS (SURGERIES) AND POLYCLINICS

		Absolute number	Index
Check-ups	1962	18,219,667	100
	1963	16,229,228	89
	1964	18,813,950	103
	1965	16,647,726	91
Services	1962	9,468,927	100
	1963	10,186,825	108
	1964	12,826,548	135
	1965	21,689,966	229
Total	1962	27,688,594	100
	1963	26,416,053	95
	1964	31,640,498	114
	1965	38,337,692	129

TREATMENT IN HOSPITAL INSTITUTIONS

		Absolute number	Index
Cases	1962	409,601	100
	1963	360,311	88
	1964	393,482	96
	1965	425,155	104
Days	1962	6,514,997	100
	1963	5,650,521	87
	1964	6,236,354	96
	1965	6,561,518	101

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