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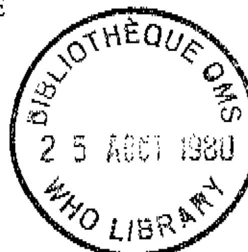
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THE CONTROL OF LABORATORY EXPENDITURES IN AMBULATORY MEDICAL CARE IN THE FEDERAL REPUBLIC OF GERMANY

by

Dr. K. G. Brenner
Zentralinstitut für die Kassenärztliche Versorgung
in der Bundersrepublik, Cologne, Federal Republic of Germany

Extent of laboratory expenditures

The numbers of laboratory tests performed in ambulatory medical care and the expenditures by the Krankenkassen (General Medical Scheme Insurers) for laboratory services have risen by 200% since 1970. They have thus grown at a considerably faster rate than the total expenditure on ambulatory treatment, which has risen by approximately 150%. This makes the laboratory sector one of the most rapidly expanding growth areas in medicine. Approximately one German Mark in every seven spent on ambulatory medical treatment is spent on laboratory tests. In 1979 the total costs of treatment for ambulatory patients treated by General Medical Scheme doctors in their own practices (approximately 55 000 in number) were approximately 14 billion DM, of which approximately two billion was spent solely for laboratory analysis. Laboratory tests and analyses made in hospitals are not included in these figures.

The expansive development of laboratory diagnosis in the last ten years has been made possible in part by new analytical methods and analytical equipment which have made it possible for most doctors in practice to make use of laboratory diagnosis to help them in diagnosis in the treatment of ambulatory patients. It was however only possible to make optimally economical use of the fully automatic laboratory equipment as doctors in practice joined together to share equipment and personnel in group laboratories. By carrying out the laboratory tests in a group laboratory, it becomes possible to achieve longer runs of tests, and the better load factors thus achieved lead to lower costs per test. The remuneration laid down in the Scale of Fees does not, however, differentiate between tests carried out at low or at higher costs. This means that members of group laboratories made a profit on each test carried out, due to the advantages of scale. This then led, for economic reasons also, to the growth of laboratory diagnosis.

Type of cost limitation

The attempt to limit overall medical costs can be approached in the laboratory sector from two angles: the medical and the financial. The medical route starts at the number of laboratory tests carried out and attempts to reduce the numbers of unnecessary tests and tests without a specific target. For this to be successful, it would be necessary for precise scientific evidence to be available on the type and extent of laboratory diagnosis as a function of the patient's medical symptoms or even only of his subjectively experienced complaints. The attempt to base cost limitation measures on being able to separate medically indicated laboratory tests from tests without a medical indication does not show much promise.

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Laboratory tests, just as medicine as a whole, are not susceptible to effectiveness criteria. In many cases it will not be possible to provide any evidence of a definite connexion between the making of a laboratory test and an improvement in the treatment of the patient. The present state of development of laboratory technology and the fact that it is relatively readily available to the doctor means that one must also assume that laboratory diagnosis is used not only for purely diagnostic purposes, but also to a relatively wide extent as confirmation where the doctor has already made a diagnosis and also as a running check on the progress of the illness. The spectrum of the 25 most important laboratory tests, which together comprise around 85-90% of the total laboratory turnover for general practitioners and specialists for internal medicine, shows that cost limitation measures must be directed not so much towards the type of test carried out as to the extent to which each individual type of test is employed (see Table).

AVERAGE ANNUAL NUMBER OF LABORATORY TESTS
PERFORMED BY GENERAL PRACTITIONERS

Type of test	Number of determinations	
	Member of a group laboratory	Non-member of a group laboratory
Glucose in blood	653	326
Strip test	616	429
Sediment in urine	611	425
Chloresterine	343	142
Triglyceride	323	95
Gamma GT	302	92
GPT	302	121
Uric acid	280	106
Creatinine	202	56
Haemoglobin	190	150
Leucocyte count	185	117
Erythrocyte count	175	128
Full blood report	136	71
Alkali phosphatasis	131	44
Iron	126	
Urea	82	26
Bilirubin	79	54
TPZ	77	33
Potassium	55	
Complex haemoglobin determination, erythrocyte and leucocyte	43	
Cataloguing	33	8
Electrophoretic protein detector	3	
Urobilin		7
Glucose (strip test)		69
Sugar in urine		58
Other	925	314
Totals	6 146	2 989

The attempt has therefore been made in the Federal Republic of Germany since 1977 to achieve cost limitation in the laboratory sector by purely financial means. The total annual expenditure by the General Medical Scheme Insurers on laboratory services under the

General Medical Scheme is subjected to an annual budget limit determined in advance. In this way the financial risk for the Insurers of increasing use of laboratory diagnosis can be limited, since if the total laboratory budget is fixed in advance, an increase in the number of tests performed leads to a reduction in the remuneration per test to the doctor.

Legal regulation and its application in General Medical Scheme treatment

The legal basis for the contractual agreement between the General Medical Scheme Insurers (Krankenkassen) and the Association of General Medical Scheme Doctors (Kassenärtzlich Vereiningung) is the Reichsversicherungsordnung (RVO) (Statute Governing Insurance). The Associations of General Medical Scheme Doctors are the organizations legally representing doctors in practice, and it is they who represent their interests against the General Medical Scheme Insurers. This statutory basis was extended on 1 July 1978 by the Health Insurance Cost Limitation Law. This change to the law requires the GMS Insurers to agree in advance with the Association of GMS Doctors a figure for total remuneration for all GMS medical services provided. This total remuneration is then divided up among the GMS doctors in practice by the Associations of GMS Doctors in accordance with a scale. The basis of this scale is usually the Scale of Fees. The ratio of the values of the various items of service in the Scale of Fees is expressed in terms of a points scale. The financial value of a point is only determined at the end of the financial year, when the agreed figure for total remuneration is divided by the total number of points actually invoiced by the doctors for services. The two contracting parties have a relatively large degree of freedom in the way the total remuneration is to be made up: it may consist of a fixed sum or of a variable sum or of a combination of both. This means that it is possible also to introduce rules whereby only those extensions to the services are permissible which can be justified on medical grounds. The variation of the total remuneration is likewise regulated by law, and depends on the average change in wages and salaries of the persons insured under the General Medical Scheme, on the practice costs and also on the number of hours worked by the doctors. The Federal Organizations of GMS Insurers and of Associations of GMS Doctors have to agree and issue a recommendation each year on the appropriate change in the total remuneration on the basis of the above criteria. This recommendation at Federal level must then be taken into account when regional agreements are reached between GMS Insurers and Associations of GMS Doctors. This Federal recommendation is usually made either at or in direct connexion with the so-called Concerted Action Committee. This Committee is made up of representatives of all organizations concerned with health, such as doctors, GMS Insurers, hospitals, government ministries, trade unions, etc. The Federal Minister for Employment and Social Order calls upon representatives of the appropriate organizations to serve on the Committee. The task of the Concerted Action Committee is to develop medical and economic data to serve as a guide for decisions, and to make suggestions for rationalization measures in the health services. Each year the Concerted Action Committee makes a recommendation, by 31 March, on an appropriate change to the total remuneration.

On the basis of this legal ruling, the head organizations of GMS Insurers and of the Federal Organization of GMS Doctors have made an agreed recommendation for the period 1 July 1979 to 31 December 1980, in which for the first time the laboratory expenditures for ambulatory treatment are budgeted within the total remuneration for all GMS medical services. The recommendation provides that the value of laboratory services provided per case treated must not be higher for each quarter-year than the corresponding figure for the corresponding quarter of the previous year.

Effect of the budget ruling for laboratory services

This budgetary ruling for laboratory services has the effect that if the number of laboratory tests per case treated increases, the GMS Insurers do not have to pay more. If more services are provided, the doctor's remuneration per item of service is reduced. The GMS Insurers are only involved in additional costs if the number of cases requiring treatment in a particular quarter-year increases. This can only occur if the proportion of the population which consults a doctor during a particular quarter-year increases. This risk is however a typical insurance risk, and thus falls outside the framework of the budget. The

agreements reached in the overall contracts regulate only the financial relationship between the GMS Insurers and the Associations of GMS Doctors. The way in which the total remuneration is distributed among the individual GMS Doctors by the Associations of GMS Doctors is regulated by the fee distribution systems of the individual Associations of GMS Doctors. Each of the 18 Associations of GMS Doctors can have a different system of fee distribution: this provides the Associations with an additional instrument of control. In Bavaria for example a fee scale distribution system which provides for a tapering off of the fees as the number of items of service provided per doctor increases has been brought into effect. The system provides that the fees shall be reduced by the following percentages from the normal Scale of Fees (see Table).

Number of items of service provided per quarter-year	Reduction of fee in %
351 - 500	5
501 - 750	10
751 - 1000	15
1001 - 1250	20
1251 - 1500	30
1501 - 2000	35
Over 2000	40

These varying deductions are justified on the argument that as the number of items of services in the laboratory increases, advantage can be taken of the possibilities of rationalization. This means that the laboratory tests are usually made in group laboratories, which operate such that their costs form a relatively low proportion of their financial turnover. Structural cost analyses demonstrate that for group laboratories the costs represent in general about 30% or less of their turnover. For the same spectrum of laboratory services provided by an individual doctor in his practice the proportion of the price represented by the cost is 70%, or often higher.

The intention of the Bavarian fee scale system is to reduce the profit margins provided by laboratory services by scaled reductions in the fees. These profits are effectively rationalization profits resulting from technical development progress, which have until now not been passed on to the GMS Insurers because of the rigidity of the Scale of Fees. The creation of a budget limit for laboratory services together with the fee scale system of the Associations of GMS Doctors reduces the economic incentive to carry out laboratory tests. To the extent that laboratory tests without a medical indication have hitherto been carried out, there is in future no financial incentive for this. The budgetary regulation of the laboratory sector means that the actual remuneration paid for laboratory services will in future be more closely correlated with the costs of providing them. The reduction in fees for laboratory services also acts to promote the carrying out of these in the most rational way, that is to say in group laboratories. Only in this way can medically necessary laboratory services be provided in such a way that the individual doctor covers his costs, against a background of sinking laboratory fees. These efforts towards rationalization also fully benefit the cost-bearing institutions, that is the GMS Insurers. The path towards medical cost limitation that has been followed in the Federal Republic of Germany demonstrates that the expenditure on laboratory services has appeared higher than it actually is, due to the methods of evaluation used.

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