

**PUBLIC ACCOUNTS COMMITTEE
(1971-72)**

(FIFTH LOK SABHA)

FORTIETH REPORT

**{Report of Comptroller and Auditor General of India
(Civil) for the year 1969-70 relating to the Ministry
of Health and Family Planning (Department of
Health)}**

INDIAN COUNCIL OF MEDICAL RESEARCH



**LOK SABHA SECRETARIAT
NEW DELHI**

April, 1972/Vaisakha, 1894 (S)

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PART II*

Minutes of the sittings of the Public Accounts Committee :

26th August, 1971
19th April, 1972

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*Not printed (one cyclostyled copy laid on the Table of the House and five copies placed in Parliament Library).

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PUBLIC ACCOUNTS COMMITTEE
(1971-72)

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SECRETARIAT

Shri Avtar Singh Rikhy—*Joint Secretary.*

Shri B. B. Tewari—*Deputy Secretary.*

Shri T. R. Krishnamachari—*Under Secretary.*

*Declared elected to the Committee on 3-8-1971 vice Shri Niranjana Verma, resigned.

**Ceased to be Member of the Committee consequent on retirement from Rajya Sabha w.e.f. 2-4-1972.

INTRODUCTION

1. The Chairman of the Public Accounts Committee as authorised by the Committee, do present on their behalf this Fortieth Report of the Public Accounts Committee (Fifth Lok Sabha) on Paragraph 64 of the Report of the Comptroller and Auditor General of India for the year 1969-70, Central Government (Civil) relating to the Ministry of Health and Family Planning (Department of Health)—Indian Council of Medical Research.

2. The Report of the Comptroller & Auditor General of India for the year 1969-70, Central Government (Civil) was laid on the Table of the House on the 22nd June, 1971. The Committee examined paragraph 64 relating to the Indian Council of Medical Research at their sitting held on the 26th August, 1971 (FN). The Committee considered and finalised this Report at their sitting held on the 19th April, 1972. Minutes of these sittings form Part II* of the Report.

3. A statement showing the summary of the main conclusions/recommendations of the Committee is appended to the Report (Appendix). For facility of reference these have been printed in thick type in the body of the Report.

4. The Committee place on record their appreciation of the assistance rendered to them in the examination of the Paragraph by the Comptroller & Auditor General of India.

5. The Committee would also like to express their thanks to the officers of the Ministry of Health and Family Planning (Department of Health) and Indian Council of Medical Research for the cooperation extended by them in giving information to the Committee.

NEW DELHI,
April 21, 1972.

Vaisakha 1, 1894 (S).

ERA SEZHIYAN,
Chairman,
Public Accounts Committee.

*Not printed (one cyclostyled copy laid on the Table of the House and five copies placed in Parliament Library).

CHAPTER I ORGANISATION

1.1. The Indian Council of Medical Research is registered under the Registration of Societies Act XXI of 1860. The Society was formed in 1949 and is successor to the Indian Research Fund Association which was founded in 1911 for prosecution of, and assistance to, Medical Research in the country.

1.2. The Executive authority of the Council is vested in a Governing Body. The Governing Body consists of several official and non-official representatives. The official representation consists of the Minister for Health as the President of the Governing Body, the Health Secretary to the Government of India as the Vice-President, Director-General of Health Services, the Director General Council of Scientific and Industrial Research. One of the Deputy Director-General of Health Services, the Director General, A.F.M.S., two Directors of the Medical Research Institutes of the Central and State Governments and Director of one of the voluntary research organisations. The non-official members *inter alia* include one representative from the Rajya Sabha and two from the Lok Sabha. The DG ICMR is the members Secretary.

1.3. In view of the practical difficulties in convening meetings of the Governing Body more frequently, an Executive Committee mainly representing the official elements has been entrusted with the responsibility of acting on behalf of the Governing Body.

1.4. The scientific deliberations of the Council are ultimately screened and approved by the Scientific Advisory Board. As the volume and variety of work increased, its functions had to be added by an increasing number of advisory Committees. The main functions of the Scientific Advisory Board and its constituent committees are formulation of scientific policies, technical scrutiny and approval of good research programmes and evaluation of the results of research. There are at present 35 experts committees to assist the Scientific Advisory Board.

1.5. The Director General of the Council is its administering authority. He may exercise all such powers and do all such acts as may be required for the proper conduct of the ordinary current administrative and business duties and affairs of the Council. The Headquarter office is concerned with the execution of all policies and programmes of the Council and supervision.

1.6. The Council has its own seven permanent institutions specifically oriented towards certain research problems, *viz.*

- (i) National Institute of Nutrition, Hyderabad;
- (ii) Virus Research Centre, Poona;
- (iii) Cholera Research Centre, Calcutta;
- (iv) Tuberculosis Chemotherapy Centre, Madras;
- (v) Occupational Health Research Institute, Ahmedabad;

- (vi) Indian Registry of Pathology, New Delhi;
- (vii) Institute for Research in Reproduction, Bombay.

The Council has also eight research, units, viz.

- (1) Reproductive Physiology Unit, Bombay.
- (2) Contraceptive Testing Unit, Bombay.
- (3) Neurophysiology Research Unit, Delhi.
- (4) Enterovirus Research Centre, Bombay.
- (5) Haematological Unit, Calcutta.
- (6) Periodontology Research Unit, Lucknow.
- (7) Madanapalle Tuberculosis Research Centre, Madanapalle.
- (8) Trachoma Research Centre, Aligarh (since wound up).

The Council has in operation an active fellowships programme and *ad hoc* research schemes.

1.7. During evidence the Director General of the Council informed the Committee that "Projects are invited from all over the country from university faculties and research institutes etc. The Council does not fund any research project unless it is recommended by an expert committee. There are about 35 expert committees at present. They vary according to disciplines. Each expert committee has 6—8 members drawn from different research institutes or faculties all over the country. They are not, by and large, connected with the Council. They scrutinise the projects and recommend to the Scientific Advisory Board whether certain projects should be financed and if so, to what extent. The report of the expert Committee is seen by the Scientific Advisory Board of which the DG Health Services is Chairman *ex-officio*."

1.8. A Reviewing Committee which went into the working of the Council and reported in March, 1968, observed, "The ICMR has continued to operate as a subsidiary department of the Ministry of Health unlike its counterparts in spite of the facts that an autonomous function was envisaged throughout. . . . Autonomy which was meant to spell freedom of action and speed, had resulted in a more tedious financial and administrative dependence on the parent Ministry. The Reviewing Committee feels that the Governing Body should re-examine the Memorandum of Association, Rules, regulations and Bye-Laws of the Indian Council of Medical Research and ensure that in future maximum autonomy is provided within the framework of governmental financial rules and regulations. In any case, the power and function of the I.C.M.R. should be comparable to that of the C.S.I.R. and the Bhabha Atomic Research Centre under their respective Ministries. If necessary, it is high time that the I.C.M.R. is made a statutory body." The Committee enquired about the action taken on the recommendation of the Reviewing Committee. The Secretary, Ministry of Health & Family Planning replied, "To the best of my knowledge, the Ministry has not taken action on this recommendation."

1.9. Asked about the control exercised by Government over the Council, the Secretary, Ministry of Health & Family Planning stated, "Whatever control we have is largely of an *ex officio* nature. In other words, the

Minister, Secretary, Financial Adviser and Director General are on the Governing Body and Executive Council, Scientific Advisory Committee, and also on the Finance Committee. What is more, the rules and regulations of G----- apply to ICMR. In other words, if they wish to deviate from the rules anywhere, they have to refer the matter to the Ministry." The Director General stated, "The Governing Body meets once a year. The Executive Committee meets once in two or three months. The Executive Committee has complete control over the Council, a little too much, I may say, because the Health Minister is the Chairman, Secretary is the Vice Chairman and Director General of Health Services and Deputy Director General of Health Services and Financial Adviser are members. The only person representing the Council is myself (Director General)."

1.10. The Reviewing Committee made the following suggestions with regard to the organisational autonomy of the I.C.M.R. :

- (i) Autonomy in the matter of utilization of funds at the discretion of the Governing Body of the I.C.M.R. or its delegated authorities. The autonomous character should be retained in a functional rather than a notional manner;
- (ii) Reconstituting the Executive Committee with greater representation of scientific members instead of the present set up, mainly composed of officials;
- (iii) Enlargement of the executive and financial powers of the Director-General of the ICMR which should be comparable to that enjoyed by the heads of similar scientific organizations in the country.

1.11. The Scientific Advisory Board of the Council which considered the Report of the Reviewing Committee made the following recommendations on the organisation at its special meeting held on 22nd August 1968 :

- (i) The Board strongly endorsed the recommendations made by the Reviewing Committee regarding enlargement of the executive and financial powers of the DG ICMR. It was felt that for the successful promotion of medical research in the country, the one single and most important step is to raise the status and emoluments of the Director-General of the Indian Council of Medical Research. Once this is done, all the other difficulties will automatically disappear.
- (ii) The Board also approved of the reconstitution of the Executive Committee by the addition of a few more scientists, including one of the Directors of the ICMR institutes by rotation.

1.12. The Governing Body at its special meeting held on 11th April, 1970 appointed a Sub-Committee to examine in detail the above recommendations of the Scientific Advisory Board. It is understood that the Sub-Committee has not yet considered the matter.

1.13. The Reviewing Committee had recommended that in view of increasing financial responsibilities of the Council, it may be necessary to consider appointment of a Finance Adviser who could assist the Director General with regard to the financial matters. The Ministry has stated that

the post of the Finance Adviser has been created, the Government of India, Department of Personnel Cabinet Secretariat has been requested to nominate a senior qualified and experienced person for the post.

1.14. Pointing out that the Secretary in the Council of Scientific and Industrial Research is of the rank of Joint Secretary, the Committee enquired about the status of the Secretary of Indian Council of Medical Research. The Director General replied that the Secretary of the Council had been appointed in the scale of Rs. 590-900.

1.15. The Committee are concerned to note, from the Reviewing Committee report that the Indian Council of Medical Research which was formed in 1949 has continued to operate as a subsidiary department of the Ministry of Health unlike its counterparts, in spite of the fact that an autonomous function was envisaged throughout. According to the Reviewing Committee, 'autonomy which was meant to spell out freedom of action and speed has resulted in a more tedious financial and administrative dependence on the parent Ministry'. The Director General of the Council submitted during evidence that control of the Executive Committee over the Council is "a little too much", because it was a wholly official ridden body. The only person representing the Council is its Director General. The Reviewing Committee had recommended that maximum autonomy should be provided to the Council which may be comparable to that of the Council of Scientific and Industrial Research or Bhabha Atomic Research Centre and if necessary, the ICMR be made 'a statutory body'. The autonomous character should be retained in a functional rather than a notional manner. For this purpose, the Reviewing Committee has suggested reconstitution of the Executive Committee with greater representation of Scientific Members and enlargement of the executive and financial powers of the Director General comparable to that enjoyed by the heads of similar scientific organisations. The Committee are in agreement with the views expressed by the Reviewing Committee that excessive governmental control is apt to impair the efficiency and growth capacity of the Council.

1.16. The Committee have been informed that the Government body has appointed a sub-Committee to examine in detail these recommendations of the Reviewing Committee. The Committee desire that this matter should be examined thoroughly and final decision taken by Government at an early date. The Committee would like to be informed about the outcome. The Reviewing Committee submitted its Report in March, 1968 and although four years have already elapsed the recommendations have not yet been processed.

1.17. The Committee are surprised that although the Council has been handling grants amounting to several lakhs of rupees every year, no Financial Adviser has been posted in the Council. The Committee note that in pursuance of the recommendation of the Reviewing Committee post of the Financial Adviser has been created. The Committee desire that this post should be filled up without delay.

CHAPTER II

FINANCES OF THE COUNCIL

Audit Paragraph

2.1. The Council, which is fed by grants from Government conducts its work through seven permanent research institutes and eight (semi-permanent) research units. The Council also finances *ad hoc* research schemes of limited duration submitted mainly by university faculties and research institutions other than those financed by it. The table below shows the grants received by the Council and expenditure incurred by it on research institutes, research units and *ad hoc* schemes :—

	1967-68	1968-69	1969-70
	(Rupees in lakhs)		
Grants received from Government	116.83	143.67	162.23
Grants received from other Sources	1.37	2.45	3.66
Expenditure incurred on permanent research institutes	41.25	42.33	48.10
Expenditure incurred on research units	3.57	4.18	9.40
Expenditure on <i>ad hoc</i> research schemes	48.98	56.91	65.68

(Paragraph 64 of the Report of the Comptroller and Auditor General (Civil) for 1969-70).

2.2. The Ministry of Health and Family Planning have also furnished the following details of grants received by the Indian Council of Medical Research and the expenditure incurred by the Council on its own Research Institutes, Research Units and *ad hoc* schemes for the year 1970-71 :

	Rs.
(a) Amount of grant received during 1970-71	1,80,18,000.00
(b) Expenditure incurred by the I.C.M.R. during 1970-71 on:	
(i) Permanent Research Institutes	68,87,170.94
(ii) Research Units	6,18,800.28
(iii) <i>Ad-hoc</i> Research schemes	69,60,391.56

2.3. According to the Annual Report of ICMR for 1970-71, the Budget Estimates of the Council, the total grant received from Government of India,

and the actual expenditure of the Council for the last years 1967-68 to 1970-71, are as given in the table below :

Year	Budget Estimate	Grant received from the Govt. of India.	Actual expenditure
1967-68	1,42,50,000	1,16,83,430	1,28,97,067
1968-69	1,64,68,000	1,46,00,329	1,40,43,905
1969-70	1,92,77,778	1,62,47,467	1,55,44,775
1970-71	1,89,45,000	1,80,18,000	1,81,88,082

2.4. The following statement shows the percentage of Budget estimates on the activities of the Council during the years 1969-70 and 1970-71 :

	1969-70 (%age)	1970-71 (%age)
(A) Permanent Research Centres	26.21	31.58
(B) Semi-permanent Research Units	5.83	4.66
(C) Research Schemes (Including Surveys and Drug Trials)	43.07	41.50
(D) Fellowships, Training etc.	3.75	4.50
(E) Headquarters Office at New Delhi (including Service Units Administration and Publications)	13.27	12.38
(F) Capital expenditure	7.77	5.38
Total	100.00	100.00

2.5. According to the Annual Report for the year 1970-71, the percentage of expenditure on administration works out to 12%.

2.6. The Reviewing Committee have observed in their Report that "On the basis of approximate calculations carried out it would appear that the expenditure incurred by the Indian Council of Medical Research in any one year would amount to 1/3 to 1/2 of the total expenditure on medical research in the country. Assuming that an equivalent amount of money is spent by other agencies for medical research, it would appear that the expenditure on medical research constitutes about 4 per cent of total research efforts of the country or 0.008 of the gross national income. These estimates are further borne out by the data on the distribution of research funds obtained from the Planning Commission. In the year 1962-63, 33 per cent of the expenditure of research was allocated to Atomic Energy, followed by 27 per cent to the Council of Scientific and Industrial Research and 25 to 27 per cent to Agricultural research. Education including University Grants Commission, Geological, Botanical Surveys etc. account for 8 to 9 per cent. Medical including the ICMR, Central Research Institute, Medical Colleges, States and Central account for 4 per cent of the total expenditure out of which the expenditure of the Indian Council of Medical Research Rs. 58 lakhs during 1962-63 works out to 1.8 per cent of the total expenditure on research. The wide disparity in the attention given to medical research is apparent from the foregoing figures. While it is quite possible that these amounts may not be quite correct, it is understood that

the trends are more or less the same even subsequently. The follow-up of the detailed figures of expenditure of I.C.M.R. on a yearly basis during the last 20 years would provide a base line for analysing and interpreting the development of medical research in India. The annual expenditure of I.C.M.R. during the last 20 years has progressively risen from initial figure of Rs. 9.3 lakhs in 1947 to Rs. 16.2 lakhs in 1952-53, to Rs. 58 lakhs in 1962-63 and Rs. 138 lakhs in 1967-68. Irrespective of the changes in the purchasing value of the Rupee, it would appear that on purely monetary considerations, there is a doubling up of the financial grant of the Council in each successive five year period. The allocation of funds for medical research in general and the I.C.M.R. in particular, were also examined in terms of the allocations for medical education and research. The overall allocation under Public Health has gradually risen from a figure of Rs. 140 lakhs in the First Five Year Plan period to 342 lakhs during the Third Five Year Plan accounting for a slow but steady rise. Out of this figure medical education, training and research account for 15.4 per cent, 10 per cent and 16.5 per cent of the total allocation for health during each one of the three plan periods. The expenditure of the I.C.M.R. amounts to Rs. 92 lakhs, Rs. 233 lakhs and Rs. 400 lakhs respectively during the three plan periods giving percentage of 4.8 to 6.7 of the total expenditure on medical education, training and research. From these figures it is apparent that while there has been a gradual and progressive increase in the allocation of funds for the medical research, there is great need for the further augmentation of the funds for enlarging the areas of research."

2.7. The Recommendations of the Reviewing Committee in this regard have been summarised thus, "It is apparent from the detailed analysis of the financial aspects of the Council that the allocation for medical research in general and the I.C.M.R. in particular is extremely meagre. Since the health and well-being of the Nation ultimately depends on the continuous acquisition of newer medical knowledge and its application, it is imperative that there should be increasing allocation of funds for medical research, fundamental, basic applied and operational in the field of nutrition, environmental hygiene and sanitation, scientific aspects of family planning etc. Although the I.C.M.R. had started as a grant-giving body it has gradually evolved into a more complex organisation, charged with the responsibility of conducting research in addition to giving grants-in-aid. It has rightly undertaken the task of training the research workers and the dissemination of Scientific knowledge. Many of these tasks are bound to increase in future, in range, extent and depth. Obviously, if the I.C.M.R. were to fulfil these tasks efficiently and speedily, there is a need for substantial increase in its resources. During the past 20 years, it has addressed itself to the more immediate and pressing problems with the help of generous assistance from international agencies. However, such assistance can only be of a short-term or temporary nature. In the long run, the I.C.M.R. has to take upon itself the burden of maintaining its constituent activities at an optimum level. It has also to organize itself and shoulder additional responsibility of getting-up of newer institutes and research units to study specific problems of public health importance that might crop up from time to time. Therefore, it might be worth while for the Governing Body of the I.C.M.R. to take stock periodically and introduce an element of "forward financing" in a broad manner, so that the I.C.M.R. can discharge its obligations effectively.

2.8. At the instance of the Committee, the Ministry of Health and Family Planning have furnished the following statement comparing the percentage of expenditure on medical teaching and research to total health expenditure in USA, UK and India :

	National Income (millions)	Total current Health exp. (millions)	Teaching and Research (millions)	As percentage to total current Health Expenditure.
U.S.A. (1961-62)\$	423,700a	29,859	1,368	4.6
U.K. (1961-62) £	22,113a	1,088	22.9	2.1
India (1969-70) Rs.	3,11,740	1,09(c)	15.6c	1.4

(a)—The data obtained from World Health Organisation on an International study of Health Expenditure and its relevance for Health planning—Brian Abet smith—World Health Organisation Geneva (1967).

(b)—Only Government of India.

(c)—Only Indian Council of Medical Research.

2.9. During evidence the Secretary stated that the grants received from other sources were mainly from WHO and PL-480 grants by USAID. At the instance of the Committee the Ministry of Health & Family Planning have furnished the following figures regarding the grants received from PL-480 and WHO during the years 1967-68 to 1970-71 :

Scheme	Funds Received			
	1967-68	1968-69	1969-70	1970-71
	Rs.	Rs.	Rs.	Rs.
I. PL-480 schemes in ICMR Institution (4 projects)	11,85,995	13,67,190	17,09,822	12,61,533
II. PL-480 schemes located in institutions not under the control of ICMR but where funds are routed through ICMR or where ICMR is the coordinating agency (8 projects)	4,95,320	8,59,644	12,61,950	14,05,474
III. Grants received from the WHO (11 projects)	(Rs.) 60,000 (- \$) 84,500	(Rs.) 93,750 (- \$) 1,22,500	(Rs.) 60,000 (- \$) 1,28,000	(Rs.) 60,000 (- \$) 1,60,000

Grants amounting to Rs. 4,82,52,858 were received for 71 PL-480 schemes located outside ICMR institutions functioning in the year 1967-68 to 1970-71. The funds were received by the grantees direct. All the projects were initially examined and recommended by the Council.

2.10. During evidence the Committee asked whether PL-480 grants were tied up with particular schemes. The Secretary Department of Health & Family Planning stated: "These are given in a somewhat peculiar way which we have found not very conducive to good work or a health relationship. The manner in which PL-480 grants are given is that there is some kind of talk between some scientists in the country and some member of the USAID staff who then decide what kind of research should be done. A project director who is a foreigner is selected and the whole matter then comes up to the ICMR for scrutiny by the Scientific Committee. Recently, the ICMR and ourselves have reviewed this procedure and we have formulated a different procedure altogether. That is, if any scientist wishes to have a research project, he will process it without reference to where the funds are coming from. He will refer the matter to the ICMR who will treat all research projects on a par. The ICMR will send it to us and then for the money we shall approach the Finance Ministry. It will not be our concern to pass the hat round to a foreign agency. If the Finance Ministry feels that some money should come from outside, that will be their responsibility and their decision. We shall not subject ourselves to any control by any foreign body or foreigners." The witness added, "The research schemes which are in operation will remain in operation and the Council continues to deal with them. For the future the new procedure will be followed." The witness further stated, "all the 480 project directors were foreigners. This kind of control we are no longer willing to accept nor are we willing to accept a state of affairs where members of US AID and Ford Foundation and the members of the American Embassy go round the country on the pretext of talking to the scientists and saying 'Why don't you take up X or Y research. Money freely available. We stopped all that'".

2.11. In a written note the Ministry of Health & Family Planning stated that in August, 1971, a new set of guidelines has been laid down for dealing with research proposals financed from PL-480 grants, the essential features of which are as follows:

- (1) If the scheme is found acceptable both from technical and budgetary points of view, the proposal is to be placed before a Screening Committee which is constituted of the DG, ICMR (Chairman), Director General of Health Service, representatives of the Ministries of Health, External Affairs, Defence, Finance (Health), Finance (Economic Affairs) and Planning Commission.
- (2) After approval by the Screening Committee the project is to be sent to the Ministry of Health for being forwarded to the American Embassy.
- (3) The research proposals should be initiated by Indian research workers/investigators, based on India's needs and conditions. Ordinarily there should be no foreign collaborator. If there is to be collaboration in exceptional circumstances, the Indian and foreign collaborator should have similar designations and the Indian worker should be the senior.
- (4) The agreement should be signed after approval by the Government and the ICMR.

2.12. It has been further stated that the funds are allocated after the examination of the merit of individual proposals received by the Council. While examining the projects consideration is given to their importance in relation to national needs. Funds are not earmarked for specific subjects. The projects already sanctioned cover a wide range of subjects including studies on Communicable Diseases such as Cholera, T.B., leprosy, virus diseases etc., other diseases such as cancer, rheumatic fever, cardiovascular diseases, mental and neurological disorders etc. Basic sciences related to medicine such as physiology immunology, genetics, experimental medicine etc. problems related to population and Family Planning and Rehabilitation.

2.13. As regards WHO it is mentioned that they are processes through the Government of India as and when necessary to meet specific needs. There is no change in the procedure.

2.14. At their 34th (Special) meeting held on 11th April, 1970, the Governing Body of the Council decided that the question regarding increasing the quantum of grant in aid to the Indian Council of Medical Research and enhancement of status and powers of the Director General should be considered by the sub-Committee already appointed.

2.15. Apart from the general policy of obtaining adequate funds, the Reviewing Committee had suggested that there is a need for the I.C.M.R. to particularly define the manner of allocating its funds for its several major activities like the permanent institutes, service/research units, *ad hoc* enquiries, Research Cadre, Fellowship programmes, capital construction, foreign exchange requirements etc. Based on the past experiences and the present and future needs, it is suggested that the permanent laboratories (existing and proposed) of the I.C.M.R. should be allocated about 40 per cent to 45 per cent of the funds and the remaining about 40 per cent to 45 per cent should be distributed equitably between the Research Fellowships and Research Cadre programmes and assistance for "free research" through the medium of *ad hoc* enquiries. As stated elsewhere, it is to restrict large-scale assistance to big post-graduate institutes and medical research institutes, which should be encouraged to deploy their own funds for research.

2.16. Pointing out that the expenditure on the permanent research institutes was 29.1% during the year 1969-70, the Committee desired to know the steps taken to implement the recommendation of Reviewing Committee. The Director General stated, "The policy of the Indian Council of Medical Research is a little different from that of other research organisations in the country, such as, the C.S.I.R. which works through their own institutes, a large number of them. The Indian Council of Medical Research operates differently. One of the established methods of promoting research is to encourage the same in different medical faculties, in colleges all over.

2.17. We have not increased the number of institutes except creating one last year. The expenditure incurred by these permanent institutes has increased from Rs. 36 lakhs to Rs. 63 lakhs over the period of the last few years. Our funding of the institutes is on the basis of their research programmes with them. We do not deny them the funds. Since last year, I felt that these institutes should be given the benefit of the advice of scientific workers and in each institute now has been created a scientific

advisory committee consisting of 5 or 6 outstanding scientists in that particular field who now help in the formulation of research programmes and putting the programmes before the Council. I am sure, the things will improve now.

2.18. Another thing that the Council has done now is to take up directly different national problems. We do not depend on the research projects coming up. We ourselves spell out the projects, for example, projects like making a study of diabetes in the country. Then there is a study of blindness. The Council has spelt out the programme of blindness study in the country. These are very important projects.

2.19. We do not deny the money to these institutes. At the same time, we want to ensure that the money spent is well spent. In the Institutes, some scientific advisory bodies have been created and a thorough study is being done. Of course, the Council is aware of the growth of these institutes."

2.20. The Committee note with concern the conclusion of the Reviewing Committee that the allocation of funds for medical research in general and the Indian Council of Medical Research in particular is extremely meagre. According to estimate of the Reviewing Committee the expenditure on medical research constitutes about 4% of the total research efforts of the country or 0.008 of the gross national income. The expenditure of the Indian Council of Medical Research during the first three Plan periods is stated to be 4.8 to 6.7% of the total expenditure on medical education, training and research. The Committee find that the expenditure of the Council has progressively increased from Rs. 9.3 lakhs in 1947 to Rs. 156 lakhs in 1969-70, and Rs. 182 lakhs in 1970-71. According to the figures furnished by the Ministry, the expenditure of the Council amounting to Rs. 156 lakhs in 1969-70 worked out to 1.4% of the current health expenditure of the Government of India. The percentage of expenditure on teaching and research to the total current health expenditure during the year 1961-62 is stated to be 4.6 and 2.1 in U.S.A. and U.K. respectively.

2.21. The governing body of the Council in April 1970 after considering the report of the Reviewing Committee and the recommendations of the Scientific Advisory Board thereon decided to refer the question of increasing the quantum of grant to the Council to a Sub-Committee. The Committee desire that this should be considered with all seriousness that it deserves. The Committee feel that the Indian Council of Medical Research should be able to discharge its obligations effectively and lack of funds should not hamper this objective. On its part the Indian Council of Medical Research should identify the areas which need attention and chalk out a suitable programme of priorities which should be kept under constant review.

2.22. Another important recommendation made by the Reviewing Committee is about apportionment of funds by the Council. It has suggested that the permanent laboratories (existing and proposed) of the Indian Council of Medical Research should be allocated about 40% to 45% of the funds and about 40% to 45% should be distributed equitably between the Research Fellowships and Research Cadre programmes and assistance for free research through the medium of ad hoc enquiries. From the figures furnished to the Committee they find that during the year 1970-71 out of the total grant of Rs. 180 lakhs, the expenditure incurred on the permanent research institutes

amounted to Rs. 69 lakhs which works out to about 38.3%. The Committee note the larger percentage of expenditure on permanent institute during the year 1970-71 as against 29.1% during the preceding year. The Committee was informed during evidence that the Council have now decided to take up directly different national problems and not to depend on the research projects coming up before them. The Committee hope that due attention will continue to be paid to the needs of the existing permanent institutes. The Committee hope that the expenditure incurred on the research activities by these institutes and on other schemes will be spent to the best advantage of the nation.

2.23. From the figures made available by the Ministry, the Committee find that substantial funds have been received under the PL-480 schemes for research projects of national importance. In respect of four PL-480 schemes undertaken directly by the institutions of the Indian Council of Medical Research, grants amounting to Rs. 11.86 lakhs were received during the year 1967-68, Rs. 13.76 lakhs in 1968-69, Rs. 17.10 lakhs in 1969-70 and Rs. 12.61 lakhs in 1970-71. In respect of eight projects located in the institutions, not under the control of Indian Council of Medical Research, but where funds were routed through the Council and where the Council is the coordinating agency, the grants received were Rs. 4.95 lakhs in 1967-68, Rs. 8.59 lakhs in 1968-69, Rs. 12.61 lakhs in 1969-70 and Rs. 14.05 lakhs in 1970-71. Besides grants amounting to Rs. 482 lakhs were received for 71 PL-480 schemes located outside the Indian Council of Medical Research Institutions direct by the grantees. During evidence the Committee were informed about the lacuna in the present procedure of giving grants for PL-480 schemes. A new procedure is stated to have been formulated whereby the research projects would be referred to the Council direct, who after scrutiny would approach the Finance Ministry for funds. It would be for the Finance Ministry to allocate funds from PL-480 grants or otherwise. The Committee hope that the new procedure will be found conducive to national interests.

CHAPTER III MAN POWER OF THE COUNCIL

3-1 The Committee desired to be furnished with a statement giving break up of the staff employed under the categories Scientific, Technical, Administrative and Ancillary in respect of the Headquarters, permanent units and semi-permanent units during the years 1967-68 to 1970-71. The Ministry of Health & Family Planning have furnished the following information :—

	Headquarters				Permanent Institutes/Centres				Semi-permanent units			
	67-68	68-69	69-70	70-71	67-68	68-69	69-70	70-71	67-68	68-69	69-70	70-71
Scientific	10	11	13	23	163	169	170	210	33	35	57	45
Technical	8	8	11	16	129	146	147	180	24	31	45	53
Ancillary (Technical)	—	—	—	—	139	141	137	137	12	19	28	30
Ancillary (non-technical)	33	33	34	41	151	147	146	164	20	19	41	41
Administrative	114	116	117	136	112	117	118	138	16	17	25	14
TOTAL	165	168	175	216	694	720	718	829	105	121	196	183

3-2. In another statement the Ministry of Health & Family Planning have furnished the following data showing category-wise break up of Administrative staff:

	Headquarters				Permanent Institutes/Centres				Semi-Permanent Units			
	67-68	68-69	69-70	70-71	67-68	68-69	69-70	70-71	67-68	68-69	69-70	70-71
Class I	5	5	5	5	—	—	—	—	—	—	—	—
Class II	55	27	28	41	22	24	26	31	2	2	2	1
Class III	84	84	84	90	90	93	92	107	14	15	23	13
*Class IV	33	33	34	41	86	83	84	92	4	3	8	8
Total	177	149	151	177	198	200	202	230	20	20	33	22

*This includes only "Non-technical ancillary" staff who are working on the administration side, such as Daftry, Peons, Sweepers, Chowkidars, Malis etc.

3.3. The Committee desired to know whether any norms had been laid down for employment of Research Staff *vis-a-vis* supporting administrative, technical and ancillary staff under the Council. In a written note the Department of Health and Family Planning have stated, "It is not possible to lay any norm for employment or research staff *vis-a-vis* administrative, technical and ancillary staff under the Council. The number of people to be employed depends on the nature of the project and their varying requirements of different categories of staff e.g. a project on Experimental Medicine would need an Animal Attendant a project in epidemiology would need Social Scientists, Social Workers and Field Workers, etc. In this connection, it may be pointed out that these requirements are decided by the Expert Committees and the Scientific Advisory Board, while scrutinising the research projects. Another important consideration is contributory facilities of the Institute in which the Project is located." During evidence, the Director General stated, "Technical staff includes scientific workers, technologists, technicians and so on. But there is a large supporting staff of field workers which come under the classification of administrative staff and not technical staff. The overloading on the administrative side in the form of administrative officer or upper division or lower division clerks is not so much; other ancillary staff are also classified as administrative staff."

3.4. The Reviewing Committee has observed in its Report that, "The so called 'support-ratio' between the scientists class and the experimental' or 'research assistant' class and the so-called 'assistant' or 'technician' class of workers under the Council shows a gross inadequacy with regard to the better qualified trained technicians. The support ratio over the years under the Council has been in the order of 1 : 10.8 : 1 whereas the optimum recommended for research organisation in developed countries is 1 : 2 : 1. On purely arithmetical considerations, there is an absolute dearth of trained technical personnel even if it is assumed that the Research Assistant class are carrying out the duties and functions expected of them. As a result, many of the scientific employees of the Council are forced to spend their time on purely mechanical work, such as observation and recording at the expense of other vital activities. Hence, it is imperative for the Council to develop a better class of technical personnel who can shoulder an increasingly greater and reliable responsibility in assisting research workers in their routine tasks."

3.5. The Committee desired to know the procedure regarding recruitment of administrative and research staff. The Director General stated, "The appointment of research staff is done at the All India level, by advertisement in leading papers and in case of senior staff also by sending notices of advertisement to leading institutions and the members of the scientific advisory committee and the governing body. There are two types of candidates—those who apply in response to advertisements and those who are proposed by direct contact which they call contact candidates. There is an appointment committee of experts who go through the applications and interviews candidates. The contact candidates are not interviewed because their performance, their papers etc. research back ground and other things are all given in the paper and then the executive committee goes through the recommendations of the selection committee and approves or disapproves." Asked whether the candidates are contacted by the Council, The Director General replied, "A copy of the advertisement is sent to the leading scientists, all the leading institutions to propose anyone whom they know would be suitable for this job. The candidate would be considered

on merits. That is what is called in scientific language 'hunting for talent.'" In a written reply the Department have stated, "The so called 'Contact candidates' are really those who are sponsored by eminent scientists, members of the Governing Body/Scientific Advisory Board and Heads of Institutions etc. It is only when the candidate has been sponsored that the Council contacts him and asks whether he is willing or not to be considered for the post. If he is willing, he is considered for the post alongwith other candidates and the selection is made on merits."

3.6. The Committee desired to know the percentage of contact appointments of research staff during each of the years 1967-68 to 1970-71. In a statement furnished to the Committee the Ministry of Health & Family Planning furnished the following position in respect of Headquarter Office and permanent Institutes :—

Year	No. of Research Staff Appointed	No of persons appointed on contact basis (sponsored)
1967-68	23	Nil
1968-69	28	2
1969-70	25	1
1970-71	36	2
Total	112	5
Percentage of the staff appointed on contact		= 4.46%

3.7. The Committee desired to know the procedure for selection of category of staff other than research staff. In a written reply the Ministry of Health & Family Planning have stated, "The staff in the Council's office and other research projects is recruited through open advertisement/ Employment Exchange. There is also a provision to give preference to the retrenched staff of the Council provided they satisfy requisite conditions."

3.8. The Memorandum of the association of the Council provides, "Service in the Council shall be temporary, renewable on a year to year basis, subject to the sanction of the Governing Body, unless an officer has been appointed on a contract basis for a specific number of years on special terms." The Committee desired to be furnished with a statement showing (a) how many were permanent, (b) how many were on contract basis, and (c) how many were continued on a year to year basis. Out of a total number of staff in respect of Headquarters and permanent institutes as on 31-3-1971. In a written reply the Ministry of Health and Family Planning have stated, "Out of a total number of staff in the Headquarters Office of the Council Permanent Institutes as on 31st March, 1971, 62 were permanent, 4 on contract basis and 906 were continued on a year to year basis." The information category-wise in respect of Headquarters office and permanent institutes is given below :—

	Permanent	On contract	Year to year basis	Total
1. Scientific	61	4	135	200
2. Technical	1	—	171	172
3. Administrative	—	—	265	265
4. Ancillary (Technical)	—	—	134	134
5. Ancillary (Non-technical)	—	—	201	201
	62	4	906	972

3.9. During the evidence Committee enquired whether the practice of appointment of staff on year to year basis did not result in not attracting the best talent either on administrative side or on research side because of lack of security of service. The Director General agreed with this view and stated, "I perfectly agree with you. I have brought out this point many times that this does not attract people, because either they will come on deputation keeping their lien or they will not come at all. So in recent years, the Council has created a small permanent cadre. This is one of the reasons why we are always in difficulty in finding the staff." The Secretary, Ministry of Health and Family Planning stated, "I entirely agree that the posts which are likely to last for any length of time should be made permanent." Asked about the reasons for continuing year to year system of appointment, the Secretary stated, "A number of research schemes are supposed to last for not more than two or three years, and the people who are working on these schemes are supposed to move from these research schemes on to something quite different. To make such people permanent would not be proper." Asked about the justification for not making headquarters office administrative staff permanent, the Director General stated, "The headquarters staff is still on continued appointment, but not permanent. But it is under the active consideration of the Ministry."

3.10. The Committee desired to know the maximum and minimum period of contract and the maximum length of service of those who continued on year to year basis. In a written reply the Ministry of Health and Family Planning stated: "The maximum period of contract was for 5 years and the minimum period one year. The maximum length of service of those who have been continued from year to year basis is 34 years. It may be mentioned in this connection that a proposal for making 80% of the staff employed in the Council's Headquarters and its permanent institutes as permanent has recently been approved by the Executive Committee of the Council. The matter is being processed further with the Government of India and the Governing Body of the Council. The Council has also constituted a Permanent Research Cadre and a permanent Technical Cadre."

3.11. The Committee desired to be furnished with a statement showing the number of persons who entered service on a year to year basis during the past 10 years, and those left the service to seek better jobs. The Department of Health & Family Planning have furnished the following information for years 1961-71 :—

Institution	No. of persons entered into service	No. of persons left for better jobs	No. of persons left for other reasons	No. of persons continuing.
Headquarters Office	281	26	65	190
Virus Research Institute, Poona.	148	-	51	97
National Institute of Nutrition, Hyderabad.	148	22	42	84
Tuberculosis Chemotherapy Centre, Madras.	274	15	89	170
Cholera Research Centre, Calcutta.	94	11	10	73
National Institute of Occupational Health, Ahmedabad.	51	1	4	46
Institute for Research in Reproduction, Bombay	107	19	9	79
Indian Registry of Pathology, New Delhi	34	1	6	21
TOTAL	1137	95	276	770

3.12. In this connection the Reviewing Committee *inter alia* observed, "Unlike in the past, when research opportunities were few, at present the ICMR seems to encounter difficulties in finding suitable scientific workers who can lead and organize new fields of research. The poor response and limited choice is ultimately traceable to the comparatively unattractive working conditions in the midst of competing attractions for medical and science graduates. In the context of present day economies, it is unreasonable to expect any sizable corps of scientists to forgo the attractions of clinical medicine and teaching experience and dedicate themselves to a long and uncertain career in research. Attracting the right quality of scientists for medical research is bound to suffer if the working conditions are far below those prevailing in comparable scientific institutions like the Post-graduate institutes, the Central Health Services, the Armed Forces, the CSIR and the Bhabha Atomic Research Centre. The drift and migration of research fellows and Assistant Research Officers and the limited opportunities for promotion even within the permanent institutes of the ICMR are ample proof of the fears and inhibitions of its employees. These appear to be inexplicable delays in applying to the ICMR employees even the ordinary revisions in the payscale and non-practising allowances, etc. made from time to time for the scientific employees under the Ministry of Health or the centrally supported medical institutions". The Reviewing Committees have accordingly suggested that the payscale and structure of the scientific personnel under ICMR should be comparable with that of the Central Health Service or the proposed Indian Medical and Health Service in the case of medical employees and the CSIR in the case of non-medical employees.

3.13. The Reviewing Committee have also recommended that the technical staff should also be provided with avenues of promotion. In a written reply the Ministry of Health & Family Planning have stated that this has been done and a separate cadre of technical staff who are working under the Council has been created. With regard to the administrative staff, the Reviewing Committee have suggested that the payscale and structure etc. should be comparable to that of CSIR.

3.14. The Reviewing Committee had also recommended that the Research Cadre of the Council should adequately cover a large number of disciplines. According to a written reply furnished by the Department of Health & Family Planning, steps have been taken to enlarge the number of workers of different disciplines in the Research Cadre to meet the future needs of medical research in the country.

3.15. In their written reply, the Ministry of Health & Family Planning have stated that in pursuance of the recommendation of the Reviewing Committee the staff of the Headquarters office of the Council has been increased.

3.16. From the date furnished to the Committee, they find that the staff of the Headquarters office of the Indian Council of Medical Research, its permanent Institutes/Centres and semi-permanent units has increased from 964 in 1967-68 to 1009 in 1968-69, 1089 in 1969-70 and 1228 in 1970-71. Out of the total staff of 1228 in the year 1970-71 the scientific staff was 278, Technical 249; Ancillary (Technical), 167; Ancillary (Non-technical), 246 and administrative, 288. The break-up of the Administrative staff shows that Class IV staff was 23% in the headquarters, 40% in the permanent

Institutes/Centres and 36% in the semi-permanent units. The Reviewing Committee observed in its Report that the so called 'support-ratio' between the scientists class and the 'experimental' or research assistant class and the so called 'assistant' or 'technical' class of workers under the Council shows a gross inadequacy with regard to the better qualified trained technicians. The Committee have been informed by the Ministry that it is not possible to lay any norm for employment of research staff vis-a-vis administrative, technical and ancillary staff under the Council. The number of the project and their varying requirements of different categories of staff. According to the Reviewing Committee, the optimum support ratio recommended for research organisations in developed countries between the scientists class and the 'experimental' or 'research assistant' class and the so-called 'assistant' or 'technician' class is 1:2:1. The Committee have been informed that the staff of the Headquarters office has been increased in pursuance of the recommendations of the Reviewing Committee. The Committee desire that the staff positions of the headquarters office, permanent institutes/centres and semi-permanent units should be kept under constant review to make sure that they are not in excess of the requirements. The Council should also lay down guidelines or norms regarding the ratio of scientific and supporting staff for the headquarters and the permanent institute centres and semi-permanent units and imbalances should be suitably corrected. In this connection the Committee would like to point out that the presence of too many administrative staff in a research institute or centre is undesirable as it spoils the atmosphere of research.

3.17. An unsatisfactory feature which came to the notice of the Committee is that the bulk of the staff of the Council is continued on a year to year basis. From the break-up furnished to the Committee, they find that out of a total number of staff in the Headquarters Office of the Council Permanent Institutes as on 31st March, 1971, 62 were permanent, 4 on contract basis and 906 were continued on a year to year basis. The maximum length of service of those who have been continued from year to year basis has been stated as 34 years. The Committee consider that insecurity of service of this magnitude would not attract the best scientific and technical staff for service in the Council. The Committee have been informed that a proposal for making 80% of the staff employed in the Council's headquarters and its permanent institutes as permanent has recently been approved by the Executive Committee of the Council and the matter is being processed with the Government of India and the Governing Body of the Council. The Council had also constituted a permanent research cadre and a permanent technical cadre. The Committee desire that keeping in view the long term and irreducible requirements of the Council the question of confirmation of a substantial number of staff of the Council, which is long over due, should be finalised expeditiously. The Committee would like to be informed of the decision taken in the matter.

3.18. The Committee also desire that Government should carefully consider that the pay scales of the scientific and technical staff and other facilities in the Council are comparable with the staff in other Government organisations so as to promote contentment and attract the best talent available to the Council and its research institutions.

CHAPTER IV RESEARCH PROGRAMMES

Ad-hoc Research Schemes

Audit Paragraph

4.1. (a) *Delay in completion of schemes.*—A review of schemes undertaken from 1961 onwards disclosed that 223 schemes continued beyond the period initially planned which was two to three years. In 13 cases out of these, the periods of extension ranged from 3 to 5 years as shown below :—

Extension of	No. of schemes	Expenditure during planned period (Rupees in lakhs)	Expenditure for the extended duration
3 years	6	1.91	13.40
4 years	3	1.47	12.77
5 years and above	4	1.50	5.79
TOTAL	13	4.88	11.96

4.2. The Ministry stated (December 1970) that "each scheme is reviewed every year and its extension is determined by the expert committee on the basis of the results" and that "an extension is granted after the experts are completely satisfied that this is necessary in the interest of the research and the achievement of the objectives."

4.3. A Review Committee appointed by the Council in September, 1966 to assess the progress made in the various fields of medical research sponsored by it and to assess the work and contribution of the permanent research institutes and (semi-permanent) research unit/cells of the Council, etc. reported in 1968 that the Council has to its credit a magnificent record of achievements; it has initiated and promoted both long-term and short-term medical research in the country and has taken "sustained interest in the development of specialised research institutes pertaining to nutrition, virus diseases, tuberculosis, cholera, etc. It has encouraged establishment of a number of research units in clinical medicine and basic medical sciences as well as quite a few service-cum-research units. It has continued to support an increasingly large number of short-term research schemes." The Review Committee also pointed out that, while there had been "an impressive growth in the number of research enquiries", it was "not a matter for satisfaction or complacency". It pointed out that "not many of the researches are of a probing nature", and that the absence of concurrent inspection and review by the Council had "led to a large amount of repetitive and fact-finding research, much of which is not likely to serve the national interest". The Committee also drew attention to "wasteful concentration of

research schemes" in certain institutions, which it attributed to "extraneous considerations and not on the merit of research schemes alone". The Committee *inter alia* made the following recommendations :—

- (i) Normally the schemes should be sanctioned for a minimum period of two and a maximum of three years at the end of which they should be almost invariably terminated.
- (ii) Schemes costing more than Rs. 50,000 per year in any single department should have official appraisers.
- (iii) Larger institutions should be encouraged to build up their own research funds so that smaller ones can get finances for their schemes from the Council.

It was stated (December 1970) that the recommendations were by and large being implemented by the Council.

4.4. It was also stated that "the bigger projects have their own projects committees which are continuously evaluating the progress of the work of the project". In regard to item (iii) it was added that "the Governing Body of the Council has decided that, so long as the Institutes were not able to get adequate funds, I.C.M.R. may support good scientists to continue with their research work in such places."

[Para 64 (I) (a) of the Report of Comptroller and Auditor General of India (Civil) 1969-70]

4.5. The Committee drew attention to the observation of the Reviewing Committee that "not many of the researches are of a probing nature", and that the absence of concurrent inspection and review by the Council had led to a large amount of repetitive and fact-finding research, much of which is not likely to serve the national interest." The Director General stated during evidence, "The Reviewing Committee was a very high-powered committee and it had made this suggestion which we have taken into account. While we cannot make a general statement whether the projects are of a probing nature or superficial nature, I will admit that there were certain projects which were not of a probing nature. It would depend upon the institutions from which they come. Sometimes a research worker comes from abroad and does research for a small amount of money for a period of two or three years. Obviously, such a project cannot be of a probing nature. But the Experts Committee go into the details of each project to see its worth. Especially after the Review Committee Report the Scientific Advisory Board also looks into it and we are doing our best. But, I would admit, one can always lay hands on certain projects which are not of a probing nature. But that would be more due to the immaturity of the research worker or the lesser amount of money or the very limited facilities available where they cannot take or projects of a probing nature and if we stop the research it will be doing harm."

4.6. The Committee pointed out that according to the Reviewing Committee "there is an undue concentration of research schemes. There is some justification behind comments that considerations other than merit of research schemes have played a part." The Director General stated during

evidence, "About concentration, I found out that there is about 40 per cent concentration in about 8 or 10 institutions in the country. They are institutions, which have the highest academic record in the country and have the latest research equipment, like the All India Institute, King George's Medical College, Lucknow, Madras Medical College, Grand Medical College, Bombay, Tropical School, Calcutta. Best projects would come out of them. But I can assure you that no project is ever rejected if it is academically sound. So, concentration does not affect the research. If we go only on one criterion, that is, of avoiding concentration, it becomes very difficult for us to say that, though academically sound, because you have seven we would not give you the eighth. We will do that if by saving that money we might advance others. I think, it will be doing harm to medical research because they have the best people of the country today who are expert research workers."

4.7. The Committee drew attention to the observation of the Reviewing Committee "While it must be admitted that better organised institutes submit better research schemes, there is some justification in the argument that many of the expert groups and advisory committees are heavily over-represented by members drawn from these institutes. As a consequence there seems to be better basis for the general contention of several officers in charge of ICMR schemes as well as the members of the advisory committee that a major part of this lopsided distribution is due to extraneous considerations and not merit of research schemes alone. If the number of different fellowships offered in these institutes is taken into account, the quantum seems to be more than it is apparent." The Director General stated, "After the publication of this Review Committee Report, the Council changed its pattern completely taking into consideration seriously the remarks made by the Review Committee because there must be some ground for this remark to be made. The expert committees were reconstituted and over 50 per cent of the new members were brought in from smaller colleges. So, the whole sort of caucus that, according to the Report, was created, was disrupted. The second important thing, which was a complaint, was that these committees were open committees. A large number of people used to come as visitors who might influence the judgment of the experts by giving their opinion. A sort of lobbying had started. Now the Committees were held *in camera* and nobody is allowed to come to these committees. Then, the membership of the committee, at least in the first year, is kept secret so that even those who give the project do not know who are the members. This is exactly what we are trying to do taking into consideration on the recommendations made in this report. The committees will again be reconstituted this year, because they are for a period of three years." The Secretary, Ministry of Health & Family Planning stated, "My own reaction to this is that since the Review Committee gave this report there has been a very honest attempt on the part of ICMR to set matters right. This is reflected in two ways. One is a small change. The number of major institutions being given grants has fallen slightly since then. It used to be 30, 32, 34 and so on. In 1970-71 it is only 26. The other bigger change is that we have not received any complaints. If people are overlooked and they feel any sense of injustice, they are quick to complain. The scientific community also complains; we do not find any hold-back on their part. We have not received any complaint in the Ministry about worthy research projects having been overlooked."

4.8. The Committee desired to be furnished with a note showing when the Expert Committee were reconstituted following the publication of the Reviewing Committee Report and their composition institution-wise. In their note the Ministry of Health & Family Planning stated that the Governing Body of the Council considered the recommendation of the Reviewing Committee for the first time in 1970. These Expert Committees were therefore formed before the acceptance of the Report of the Reviewing Committee. The term of these Committees is finishing on 31st March, 1972. The Ministry furnished the composition of the Committees for the terms 1966-67 to 1968-69 and 1969-70 to 1971-72. The Committee find that out of 97 institutions represented on the Expert Committees of the term 1969-70 to 1971-72, 63 institutions were also represented on the preceding Committees. Some of the institutions were represented by as many as 4 to 21 experts, while others were represented by a single expert.

4.9. The following statement shows the names of institutions which are represented by 4 or more experts :

Name of the Institute	No. of experts serving on expert committees for years 1969-70 to 1971-72
1. S. N. Medical College, Agra	8
2. Tata Memorial Centre, Bombay	4
3. Indian Institute of Sciences, Bangalore	6
4. Postgraduate Institute of Medical Education & Research, Chandigarh	10
5. School of Tropical Medicine, Calcutta	5
6. Institute of Postgraduate Medical Education and Research, Calcutta	4
7. National Institute of Nutrition, Hyderabad	4
8. K. G. Medical College, Lucknow	6
9. All India Institute of Medical Sciences, New Delhi	21
10. Maulana Azad Medical College & Associated Irwin & G.B. Pant Hospital, New Delhi	8
11. Indian Council of Medical Research, New Delhi	4
12. Directorate General of Health Services, New Delhi	5
13. Jawaharlal Institute of Post-graduate Medical Education & Research, Pondicherry	5
14. Christian Medical College and Hospital, Vellore	7
15. Banaras Hindu University Varanasi	8

4.10. The Committee desired to be furnished with a statement giving break-up of the grants given for ad hoc research schemes institution-wise for the years 1967-68 to 1970-71 and number of representatives of the institu-

tions on the Expert Committees. From the data furnished by the Ministry of Health & Family Planning the following position emerges :

Name of Expert Committees concerned with grants	1967-68				1968-69			
	Institutions represented		Institutions not represented		Institutions represented		Institutions not represented	
	No. of schemes	Grants (Rs.)	No. of schemes	Grants (Rs.)	No. of schemes	Grants (Rs.)	No. of schemes	Grants (Rs.)
1	2	3	4	5	6	7	8	9
1. Advisory Committee on National Health problems	—	—	2	19,000	1	8,912	2	33,500
2. Expert Committee on Cholera	5	1,20,269	—	—	7	1,65,162	3	21,011
3. Expert Committee on Environmental Hygiene and Sanitation	4	49,507	2	22,728	1	10,772	5	62,517
4. Expert Committee on Leprosy	2	1,70,487	4	29,051	3	2,15,111	3	28,494
5. Expert Committee on Occupational Health	2	9,303	2	20,154	1	18,564	2	44,029
6. Expert Committee on Tuberculosis	3	37,847	17	2,81,337	2	13,427	8	2,52,735
7. Expert Committee on Venereal and Dermatology diseases	2	5,442	3	26,502	2	20,197	1	9,715
8. Expert Committee on Virus and Arthropod Borne Diseases	9	2,69,719	8	1,65,953	7	2,26,004	20	2,35,511
9. Expert Committee on Nutrition	11	77,427	14	1,89,329	10	1,08,718	18	2,39,084
10. Expert Committee on Scientific aspect of Family Planning	10	1,50,609	14	1,25,165	19	2,57,197	24	2,13,016
11. Expert Committee on Maternal and Child Health	6	1,49,462	6	28,390	7	1,45,770	14	49,547
12. Advisory Committee on Basic Medical Sciences	1	—	—	—	—	—	—	—
13. Expert Committee on Anatomy	6	31,805	8	23,687	4	24,415	9	28,531
14. Expert Committee on Bio-chemistry	5	53,871	9	76,032	7	70,699	13	75,632
15. Expert Committee on Endocrinology	4	70,160	9	76,810	5	47,058	7	47,441
16. Expert Committee on Microbiology	7	51,329	5	32,027	4	23,681	7	83,654
17. Expert Committee on Pathology	6	48,400	7	34,922	4	28,619	5	39,701
18. Expert Committee on Pharmacology	9	63,573	8	31,379	12	76,205	19	87,301

Name of Expert Committees concerned with grants	1969-70				1970-71			
	Institutions represented		Institutions not represented		Institutions represented		Institutions not represented	
	No. of schemes	Grants (Rs.)	No. of schemes	Grants (Rs.)	No. of schemes	Grants (Rs.)	No. of schemes	Grants (Rs.)
1	10	11	12	13	14	15	16	17
1. Advisory Committee on National Health problems	1	25,790	2	60,000	--	--	--	--
2. Expert Committee on Cholera	7	1,96,871	5	60,130	4	1,64,518	3	13,050
3. Expert Committee on Environmental Hygiene and Sanitation	--	--	4	51,767	1	22,989	3	28,732
4. Expert Committee on Leprosy	3	1,64,916	2	14,874	3	3,19,845	3	11,975
5. Expert Committee on Occupational Health	2	38,272	3	26,396	2	38,381	4	48,521
6. Expert Committee on Tuberculosis	7	79,592	8	80,612	--	--	12	1,16,854
7. Expert Committee on Venereal and Dermatology Diseases	4	29,459	6	18,825	--	--	7	23,865
8. Expert Committee on Virus and Arthropod Borne Diseases	2	93,162	20	3,92,013	6	2,77,668	13	1,94,416
9. Expert Committee on Nutrition	19	1,61,619	23	2,47,965	13	89,091	22	3,77,711
10. Expert Committee on Scientific aspect of Family Planning	16	2,28,578	28	2,50,751	18	4,65,991	37	6,51,174
				(Expert Committee on Reproductive Biology and Fertility Control)				
11. Expert Committee on Maternal and Child Health	8	1,51,205	23	1,38,546	7	52,355	29	3,63,433
12. Advisory Committee on Basic Medical Sciences	--	--	--	--	--	--	--	--
13. Expert Committee on Anatomy	4	22,813	9	34,822	1	1,742	4	8,212
14. Expert Committee on Bio-chemistry	10	88,246	16	96,366	7	88,042	21	1,74,766
15. Expert Committee on Endocrinology	6	82,998	16	1,58,097	8	1,05,942	13	1,38,395
16. Expert Committee on Micro-biology	1	14,906	15	2,59,936	3	39,687	16	2,87,321
17. Expert Committee on Pathology	3	17,784	8	46,744	1	11,440	3	12,392
18. Expert Committee on Pharmacology	12	77,841	18	97,991	20	1,09,597	19	86,069

	1	2	3	4	5	6	7	8	9
19. Expert Committee on Physiology		2	31,716	12	78,800	4	59,673	11	49,875
20. Advisory Committee on Clinical and Experimental Medicines		16	95,535	19	2,06,353	18	1,01,669	26	2,31,771
21. Expert Committee on Dental Health		5	46,054	4	22,759	7	40,531	1	2,493
22. Expert Committee on Neurology		6	31,453	5	39,711	4	26,326	10	84,553
23. Expert Committee on Ophthalmology		10	1,23,497	6	25,656	16	1,32,900	7	39,581
24. Expert Committee on Mental Health		3	14,984	6	56,850	5	44,988	7	40,830
25. Expert Committee on Urology		3	23,703	1	3,801	6	51,100	1	12,717
26. Expert Committee on Cardiovascular diseases and Hypertension		9	1,06,821	9	82,825	6	75,197	8	49,898
27. Expert Committee on Haematology		2	13,843	10	52,594	2	30,274	10	84,014
28. Expert Committee on Gastro-enterology		10	75,594	2	8,067	12	1,06,554	1	8,423
29. Advisory Committee on Indigenous Drugs (CORS)		12	3,09,270	50	7,72,060	17	3,88,476	51	8,39,007
30. Joint Advisory Committee on Emergency and Aviation Medicines		3	51,336	4	35,586	4	60,590	5	44,472
31. Expert Committee on Composite Drug Research Schemes									
32. Expert Committee on Medical Education									
33. Expert Committee on Human Genetic and Immunology									
34. Expert Committee on Clinical and Experimental Oncology									
35. Expert Committee on Expoliative Cytology									
36. Expert Committee on Health Practices									
TOTAL		173	22,83,016	256	25,67,528	197	25,78,789	298	30,39,053

	1	10	11	12	13	14	15	16	17
19. Expert Committee on Physiology		6	54,627	7	30,615	7	52,169	7	23,889
20. Advisory Committee on Clinical and Experimental Medicines		17	1,09,535	24	1,67,351	15	1,24,267	11	1,14,755
21. Expert Committee on Dental Health		10	50,244	2	15,857	8	35,337	2	5,742
22. Expert Committee on Neurology		3	16,954	10	55,569	7	75,881	5	35,736
23. Expert Committee on Ophthalmology		18	1,37,529	7	39,614	17	1,46,181	11	83,065
24. Expert Committee on Mental Health		4	44,227	9	92,658	3	23,724	12	1,01,086
25. Expert Committee on Urology		10	1,12,719	2	22,350	13	1,25,530	3	56,191
26. Expert Committee on Cardiovascular diseases and Hypertension		10	1,25,128	8	52,600	13	1,42,613	6	63,707
27. Expert Committee on Haematology		4	42,507	11	89,136	5	56,851	14	1,04,342
28. Expert Committee on Gastro-enterology		17	1,37,355	3	16,491	13	96,580	11	1,08,498
29. Advisory Committee on Indigenous Drugs (CGRS)		2	11,560	6	24,328	—	—	—	—
30. Joint Advisory Committee on Emergency and Aviation Medicines		4	50,708	3	35,670	—	—	—	—
31. Expert Committee on Composite Drug Research Schemes		9	3,86,904	35	9,78,143	—	—	—	—
32. Expert Committee on Medical Education		—	—	4	34,170	2	33,581	2	28,702
33. Expert Committee on Human Genetic and Immunology						10	74,011	7	55,298
34. Expert Committee on Clinical and Experiment Oncology						4	28,811	7	93,033
35. Expert Committee on Expoliative Cytology						6	69,847	1	10,666
36. Expert Committee on Health Practices						3	1,20,734	2	50,854
TOTAL		219	27,54,049	337	36,90,387	220	29,93,405	310	34,71,850

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4.11. In another statement the Ministry furnished the following details of the number of *ad hoc* research schemes financed by the Council in 1967-68, 1968-69, 1969-70 and 1970-71 and the number of institutions implementing them.

Year	No. of schemes	No. of Research institutes in which research schemes located
1967-68	396	67
1968-69	465	126
1969-70	518	84
1970-71	512	112

4.12. The Committee enquired about reasons for the delay in completion of certain schemes. The Director General replied: "It is correct that there was delay. It is also correct that there is some delay even now. In a big organisation dealing with large number of projects all over the country there are only two ways of data analysis. One is by the projects in their own institutions. A large number of medical colleges that are opened have not even the post of a statistician with them. Therefore they have no facilities for statistical analysis, though we try to ensure that in the beginning they do consult some statistician. The other way is the Council doing the analysis for them. The Council has very much augmented its statistical division."

4.13. Referring to 223 schemes which were continued beyond the period initially planned, the Director General stated, "The total number of these new schemes which were sanctioned from 1961 to 1967-70 were 1101 of which according to the Review Committee's report, 223 were extended beyond the initial period which varied from six months to 2 years. 13 were those which were going on beyond 3 years. It comes to 1.18% of the total schemes sanctioned. These were the schemes on which it is not possible for the research workers to tell what is going to happen. For example, there is a scheme for tobacco cancer. Suddenly at the end of 3 years, we find that no satisfactory progress has been made, and all I wanted may not have been done. So, we will not be able to foresee how much time it will take. As I said, this is only 1.18% of the total schemes. I may tell you that out of 13, 9 have already terminated and only four remain which will go upto March, 1972.".....In a written reply the Department of Health and Family Planning stated that two of the four schemes will be continued for the year 1972-73, one scheme will terminate on 31st March, 1972 and the other is being wound up.

4.14. The Committee desired to know the number of *ad hoc* schemes costing more than Rs. 50,000 undertaken during 1967-68 to 1970-71 and the number of such schemes evaluated as recommended by the Reviewing

Committee. In a written reply the Ministry of Health & Family Planning have furnished the following information :

Year	No. of Schemes
1967-68	8
1968-69	16
1969-70	14
1970-71	13

All the above schemes were evaluated annually in the Directorate of the Council, by the members of the Expert Committee concerned and also by the Scientific Advisory Board of the Council before their continuation was sanctioned. Besides, out of the above *ad-hoc* schemes, the work of six schemes, which had completed five years, has been evaluated by the Special committees constituted for the purpose."

4.15. At the instance of the Committee the Ministry of Health and Family Planning furnished the following figures in regard to the number of schemes undertaken during the years 1967-68 and 1968-69 and their present position :

	Years	
	1967-68	1968-69
1. No. of schemes undertaken	396	465
2. No. of schemes completed	295	401
3. No. of schemes abandoned	74	22
4. No. of schemes still continuing.	27	42

4.16. The Committee asked the reasons for abandonment of the schemes. The Director General stated, "In 1967-68, the schemes abandoned were either those schemes which the investigators did not want to continue with or the schemes which the Council terminated because of unsatisfactory work. Sometimes, the investigators do not want to continue with the schemes because they take a project and are transferred to another institute and, sometimes, they go abroad and they say, they cannot carry on with the work." The witness added, "As regards the schemes terminated by the Council on account of unsatisfactory work, 5.7 per cent of the total amount spent on research during the year." Asked about the steps taken to prevent termination of schemes the witness replied, "The reaction is reflected in the figures of next year. In 1968-69, the total number of abandoned schemes was only 22, that is 10 schemes which the investigators did not wish to continue with and 12 schemes terminated by the council on account of unsatisfactory work. The expenditure involved on abandoned schemes was 6.6 per cent while it was 3.1 per cent only on schemes terminated by the Council as compared to 5.7 per cent of previous year." The witness added, "It is a recognised fact that in research we should be ready for about 10 per cent infructuous expenditure. We do our best to avoid that. We try our best to scrutinise the scheme and see that it is academically sound. We see that the person who has given the scheme is going to be with the institute for that period and that the institute has got the facilities. This is all that we can do. Afterwards, if some body from

down south, 1000 miles away, or wherever it says "Sorry, I cannot continue with the scheme because the equipment which I want has not come or I am leaving the institute to become a professor or something like that", the scheme has to be terminated."

4.17. The Committee desired to be furnished with the details of the schemes abandoned during the past five years, expenditure incurred thereon and the reasons therefor. The Department of Health & Family Planning have furnished the following information :—

Year	No. of schemes abandoned	Total expenditure incurred on schemes (Rs.)
1966-67	17	2,77,857
1967-68	32	6,50,915
1968-69	15	2,80,190
1969-70	24	2,39,876
1970-71	23	4,01,205
TOTAL	111	18,50,043

The following are said to be the board reasons for termination of the schemes :

- (i) The Investigators did not wish to continue the research.
- (ii) Non-receipt of Report of the work done.
- (iii) For want of necessary equipments and material.
- (iv) Unsatisfactory Progress of work.
- (v) Deviation from the objectives etc. i.e. other reasons.

4.19. The Committee note the observations of the Reviewing Committee that while "there has been an impressive growth in the number of research enquiries", it is "not a matter for satisfaction or complacency". The Committee are particularly concerned over the conclusion that "not many researches are of a probing nature" and that the absence of concurrent inspection and review by the Council "had led to large number of repetitive and fact finding research much of which is not likely to serve the national interest". This needs remedial measures.

4.20. Another unsatisfactory aspect to which the Reviewing Committee drew attention is that there was undue concentration of research schemes in certain institutions which it attributed to extraneous considerations and not on the merit of schemes alone. It was admitted by the Director General, Indian Council of Medical Research during evidence "that there is about 40% concentration in about 8 to 10 institutions which have the highest academic record in the country and have the latest research equipment". The Committee were assured that no project is ever rejected if it is academically sound.

4.21. The Committee note the steps taken by the Council to avoid distribution of schemes to institutions on extraneous considerations. One of the steps is to reconstitute the Expert Committee by nominating over 50% of new members from smaller colleges/institutes. The other step taken is to hold the meetings of the Expert Committee in camera to avoid lobbying. Thirdly the membership of the Committee at least in the first year of the three years term is kept secret so that even those who give the schemes do not know the names of members. The Committee however, find from the written reply of the Ministry that the Expert Committee will be reconstituted in accordance with the recommendations of the Reviewing Committee on expiry of their term on 31st March, 1972. The Committee hope that while reconstituting the new Committee a reasonable number of members will be appointed from the smaller institutions/colleges.

4.22. The Committee note that 223 schemes undertaken from 1961 onwards continued beyond the period initially planned which was 2 to 3 years, out of these 13 schemes were extended for periods ranging from 2 to 5 years. According to the Review Committee normally schemes should be sanctioned for a minimum period of two and a maximum three years at the end of which they should be almost invariably terminated. The Committee desire that this should be followed in all cases unless it is in national interest to extend a scheme. A proper watch should be kept over the progress of the scheme to avoid delay in their completion.

4.23. The Committee note with concern that out of 396 schemes undertaken in 1967-68, 74 had to be abandoned. It is, however, gratifying to note that out of 465 schemes undertaken in 1968-69 only 22 were abandoned. During years 1967-68 to 1970-71 the total number of schemes abandoned is 111 involving a total expenditure of Rs. 18.5 lakhs.

4.24. Among the reasons mentioned for abandonment of the schemes are refusal of investigators to continue research, non-receipt of the report of the work done, want of necessary equipment and material, unsatisfactory progress in work and deviation from objectives. In paragraph 1.65 of their 62nd Report, (Third Lok Sabha), the Committee recommended that schemes should be initiated after thorough scrutiny so that the number to be dropped could be minimised. While the Committee appreciate that the number of schemes terminated has come down, they desire that the initial scrutiny of the scheme should be made more thorough with particular reference to the keenness of the investigator and facilities available for completion of the scheme.

Research Units

(a) Madanapalle Research Unit

Audit Paragraph

4.25. The Unit was taken over by the Council in 1956 and undertook (in all) three projects relating to tuberculosis for which Rs. 43.33 lakhs were spent upto March 1970. An expert group recommended (1965) that the project had been going on "for a sufficiently long time" and that the accumulated data should be analysed. This recommendation was endorsed by a working group which suggested that a consolidated report on the work should be made available by December 1966. The Review Committee set up by the Council, while noting the "Universal appreciation of the quality and standard of work", pointed out (1968) that the "study has extend-

ed for a very long period without any attempt at drawing conclusions." It drew attention to the "uncontrolled situation" due to investigation not having "been pin-pointed in time and space" and "supplementary problems having been taken over without the completion of the existing ones". After an inspection of the Unit, the Council found (July 1969) that no special field work was necessary for one of the three projects undertaken by the Unit and that about the other two projects, it was "difficult to assess the exact value of work done in the absence of a critical and competent analysis of the material." The Unit was closed on the 31st March, 1970. A part of the final report was received from the Unit in September 1970 and considered by the Expert Committee on tuberculosis and chest diseases in October 1970. The other part of the report is still awaited (December 1970).

[Para 64(II)(a) of the Report of Comptroller & Auditor General of India (Civil) 1969-70]

4.26. The Committee desired to know the reasons for delay in the analysis of data and the present position. The Director General stated, "I myself went to Madanapalle, stayed there and found that this was one of the finest collections of information but the data was not being analysed. Now because of the pressure that I could put on them to the extent of stopping their grant, the report of 1967 has come. We tried our best. We even tried to give him help from the Council. A statistical officer went there. After the Review Committee's report this report has come. This was reviewed last year and I think it was commended as a very good piece of work. Our duty was to impress on him as much as we can and I think we have succeeded in getting out of him upto 1967 and we are now pursuing it further." The Secretary, Ministry of Health & Family Planning added, "The results of TB research are available only after a long period of time. The Unit of Madanapally has been getting grants for 14 years. We have told him (the doctor in charge) 'We will not give you any more money till the valuable massive data already collected has been analysed. As soon as that is completed, I feel, this unit should be given more money. These are the research projects in the Madanapalle Report which have got delayed'."

4.27. In a written note, the Ministry of Health and Family Planning stated that the Madanapalle Tuberculosis Institute was receiving the following three grants :—

"1. ICMR enquiry on Tuberculosis Field Research Project from 1956-57 to 1969-70. This had two aspects :—

(a) Longitudinal study of the epidemiology of TB in South Indian rural population, or

(b) Drug therapy on community basis.

2. A WHO grant from 1956-57 to 1969-70 for work on Epidemiological Impact on Various Control Measures and

3. A PL-480 grant from 1964 to 1971 for investigations into the classification of Indian Mycobacteria.

No special field work except some field work for collection of material was found necessary in the third project. The total amount granted to this

project was Rs. 26,56,232/-. The project terminated on 31st August, 1971."

ICMR Enquiries at Madanapalle

4.28. The Work done on one aspect of the study namely on "Longitudinal study of the epidemiology of Tuberculosis in South India Rural Population" from 1950—67, including the work done with the Council's grant, has been received and was considered by the Expert Committee on "Tuberculosis and Chest Diseases" at its meeting held on 5th, 6th October, 1970. The Expert Committee comments are reproduced below :—

"The Committee considered the above report. It was noted with satisfaction that the report has been received from the investigator though somewhat late. It is expected that the report on the 'drug Therapy on Community Basis' would also become available soon."

Seven mass miniature radiographic surveys have been carried out and all patients diagnosed were offered treatment, initially in a hospital especially for the study. Coverages at some of the surveys have been very low indeed (lowest about 30 per cent). The report confines mainly to the findings of the three surveys with good coverages.

The total number of bacteriologically confirmed cases at three surveys was 54 in 1950-51, 68 in 1957-58 and 99 in 1964-65. Corresponding prevalence rates of tuberculosis were 4.1 per thousand, 3.8 per thousand and 3.1 per thousand respectively. However, due to some assumptions made, his evidence in the reduction of prevalence of bacteriologically proved tuberculosis is not conclusive. Further more, there has been neither any fall in the incidence of the disease over the years, nor in the pool of infection. However, there has been marked fall in the prevalence of cases positive by microscopy alone. There is a marked increase in the number of cases with resistant culture.

The Committee appreciated the pioneer work inspite of its shortcomings."

4.29. The further report on this subject and also the report on the second aspect of the study namely "Drug therapy on community basis" have not yet been received. The final evaluation of the work can be made only after these reports are received. The investigator has been reminded. The W.H.O. grant also given for the same work.

4.30. The Committee note with concern that although the Madanapalle Research Projects relating to Tuberculosis were taken up in 1956, the final report on the research work has not yet been received from the investigator. The total expenditure incurred on the project upto March, 1970 was Rs. 43.33 lakhs. It is regrettable that the Council did not care to find out for ten long years what was happening to the project till the Reviewing Committee drew attention to the "uncontrolled situation" due to investigation not "having been pinpointed in time and space" and "supplementary problems having been taken over without the completion of the existing ones." It is disquieting to note that due to the intransigence on the part of the investigator the grant to this Unit had to be stopped and ultimately the Unit itself had to be closed down on the 31 March, 1970. This reveals a sad state of affairs in the working of this Research Unit. Had the Council provided a system of

periodic inspection or appraisal, such a situation would have been avoided. In this particular case the concerned Expert Group and the Advisory Committee failed in providing guidance to the Research Unit. It is strange that having spent as much as 43.33 lakhs, the Government finds itself helpless to do anything in the matter. Considering the national importance of the project and the large amount of money spent therein, the Committee hope that vigorous measures would be taken to obtain the final report from the investigator without further delay. The Committee would like Government to learn a lesson from this case and institute necessary remedial action to remove all defects and deficiencies in the system.

(b) *Trachome Research Centre, Aligarh*

Audit Paragraph

4.31. The Unit, which was set up in 1960 to obtain basic information about the trachoma agent, its isolation, characteristics and preparation of a suitable vaccine, was paid Rs. 4.91 lakhs upto March 1970. The Review Committee (1968) pointed out that "although considerable money had been spent on this enquiry due to a variety of factors, the unit had not gathered the expected momentum". An expert group of the Council recommended (December 1968) that the Centre be wound up in March 1971 and that, in the meanwhile, it should concentrate on epidemiological research including clinical epidemiology and therapeutic trials, etc. Another expert committee which review the work of the Centre in 1969 pointed out that the previous expert group's recommendations had not been implemented and that, as no useful results were likely to accrue further, the Centre be closed down from April 1970.

4.32. The Ministry stated (December 1970) that "the work of the Trachoma Research Centre was wound up on 31st March, 1970 but the services of the technician, driver and a dresser were necessary for winding up the work of the Centre. The services of the technician and driver were terminated on 30th April, 1970 and that of the dresser on 31st May, 1970".

[Para 64 (II)(b) of the Report of Comptroller & Auditor General of India (Civil) 1969-70.]

4.33. The Committee desired to know the factors that hampered the successful working of the Trachoma Research Centre, Aligarh and the steps taken to remove the difficulties. In a note, the Ministry of Health and Family Planning have stated that Trachoma Research Centre, Aligarh was established in 1960 under Prof., Director, Institute of Ophthalmology, Muslim University, Aligarh. The aims and objectives were to study the epidemiology, natural history, virological aspects and prevention and to organise training programmes, with regard to Trachoma. From 1965 onwards, the Centre was under Dr., Officer in Charge, National Trachoma Control Project, Aligarh. The work of the enquiry has been reviewed every year by the appropriate Expert Committee of the Council. Till 1965 the overall progress of work was found to be satisfactory in spite of the initial handicaps particularly regarding the availability of staff.

4.34. Among the difficulties which hampered the work since 1965, was the heavy work under the Officer-in-charge, National Trachoma Control Project, inadequacy of staff, fluctuations in the voltage of electric current

at Aligarh, lack of animal house facilities; absence of a gas plant and the delays in procurement of equipment were also stated to be the difficulties.

4.35. In 1965, the Expert Committee on Ophthalmology recommended that the Centre could be located in a place where facilities exist for consultation with bacteriologists, ophthalmologists and virologists and suggested its location at the All India Institute of Medical Sciences, New Delhi. However, on inspection of the facilities at Aligarh, Late Col.the then Prof. of Microbiology, All India Institute of Medical Sciences, New Delhi, suggested that there was adequate material at Aligarh which had also other advantages. Therefore, he suggested that the progress of work at Aligarh should be watched for some more time.

4.36. However, inspite of advertisements and personal efforts, a suitable virologist could not be found for work at the Centre. Further, the officer-in-charge of the National Trachoma Control Project indicated that he was unable to devote sufficient time for the work of the Centre.

4.37. A Reviewing Committee was appointed by the Council in 1967 and the Committee recommended that the Centre should confine itself to work on the clinical epidemiology and therapeutic trials only and that virological work at the Centre may be withdrawn. The Committee also recommended that the studies on the selected aspects may be completed within three years.

In 1969, the Expert Committee while considering the progress of work, recommended that the project may be closed with effect from 31st March, 1970.

4.38. Therefore, it will be seen that the work initially went on very well for nearly five years but further development was hampered mainly because of heavy work load and also the difficulties of recruiting a suitable virologist. The Council took several steps to overcome the handicaps but ultimately, on the decision of the Expert Committee, the project was closed."

4.39. The Committee desired to know to what extent the Trachoma Research Centre was successful in achieving its objectives during 11 years of its existence. In a written reply the Ministry of Health and Family Planning have stated. "To start with in 1960, the Trachoma Research Centre, Aligarh had very comprehensive overall objectives including studies on the epidemiology, natural history, virological aspects and prevention and to organize training programmes with regard to Trachoma.

These were meant to be carried out on a very long term basis and only specific aspects could be taken up for investigations.

Based on the recommendations of the Reviewing Committee in 1967, the Centre was to confine itself to work on clinical epidemiology and therapeutics only. Given below is a list of the studies carried out :—

- (a) A large number of clinical studies on a comparative value of antibiotics and sulphonamides have been carried out and the drugs of choice for the treatment of trachoma have been established.

- (b) The role of trachoma as a predisposing causative factor to glaucoma has been established.
- (c) Trachoma virus was isolated and identified.
- (d) Laboratory techniques for culture of trachoma agents were developed.
- (e) Improved staining techniques were determined.
- (f) Laboratory studies on clinical diagnosis of trachoma were carried out.
- (g) Corroboration of cellular picture of smears from conjunctival clinical findings was established.
- (h) Two adenoviruses type 3 and type 15 were found associated with trachoma conjunctives.
- (i) The bacterial flora and trachomatous conjunctives in rural areas was surveyed.
- (j) Preliminary studies on the role of cattle and pet animals as a source of human ocular infection was carried out.

Regarding training programme, several long term and short term training courses were held both for national and international personnel. The WHO has also sponsored several candidates from other countries for the training.

It will, therefore, be seen that, within the limits of funds and technical personnel available the Centre has carried out several investigations of merit."

4.40. The Committee are distressed to note the unsuccessful working of the Trachoma Research Centre, Aligarh and its ultimate closure after it had been functioning for 10 years involving an expenditure of Rs. 4.91 lakhs. The slow and tardy progress of the project is attributed to non-availability of suitable staff, delays in procurement of equipment and absence of various other facilities at the Centre. This indicates that the research project was taken up without a thorough initial scrutiny. There is need to improve the working of the Research Centres and also for laying down specific targets or work schedules for them. The Committee suggest that the Council should review the procedure relating to the setting up and functioning of the Research Units in the interest of preventing waste and avoiding infructuous expenditure.

(c) General appraisal of working of Research Units

Audit Paragraph

4.41. After an evaluation of the work done by the various research units set up by the Council, the Review Committee pointed out in March 1968 that, while many of them "have contributed useful knowledge", "the size of the units has tended to grow, sometimes out of proportion to the actual needs" and that their programmes "which were originally clear-cut" had "tended to be diffuse" and "go round in concentric circles". The Committee observed that the size of the units should be "restricted" and "the optima laid down" and that assistance should be provided only for a limited period of not more than 3 years to 5 years subject to screening by appropriate advisory committees. The Scientific Advisory Committee of the Council accepted (in 1968) these recommendations. It was stated in

December 1970 that the work of the units was screened annually by the members of the appropriate advisory committees and the Scientific Advisory Committee of the Council and that the recommendation that the units should be assisted for a limited period had been implemented to a large extent.

[Para 64 (II)(c) of the Report of Comptroller and Auditor General of India (Civil) 1969-70]

4.42. The Committee desired to know the reasons why in most cases, the original schemes tended to diffuse. The Director General stated, "This is a statement to which I do not know what to answer. But it does happen to medical research or any other research that though we go out with a definite objective—for example we would like to study the result of tobacco chewing in relation to oral cancer and the project is well defined, for which we ask the money. Now, as we go on, we find that it is not tobacco chewing but bettlenut chewing or lime chewing that gives rise to cancer and then we have to make changes to this extent. We cannot tell what the results will produce. Even an outstanding Genetist of today, who has got a Nobel Prize does not know what the result of genetics would be on humanity. I would not like to refuse the Review Committee at all, but I feel that sometimes it is inevitable."

4.43. In a written reply, the Ministry of Health and Family Planning have stated that, "The Reviewing Committee had recommended that the Research Units under the Council should be progressively closed down and/or transferred to the host institutions. It was recommended that the host institutions should take over the Units at the end of the specific period as a part of the institutional activity. The recommendation of the Reviewing Committee that the Units should be for a limited period and, after the expiry of this period, should be taken over by the Institute concerned has been implemented e.g. the Neurophysiology Research Unit of the Council located at the All-India Institute of Medical Sciences, New Delhi, was taken over by the Institute on 1st April, 1971. The Haematological Research Unit at Calcutta is being taken over by the School of Tropical Medicine, Calcutta, from 1st April, 1972.

As recommended by the Reviewing Committee, no research cell has been established by the Council.

The Composite Drug Research Scheme has been taken over from 1st April, 1970 by the Central Council of Indian Medicine and Homoeopathy."

4.44. From the evaluation of the work of the various research units done by the Reviewing Committee, the Committee find that while many of them "have contributed useful knowledge", "the size of the units has tended to grow sometimes out of proportion to the actual needs" and that their programmes "which were originally clearcut" had "tended to be diffuse" and "go round in concentric circles". The Committee were informed during evidence that this happens in medical research or any other research that though the schemes have a "definite objective" at the initial stage, diffusion was sometimes "inevitable" as the research work proceeds. While the Committee appreciate that this may be the case in some projects appropriate measures may be taken to ensure that this does not happen as a rule, and the units do not tend to grow out of proportion to the actual needs and continue beyond the specified period.

4.45. The Committee note that in pursuance of the recommendation of the Reviewing Committee, the Council has transferred certain units to the host institutions after the expiry of the specified period. The Committee hope that the Council would review the other units which are continued after the expiry of the limited period for suitable action.

Fellowships

4.46. According to the Review Committee training of Research Workers of the requisite calibre, competence and range is one of the primary functions of the I.C.M.R. During the last 20 years several progressive steps have been taken to ensure a steady supply of research workers both for assisting in the research programmes and also for training in research methodology. Lack of funds and expediency, both on the part of the I.C.M.R. and the research guides, have tended to restrict full benefits being derived from these programmes. In spite of the above difficulties, there is a substantial increase in the number of different categories of Fellowships offered, which is more noticeable during the last 5 years. To a large majority of the Research Fellows "research" has been a means to a temporary and without any abiding interest in a research career. Due to its inability to offer attractive permanent careers in research, the I.C.M.R. has not been able to stipulate any conditions. However, some of the earlier experiments of the I.C.M.R. in instituting Research Training Fellowships had certainly better chances of promoting a climate of research. Similarly, the newly introduced Travel and Post-doctoral Fellowships hold promise for filling lacunae.

4.47. The Reviewing Committee have observed, "In the matter of distributing of research fellowships, the Council should try to minimize undue concentration in any institution. A part of this can be taken care of by appointing more representative Selection Committees than at present. Since it is anticipated that many of the research fellows would not take to full-fledged research careers, it would be eminently desirable that the scouting for research talent should be done on a more country-wide basis. The Reviewing Committee feels that the I.C.M.R. might consider allocating at least one or two Research Fellowships in a large number of medical colleges who have facilities for Post-graduate studies. On the analogy of the Research Fellowships of the University Grants Commission and the C.S.I.R. there is a scope and need for the I.C.M.R. to constantly project the image of medical research in the medical colleges, small and big."

4.48. At the instance of the Committee the Ministry of Health & Family Planning furnished a statement showing institution wise break-up of the fellowships and expenditure for the years 1967-68, 1968-69, 1969-70 and 1970-71. The following position emerges :

Year	No. of Institutes	No. of fellowships given	Expen-	T.A	Con-	Total
			diture		tingencies	
			Rs.	Rs.	Rs.	Rs.
1967-68	52	130	2,70,585	10,166	29,577	3,10,328
1968-69	46	110	2,94,134	15,317	20,600	3,30,051
1969-70	53	135	3,09,389	12,345	28,458	3,50,192
1970-71	54	129	3,20,226	10,927	29,187	3,60,341

4-49. The following table shows the particulars of the institutions which accounted for substantial expenditure on fellowships

Institutes	1967-68		1968-69		1969-70		1970-71	
	No. of fellowships	Expenditure						
1. National Institute of Nutrition, Hyderabad.	5	11,247	5	11,328	7	11,597	..	11,690
2. G.V.M. Medical College, Kanpur.	11	27,985	12	33,564	12	31,847	7	16,930
3. K.G. Medical College, Lucknow.	7	20,479	11	30,006	9	33,009	8	29,566
4. All India Institute of Medical Sciences, New Delhi	21	29,972	12	25,389	9	11,463	8	16,284
5. Maulana Azad Medical College and Associated Irwin and G.B. Pant Hospital, New Delhi	10	25,460	11	23,290	12	24,452	5	14,833
6. Patna University, Patna.	3	13,300	2	2,700	2	7,110	7	19,652
7. Medical College, Trivandrum		9,301	4	14,143	3	1,333
8. V.P. Patel Chest Institute, Delhi.			3	7,749	6	19,210	6	16,237
9. Lady Harding Medical College, New Delhi.			1	2,100	1	1,001	7	17,672

4.50. From the data furnished to the Committee they find that the total number of fellowships given by the Indian Council of Medical Research was 130 involving expenditure of Rs. 3.10 lakhs in 1967-68, 110 involving expenditure of Rs. 3.30 lakhs in 1968-69, 135 involving expenditure of Rs. 3.50 lakhs in 1969-70 and 129 involving expenditure of Rs. 3.60 lakhs in 1970-71. The number of institutions which participated in the fellowships schemes was 52 in 1967-68, 46 in 1968-69, 53 in 1969-70 and 54 in 1970-71. The Committee, however, find that a few institutions like G.V.M. Medical College, Kanpur, K.G. Medical College, Lucknow, All India Institute of Medical Sciences, New Delhi and Maulana Azad Medical College, New Delhi have been receiving larger number of fellowships and the amount of funds under the scheme. The Reviewing Committee have observed that in the matter of distribution of research fellowships, the Council should try to minimise undue concentration in any institution and it would be eminently desirable that scouting for research talent should be done on a more extensive country-wide basis. Further on the analogy of the research fellowships of the University Grants Commission and the Council of Scientific and Industrial Research, there is a scope and need for the Indian Council of Medical Research to constantly project the image of medical research in medical colleges, small and big. The Committee desire that the Council should take necessary steps to avoid concentration of research fellowships in any institution, and allocate fellowships on a wider basis.

Permanent Institutes

4.51. In a note the Ministry of Health and Family Planning have stated that each of the institutes have been established "to carry out research in depth on problems of national importance in one field of specialization. The institutes have broad objectives within the framework of which investigations are carried out on selected aspects in any given period of time. The Directors of the Institutes, in consultation with their own scientific staff, define the areas of work which should be taken. Sometimes they also receive directions in this regard from the Council itself, taking note of the suggestions made by the Expert Committees, Scientific Advisory Board, and the Ministry. Some of the investigations may be of a short duration and others of a duration extending to over several years.

Each of these institutes has a Scientific Advisory Committee presided over by the Director-General, ICMR and consisting of a few eminent scientists in the particular field from outside the Institute. The Committee meets at least once a year, to review the progress of work and also to examine the proposals for future programmes and make suitable suggestions. The annual report of the institute as well as the minutes of the meetings of the Scientific Advisory Committees are later placed before the appropriate Expert Committee of the Council where they are considered further.

The Directors of the Institutes have the responsibility of utilizing funds made available during any year to maximum advantage and to coordinate activities of the research workers. In preparing the budgets for any year, the needs of the current programmes of work as well as those needed for the expansion of the activities which are envisaged, are taken into consideration.

The institutional approach has many advantages. Firstly, a nucleus of specialization in a particular field, with an assured continuity of research is developed; secondly, it provides opportunity for an overall review of

problems of national importance in the particular subject and it is possible to plan a series of coordinated long-term and short-term studies on selected aspects of the problem; thirdly, it provides opportunity for a certain degree of flexibility both to meet the changing needs as well as to take note of scientific advances which take place, enabling initiation of research on important and topical problems with the least possible delay; fourthly, the work is done under close supervision assuring results of a high quality; fifthly, the scientists have ready access to a variety of modern equipment and supplies and other facilities on a scale which only an institute can provide, and sixthly because of the availability on the staff of experts in different subjects, it is possible to develop a multi-disciplinary approach research."

In a note showing action taken on the recommendations of the Reviewing Committee relating to the Permanent Institutes, the Ministry have stated : "The Reviewing Committee had urged the need to ensure the minimum requirements for the newly established institutes viz. the National Institute of Occupational Health, Ahmedabad, and the Institute for Research in Reproduction, Bombay, have been met and their expanded programmes are now being phased.

The Reviewing Committee had recommended that there was need and scope for a more critical appraisal of the working of the permanent institutes. For proper appraisal of the research programmes of the Institutes/Centres and for giving advice to the Directors of the Scientific Advisory Committees have been constituted by the Council for each of its permanent Institutes/Centres. The Scientific Advisory Committees are responsible for the formulation of the Scientific Programmes of the Institutions and scrutiny of their work. The report of the Scientific Advisory Committee is placed for consideration of the concerned Expert Committee and the Scientific Advisory Board of the Council. Eminent specialists, representatives of local and/or participating institutions and the Director General, Indian Council of Medical Research, or his representatives, are members of the Scientific Advisory Committees.

As recommended by the Reviewing Committee the practice of holding periodically a meeting of the Directors of the ICMR Research Institutes/Centres have been continued. The last meeting of the Directors of the Institutes/Centres of the Council was held in November, 1971.

The Reviewing Committee had suggested that the powers of the Directors of the ICMR Research Institutes should be progressively enlarged. Steps have also been taken to decentralise the administration of the permanent institutes of the Council and to enlarge the administrative and the financial powers of the Directors of the Institutes.

The Reviewing Committee had recommended that since the permanent Research Institutes of ICMR constituted a major portion of the activities of the ICMR, the Directors of the Institute should play an increasing role at the several policy making levels of the ICMR. The recommendation of the Reviewing Committee regarding association of the Directors of the permanent Research Institutes/Centres with the work of the Governing body and the Scientific Advisory Board has been implemented. The Scientific Advisory Board and the Governing Body of the Council have now on them Directors of the Council's Research Institutes, who are appointed as

members of these bodies by rotation. At present the Director of the National Institute of Nutrition, Hyderabad, is a member of the Governing Body and the Director, National Institute of Occupational Health, Ahmedabad, is a member of the Scientific Advisory Board of the Council."

4.52. The permanent research institutes of the Indian Council of Medical Research constitute a major portion of the activities of the Indian Council of Medical Research and these have been established to carry out research in depth on problems of national importance. The Reviewing Committee had recommended that there was a need and scope for a more critical appraisal of the working of the permanent institutes. In pursuance of this recommendation Advisory Committees have been constituted by the Council for each institution which have been made responsible for the formulation of scientific programmes of the institution and scrutiny of their work. The Committee suggest that in view of the important and major role of the permanent institutes in the respective field of research, a periodical achievement audit should be undertaken every five years to assess their actual achievement. For this purpose, achievement audit committees consisting of experts may be constituted.

Coordination of Research Work

4.53. The Reviewing Committee have observed that "One of the important function of the ICMR is the coordination of research efforts in the country. There are several agencies both medical and non-medical, Central, State and private and a large number of medical colleges and research institutes at varying stages of development engaged in the task of medical research. There is hardly any coordination. The ICMR like a 'Kamadhenu' has tended to follow the practice of 'first come, first served'. In the long run it is feared that such a policy may lead to the development of groups of vested interests within the ICMR to the comparative neglect of larger area of potential research workers in the country. Although there are a few State Medical Research Committees in the country, the association of the ICMR is mostly nominal. Except for occasional technical scientific advice by its nominees there is no coordination at the policy level or technical assistance by the ICMR—monetarily or otherwise. Thus, there is a growing feeling amongst many medical colleges and State Medical Research Committees that the ICMR is well beyond their reach. Such a situation, if continued unchecked, can only lead to the ICMR losing its National role-function and prerogative."

4.54. With regard to coordination in the medical research the Director General stated during evidence, "Regarding this PL480 programmes and other research programmes it was till now not necessary that the ICMR should be consulted. But now, with the revision of the whole thing, all projects should be submitted to the Indian Council of Medical Research. These projects are evaluated by the Council experts. The Council's advice is expertise from the University Professors in the particular field. The programme is thoroughly scrutinised and then it is sent on to the Ministry for clearance. Even now, a new Committee has been constituted (or is in the process of constitution) where the representatives of the various bodies sit together to go over these projects. These programmes are then submitted every year to an Expert Committee which goes through them the same year. So, at present the position is that we have got a very critical evaluating. As regards the liaison between the Ministry and the Council the Ministry of Health and Family Planning stated in a written reply that "The Indian Council of Medical Research and the Ministry of Health have close

linkages. The main contribution which executive departments can make to the overall strategic planning in medical research is to define the objectives important in relation to the policies of the Government. It is the task of the scientists in the Council to plan the attacking of objectives and be a source of unfettered expert opinion to the Government. The Executive department thus spells out the need while the Indian Council of Medical Research determines the feasibility and plans and executes the research. The close linkage with the Ministry have been established through :—

- I. The Scientific Advisory Board of the ICMR of which the Director-General of Health Services is the Chairman. This brings close linkages between the Ministry and the Council.
- II. The Directors or Senior Officers of the several institutions of the Ministry, such as those of Central Leprosy Training & Research Institute, Chingleput, National Institute of Communicable Diseases, Delhi, Central Drug Research Institute, Lucknow, Central Public Health Engineering Research Institute, Nagpur, Family Planning Institute, Delhi, etc. as well as officers of the Ministry such as Family Planning Commissioner T.B. Adviser to Government V.D. Adviser Advisers of Dental Health, Nutrition etc. are members of the Council's Scientific Expert Committees.
- III. Recently a Coordination Committee for Research in Reproductive Biology, Demography and Communication Action has been appointed in December, 1971.
- IV. A Consultative Committee for coordination of Research in Cancer, of which the Director General of Health Services is also a member, again brings the Council and the Ministry together in the field of cancer research.

4.55. The Committee asked however-lapping and duplication of research schemes undertaken through the ICMR and by others independent of ICMR are avoided. In a note furnished by the Ministry of Health and Family Planning it has been stated, "Biochemical research is also supported, besides the ICMR by the Council of Scientific and Industrial Research, Atomic Energy Commission and in some cases directly by the Ministry of Health. The CSIR laboratories have so oriented their programmes of work that medical and biological research carried out by them is largely directed towards the needs of technological development and the related industries. The institutes directly under the Ministry of Health have oriented, by and large towards production and operational research, though this cannot be said for all of them e.g. Chittaranjan National Cancer Research Centre, Calcutta. Further, medical research is being carried out in the medical faculties and other research institutions in the country from their own research funds. The most successful technique the Council has been able to adopt, for avoiding duplication, has been the scrutiny of the requests for financial support by the research workers, through its Expert Committees which at present are 36 in number and cover all the disciplines. These Committees are composed of leading experts in relevant subjects. These experts are derived from the medical faculties, and research institutes from all over the country, irrespective of the fact that many of whom work under organisations other than the ICMR. The Scientific Advisory Committees

of the Institutes of the Council also have on them Experts from other institutes. While reviewing and recommending projects which come up for their consideration, they are in a position to take note of such research to avoid unnecessary repetition.

Further, the Director-General, ICMR or other representatives of the Indian Council of Medical Research, are on the Governing Body/Executive Committees or the Scientific Advisory Committees of several institutes, like the Central Drug Research Institute, Lucknow, Central Leprosy Teaching and Research Institute, Madras, Chittaranjan Cancer Research Centre, Calcutta, Haffkine Institute, Bombay etc., where inter-communication again fulfils the same purpose."

4.56. The Reviewing Committee recommended that the formulation of scientific policies and guidelines should be one of the primary functions of the Scientific Advisory Board, after shifting the specific recommendations of the Constituent Expert Groups. According to a note furnished by the Ministry, the recommendations of the Review Committee are being implemented. In order to enable in-depth evaluation of the research programmes of the Council by the members of the Scientific Advisory Board, the pattern of working of the Board has been changed. The research activities of the Council in certain specialities are being reviewed each year by different members of the Scientific Advisory Board. Directors of three research Institutions/Centres of the Council are also invited each year, in rotation, to the meetings of the Scientific Advisory Board to review the research work in the area pertaining to their speciality. This arrangement has not only enabled the members of the Scientific Advisory Board to assess and evaluate the research work in progress in the different fields under the auspices of the Council and to determine the area in which the Council's efforts should be expanded in the coming year, but has also provided the members of the Board a sense of active participation and involvement in the activities of the Indian Council of Medical Research.

4.57. The Reviewing Committee suggested the need for a flexible 'brain trust' in the Directorate of the ICMR to analyse the current trend of research and serve as a feed-back mechanism between the Expert Groups and the Scientific Advisory Board and later the Governing Body. The Ministry have stated that the Scientific staff in the Directorate of the Council has been enlarged. The Council's technical and administrative set up at the Headquarters has been completely reorganised with the creation of eight Divisions: Basic Medical Sciences; Clinical Medical Sciences; Reproductive Biology and Fertility Control, Nutrition, Maternal Health and Pediatrics; Clinical Epidemiology and Communicable Diseases; Biostatistics and Communication; Publication and information; PL-480 and other foreign aided projects and Administrative and Accounts, each under a Deputy Assistant Director General. This has helped in the execution and expansion of suitable programmes in the field of medical research, in making a co-ordinated approach for tackling National Health Problems and also helped in avoiding unnecessary duplication of effort.

4.58. The Reviewing Committee suggested that the Statistical Unit of the Council be enlarged with the addition of a Clinical and Epidemiology Section. The Ministry have stated that as recommended by the Reviewing Committee, the Division of Biostatistics and Communication of the Council

has been enlarged. The Division is now providing statistical advice and guidance to various research projects all over the Country. The Division gives guidance in the initial stages in proper planning of the research work and helps the research workers in analysing and interpreting the data. A Division of Clinical Epidemiology and Communicable Diseases has also been created.

4.59. According to the Reviewing Committee, one of the important functions of the Indian Council of Medical Research is the coordination of research efforts in the country. There are several agencies, both medical and non-medical, Central, State and Private and a large number of medical colleges and research institutes at varying stages of development engaged in the task of medical research, but "there is hardly any coordination". The Committee have been informed about the measures taken by the Ministry and Council to establish coordination and to avoid overlapping or duplication in medical research. These measures include association of the officers of the Health Ministry with the ICMR, scrutiny of request for financial support by research workers through Expert Committees of the Council, members of which are derived from the institutes all over the country, nomination of the representatives of the Council on the Advisory Committees of other institutions, reorganisation of the technical and administrative set up of the headquarters of the Council and setting up Coordination Committees. The Committee cannot overemphasize the importance of close cooperation and coordination amongst the various agencies engaged on medical research with ICMR taking the lead by virtue of its pre-eminent position in this field and suggest that energetic steps may be taken to enlarge the scope of collaboration. Elsewhere in this Report the Committee have expressed concern over the comparatively less amount of expenditure on medical research incurred in the country. The Committee are emphatically of the view that funds should not ordinarily be allocated by the Council on duplicate or repetitive research. The Committee therefore desire that continued attention should be paid to this aspect of coordination.

According to the Reviewing Committee although there are a few State medical research committees in the country, the association of the ICMR is mostly nominal. The Committee desire that necessary steps should be taken to make effective representation of the Council on the state committees to ensure better coordination in the research work.

Dissemination of Research Information

4.60. The Committee enquired about the arrangements for dissemination of the results of research to all concerned. In a written reply, the Ministry have stated that "the results of the research work carried out under the auspices of the Council are made available to the public through :—

1. *Indian Journal of Medical Research*
(Published monthly) an internationally recognized research journal.
2. *ICMR/Technical Report Series*
(published frequently as and when necessary) in which are published the results of comprehensive studies on special problems.
3. *ICMR/Research Information Bulletin*
(published monthly) in which the highlights of the work under

the council are described, providing ready reference to research workers regarding the work of the Council.

4. *Research Papers* by authors in numerous Indian and international journals.
5. *Annual Reports* of the institutes centres of the Council which are widely circulated.
6. Constant interaction of Scientists at the Council's numerous symposia, seminars, research workers conferences etc.

Some of the permanent institutes of the Council also publish monographs and special bulletins to bring the results of the research work to the notice of administrators and general public. For example the National Institute of Nutrition has brought out the following publications :—

1. Diet Atlas of India
2. Nutrition Atlas of India
3. Nutritive value of Indian foods
4. Nutrition for mother and child
5. National Institute of Nutrition—a decade of progress, 1961—1971.

The Institute also publishes a quarterly journal called "NUTRITION" in which articles on food are written in simple language understandable by lay public.

The Blood Group References Centre at Bombay also brings out a News Letter giving the details of its research activities. The other institutes are also encouraged to bring out similar bulletins for dissemination of knowledge.

For a similar purpose, the Council last year organised a Journalists' Seminar at National Institute of Nutrition, Hyderabad where about 20 journalists from India interacted with the Scientists working in the field of Nutrition and as a result of the Seminar the work of the Institute was widely made known to the public through the columns of the Daily and Weekly Papers."

4.61. The Reviewing Committee had mentioned in their report that "In the course of the visits, and also from the replies to the questionnaires, it appeared that the attention of the Reviewing Committee has been drawn to the need for greater publicity of the activities of the Council, especially about the working programmes of the Council, its fellowships etc., and above all the manner in which people can avail of the scientific and even technical help through the Council and its permanent institutes In the opinion of the Reviewing Committee, much of the good work that has been done by the Indian Council of Medical Research is not known to the outside world because of its not taking sufficient care to provide a machinery for the continuous dissemination of information about its work and achievements and its programme and policies."

4.62. One of the aims and objects of the Council set forth in the Memorandum of Association relates to the dissemination of knowledge by printing.

publishing and spreading scientific information. The Committee are unhappy to learn from the Reviewing Committee Report that "much of the good work that has been done by the Indian Council of Medical Research is not known to the outside world because of its not taking sufficient care to provide a machinery for the continuous dissemination of information about its work and achievements and its programme and policies." The Committee find that the Council is making available its research work through journals, research papers, annual reports and other publications. The Committee suggest that the Council should consider measures to increase and popularise the circulation of these journals and publications amongst all interested and potential research workers in the country. The Council should also consider the feasibility of bringing out some publications for the use of lay public to project a better image of itself. The Council may also arrange lectures and seminars in medical colleges and hospitals in the country to give wider publicity to their research work.

Utilisation of Research work

4.63. A mention has been made in the Annual Report of ICMR for 1969-70 that the Health Minister stated that the Council should encourage and give priority to research the benefits of which could be realised and utilised as early as possible and that the Council should strike a balance between the interest of inventors and commercial enterprise on one hand and the general public on the other. The Committee asked whether any outstanding achievements of the Council had been commercially exploited in the country. The Director General stated, "Some of them have. For example, recently the Virus research has been patented an apparatus and is now being prepared for other Institutes. For example, the ICMR get an award of Rs. 5,000/- for devising an apparatus for separating male and female mosquito pupai."

4.64. In a written reply, the Ministry of Health and Family Planning have stated that the Council in the formulation of its research programme have always encouraged and given priority to projects which are applied in nature and the results of which could be utilised, for the benefit of the community. Keeping this in view, the priority direction of the Council has been for sometime in communicable diseases, mal-nutrition and reproductive biology and fertility control. The results are already evident in the Government's policy of malaria control, Filaria control, small-pox eradication, rabies control etc. Its work on tuberculosis has led to the acceptance of domiciliary treatment of tuberculosis by the State Governments.

4.65. Regarding the close cooperation of the scientists, commercial enterprises and the general public, the results of the Council are published in the scientific journals for utilisation by those interested. The work done under the Council does not, by and large, ordinarily lend itself to development of inventions or processes which could be patented and commercially exploited. Besides the Council's workers have also been awarded Invention Promotion Board prizes. The Council also undertakes either on the request of the Drug Controller of India or commercial organisations clinical trials for drugs, including vaccines. For example, the Council in collaboration with WHO recently carried out a field trial of typhoid vaccines and is conducting field studies on ECG vaccination in the prevention of T.B. in Tamil Nadu State.

4.66. Most of the research projects under Environmental Physiology and Medicine undertaken under the Council's auspices are defence oriented and several of them are carried out in collaboration with the Armed Forces Medical Services. Emphasis, during the last two years, was on high altitude hypoxia and cold stress and many of the projects directly or indirectly referred to problems of adaptation to high altitude and severe cold of Indian soldiers posted on the northern borders of India. The findings have been utilised by the defence forces.

Clinical trials were conducted on some new drugs under the aegis of the Council at various centres in the country.

Under composite Drug Research Scheme which was with the Council till March, 1970, at least 5 medicinal plants had reached an advanced stage of investigation.

Food-supplements

4.67. Programmes to provide food supplements to pre-school children on nation-wide basis have been started in an attempt to improve the nutritional status particularly of children. For this purpose, wide range of processed products suitable for different situations have been worked out which would provide adequate calories without compromising nutritional quality.

Dietary Survey

4.68. The nutrition and diet surveys have been carried out from time to time on a countrywide basis alongwith the determination of nutritive value of common and uncommon foods. Recommendations have been made regarding the nutritional requirements on the basis of elaborate laboratory clinical and field studies, providing valuable information to the planners and public health nutrition workers towards understanding the type and magnitude of the nutritional problems of the methods of overcoming them. Council's publication entitled "Dietary Allowances for Indians" provide valuable information to the general public.

Contraception

4.69. The Council's research programmes in the field of Reproductive Biology & Fertility Control includes studies on (a) basic research, (b) applied oriented basic research and (c) applied research. These are ultimately oriented towards finding out an ideal contraceptive acceptable to the different cultural and socio-economic groups in the country. The identification through such research efforts of many lacunae which exist in our knowledge of the many reproductive processes which could be vulnerable to controlled interference has led to the development of many new approaches in methods of contraception. Contraceptive technology has advanced in various approaches both in male and female such as steroidal drugs; bio-mechanical methods; surgical techniques aiming at reversibility; local methods and immunological approach to fertility control. The Council through its Contraceptive Testing Units is now testing on a National Basis 11 new methods which include (i) Cu T device, (ii) one pill-a-month, (iii) monthly intra muscular injections, (iv) hormone implants placed under the skin for contraceptive effect lasting about 3 years, (v) low dose combination pills, (vi), (vii) & (viii) low dose continuous regimes, (ix) indigenous preparation, (x) local intravaginal contraceptive films and (xi) tantalum clips for

reversible sterilization in the male. Based on the results of such trials and evaluation, the methods are recommended to the Ministry of Health for introduction in the National Family Planning Programme.

Side by side research is continued to find out any adverse long term effects of these newer methods which include detection of cancer; metabolic effects, subsequent fertility, bleeding patterns etc. Efforts are also being made to find out the cause of vaginal bleeding with the IUCD and many drugs are being tested for its control.

Long term studies of 9 years duration have shown no adverse effect on subsequent fertility with the use of IUCD or oral pills; no development of cancer; no serious metabolic side effects; and an overall acceptability rate of 50 per cent. These studies indicate that with proper selection of cases and good follow up facilities *e.g.*, IUCD and pills are safe and acceptable by a large per cent of women.

The intra vascontraceptive device, newer innovations of vasectomy and tubectomy techniques, temporary sterilization with use of metal clips are in the process of development with a bright future.

4.70. The Committee note that the work done by the Indian Council of Medical Research in the field of communicable diseases, malnutrition and reproductive biology and fertility control have been utilised by Government. The Council's research projects under Environmental Physiology and Medicine on high altitude hypoxia have been utilised recently by the Indian Defence Forces located at the high altitudes in the country. The Committee have been informed that some achievements of the Council have also been commercially exploited in the country. The Committee hope that in formulating its research programmes the Council will concentrate on the projects of applied nature the results of which could be utilised for the benefit of the community.

CHAPTER V

GENERAL

5.1. The Committee desired to be furnished with a note indicating the institutional arrangements for undertaking, coordinating and Financing medical research in other countries such as U.K., U.S.A., Russia etc. In a note, the Ministry have explained the position in U.S.A., U.K. and U.S.S.R. :

United States of America

5.2. In the United States of America, Medical research under Government auspices is carried out primarily by the National Institutes of Health which is the principal research arm of the Public Health Service. The NIH is an autonomous body established by Statute. Research under the Federal Government auspices is also carried out in a few other institutions, such as the National Communicable Diseases Centre, which are directly under the Health Services, and in a few institutions under the Social and Rehabilitation Services and Social Security Administration. The National Institutes of Health receives nearly 80% of federal Government funds provided for medical research in the U.S.

The National Institutes of Health, both conducts and supports basic and clinical research in the causes, diagnosis, prevention and cure of diseases of man including biological effects of environmental contaminants; in the process of human growth and development; and in related sciences.

The research activities of the NIH are conducted primarily through six diseases-oriented institutes namely :—

1. National Cancer Institute.
2. National Heart and Lung Institute.
3. National Institute of Arthritis & Metaboloc Diseases.
4. National Institute of Neurological Diseases & Stroke.
5. National Dental Research Institute.
6. National Institute of Allergy and Infectious Diseases.

In addition, there are several other smaller but independent divisions and centres dealing with specific subjects.

These permanent institutes of the NIH carry out research in the specified fields on a full time and continuing basis.

The Directors of the NIH as well as the Directors of the several institutes have advisory Councils which are also established under Statute. In addition, each institute has a larger number of Committees or Study Groups to review the work on different subjects.

In addition to the work carried out in the institutes themselves, they also support research by outside agencies through research grants and contracts. The institute is responsible to consider research grants and contracts received by the NIH for other institutions or individuals for carrying

out work on specific aspects of the subject and to make the necessary recommendations after review by the appropriate committees.

For instance, in 1970, there were 11,339 research grants (totalling \$ 602,153,477) and 1017 research contracts (totalling \$ 105,334,686) in addition to the work done in the several institutes.

The process of budgeting each year for NIH is as follows :

The Department of Health, Education and Welfare (DHEW) establishes guidelines for long range plans. The National Institutes of Health develops guidelines for programmes and funding plans. Then the particular institute develops its own programme and funding plans and submits it to NIH. Then the NIH prepares an overall plan and send it to the Department of Health, Education and Welfare. The Institute prepares technical budget schedules and the NIH prepares a formal budget.

The budget office of the Government holds hearings and approves the inclusion of the appropriate amount in the national budget prepared by the President for presentation to the Congress.

United Kingdom

5.3. The Principal source of government funds for medical research in the United Kingdom is the Medical Research Council. Its primary objective is to advance knowledge that will improve the health, both physical and mental, of individuals in the community. The Council also aims to play its full part together with other research councils and the Universities in maintaining and developing a scientific potential of the country. The Council has three broad policies governing the research it supports or undertakes :—

- the support of projects and individuals of exceptional merit;
- the training of research workers and the support of research over the whole field of biomedical sciences;
- the encouragement and promotion of a balanced development of knowledge from fundamental research to practical problems of medicine and public health with particular attention to priority fields.

The *direct support* for research is given to :

- (i) the Council's own establishments in the Institutes and Units;
- (ii) its senior external scientific staff placed in other institutes.

The *indirect support* for research is given for specific purposes to :—

- (i) other institutions such as the Institute of Cancer Research, at the Royal Cancer Hospital, London and
- (ii) to numerous research groups at the Universities and to individuals.

In implementing these scientific policies, the Council prefers when possible to work through universities. When necessary the Council complements this by employing its own staff if possible in association with a University.

The Council's large establishments are :—

1. National Institute for Medical Research;
2. The Clinical Research Centre;
3. Laboratory for Molecular Biology.

The rationale of large establishments has been stated as follows :—

"Such establishments can provide, within a reasonably circumscribed area of science, a concentration of full-time research workers and an environment, in which they can collaborate and share the most advanced equipment. Moreover, their internal organisation is flexible, so that they can change the direction of research as needed without being tied to any particular discipline by the need to provide education and training. Under these conditions a new field of work can easily be tackled. These establishments train many post-graduate students and allow post-doctoral workers, whether on fellowships or junior staff appointments or as visitors from overseas, periods of concentrated, fulltime research before they go on to a career in the universities or in some other scientific employment."

The MRC's permanent establishment not only consists of the staff at the large institutes but also quite a number of staff allotted to smaller units or individuals located in Universities.

In general a Council establishment is created only when the purpose in question is unlikely to be attained, or attained so fast or so effectively, by any other means. Whenever possible establishments are associated with a university, preferably by being sited within it. In this way university staff, including those supported by Council research grants, and Council establishment can derive mutual benefit from collaborative work and the facilities provided by the Council for it establishments can be made available to a larger number of scientists. Council staff are also encouraged to help in university teaching.

The Council itself consists of distinguished scientists and administrators together with a number of Assessors nominated by several other institutions like the Department of Health and Social Security, Scottish Home and Health Department; the Royal Society, University Grants Committee; Science Research Council; Agricultural Research Council; Social Science Research Council; Natural Environment Research Council.

The Council has several *Research Boards* such as :—Bio-medical Research Board; The Clinical Research Board; The Tropical Medicine Research Board, together with Grants Committees. The Council has a large number of *Advisory Committees* on which it depends for assistance in promotional research on special subjects. The Secretary of the Council is assisted in his office by technical sections for Cellular Disorders, Infection and immune diseases, Social medicine, General clinical medicine, Psychiatry and Nerves disorders, Industrial and environmental medicine and tropical medicine and University Grants and awards and administration.

The institutional set up is found only in the three institutes of which the National Institute of Medical Research is the most prominent. This institute consists of 16 scientific divisions and five specialized laboratories. It has a scientific staff of 154.

U.S.S.R.

5.4. Medical Research in the Union of Soviet Republics is financed both by the U.S.S.R. Government and the different Soviet Republics. For all federally sponsored medical research, the funds are provided by the Ministry of Health.

The funds are channelled mainly through the Academy of Medical Sciences, which is an autonomous body under the Ministry of Health. The academy has 32 research institutes for study of specific subjects, examples of which are :—

1. Ivonovsky Institute of Virology.
2. Gamaliya Institute of Epidemiology and Immunology.
3. Institute for Experimental and Clinical Oncology.

Each of them is multi-disciplined.

The Ministry of Health also runs a few research institutions directly, for example, Institute for Epidemiology & Parasitic Diseases.

The Ministry also gives grants to several teaching institutions in the country to carry out bio-medical research. Regarding budgeting the Directors of the Institutes have to send detailed budgets either to the Ministry directly or through the Academy of Medical Sciences in case of institutes run by it.

The Committee asked whether the Council prepared any performance budget not only for its activities but also for each individual scheme and research project. The Director General stated, "For financial assistance the projects of the council have to give the purpose of the project, the staff to be appointed on that project and the amount of money needed to be spent on that. This will be examined by the Experts Committee which consists of 6 to 8 scientists from all over India, who go through the project and decide whether that project is worthwhile, whether the institution has the necessary facilities for undertaking that project and whether it is feasible financially and in other respects. A thorough scrutiny is made of all the projects and it is only then that the Experts Committee recommends to the Scientific Advisory Board to give sanction for so much money for so much staff and contingent grant. Irrespective of whether the project lasts for three or four years the sanction is only renewed every year after appraisal". The Secretary, Ministry of Health & Family Planning stated, "The performance budget scheme is being gradually extended from Ministry to Ministry and within each Ministry to the various attached offices, it has been extended to our Ministry and ICMR finds a mention in the performance budget. But it has not yet been extended in a detailed form to this organisation."

5.5. Following certain press reports that a Committee has been constituted to go into the working of Indian Council of Medical Research, the Ministry of Health & Family Planning were requested to state the circumstances leading to the appointment of the Committee and its terms of references. The Ministry of Health and Family Planning informed on 14th April 1972 that in view of the discussions by the Public Accounts Committee "it was felt that it was high time to set up a high-powered Committee, consisting of eminent medical scientists not concerned with the Council, to

review the working etc. of the Indian Council of Medical Research. Accordingly, a Committee was set up, *vide* this Department's letter of even number dated the 2nd March, 1972". According to this letter the terms of reference of the said Committee would be :

- (i) To evaluate the researches carried out under the auspices of the I.C.M.R. during the past five years with special reference to their impact on finding practical solutions to the major health problems facing the country.
- (ii) To review the manner in which the resources placed at the disposal of the I.C.M.R. have been deployed during the past five years in the fulfilment of its aims and objects.
- (iii) To report on the present pattern of working of the I.C.M.R. in its headquarters office, its laboratories units, etc. and their linkages; and
- (iv) Taking into account the findings under (i), (ii) & (iii) above, to advise the Government/Council on broad lines of future development with special reference to definition of goals in research in terms of the health needs of the country and evolving an appropriate strategy of development of resources and of organisational structure to accomplish those goals.

5.6. The Ministry have, however, stated that "the said Committee has not yet started functioning for the reason that the Director General Indian Council of Medical Research, has pointed out that setting up of this Committee by the Government is against the existing provisions of the Rules, Regulations and Bye-laws of the Council according to which only the Governing Body of the Council is competent to take decision in such matters. The Ministry of Law, who were also consulted, opined that Government is not competent to constitute a Committee to review the functioning of an institution registered under the Societies' Registration Act, 1860. In the circumstances, the Director General of the Council has been advised to place this matter before the Governing Body, at its next meeting, with a view to obtaining its concurrence. Further action will be taken in the matter after the decision of the Governing Body of the Council becomes available."

5.7. In the preceding Chapters the Committee have dealt with some aspects of the working of the Indian Council of Medical Research with particular reference to the recommendations of the Reviewing Committee which made a comprehensive review of the activities of the Council in its Report submitted in March, 1968. The Reviewing Committee has highlighted some shortcomings in the working of the Council and made suggestions for improvement. The Committee note that the Council has in most cases accepted the recommendations of the Reviewing Committee. But decisions have yet to be taken on some far reaching recommendations of the Reviewing Committee like making the Council autonomous, reconstitution of the Governing Body and Executive Committee and increasing the quantum of grant to the Council, although four years have elapsed since the Report was submitted. The Committee hope that action on these and other remaining important recommendations will be expedited.

5.8. More than 4 years have elapsed since the Reviewing Committee reported on the working of the Indian Council of Medical Research. The

Committee are glad that as a result of the discussions by the Committee, the Ministry of Health & Family Planning felt that it was high time to set up another high powered Committee to review the working etc. of the Council. The Committee agree that such a review is due now. They desire that the matter should be placed before the Governing Body of the Council for their concurrence as early as possible.

5.9. The Committee also suggest that apart from the Annual Report of the Director General, ICMR the Council should also prepare an annual Performance Budget of its activities, covering individual schemes and research projects.

5.10. The Committee have been furnished with a note on the institutional arrangements for undertakings, coordinating and financing medical research in U.K., U.S.A. and U.S.S.R. The Committee desire that a detailed study of the arrangements obtaining in these countries may be helpful to the next Reviewing Committee for suggesting improvements in the working of the Council.

NEW DELHI,
April 21, 1972
Vaisakha 1, 1894 (S).

ERA SEZHIYAN.
Chairman,
Public Accounts Committee.

APPENDIX

Summary of Main Conclusions/Recommendations

Sl. No.	Paragraph No.	Ministry/Deptt. Concerned	Conclusion/Recommendation
1	2	3	4
1	1-15	<u>Health</u> I.C.M.R.	<p>The Committee are concerned to note, from the Reviewing Committee report that the Indian Council of Medical Research which was formed in 1949 has continued to operate as a subsidiary department of the Ministry of Health unlike its counterparts, in spite of the fact that an autonomous function was envisaged throughout. According to the Reviewing Committee, 'autonomy which was meant to spell out freedom of action and speed has resulted in a more tedious financial and administrative dependence on the parent Ministry'. The Director General of the Council submitted during evidence that control of the Executive Committee over the Council is "a little too much", because it was a wholly official ridden body. The only person representing the Council is its Director General. The Reviewing Committee has recommended that maximum autonomy should be provided to the Council which may be comparable to that of the Council of Scientific and Industrial Research or Bhabha Atomic Research Centre and if necessary, the ICMR be made 'a statutory body'. The autonomous character should be retained in a functional rather than a notional manner. For this purpose, the Reviewing Committee has suggested reconstitution of the Executive Committee with greater representation of Scientific Members and enlargement of the executive and financial powers of the Director General comparable to that enjoyed by the heads of similar scientific organisations. The Committee are in agreement with the views expressed by the Reviewing Committee that excessive governmental control is apt to impair the efficiency and growth capacity of the Council.</p>
2	1-16	Do.	<p>The Committee have been informed that the Governing body has appointed a sub-committee to examine in detail these recommendations of the Reviewing Committee. The Committee desire that this matter should be examined thoroughly and final decision taken by Government at an early date. The Committee would like to be informed about the outcome. The Reviewing Committee submitted its Report in March, 1968 and although four years have already elapsed the recommendations have not yet been processed.</p>

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3	1-17	Health <u>Health</u> I.C.M.R.	The Committee are surprised that although the Council has been handling grants amounting to several lakhs of rupees every year, no Financial Advisor has been posted in the Council. The Committee note that in pursuance of the recommendation of the Reviewing Committee post of the Financial Advisor has been created. The Committee desire that this post should be filled up without delay.
4	2-20	Do.	The Committee note with concern the conclusion of the Reviewing Committee that the allocation of funds for medical research in general and the Indian Council of Medical Research in particular is extremely meagre. According to estimate of the Reviewing Committee the expenditure on medical research constitutes about 4% of the total research efforts of the country or 0.008 of the gross national income. The expenditure of the Indian Council of Medical Research during the first three Plan periods is stated to be 4.8 to 6.7% of the total expenditure on medical education, training and research. The Committee find that the expenditure of the Council has progressively increased from Rs. 9.3 lakhs in 1947 to Rs. 156 lakhs in 1969-70, and Rs. 182 lakhs in 1970-71. According to the figures furnished by the Ministry, the expenditure of the Council amounting to Rs. 156 lakhs in 1969-70 worked out to 1.4% of the current health expenditure of the Government of India. The percentage of expenditure on teaching and research to the total current health expenditure during the year 1961-62 is stated to be 4.6 and 2.1 in U.S.A. and U.K. respectively.
	2-21	Do.	The governing body of the Council in April, 1970 after considering the report of the Reviewing Committee and the recommendations of the Scientific Advisory Board thereon decided to refer the question of increasing the quantum of grant to the Council to a Sub-Committee. The Committee desire that this should be considered with all seriousness that it deserves. The Committee feel that the Indian Council of Medical Research should be able to discharge its obligations effectively and lack of funds should not hamper this objective. On its part the Indian Council of Medical Research should identify the areas which need attention and chalk out a suitable programme of priorities which should be kept under constant review.
5	2-22	Do.]	Another important recommendation made by the Reviewing Committee is about apportionment of funds by the Council. It has suggested that the permanent laboratories (existing and proposed) of the Indian Council of Medical Research should be allocated about 40% to 45% of the funds and about 40% to

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6	2-23	Health I.C.M.R.	<p>45% should be distributed equitably between the Research Fellowships and Research Cadre programmes and assistance for free research through the medium of <i>ad hoc</i> enquiries. From the figures furnished to the Committee they find that during the year 1970-71 out of the total grant of Rs. 180 lakhs, the expenditure incurred on the permanent research institutes amounted to Rs. 69 lakhs which works out to about 38.3%. The Committee note the larger percentage of expenditure on permanent institutes during the year 1970-71 as against 29.1% during the preceding year. The Committee was informed during evidence that the Council have now decided to take up directly different national problems and not to depend on the research projects coming up before them. The Committee hope that due attention will continue to be paid to the needs of the existing permanent institutes. The Committee hope that the expenditure incurred on the research activities by these institutes and on other schemes will be spent to the best advantage of the nation.</p> <p>From the figures made available by the Ministry, the Committee find that substantial funds have been received under the PL-480 schemes for research projects of national importance. In respect of four PL-480 schemes undertaken directly by the institutions of the Indian Council of Medical Research, grants amounting to Rs. 11.86 lakhs were received during the year 1967-68, Rs. 13.76 lakhs in 1968-69, Rs. 17.10 lakhs in 1969-70 and Rs. 12.61 lakhs in 1970-71. In respect of eight projects located in the institutions, not under the control of Indian Council of Medical Research, but where funds were routed through the Council and where the Council is the coordinating agency, the grants received were Rs. 4.95 lakhs in 1967-68, Rs. 8.59 lakhs in 1968-69, Rs. 12.61 lakhs in 1969-70 and Rs. 14.05 lakhs in 1970-71. Besides grants amounting to Rs. 482 lakhs were received for 71 PL-480 schemes located outside the Indian Council of Medical Research Institutions direct by the grantees. During evidence the Committee were informed about the lacuna in the present procedure of giving grants for PL-480 schemes. A new procedure is stated to have been formulated whereby the research projects would be referred to the Council direct, who after scrutiny would approach the Finance Ministry for funds. It would be for the Finance Ministry to allocate funds from PL-480 grants or otherwise. The Committee hope that the new procedure will be found conducive to national interests.</p>
7	3-16	Do.	<p>From the data furnished to the Committee, they find that the staff of the Headquarters office of the Indian Council of Medical Research, its permanent institutes/Centres and semi-permanent units has increased from 964</p>

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in 1967-68 to 1009 in 1968-69, 1089 in 1969-70 and 1228 in 1970-71. Out of the total staff of 1228 in the year 1970-71 the scientific staff was 278, Technical 249; Ancillary (Technical), 167; Ancillary (Non-technical), 246 and administrative, 288. The break-up of the Administrative staff shows that Class IV staff was 23% in the headquarters, 40% in the permanent Institutes/Centres and 36% in the semi-permanent units. The Reviewing Committee observed in its Report that the so called 'support-ratio' between the scientists class and the 'experimental' or research assistant class and the so called "assistant" or 'technical' class of workers under the Council shows a gross inadequacy with regard to the better qualified trained technicians. The Committee have been informed by the Ministry that it is not possible to lay any norm for employment of research staff *vis-a-vis* administrative, technical and ancillary staff under the Council. The number of the project and their varying requirements of different categories of staff. According to the Reviewing Committee, the optimum support ratio recommended for research organisations in developed countries between the scientists class and the 'experimental' or 'research assistant' class and the so-called 'assistant' or 'technician' class is 1 : 2 : 1. The Committee have been informed that the staff of the Headquarters office has been increased in pursuance of the recommendations of the Reviewing Committee. The Committee desire that the staff positions of the headquarters office, permanent institutes/centres and semi-permanent units should be kept under constant review to make sure that they are not in excess of the requirements. The Council should also lay down guidelines or norms regarding the ratio of scientific and supporting staff for the headquarters and the permanent institute centres and semi-permanent units and imbalances should be suitably corrected. In this connection the Committee would like to point out that the presence of too many administrative staff in a research institute or centre is undesirable as it spoils the atmosphere of research.

8. 3-17

Health
I.C.M.R.

An unsatisfactory feature which came to the notice of the Committee is that the bulk of the staff of the Council is continued on a year to year basis. From the break-up furnished to the Committee, they find that out of a total number of staff in the Headquarters Office of the Council/Permanent Institutes as on 31st March, 1971, 62 were permanent, 4 on contract basis and 906 were continued on a year to year basis. The maximum length of service of those who have been continued from year to year basis has been stated as 34 years. The Committee consider that insecurity of

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			<p>service of this magnitude would not attract the best scientific and technical staff for service in the Council. The Committee have been informed that a proposal for making 80% of the staff employed in the Council's headquarters and its permanent institutes as permanent has recently been approved by the Executive Committee of the Council and the matter is being processed with the Government of India and the Governing Body of the Council. The Council had also constituted a permanent research cadre and a permanent technical cadre. The Committee desire that keeping in view the long term and irreducible requirements of the Council the question of confirmation of a substantial number of staff of the Council, which is long over due, should be finalised expeditiously. The Committee would like to be informed of the decision taken in the matter.</p>
9.	3-18	Do.	<p>The Committee also desire that Government should carefully consider that the pay scales of the scientific and technical staff and other facilities in the Council are comparable with the staff in other Government organisations so as to promote contentment and attract the best talent available to the Council and its research institutions.</p>
10.	4-19	Health <hr/> ICMR	<p>The Committee note the observations of the Reviewing Committee that while "there has been an impressive growth in the number of research enquiries," it is "not a matter for satisfaction or complacency". The Committee are particularly concerned over the conclusion that "not many researches are of a probing nature" and that the absence of concurrent inspection and review by the Council "had led to a large number of repetitive and fact finding research much of which is not likely to serve the national interest". This needs remedial measures.</p>
11.	4-20	Do.	<p>Another unsatisfactory aspect to which the Reviewing Committee drew attention is that there was undue concentration of research schemes in certain institutions which it attributed to extraneous considerations and not on the merit of schemes alone. It was admitted by the Director General, Indian Council of Medical Research during evidence "that there is about 40% concentration in about 8 to 10 institutions which have the highest academic record in the country and have the latest research equipment". The Committee were assured that no project is ever rejected if it is academically sound.</p>
12.	4-21	Health <hr/> ICMR	<p>The Committee note the steps taken by the Council to avoid distribution of schemes to institutions on extraneous considerations. One</p>

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			<p>of the steps is to reconstitute the Expert Committee by nominating over 50% of new members from smaller colleges/institutes. The other step taken is to hold the meetings of the Expert Committee in camera to avoid lobbying. Thirdly the membership of the Committee atleast in the first year of the three years term is kept secret so that even those who give the schemes do not know the names of members. The Committee however, find from the written reply of the Ministry that the Expert Committee will be reconstituted in accordance with the recommendations of the Reviewing Committee on expiry of their term on 31st March, 1972. The Committee hope that while reconstituting the new Committee a reasonable number of members will be appointed from the smaller institutions/colleges.</p>
13.	4-22	Do.	<p>The Committee note that 223 schemes undertaken from 1961 onwards continued beyond the period initially planned which was 2 to 3 years, out of these 13 schemes were extended for periods ranging from 2 to 5 years. According to the Review Committee normally schemes should be sanctioned for a minimum period of two and a maximum three years at the end of which they should be almost invariably terminated. The Committee desire that this should be followed in all cases unless it is national interest to extend a scheme. A proper watch should be kept over the progress of the scheme to avoid delay in their completion.</p>
14.	4-23	Do.	<p>The Committee note with concern that out of 396 schemes undertaken in 1967-68, 74 had to be abandoned. It is, however, gratifying to note that out of 465 schemes undertaken in 1968-69 only 22 were abandoned. During years 1967-68 to 1970-71 the total number of schemes abandoned is 111 involving a total expenditure of Rs. 18.5 lakhs.</p>
15.	4-24	Do.	<p>Among the reasons mentioned for abandonment of the schemes are refusal of investigators to continue research, non-receipt of the report of the work done, want of necessary equipment and materials, unsatisfactory progress in work and deviation from objectives. In paragraph 1.65 of their 62nd Report, (Third Lok Sabha), the Committee recommended that schemes should be initiated after thorough scrutiny so that the number to be dropped could be minimised. While the Committee appreciate that the number of schemes terminated has come down they desire that the initial scrutiny of the scheme should be made more thorough with particular reference to be keenness of the investigator and facilities available for completion of the scheme.</p>
16.	4-30	Health ICMR	<p>The Committee note with concern that although the Madanpalle Research Projects relating to Tuberculosis were taken up in 1956,</p>

the final report on the research work has not yet been received from the investigator. The total expenditure incurred on the project upto March, 1970 was Rs. 43.33 lakhs. It is regrettable that the Council did not care to find out for ten long years what was happening to the project till the Reviewing Committee drew attention to the "uncontrolled situation" due to investigation not "having been pinpointed in time and space" and "supplementary problems having been taken over without the completion of the existing ones." It is disquieting to note that due to the intransigence on the part of the investigator the grant to this Unit had to be stopped and ultimately the Unit itself had to be closed down on the 31st March, 1970. This reveals a sad state of affairs in the working of this research Unit. Had the Council provided a system of periodic inspection or appraisal, such a situation would have been avoided. In this particular case the concerned Expert Group and the Advisory Committee failed in providing guidance to the Research Unit. It is strange that having spent as much as Rs. 43.33 lakhs, the Government finds itself helpless to do anything in the matter. Considering the national importance the project and the large amount of money spent therein, the Committee hope that vigorous measures would be taken to obtain the final report from the investigator without further delay. The Committee would like Government to learn a lesson from this case and institute necessary remedial action to remove all defects and deficiencies in the system.

17. 4-40 Health
I.C.M.R.

The Committee are distressed to note the unsuccessful working of the Trachoma Research Centre, Aligarh and its ultimate closure after it had been functioning for 10 years involving an expenditure of Rs. 4.91 lakhs. The slow and tardy progress of the project is attributed to non-availability of suitable staff, delays in procurement of equipment and absence of various other facilities at the Centre. This indicates that the research project was taken up without a thorough initial scrutiny. There is need to improve the working of the Research Centres and also for laying down specific targets or work schedules for them. The Committee suggest that the Council should review the procedure relating to the setting up and functioning of the Research Units in the interest of preventing waste and avoiding in-fructuous expenditure.

18. 4-44 Do.

From the evaluation of the work of the various research units done by the Reviewing Committee, the Committee find that while many of them "have contributed useful knowledge", "the size of the units has tended to grow sometimes out of proportion to the actual needs" and that their programmes "which were originally clearcut" had "tended to diffuse" and

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			<p>"go round in concentric circles". The Committee were informed during evidence that this happens in medical research or any other research that though the schemes have a "definite objective" at the initial stage, diffusion was sometimes "inevitable" as the research work proceeds. While the Committee appreciate that this may be the case in some projects appropriate measures may be taken to ensure that this does not happen as a rule, and the units do not tend to grow out of proportion to the actual needs and continue beyond the specified period.</p>
19.	4-45	Health I.C.M.R.	<p>The Committee note that in pursuance of recommendation of the Reviewing Committee, the Council has transferred certain units to the host institutions after the expiry of the specified period. The Committee hope that the Council would review the other units which are continued after the expiry of the limited period for suitable action.</p>
20.	4-50	Do.	<p>From the data furnished to the Committee they find that the total number of fellowships given by the Indian Council of Medical Research was 130 involving expenditure of Rs. 3.10 lakhs in 1967-68, 110 involving expenditure of Rs. 3.30 lakhs in 1968-69, 135 involving expenditure of Rs. 3.50 lakhs in 1969-70 and 129 involving expenditure of Rs. 3.60 lakhs in 1970-71. The number of institutions which participated in the fellowships schemes was 52 in 1967-68, 46 in 1968-69, 53 in 1969-70 and 54 in 1970-71. The Committee, however, find that a few institutions like G.V.M. Medical College, Kanpur, K.G. Medical College, Lucknow, All India Institute of Medical Sciences, New Delhi and Maulana Azad Medical College, New Delhi have been receiving larger number of fellowships and the amount of funds under the scheme. The Reviewing Committee have observed that in the matter of distribution of research fellowships, the Council should try to minimise undue concentration in any institution and it would be eminently desirable that scouting for research talent should be done on a more extensive country-wide basis. Further on the analogy of the research fellowships of the University Grants Commission and the Council of Scientific and Industrial Research, there is a scope and need for the Indian Council of Medical Research be constantly project the image of Medical Research in Medical Colleges, small and big. The Committee desire that the Council should take necessary steps to avoid concentration, and of research fellowships in any institution, allocate fellowships on a wider basis.</p>
21.	4-52	Do.	<p>The permanent research institutes of the Indian Council of Medical Research constitute a major portion of the activities of the Indian</p>

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Council of Medical Research and these have been established to carry out research in depth on problems of national importance. The Reviewing Committee had recommended that there was a need and scope for a more critical appraisal of the working of the permanent institutes. In pursuance of this recommendation Advisory Committee have been constituted by the Council for each institution which have been made responsible for the formulation of scientific programmes of the institution and scrutiny of their work. The Committee suggest that in view of the important and major role of the permanent institutes in the respective field of research, a periodical achievement audit should be undertaken every five years to assess their actual achievement. For this purpose, achievement audit committees consisting of experts may be appointed.

22. 4-59 Health
I.C.M.R.

According to the Reviewing Committee, one of the important functions of the Indian Council of Medical Research is the coordination of research efforts in the country. There are several agencies, both medical and non-medical, Central, State and Private and a large number of medical colleges and research institutes at varying stages of development engaged in the task of medical research, but "there is hardly any coordination." The Committee have been informed about the measures taken by the Ministry and Council to establish coordination and to avoid overlapping or duplication in medical research. These measures include association of the officers of the Health Ministry with the I.C.M.R., scrutiny of request for financial support by research workers through Expert Committees of the Council, members of which are derived from the institutes all over the country, nomination of the representatives of the Council on the Advisory Committees of other institutions, re-organisation of the technical and administrative set up of the headquarters of the Council and setting up Coordination Committee. The Committee cannot over-emphasize the importance of close cooperation and coordination amongst the various agencies engaged on medical research with I.C.M.R. taking the lead by virtue of its pre-eminent position in this field and suggest that energetic steps may be taken to enlarge the scope of collaboration. Elsewhere in this Report the Committee have expressed concern over the comparatively less amount of expenditure on medical research incurred in the country.

The Committee are emphatically of the view that funds should not ordinarily be allocated by the Council on duplicate or repetitive research. The Committee therefore desire that continued attention should be paid to this aspect of coordination.

According to the Reviewing Committee although there are a few State medical research

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			<p>committees in the country, the association of I.C.M.R. is mostly nominal. The Committee desire that necessary steps should be taken to make effective representation of the Council on the state committees to ensure better coordination in the research work.</p>
23.	4-62	Health I.C.M.R.	<p>One of the aims and objects of the Council set fourth in the Memorandum of Association relates to the dissemination of knowledge by printing, publishing and spreading scientific information. The Committee are unhappy to learn from the Reviewing Committee Report that "much of the good work that has been done by the Indian Council of Medical Research is not known to the outside world because of its not taking sufficient care to provide a machinery for the continuous dissemination of information about its work and achievements and its programme and policies." The Committee find that the Council is making available its research work through journals, research papers, annual reports and other publications. The Committee suggest that the Council should consider measures to increase and popularise the circulation of these journals and publications amongst all interested and potential research workers in the country. The Council should also consider the feasibility of bringing out some publications for the use of lay public to project a better image of itself. The Council may also arrange lectures and seminars in medical colleges and hospitals in the country to give wider publicity to their research work.</p>
24.	4-70	Do.	<p>The Committee note that the work done by the Indian Council of Medical Research in the field of communicable diseases, malnutrition and reproductive biology and fertility control have been utilised by Government. The Council's research projects under Environmental Physiology and Medicine on high altitude hypoxia have been utilised recently by the Indian Defence Forces located at the High altitudes in the country. The Committee have been informed that some achievements of the Council have also been commercially exploited in the country. The Committee hope that in formulating its research programmes the Council will concentrate on the projects of applied nature the results of which could be utilised for the benefit of the community.</p>
25.	5-7	Do	<p>In the preceding Chapters the Committee have dealt with some aspects of the working of the Indian Council of Medical Research with particular reference to the recommendations of the Reviewing Committee which made a comprehensive review of the activities of the Council in its Report submitted in March, 1968. The Reviewing Committee has highlighted some short-comings in the working of</p>

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			of the Council and made suggestions for improvement. The Committee note that the Council has in most cases accepted the recommendations of the Reviewing Committee. But decisions have yet to be taken on some far reaching recommendations of the Reviewing Committee like making the Council autonomous, reconstitution of the Governing body and Executive Committee and increasing the quantum of grant to the Council, although four years have elapsed since the Report was submitted. The Committee hope that action on these and other remaining important recommendations will be expedited.
26.	5.8	Health <u>I.C.M.R.</u>	More than 4 years have elapsed since the Reviewing Committee reported on the working of the Indian Council of Medical Research. The Committee are glad that as a result of the discussions by the Committee, the Ministry of Health & Family Planning felt that it was high time to set up another high powered Committee to review the working etc. of the Council. The Committee agree that such a review is due now. They desire that the matter should be placed before the Governing Body of the Council for their concurrence as early as possible.
27.	5.9	Do.	The Committee also suggest that apart from the Annual Report of the Director General, I.C.M.R. the Council should also prepare an annual Performance Budget of its activities, covering individual schemes and research projects.
28.	5.10	Do.	The Committee have been furnished with a note on the institutional arrangements for undertakings, coordinating and financing medical research in U.K., U.S.A. and U.S.S.R. The Committee desire that a detailed study of the arrangements obtaining in these countries may be helpful to the next Reviewing Committee for suggesting improvements in the working of the Council.

