



REPORT
OF THE
COMMITTEE ON INDIGENOUS SYSTEMS
OF MEDICINE

VOL. I
REPORT AND RECOMMENDATIONS

ISSUED BY THE MINISTRY OF HEALTH
GOVERNMENT OF INDIA

1948



REPORT
OF THE
COMMITTEE ON INDIGENOUS SYSTEMS
OF MEDICINE

VOL. I
REPORT AND RECOMMENDATIONS

PUBLISHED BY THE MINISTRY OF HEALTH
GOVERNMENT OF INDIA

1948

TABLE OF CONTENTS

		PAGE
CHAPTER I.—	INTRODUCTORY The history and development of Ayurveda and Unani or Arabian systems of medicine—Their past achievements—The cause of decline and their present position—Attempts at their revival.	1—8
CHAPTER II.—	THE APPOINTMENT AND PERSONNEL OF THE COMMITTEE AND THE PROCEDURE ADOPTED BY IT	9—13
CHAPTER III.—	PROGRESS OF WORK OF THE COMMITTEE	14—24
CHAPTER IV.—	PREVIOUS COMMITTEES ON INDIGENOUS SYSTEMS OF MEDICINE SET UP BY PROVINCIAL AND OTHER GOVERNMENTS. Madras (1923), Bengal (1925), United Provinces (1926), Burma (1928), Central Provinces and Berar (1939), Punjab (1941), Bombay (1947), Assam (1947), Orissa (1947), Mysore (1942), Ceylon (1927 and 1947).	25—67
CHAPTER V.—	EXISTING CONDITIONS OF MEDICAL RELIEF Medical Relief as it obtains now in India—The present state of Indigenous Systems of Medicine,—its practitioners, institutions of teaching and medical-relief.	68—76
CHAPTER VI.—	INTEGRATION OF INDIAN AND WESTERN MEDICINE LEADING TO THEIR ULTIMATE SYNTHESIS Introductory—Western medicine and its rapid advance ; its limitations—Indian Medicine and its comprehensiveness—Science and Philosophy ; Philosophy necessary for the progress of science—Need of synthesis of the Indian and Western systems—Synthesis not difficult—Some authoritative opinions about synthesis—Opposition to synthesis—No alternative to synthesis—Integrated studies in three steps—Objection to synthesis answered—Special text-books, teachers and improved basic qualifications for the students necessary to make the programme of synthesis a success.	77—94

	PAGE
CHAPTER VII.—EDUCATION AND MEDICAL INSTITUTIONS	95—113

Introductory—Plan of the Chapter—The kind of future Medical Practitioners needed for India—Equipment of an ideal physician—Two courses of studies viz., Degree and Diploma—Curriculum of Studies—Basic qualification for admission—Improved methods of teaching for Degree Course—Elimination of unnecessary details in the Curriculum—Duration of the course of study—Provision of text-books—Medium of instruction—Institutions of Medical Education—Uniform standard of Examinations and Degrees—Post-Graduate studies and research—Course of study in Indian medicine for those qualified in Western medicine—Course of study in Western medicine for those qualified in Indian medicine.

CHAPTER VIII.—THE ORGANISATION OF RURAL MEDICAL RELIEF	114—126
--	---------

Personnel—Six months course to existing practitioners for medical-relief schemes—Possible criticism—Experience of the U.S.S.R. in the organisation of medical relief to the rural population and the Feldsher Course—Experience of China—Suggestions of Lt. General Hance and Lt. Col. McDonald—Syllabus and Curriculum for the six months course of training to the existing practitioners—The expected increase in the personnel—Measures for organising immediate medical Relief to the rural population—Subventions—Institutions of Medical Relief viz., Primary, Secondary, Panchayat, Tehsil, District and Provincial Units—Higher Personnel.

CHAPTER IX.—STATE CONTROL OF MEDICAL PRACTICE AND EDUCATION	127—138
---	---------

The need for control—Historical precedents—Legislation regarding Western medicine—Registration of practitioners and control of education in Indian medicine now in vogue in the Provinces and States—Declaration of the policy of the State according Recognition to the Indigenous Systems of Medicine—State Regulation and National Medical Board—Two Medical Councils and Provincial Branches—Registration; Safety to Public; Control of practice; Privileges and rights—Registration compulsory or optional; one Register or two—the Register of Indian Medicine.

	PAGE
CHAPTER X.—RESEARCH	139—170

Introductory—Aim and Methods of Approach to Research; the need for adopting the Meditational and Experimental methods in Research—The value of creative ideas—Limitation of experimental methods—Utilisation of experimental methods to work on valuable ideas contained in Indian medicine will contribute to original research—Research categories viz. :

- i. Research on Literature
- ii. Research on Fundamental Doctrines
- iii. Clinical Research
- iv. Pharmacological Research
- v. Research in Diet and Domestic medicine
- vi. Research in Psychological Medicine

The Board of Research in Indian Medicine—The Central Institute for Research in Indian Medicine—Divergent and Convergent types of Research Institutions and the type of Research Institute needed—The sections of the Research Institute—Direction and control of the Institute—The Sectional Heads and the type of Staff required—Statistical Section—The Archives of Indian Medicine—Prohibition of private practice to the Staff of the Institute and their salaries—Venue of the Central Research Institute—Provincial and Regional centres of Research—Post-Graduate Courses and the training of Teachers—Training of Research workers.

CHAPTER XI.—DRUGS AND MEDICINAL PREPARATIONS	171—181
--	---------

Section I :

Drugs—Classification of remedies—Difficulty of identification—Unsatisfactory drug supply—Identification of medicinal plants—Herbarium of medicinal plants—Survey and cultivation of medicinal plants—Compilation of a book on *Materia-Medica*—Standardisation of medicinal preparations. ●

Section II :

The preparation of a Pharmacopoeia of Indian Medicine—A Pharmacopoeial List of Indian Medicine—Pharmacies—Adulteration of drugs and lack of standard in medicinal preparations—The need to licence and control the collection and distribution of drugs—Creation of a suitable agency to inspect and control the sale of crude drugs

and finished products—Assistance to private enterprises and production by the State—Need to lay down at least the minimum requirements in respect of technical staff, equipment and accommodation to the manufacturing firms—A committee to examine the requirements of the country in respect of indigenous drugs and finished products and lay down measures for their control—Training of Pharmacists and their registration.

CHAPTER XII.—ADMINISTRATION AND FINANCE	182—186
CHAPTER XIII.—SUMMARY OF THE RECOMMENDATIONS	187—198
CHAPTER XIV.—CONCLUSIONS	199—200

CHAPTER I

INTRODUCTORY

1. The Indigenous Systems of Medicine, with which this enquiry is concerned, are reckoned to be the Ayurveda (including Siddha)¹ and the Unani Tibbi. In our report we shall refer to them as the Indian Systems of medicine, or Indian medicine. Of these two systems only the Ayurveda is strictly speaking native to the soil. Its beginnings, as of any other thing which deals with man, lie deep in unrecorded history; but the traditional date is about 3,000 years ago. The history of Ayurveda may be divided into four periods: (1) the Vedic period, (2) the period of original research and classical authors, (3) the period of compilation and also of *Tantras* and *Siddhas* (Chemist physicians), and (4) the period of stagnation and recompilation. It was during the second and third periods that Ayurveda was at its zenith. A study of the early literature of Ayurveda shows the heights and extent of medical knowledge of the ancient Aryans. Treatises on medicine, anatomy, gynæcology, obstetrics, caesarean section and crushing of foetus; surgery including lithotomy, and many other measures, such as rhinoplasty, which are considered to be recent advances, and pediatrics, and similar subjects had been composed during this period. The human body was dissected and attempts made to understand the functions of important organs.² There is evidence to believe that the rules of bacteriology, immunology, and methods of preventive medicine, such as segregation of persons suffering from infectious diseases, and some kinds of vaccination were also not unknown to them. Their greatest achievement, however, was the much maligned and much misunderstood, *Tridosha Theory*, which according to some competent authorities may serve to harmonise the two antagonistic recent theories—the cellular and the humoral. Study of Ayurveda reveals, to take a few instances, that immunity to small-pox which cow-pox gives was known to the ancient Hindus, and that anaesthetics

¹ Though some may claim Siddha to be an independent system, yet in the evidence given before us no claim for separation of this system from Ayurveda was made. On the other hand it has definitely been asserted that, "Both the Siddha and Ayurvedic systems have the same common foundations including the *Tridhatu* physiology and the *Tridosha* pathology". We, therefore, do not propose to deal separately with the Siddha System. The Ceylon Commission on Indigenous Medicine of 1947 too have adopted this course.

² Vide Charaka, Susruta and Kasyapa Samhitas,

2 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

administered by mouth or through inhalation were in use. The science of dietetics, which is in its early stages with Western medicine, was well known and minutely worked out, with due regard to individual susceptibilities and to seasonal and climatic variations.

2. About the beginning of the Christian era Ayurveda, (or Hindu Medicine), had reached its apogee and had spread far and wide influencing deeply the systems of medicine in Egypt, Greece, Rome and Arabia. The influence of the Hindu Medicine was not confined to ancient and mediaeval periods alone. Through its influence on Greek medicine and through the influence of the Greek on Arabian medicine and of the Arabian on the medicine in Europe, the Ayurvedic system can well claim to be the chief, though remote source, from which the mighty river of Western medicine has had its beginnings. In course of time, further progress on the fundamentals of medicine came to a stop, though *Materia Medica* (especially *Rasasasthra*) and therapeutics were still being enriched. The art of surgery and knowledge of anatomy suffered a growing progressive decline, partly because of the growing prejudice against dissection of dead bodies.¹ In spite of that, the tradition of surgery which was fostered by the Ayurvedic and Unani systems, when they came closer, was continued by a sect called JARAHIS. Couching of the cataract, bone-setting, and surgical treatment of the wounded in the battles are some of the fine examples of their tradition. The introduction of Western surgery after the advance of British Rule arrested the practice of this indigenous tradition. In addition, there were political and social changes which hastened the decline. And, as is inevitable in periods of decay, people became slaves of ancient texts which were not even correctly handed down and it came to be considered almost sacrilegious to question their authority. Independence of thought and innovation were halted; and unheeded went the adjuration of Charaka: "The physician need not be ashamed because he is not conversant with the names of all possible diseases, for all diseases have not yet been definitely recognised by name. There is no end of Medical Science. Skilfulness in practice should be acquired from others without feeling any humiliation. Unto men of intelligence, the entire world acts as a teacher, unto men destitute of intelligence the entire world appears as hostile; hence the wise should listen to and follow the counsels of even an opponent when they are instructive and praiseworthy, calculated to promote health and life and well suited to the conditions of the people."²

3. With the advent of the Muslim rule, the Unani System came to be introduced into the country. During this period both

¹ Refer to the preface of *Kasyapa Samhita* by Srijit. Pt. Hemaraj Sharma, Rajaguru of Nepal.

² Charaka Suthrasthana, Chapter 18, Vimanasthana, Chapter 8, Sl. 44.

the Ayurvedic and Unani medicine continued to minister to the needs of the people but their further study and growth though not the practice, however, declined. Both were in a static condition when the Western system was introduced by the British, in the third decade of the 19th century. And now, there are only a very few learned Vaidyas who, inspite of adverse circumstances are keeping the meagre flame of learning alive, while the practice of the art has fallen into the hands of persons, a great majority of whom have neither fully studied the subject, nor are competent enough to minister to the needs of the people. Yet, whatever the causes of its decadence Ayurveda is not dead in India. There is still demand for it on the part of large and varied sections of the population. Nor must it be forgotten that the Ayurveda is not only the original science of medicine but is also a rich store-house of principles and generalisations of medicine, which can be of great value to modern science in general and to medicine in particular.

4. THE UNANI OR THE ARABIAN SYSTEM: The Unani system, though named after the Greeks, owes its present form to the Arabs who not only saved much of the Greek literature by rendering them into Arabic but also enriched the medicine of their day with many of their own contribution. It was however, in acknowledgment of this debt to the Greeks that the Arabs named their systems of medicine as the Unani or Greek system. "During the rise of Islam in Damascus and the subsequent foundation of the Baghdad University in the glorious days of Haroun-al-Rashid the system of learning got a good deal of impetus, and the translation into Arabic of Greek books was taken in hand. Abu-barkre-ibn Zakaria (Rahazes) in 850 A.D. translated the other various branches of the science. The "Qanoon" of Sheikh Bu Alisenna (Avicenna) who flourished in 980 A.D. is an authority on this science and was translated into Latin, French and English during the years 1593 to 1595 A.D. Unani had an extensive sphere of influence as early as the 12th century A.D. It was in the 10th and 11th century that Abu Kasim Zaharavi and Zahara near Cerdova in Spain wrote valuable books on Unani medicine and many of them were translated into Latin. Surgery had a recognised position in the then educated world. In fact the Arabians are acknowledged on all hand to have played a prominent part in the spread of various sciences, including Unani, in the West.

5. But with the decline of the Muslim influence in Europe the degeneration in Islamic sciences set in. Educational institutions closed down, hospitals were dislocated, and libraries destroyed, while the few works that were saved fell into the hands of strangers. Every physician had to content himself with what knowledge he could acquire under the circumstances. The result was that important subjects like surgery, midwifery, anatomy, and chemistry, remained

4 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

undeveloped and the progress of the science of medicine was arrested. Europe, however, took up the trail of medicine from the Arabs. By re-establishing the objective methods which had been discarded by the unworthy successors of the great Avicenna, Rhazi and others, the Western medicine has today come to give us a vastly bigger store-house of medical knowledge and practice.

6. Although both Ayurveda and Unani Systems now exist only in a static form, it is possible that if these systems are properly studied and investigated, they are still capable of making many valuable contributions to the modern medical science. The great benefit which modern medicine can derive from these systems is likely to be from a study of their basic principles. It has been suggested that the comparatively simpler and the more coherent accounts of the Unani System "prove to be valid generalization of the facts of modern science",¹ and they could be employed as helpful keys for the study of the more ancient and elaborate system of Ayurveda.

This point deserves the fullest consideration.

7. In addition, it must be borne in mind that the Indigenous Systems of Medicine however static they may be, still claim a major share in the medical relief of the people. They are popular with the people and they attend to more than 80 per cent of the needs of the people, particularly in the rural areas. The Report of the Health Survey and Development Committee acknowledges this. It says "we realise the hold that these (the Indigenous) systems exercise not merely on the illiterate masses but over considerable sections of the intelligentsia. We have also to recognise that the treatment by practitioners of these systems is said to be cheap, and it is claimed that the empirical knowledge, that has been accumulated over centuries, has resulted in a fund of experience of the properties and medical use of minerals, herbs and plants which is of some value. Further, the undoubted part that these systems have played in the long distant past in influencing the developments of medicine and surgery in other countries of the world has naturally engendered a feeling of patriotic pride in the place they will always occupy in any world history of the rise and development of Medicine."²

ATTEMPTS AT REVIVAL

8. Naturally enough, systems, so popular with the people, were bound to receive some attention from the Government, however foreign it might have been. In 1827 classes in Ayurvedic medicine were opened at the Government Sanskrit College, Calcutta and about the same time in Unani medicine at the Madrassah. But the

¹ Report on the synthesis of the Indian and Western medicine by Lt. Col. M. H. Shah—Appendix B-II-15.

² Report of the Health Survey and Development Committee, Vol. 1, page 455.

East India Company were not satisfied with the work done, and on the report of a Committee, in 1833, they decided to stop these classes, and to set up the Calcutta Medical College of Western medicine. The period of state patronage of the Western medicine now set in. It was the science of the masters and specially meant for them. This gave it the attraction usual in such cases, and this attraction was powerfully reinforced by its surgical achievements. In a conservative country like India, however, a reaction was bound to come in with the rise of nationalism and the challenge it offered to Western thought, learning and mode of life. The question of the rehabilitation of the Ayurveda and Unani Systems, again came to the fore. One of the first signs of this reaction was the inauguration of the All-India Ayurveda Mahamandal and Vidyapita (now renamed Congress) in the early years of the present century. Courses of study were planned and holding of examinations in Ayurveda was started. Some scholars took up the editing of the classical works and brought out editions based on original material with admixture of recent knowledge.

9. Provincial Governments too began to take interest in the revival of Indian medicine, and in 1917 the Government of Madras appointed Dr. Koman, to a one-man Commission, to make investigations into the Indigenous System of Medicine. The Indian National Congress at its Nagpur Session in 1920 took up the question and adopted the following resolution—"This Conference is of the opinion that, having regard to the widely prevalent and generally accepted utility of the Ayurvedic and Unani Systems of Medicine in India, earnest and definite efforts should be made by the people of this country to further popularise Schools, Colleges and Hospitals for instruction and treatment in accordance with Indigenous Systems."¹ This resolution was reiterated by the Working Committee of the Indian National Congress in 1938.

10. Meanwhile some of the Provincial Governments set up Committees to consider the restoration of the systems. The Committee set up by the Government of Madras in October 1921 "to report on the question of recognition and encouragement of the Indigenous Systems of Medicine in vogue in this Presidency," was not only the earlier of these Committees, but in its monumental memorandum on "*The Science and the Art of Indian Medicine*" by its Secretary Dr. G. Srinivasamurti, offered a challenge to the upholders of the Western System, particularly regarding the essential soundness and the scientific character of the fundamental basis of Indian medicine. About the same time, 1921-22, the Government of Bengal set up two Committees, one on the restoration and development of Ayurvedic medicine and the other of the Unani

¹ Resolution No. II of the Indian National Congress, Nagpur 1920. See Chapter 5 on Provincial Committees.

6 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

medicine. Later on, other Provincial Governments set up their Committees to report on the Indigenous Systems of Medicine, and simultaneously, some Provincial and State Governments began to interest themselves in using the agency of Indian medicine in their schemes of rural medical relief. Schools and Colleges of Indian medicine were opened in the Provinces of U. P., Madras, Delhi, Bombay, Bengal and in some Indian States, to train "Competent practitioners of Indian Medicine with a good working knowledge of Western Medicine also", so as to enable the alumni of these institutions to become competent to render all-round medical relief to the rural population. It was also hoped to promote research in the Indigenous systems and to bring about an integration of whatever was good and of proven utility in the Indian and Western systems of Medicine by combining the study of the two in these institutions.

11. In the meanwhile the Government of India appointed the Health Survey and Development Committee known as "Bhore Committee" "to make a broad survey of the present position in regard to health conditions and health organisations in British India and to make recommendations for future development." This Committee made an extensive and critical survey of the present position of the "Health conditions and health organisations" in the country and recommended far-reaching measures for bettering the same from the standpoint of view of Western medicine. With regard to the indigenous systems of medicine the Committee was, unfortunately "not in a position to assess the real value of these systems." But consideration of the value of, and help which could be given by the Indigenous Systems was not dealt with, "on account of paucity of time and opportunities at their disposal, to conduct an investigation into the problem as would justify clear-cut recommendation in respect of the part to be assigned to the Indigenous Systems in the organised State Medical Relief of the Country."

12. This omission by the Bhore Committee led to a great deal of public criticism¹ and it was in consequence of it that at the conference of the Health Ministers which took place at Delhi in October, 1946, at the suggestion of the Hon'ble Mrs. A. Rukmini Lakshminpathi, the then Minister of Health with the Government of Madras, the following resolutions were adopted :

"In accordance with the recommendations of the National Planning Committee this Conference resolves that adequate provision should be made in the Centre and Provinces :

- (a) for research in and the application of scientific method for the investigation of the Indigenous systems like Ayurveda and Unani with reference

¹ Dr. P. B. Mukerjee—Presidential Address XXIII All-India Medical Conference, Madras, 1946.

- to (i) maintenance of health and (ii) prevention and cure of diseases.
- (b) for starting colleges and schools for training for diploma and degree courses in Indigenous systems of Medicine.
- (c) for post-graduate courses in Indian Medicine for graduates in Western Medicine.

"In accordance with Resolution No. 13 of the National Planning Committee this Conference resolves to absorb the practitioners of Ayurvedic and Unani systems of Medicine into the State Health Organisation by giving them further scientific training wherever necessary as health personnel, like doctors, physical training experts (Ustads), sanitary staff, masseurs, nurses, midwives.

"This Conference resolves that in the Central Council and Provincial Health Boards and Councils, the Departments and practitioners of Indian Medicine should be given due representation, wherever possible."

It was in pursuance of these resolutions that the Government of India in the Department of Health set up the present Committee.

13. Before concluding this chapter we wish to clearly state our views in regard to what is generally spoken of as different "Systems" of Medicine viz., Ayurveda, Siddha, Unani Tibb, Western medicine, Homeopathy and the like. We hold that, if the aim of all of them is the same, *i.e.*, the maintenance of health, and prevention and cure of disease, they should all be properly investigated and integrated in the form of a single system which should be capable of suitable alteration and adaptation in accordance with time and other conditions.

14. Science is universal and medical science is no exception. We do not believe that there can be separate systems of Western or Indian Medicine. Such multiplicity of systems is only believed in and encouraged by people who have not clearly grasped the significance of the noble ideals as preached by the great Acharyas of Indian medicine and the savants of the Western medicine. The so-called "systems" merely represent different aspects and approaches to medical science as practised during different ages and in different parts of the world; anything of value emerging from these should be utilised for the benefit of humanity as a whole and without any reservation. It was our effort to avoid the use of term "Systems" in our report, but as the word has been used in the terms of reference of the Committee we have used it though reluctantly.

15. *Summary.* The Indigenous medicine in India comprises of Ayurveda including Siddha and Unani Tibb. For the two

¹ Summary of the Proceedings of the Central Provincial Health Conference, 1947.

8 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

combined we have used the name of Indian medicine in this Report. Ayurveda which is based on the Vedas, was developed systematically more than three thousand years ago, and made great progress both on the preventive and curative side of medicine. When India was subjected to foreign domination Ayurvedic medicine received a set back. The Unani Tibb is not strictly speaking indigenous to India. It came with the Mohammedan rule and gained popularity generally in those areas where Muslims were in the majority and was developed by State support under the Muslim rule. When the British came to India the Western medicine was introduced and came to be adopted as the State system of relief. As a consequence, Ayurveda and Unani Tibb both declined. The Indian medicine although static, still gives medical relief to more than 80 per cent of the population in some form or other. Efforts to resuscitate the Ayurvedic and Unani Tibb have therefore been made during the last 3 or 4 decades. A number of Provincial Governments have set up Committees to advise how this should be done and the Indian medicine could be effectively utilised in giving medical relief to the people of the country. Schools and Colleges have been opened in some provinces and States to train practitioners suitable for present day requirements, i.e., with a working knowledge of Western medicine. The Government of India appointed the Health Survey and Development Committee in 1944 to enquire into the health conditions in the country with a view to improve medical relief to the people. This Committee made far-reaching recommendations, but were not in a position to determine the part which the Indian medicine should play in medical relief. This omission came in for a good deal of criticism. A Conference of Provincial Health Ministers was held in New Delhi in October 1946 and our Committee was appointed directly as a result of their deliberations. We wish to emphasise here that the Committee do not believe in the multiplicity of systems of medicine. Science is universal and medical science is no exception. The so-called "Systems" merely represent different aspects of and approaches to medical science as practised during different ages and in different parts of the world. Anything of value emerging from these should be utilised for the benefit of humanity as a whole without any reservation and integrated in the form of a unified system for the country.

CHAPTER II

THE APPOINTMENT, FUNCTIONS AND PERSONNEL OF THE COMMITTEE AND THE PROCEDURE ADOPTED BY IT

16. By their Press note dated December 19, 1946, the Government of India announced as follows :

“ ENCOURAGEMENT TO INDIGENOUS SYSTEMS OF MEDICINE COMMITTEE TO RECOMMEND NECESSARY STEPS ”.

“ In pursuance of the resolution adopted by the Health Ministers' Conference held recently in Delhi, the Government of India have decided to appoint a Committee to consider and recommend the steps that should be taken to improve facilities for research and training in indigenous systems and generally to increase their usefulness to the public.

“ The Health Ministers' Conference resolved that adequate provision should be made at the Centre and in the Provinces for training and research in indigenous systems of medicine and for the application of scientific method for the investigation of those systems.

“ The Committee, now to be appointed, will consist of practitioners of Indian systems of medicine together with representatives of the allopathic system. The personnel of the Committee will be announced shortly. It is hoped that the Committee's recommendations will be of assistance to Provincial Governments in implementing the policy agreed upon at the Conference.

FUNCTIONS OF THE COMMITTEE

17. “ The functions of the Committee will be to make recommendations in regard to the following matters :

- (1) the provision that should be made for research in, and the application of scientific methods for the investigation of the indigenous systems of medicine such as Ayurveda and Unani Tibb, with reference to maintenance of health and the prevention and cure of disease ;¹

¹ In view of the ambiguity in the language of this function as given to us, we have decided to interpret it as follows :

- (1) The provision that should be made for research in the Indigenous System of Medicine ;
- (2) The provision that should be made for the application of scientific methods for the investigation of the Indigenous Systems of Medicine.

10 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

- (2) the measure to be taken to improve facilities for training in Indian systems of medicine ;
- (3) the desirability of State Control of the practice of those systems of medicine, and
- (4) the other measures to be taken to increase the usefulness of the systems to the public as part of a comprehensive plan."

AN ADDITIONAL FUNCTION

18. To these functions, the Hon'ble member then, Raja Ghazanfar Ali, in his inaugural address to the Committee, on 22nd March 1947, added another : " an enquiry, as to whether the three systems Ayurveda, Unani and the Modern cannot be combined into one all-comprehensive system ". The Hon'ble Member, while calling upon the Committee to do this said :

" Medical Science should have no barriers of systems, of civilisations and cultures, of the Eastern and the Western. Medicine should be the common possession of mankind, and as such anything which is of value, anything which the systems old and new have to contribute should be pooled together and placed at the service of suffering humanity "

" The heritage of India coupled with the discoveries of the West, should produce a system, universal in its application, and general in its benefits. India, which has contributed so greatly to many sciences, may yet again enrich the World with a system of medicine, effective, inexpensive, and yet rational and therefore, acceptable "

19. In his address the Hon'ble Member, also explained how the composition of the Committee was arrived at after considering the recommendations of the Provincial Governments. He then expressed his strong feeling that the medical relief provided for the people must not only be economic and popularly acceptable, but must also be based on rational and scientific lines. After recounting the functions of the Committee as laid down in the Government of India, Health Department Press Note of December 19, 1946, the Hon'ble Member asked the Committee specially to consider the possibility of working out a synthesis of the Indigenous and the Western Systems of Medicine. He concluded his address with the remarks "To achieve this noble object it is essential not only that we plan to extend the facilities for medical relief, but also that we carry on research and enquiry, conduct experiments and test clinically, and standardise and systematise our medical knowledge ". It was with this exhortation in mind that the Committee set on its labours.

PERSONNEL OF THE COMMITTEE

20. A press note dated January 21, 1946, made the following announcement regarding the Personnel of the Committee.

“ The Government of India have appointed the undermentioned persons to serve on the Committee to consider the measures to be taken to increase the usefulness of the Indian Systems of Medicine.

Chairman. Col. Sir R. N. Chopra.

Vaids. Bishagratna Dr. A. Lakshmipathi, B.A., M.B. & C.M., Principal, Madras Ayurvedic College, 1920-28; Member, Board of Advisers on Indigenous Systems of Medicine, Madras.

Dr. Balkrishna Chintamani Lagu, A.V.V., M.L.A. President, Board of Indian Systems of Medicine, Bombay.

Dr. B. A. Pathak, Principal, Banaras Hindu University Ayurvedic College—Member, U. P. Board of Indian Medicine.

Hakims. Shifa-ul-Mulk Hakim Habib-ur-Rehman, Principal, Tibbia College, Decca.¹

Shifa-ul-Mulk Hakim Mohd Hassan Qarshy, Principal, Tibbia College, Lahore.

Hakim Naseer-ud-Din Ahmed Khan, General Secretary of the Ayurvedic and Tibbi Board, Delhi Province.

The names of the two doctors to be appointed to serve on the Committee will be announced shortly. The Committee will be empowered to co-opt provincial representatives at any place it may visit during its tours.”

21. By a Press Note dated 30th January, 1947, the names of the two doctors to serve on the Committee, were announced as follows :

“ The Government of India have appointed the undermentioned allopathic doctors to serve on the Committee to consider the measures to be taken to increase the usefulness of the Indian Systems of Medicine, in addition to Sir R. N. Chopra (Chairman) and the Vaids and Hakims whose names have already been announced :

Major M. H. Shah, Superintendent, Irwin Hospital, Delhi (now Lt. Col. and Chief Medical Officer, Jinnah Central Hospital, Karachi).

Dr. B. N. Ghosh, Professor of Pharmacology, Carmichael Medical College, Calcutta.”

In view of representations to the Health Department that there were no representatives of the orthodox Vaidyas on the

¹ Shifa-ul-Mulk Hakim Habib-ur-Rehman died before the Committee started functioning.

12 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

Committee, Vaidya Jadavjee Tricumjee Acharya was appointed on the 26th April 1947 and Dr. A. U. Butt, Principal, Tibbia College, Aligarh, on 23rd May 1947. In the meanwhile, on 30th April Hakim Niser Ahmed Khan of Calcutta was appointed to fill the vacancy caused by the death of Shifa-ul-Mulk Hakim Habib-ur-Rehman. The last named although regularly invited did not attend any meeting.

PROCEDURE

22. The Committee at its first meeting on 22nd of March 1947, decided on the following procedure :

- (1) To draw up and issue four sets of Questionnaire,¹
 - (a) for Provincial Governments, (ii) for teaching institutions, (iii) for practitioners of the three systems (Ayurvedic, Unani and the Western) and (iv) for Dawakhana or Pharmacies. These questionnaires were to be printed in English, Hindi and Urdu.
 - (b) On receipt of replies, to have these considered by Sub-Committees of members of the Committee.
 - (c) To have the findings of these Sub-Committees scrutinised by the whole Committee.
 - (d) To appoint touring Sub-Committee, or Committees, to visit selected places for taking evidence, and for inspecting institutions.
 - (e) It was also decided to appoint a sub-committee consisting of the following members to investigate the possibility of arriving at a synthesis of the Indigenous and the Western Systems of Medicine ;

Lt. Col. M. H. Shah
Dr. A. Lakshmi pathi
Hakim Qarshy

23. To facilitate the work of issuing questionnaire members were requested to send in their suggestions regarding the institutions and persons to be addressed. At its second session on March 24 the Committee decided to attempt at making a programme of work, part of which could be implemented immediately, and the rest over a period of some years. The immediate programme was to be concerned with the utilisation of the services of the practitioners of the

¹ See Appendix A-II-2.

Indigenous Systems for an expansion of health-work all over the country, particularly in rural areas, in as short a time as possible. The long term programme was to be an attempt to evolve a unified system of Medicine through the incorporation of all that was best in the three systems—Ayurvedic, Unani and the Western medicine. It was to aim at an integration leading to a real synthesis of these systems, instead of at a mere process of addition which is going on at present.

CHAPTER III

PROGRESS OF WORK

24. From the very outset the work of the Committee was hampered by some unforeseen and unforeseeable delays and difficulties. Though the Committee was appointed in February it could not meet till the 22nd of March. At its first meeting, the drafts of the questionnaire prepared by the Chairman with the help of Dr. K. C. K. E. Raja who had been Co-opted as a member and Lt. Col. M. H. Shah were considered and accepted with some modifications.

25. *Printing Delays.* The material for questionnaire in English was handed to the press on 9th April but it was not till a whole month later that the printed copies were received. The printing of Urdu Questionnaire took less time, because the usual red-tape procedure was dispensed with. The printing of Hindi questionnaire was entrusted to a Press at Lahore, in the hope of getting the work executed more expeditiously than could be hoped for at Delhi. But the out-break of riots at that city delayed the receipt of the questionnaire till well past the middle of June. Thus it will be seen that the work of printing the questionnaire itself took three months through circumstances which were unforeseen and could not be prevented.

26. *Departmental Delays.* There were other causes of delay too. The Department of Health was addressed as early as the 2nd of April to accord permission to the Committee to address directly the major Indian States, and for a list of such States. The permission and information were not received till the 24th of May. The questionnaire to the States could not therefore be issued till the first week in June.

27. *Repeated Postponements.* The original date, 15th of July, fixed by the Committee for the receipt or of replies, had to be repeatedly extended on account of delays in printing, delay in the receipt of information from the Department, and delays due to country-wide dislocation of postal arrangements—both before and after the partition. Pressing requests for postponement were received from various institutions, private practitioners and important organisations such as the All-India Ayurvedic Congress, the Indian

Medical Association, the Bombay Vaidya Sabha, The Tamil-Nad Ayurveda Sabha, etc. In particular the Indian Medical Association asked for repeated postponements, first to the 30th of August, then to the 15th of October and finally to the 15th of November.

28. There was also considerable delay in getting replies from the various Provincial Governments and Indian States who were addressed. These Governments and States were requested :

(i) to answer Questionnaire No. I, and (ii) to give the Committee a list of institutions, individuals and dawkhanas to whom Questionnaire Nos. II, III and IV respectively should be sent. Three reminders had to be issued to the Governments alone to give us the required information. Since a number of Governments did not even acknowledge the receipt of any of the many letters and reminders of the Committee, a list of such Governments as have replied to Questionnaire No. I is given in Appendix IV.

29. *Delay in the Submission of Memoranda.* At the first meeting of the Committee on the 22nd of March, it was decided to set up a Scientific Memoranda Sub-Committee, to investigate the possibility of synthesising the three systems of the Ayurvedic, Unani and Western medicine.

30. Major (now Lt.-Col.) M. H. Shah had volunteered to do the spade work in connection with the Sub-Committee appointed in the first meeting. As he requested for the help of three research assistants and asked for other facilities, he was given a grant of Rs. 20,000/- to meet the necessary expenses. Although his Research team started the work with great zeal, in less than six weeks it had to be disbanded on account of the partitioning of the country. Despite this and his transfer to Pakistan, Col. Shah assured the Chairman that he will submit a report atleast in regard to the Unani System. Due, however, to the fact that he was kept fully occupied in developing a Central Hospital for the Pakistan Government, his report was not received until the 27th of June, 1948.

31. As no arrangements existed for securing parallel information in regard to the Ayurveda, the Chairman decided to call a meeting of some of the Ayurvedic members of the Committee at Bombay on the 2nd of November, to make arrangements for preparing a scientific memorandum about the Ayurvedic system. The date of the meeting had however to be shifted to the 16th of November, as Dr. Lakshmi pathi was unable to attend on an earlier date. The meeting was held on the 16th of November in Bombay and was attended by the Chairman, Vaidya Jadavji Tricumji Acharya, and Dr. Lagu, Lakshmi pathi, Pathak, and Mehta (Co-opted Member), and it was decided to proceed with the work connected with the Scientific Memorandum on the Ayurvedic System.

16 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

32. The members present at this meeting once again reiterated their opinion that it was desirable to attempt a synthesis of the Western medicine and the Indigenous Systems. It was also agreed that this synthesis should be attempted at two levels—higher and lower. A special Sub-Committee was set up to work out the higher synthesis with the following membership :

Dr. B. C. Lagu (Convener),
Vaidya Jadavji Tricumjee Acharya,
Dr. A. Lakshmipathi,
Dr. B. A. Pathak, and
Dr. P. M. Mehta.

The Sub-Committee was empowered to hold a conference of eminent Vaidyas and Kavirajs from all over India, so that its findings may have the fullest possible support.

33. Another sub-Committee, consisting of Dr. B. A. Pathak, (Convener), Vaidya Jadavji Tricumjee Acharya and Dr. A. U. Butt was appointed to work out the lower synthesis¹ i.e., the devising of an immediate plan of work so as to fit in the practitioners of the Indigenous Systems and others considered eligible, for the work of general medical relief and public health for the rural areas. This sub-Committee was also to decide a short term course of study for the registered practitioners of Indian medicine and others considered eligible, and also to recommend the minimum qualifications of those who were to be allowed to take this course. It was agreed that the short term course should include the principles of Public Health and the study of preventive measures.

34. The conference convened by the Scientific Memoranda Sub-Committee for higher synthesis met at Poona from the 15th to the 22nd of December, and with the co-operation of distinguished practitioners and scholars, worked hard at producing its report. The following were present at this conference :

1. Dr. D. N. Banerjee, Calcutta, 2. Dr. D. V. Subba Reddi, Madras, 3. Kaviraj Jyotishchandra Saraswati, Delhi, 4. Vaidya Jogendranath Darshanshastri, Calcutta, 5. Vaidya Rajeshwardatta Shastri, Benares, 6. Vaidya Parmeshwaran Pillai, Travancore, 7. Vaidyaratna Pt. M. Doraiswamy Ayyangar, Madras, 8. Vaidya Purushotamshastri Hirlekar, Amaroti. 9. Pt. Malladi Ramamurthy Shastri, Narsapur. 10. Vaidya Gangadharshastri Gune, Ahmednagar. 11. Vaidya B. V. Gokhale, Poona. 12. Dr. M. N. Agashe, Satara City. 13. Prof. Balwant Singh, Benares. 14. Prof. Dattataraya Anant Kulkarni, Benares. 15. Kaviraj Upendranath Das, Delhi. 16. Vaidya Ganeshdatt Saraswat, Delhi. 17. Dr. H. V. Savanur, Belgaum,

¹For the term 'Lower Synthesis' the term Interim arrangement was substituted later on.

18. Dr. C. Dwarakanath, Bangalore. 19. Pt. Badri Duttji Shastri, Benares. 21. Hakim Nazir-ud-din Ahmed Khan also attended some of the sessions of the Conference. (Capt. G. Srinivasa Murthi, and Dr. M. Ramachandran of Mysore, who were invited to the conference were unable to attend). The former however, deputed Dr. Dwarakanath of the Sri Jayachamarajendra Institute of Indian Medicine to be present in his place. This conference selected the following three as chief subjects for discussion :

- (i) The *Panchamahabhuta* theory, its meaning, and its interpretation in a scientific way.
- (ii) The *Tridosha* theory, its meaning and its relation to physiology, pathology, and therapeutics, and its interpretation in modern scientific way.
- (iii) *Rasa, Guna, Virya, Vipaka* and *Prabhava* theory, its relation to therapeutics and its interpretation in modern scientific way.

35. The reports of this conference and of the Sub-Committee on synthesis at the lower stage were promised by the first week in January. But on account of the preoccupation of the members—all of whom are busy non-officials—it was not received till June 1, 1948. Meanwhile at the chairman's request Dr. Pathak undertook to sort out English and Hindi replies to Questionnaire II (Institutions) and III (Private Practitioners) and IV (Dwakhana); and Dr. A. U. Butt, the replies in Urdu to these Questionnaire. The list of institutions selected for being visited and persons to be invited to give evidence, drawn up by these two members, was further scrutinised by the Chairman and finalised. The thanks of the Committee are due to Drs. Pathak and Butt for the work done in this respect.

36. In view of the delay in the receipt of Lt.-Col. Shah's report on Unani medicine, the Chairman decided early in February 1948 to set up another Unani Sub-Committee with Hakim Nazir-ud-din Ahmed Khan as its convener. The Sub-Committee met at Madras and submitted its memorandum at the end of February. The following Hakims and Vaidyas attended the Unani Scientific Memorandum Sub-Committee at Madras :

- (1) Hakim Nazir-ud-din Ahmed Khan (Convener).
- (2) Dr. Syed Niamatullah Sahib, President.
- (3) Sir Mohd. Oosman Saheb.
- (4) Janab Maulana Moulvi Hakim Peer Madani Saheb.
- (5) Hakim J. H. Moulvi Khader Ahmed Saheb.
- (6) Hakim Hafiz Mohd. Abdus Shukur Saheb, Madras.
- (7) Hakim J. H. Mohd. Ibrahim Saheb.
- (8) J. Shifa-ul-mulk Haji Hakim Syed Maqudoom Ashraf Saheb.
- (9) Janab Hakim Ahmed Hussain Saheb.
- (10) Dr. A. Lakshmi pathi.
- (11) Vaidyaraj Pt. Radhakrishna Dvivedi of Hyderabad.
- (12) Dr. V. K. Venkataswami, M.B.B.S., F.I.M.,

18 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

Lecturer. Government College of Indian Medicine, Madras. (13) Ayurvedacharya Dr. M. Visweswara Sastry, H.P.I.M., Lecturer, Government College of Indian Medicine, Madras and (14) Hakim Maulvi Zainulabedin Saheb, Mysore. Dr. B. A. Pathak joined later. Dr. Butt of Aligarh University could not be present at Madras.

37. As the Ayurvedic Memorandum was still not received, the Chairman decided to call a meeting of the whole Committee to consider the matter. The meeting of the Committee was held on 2nd, 3rd and 4th March 1948. At this meeting the tour programme of the Committee was approved and the list of institutions to be visited and individuals to be examined orally was amended. As it was not considered necessary for the entire Committee to visit every place, Sub-Committees with certain co-opted members were set up to record evidence and to inspect the institutions at different places. These touring Sub-Committees were as follows :

Station	Members	Co-opted Members
DELHI	Col. Sir R. N. Chopra (Chairman) Dr. A. Butt Dr. B. A. Pathak Dr. B. C. Lagu Dr. A. Lakshmiopathi Vaidya Jadavji Tricumjee Acharya Hakim Nazir-ud-din Ahmed Khan Dr. B. N. Ghosh.	Lt. Col. Amirchand, I.M.S., President, Indian Medical Association, Calcutta. (Declined to attend the Meetings of the Committee.) Kaviraj Upendra Nath Das, Secretary, All-India Ayurveda Vidyapitha, Delhi. Pt. G. D. Saraswata, B.A., General Secretary, All-India Ayurvedic Con- gress, Delhi.
ALIGARH	Col. Sir R. N. Chopra (Chairman) Dr. A. Butt.	Hakim Abdulla Khan Nasar, Lecturer, Tibbia College, Muslim University, Aligarh.
LUCKNOW	Col. Sir R. N. Chopra (Chairman) Dr. A. Butt Dr. B. A. Pathak Hakim Nazir-ud-din Ahmed Khan (Col. Sir R. N. Chopra could not visit Lucknow due to unavoidable circumstances. Dr. Butt and Hakim Nazir-ud-din Ahmed Khan reached Lucknow on the 11th March only.)	Dr. B. B. Bhatia, Principal, King Ed- ward Medical College, Lucknow. Pandit Jagannath Prashad Shukla, Sammelan Road, Allahabad. Shifa-ul-Mulk Hakim Abdul Hasib Saheb, Cantonment Road, Lucknow.
BENARES	Col. Sir R. N. Chopra (Chairman) Dr. B. A. Pathak Hakim Nazir-ud-din Ahmed Khan (Hakim Nazir-ud-din Ahmed Khan could not attend).	Pandit Hariranjana Mazumdar, Hos- tutora, Benares. Hakim Altafur Rahman, D. O. M. S. (Aligarh) Chhetanpura, Benares.
PATNA	Col. Sir R. N. Chopra (Chairman) Dr. A. Butt Dr. B. A. Pathak (Dr. Pathak could not be present at Patna due to his preoccupation in connection with the work of the Committee.)	Vaidya Hari Narayan Chaturvedi, Princi- pal, Government Ayurvedic College, Patna.

Station	Members	Co-opted Members
CALCUTTA	Col. Sir R. N. Chopra <i>(Chairman)</i> Dr. A. Butt Dr. B. A. Pathak Shifa-ul-Mulk Hakim Nisar Ahmed Khan Dr. B.N. Gosh	Capt. P. B. Mukerji, B.Sc., M. B., F.R.C.S., F.F.R., D.M.R.E., (Camb.) 47-2, Hazra Road, Calcutta 19. Dr. D. N. Banerji, M.B. (Cal.), M.D. (Berlin) Professor of Pathology, Carmichael Medical College, Calcutta. KJ. Rakhal Das Sen, 151, Vivekananda Road, Calcutta. KJ. Bimala Nanda Tarkatirtha, Director, Vaidya Shastra Peeth, 90/3, Grey Street, Calcutta. KJ. Anantha Nath Ray, 29/3, Grey Street, Calcutta. KJ. Indu Bhushan Sen, 70/1, Cornwallis Street, Calcutta.
	(Shifa-ul-Mulk Hakim Nisar Ahmed Khan did not attend the sessions due to reasons of health.)	
NAGPUR	Dr. B. N. Ghosh (Vaidya Jadavji Tricumjee Acharya could not be present at Calcutta owing to his pre-occupation in connection with the Committee's work.)	Pt. Govardan Sharma Chhangani, Sitta- Vaidya Jadavji Tricumjee Acharya burdi, Nagpur.
VIZAGAPATAM	Col. Sir R. N. Chopra <i>(Chairman)</i> Dr. A. Lakshmipathi	
MADRAS	Col. Sir R. N. Chopra <i>(Chairman)</i> Dr. A. Lakshmipathi Dr. B. N. Ghosh Dr. B. C. Lagu Hakim Nazir-ud-din Ahmed Khan	Vaidya Ratna Capt. G. Srinivasa Murti, B.A., B.L., M.B. & C.M. Lattice Bridge Road, Adyar, Madras. Vaidya Ratna Pandit Mr. Doraiswamy Iyengar, A.K.A.C., "ARYA GRIHAM", Vepery, Madras. Dr. Syed Niamathulla, Ex-Mayor of Madras, 75, Pycrofts Road, Triplicane, Madras.
	(Dr. B. C. Lagu and Hakim Nazir-ud-din Ahmed Khan could not be present at Madras for the meeting.)	
TRIVANDRUM	Col. Sir R. N. Chopra <i>(Chairman)</i> Dr. A. Lakshmipathi Dr. B. C. Lagu	
ERNAKULAM	Col. Sir R. N. Chopra <i>(Chairman)</i> Dr. A. Lakshmipathi Dr. B. C. Lagu	
TRICHUR	Col. Sir R. N. Chopra <i>(Chairman)</i> Dr. A. Lakshmipathi Dr. B. C. Lagu	
BANGALORE	Col. Sir R. N. Chopra <i>(Chairman)</i> Dr. A. Lakshmipathi Dr. B. C. Lagu Hakim Nazir-ud-din Ahmed Khan	Dr. C. Dwarakanath, L.I.M. (Madras), Z. T. (Hamburg 'Varsity), Research Officer, Sri Jayachamarajendra Insti- tute of Indian Medicine, Bangalore City.
MYSORE	Col. Sir R. N. Chopra <i>(Chairman)</i> Dr. A. Lakshmipathi Dr. B. C. Lagu Hakim Nazir-ud-din Ahmed Khan (Col. R. N. Chopra who was indisposed could not visit Mysore.)	Dr. C. Dwarakanath, L.I.M. (Madras), Z.T. (Hamburg 'Varsity), Research Officer, Sri Jayachamarajendra Insti- tute of Indian Medicine, Bangalore City.

20 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

Station	Members	Co-opted Members
HYDERABAD	Col. Sir R. N. Chopra (Chairman) Dr. B. C. Lagu Hakim Nazir-ud-din Ahmed Khan	Pandit Radha Krishen, Principal, Government Ayurvedic College, H. E. H. The Nizam's Government, Hyderabad (Dn.).
BOMBAY	Col. Sir R. N. Chopra (Chairman) Dr. B. C. Lagu Vaidya Jadavji Tricumjee Acharya (Vaidya Jadavji Tricumjee Acharya could not be present at Bombay due to his being at Benares in connection with the Committee's work.)	Dr. P. M. Mehta, M.D., Chief Medical Officer, Jamnagar. Dr. B. B. Yodh, M.B. (Bom.), M.R.C.P., (Lond.), D.T.M. & H. (Eng.), Parabsha Road, Malabar Hill, Bombay.
POONA	Col. Sir R. N. Chopra (Chairman) Dr. B. C. Lagu Vaidya Jadavji Tricumjee Acharya (Vaidya Jadavji Tricumjee Acharya could not be present at Poona due to his being at Benares in connection with the Committee's work.)	Vaidya Gangadhar Shastri Gune, Ayurvedashram Pharmacy, Ahmednagar.
AHMEDABAD	Dr. B. C. Lagu Vaidya Jadavji Tricumjee Acharya (Vaidya Jadavji Tricumjee Acharya could not be present at Ahmedabad due to his being at Benares in connection with the Committee's work.)	Bapalal G. Vaidya, Principal, Shree O.H. Nazar Ayurveda Mahavidyalaya, Timaliya Vad, Nanpura, Surat.
JAIPUR	Dr. B. C. Lagu Vaidya Jadavji Tricumjee Acharya (Vaidya Jadavji Tricumjee Acharya could not be present at Jaipur due to his being at Benares in connection with the Committee's work.)	

The Secretary and two stenographers accompanied the various Sub-Committees on this tour. The Committee held sittings, examined witnesses and visited institutions mentioned in the table attached. After finishing work at Bombay, the Secretary returned to Delhi and did not visit Poona, Ahmedabad and Jaipur.

38. Thanks to the efficient arrangement made by the Governments of Provinces and States at their Provincial and State Headquarters, the programme of the Committee was adhered to in spite of many eleventh hour additions to the number of witnesses to be examined and institutions to be visited. After completing its tour, the Committee's Headquarters was transferred to Simla from Delhi at the instance of the Chairman.

39. As the Secretariat staff of the Committee was quite inadequate for the heavy work involved a request for extra staff was made to the Health Ministry. This extra staff was one stenographer and two typists. To strengthen the technical side of the Secretariat of the Committee, the Chairman requested the Government of Mysore to loan the services of Dr. C. Dwarakanath, L.I.M. (Madras), Z.T. (Hamburg Varsity), for a period of one month. This request was acceded to by the Government of Mysore and Dr. Dwarakanath reported himself for work on the 29th April. The loan of Dr. Dwarakanath's

services was later on extended to the end of July. As the work involved in writing the report was still too heavy, and as the Chairman desired to finish the work at an early date, a request was made to the Government of Madras to depute Dr. V. Narayanaswamy Aiyar of the Government College of Indian Medicine to come to Simla to help in writing the report. The Government of Madras very kindly agreed to loan the services of Dr. Aiyar till the end of July. In addition to these two gentlemen, it was also found necessary to request Drs. B. N. Ghosh, B. C. Lagu and B. A. Pathak and Vaidya Jadavji Tricumjee Acharya, the members of the Committee to come to Simla some days earlier than the 20th July when the final meeting of the Committee was scheduled to begin its session.

40. The Committee's term of appointment had also to be extended from time to time. The Committee was originally appointed to function till the end of October 1947. This term was extended successively to February and May and lastly to the end of July 1948.

41. The final meeting of the Committee to consider the draft of the Report began on the 20th July and ended on the 28th July 48. The following members attended this meeting :

- | | | |
|-------------------------------------|------|----------|
| 1. Col. Sir R. N. Chopra | | Chairman |
| 2. Dr. B. N. Ghosh | } | Members |
| 3. Lt. Col. M. H. Shah | | |
| 4. Dr. B. A. Pathak | | |
| 5. Dr. A. Lakshmipathi | | |
| 6. Dr. B. C. Lagu | | |
| 7. Vaidya Jadavji Tricumjee Acharya | | |
| 8. Hakim Nasir-ud-din Ahmed Khan | | |

42. (a) Thanks of the Committee are due to the various Provincial and State Governments for all the help that they gave in supplying information, forwarding the questionnaire, and in making arrangements for the visits of the Committee and its Sub-Committees to the different places. Our thanks are also due to the Government of Pakistan for having permitted Col. Shah to join the final meeting of the Committee. It is hoped that this collaboration by the two Dominions may prove to be the beginning of a more lasting co-operation in many other spheres of common interest.

(b) The Committee cannot thank enough the Governments of Mysore State and of Madras for their kindness in placing the services of Drs. G. Dwarakanath, L.I.M. (Madras), Z.T. (Hamburg 'Varsity) and V. Narayanaswami Aiyar, H.P.I.M. respectively at the disposal of the Committee. We are greatly indebted to these two gentlemen for their coming up to Simla and for the very valuable help rendered by them in analysing the data, going through the

22 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

memoranda and drafting of the Report. It was due, in no small measure, to the co-operation of these two scholars that the Report of the Committee could be expedited. To Vaidyaratna Capt. G. Srinivasa Murti, B.A., B.L., M.B. & C.M., the Committee is indebted for his valuable advice and help at every stage of drafting of the Report. We are also grateful to him for bringing up-to-date his memorandum on "The Science and Art of Indian Medicine" and submitting it in an abbreviated form, in his capacity as a co-opted member of the Committee.

(c) To the Servants of India Society, Poona, we are grateful for so kindly placing their hall, office and living rooms at our disposal for the meeting of the Ayurvedic Section of the Scientific Memorandum Sub-Committee and to the Government College of Indian Medicine, Madras, for placing their premises at our disposal for the meeting of the Unani Section of the Scientific Memoranda Sub-Committee.

(d) To the Governors of United Provinces, Bihar, Bengal, Madras and Bombay we are grateful for the kindness and courtesy shown to the members of the Committee during their visit to their respective Capitals, and to the Governments of these Provinces for the arrangements they made for holding the Meetings of the Committee. To the States of Travancore, Cochin, Mysore, Hyderabad and Jaipur, and to the Vice-Chancellors of the Muslim University, Aligarh and Hindu University, Benares, we must offer our most grateful thanks for their very kind hospitality and help. To the Government of Kashmir State we are deeply grateful for allowing the Chairman to take up our work, first in addition to his other duties in the State and later by giving him leave to bring the work to completion.

(e) The Committee are grateful to the Secretary Sri G. D. Sondhi, M.A. (I. E. S.), Retd. for the trouble he has taken in arranging the tours in connection with the taking of oral evidence and visiting educational and other institutions. His quick comprehension of various technical subjects was helpful in drafting the Report.

(f) Thanks of the Committee are also due to Sri Suresh Chandra Parasher, M.Sc. (Economics) (London), who, for nearly two months worked in an honorary capacity and gave much valuable help in compiling information for the various Chapters of the Report.

(g) Finally we would like to thank the ministerial staff for cheerfully working long hours, weeks on end. In particular we would like to thank Sri G. Balakrishnan who worked not only as a stenographer, but was also the mainstay of the clerical organisation. Without his able and painstaking help the Committee's work would not have proceeded as smoothly as it did. To Sri Malik Bodh Raj, Head Clerk, we are indebted for looking after the accounts.

Table showing the places and Institutions visited and dates of the meetings of the Committee held during its tour.

Province/State	Place of Sittings	Dates of Sittings	Number of Witnesses Examined	Institutions Visited
DELHI	NEW DELHI	4th March 1948	11	1. Ayurvedic Unani Tibbi College, Delhi. 2. Banwarilal Ayurved Trust Vidyalaya, Delhi.
UNITED PROVINCES	ALIGARH	7th and 8th March 1948	16	Tibbia College, Muslim University, Aligarh.
..	LUCKNOW	10th, 11th & 12th March 1948	10	1. Kanya-Kubja Ayurvedic College. 2. Mulchand Rustogi College. 3. Takmilul Tibb College. 4. Mambaul Tibb College, 5. State-Aided Unani College.
..	BENARES	13th & 14th March 1948	17	1. Benares Hindu University Ayurvedic College. 2. Benares Hindu University Ayurvedic Hospital.
BIHAR	PATNA	15th & 16th March 1948	19	1. Government Ayurvedic College, Patna. 2. Government Tibbia College Patna.
BENGAL (WEST)	CALCUTTA	18th, 19th, 20th, 21st & 22nd March 1948	75	1. Jamini Bhushan Ashtanga Ayurveda Vidyalaya, Calcutta. 2. Bangiya Unmad Ayurved Ashram, Calcutta. 3. Vishwanath Ayurveda Mahavidyalaya, Calcutta.
CENTRAL PROVINCES AND BERAR	NAGPUR	23rd & 24th March 1948	8	
MADRAS	VIZAGAPATAM	23rd & 24th March 1948	4	
..	MADRAS	26th, 27th & 28th March 1948	25	1. Government College of Indian Medicine, Madras. 2. Hospital attached to Govt. College of Indian Medicine, Madras. 3. Venkataramana Ayurvedic College and Dispensary, Madras.
TRAVANCORE STATE	TRIVANDRUM	30th & 31st March 1948	24	1. Government Ayurvedic College, Trivandrum.
COCHIN STATE	ERNAKULAM	3rd & 4th April 1948	8	1. Government Ayurvedic College and Hospital. 2. Government Ayurvedic Dispensary.
..	TRICHUR	5th April 1948	4	1. Government Central Ayurvedic Pharmacy, Trichur. 2. Cochin Ayurvedic Laboratories, Trichur.

24 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

Province/State	Place of Sittings	Dates of Sittings	Number of Witnesses Examined	Institutions Visited
COCHIN STATE	TRICHUR	5th April 1948		<ol style="list-style-type: none"> 3. Government Ayurvedic Laboratories, Trichur. 4. Viyyar Ayurvedic Hospital. 5. Outpatient Dispensary, Wadakkanchery. 6. Cherutharuthy Government Hospital. 7. Shoranur Keraliya Ayurveda Samajam Pharmacy, Hospital and College.
MYSORE STATE	BANGALORE	7th & 8th April 1948	29	<ol style="list-style-type: none"> 1. Sri Jayachamarajendra Institute of Indian Medicine, Bangalore.
"	MYSORE	9th & 10th April 1948	16	<ol style="list-style-type: none"> 1. Government Ayurvedic and Unani College, Mysore. 2. Sri Yogasala, Mysore Palace, Mysore.
HYDERABAD STATE	HYDERABAD	11th April 1948	20	<ol style="list-style-type: none"> 1. Government Unani College. 2. Government Ayurvedic College.
BOMBAY	BOMBAY	13th & 14th April 1948	8	<ol style="list-style-type: none"> 1. R. A. Podar Ayurvedic College.
"	POONA	15th April 1948	25	<ol style="list-style-type: none"> 1. Ayurved Mahavidyalaya. 2. Ayurved Hospital and Dispensary. 3. Ayurved Rasashala.
"	AHMEDABAD	18th April 1948	8	
JAIPUR STATE	JAIPUR	20th April 1948	10	

CHAPTER IV

PREVIOUS COMMITTEES ON INDIGENOUS SYSTEMS OF MEDICINE SET UP BY PROVINCIAL AND OTHER GOVERNMENTS

43. Though our Committee is the first one of its kind set up by the Central Government, there have been a number of other Committees set up by the Provincial and other Governments, from time to time, to deal with problems relating to Indigenous Medicine.

These Committees were :

- (1) The Committee on Ayurvedic and Unani Systems, Bengal, set up in August, 1921.
- (2) The Committee on Indigenous Systems of Medicine, Madras, set up in October, 1921.
- (3) The Committee on Ayurvedic and Unani Systems, United Provinces, set up in 1925.
- (4) The Committee on Indigenous Systems of Medicine, Ceylon, set up in 1926.
- (5) The Committee of Enquiry into the Indigenous Medicine, Burma, set up in 1928.
- (6) The Committee appointed to Examine the Indigenous System of Medicine, C.P. and Berar, set up in 1937.
- (7) The Indigenous Medicine Enquiry Committee, Punjab, set up in 1938.
- (8) A Committee to go into the question of encouraging the Indigenous Systems of Medicine, Mysore set up in 1942.
- (9) The Utkal Ayurvedic Committee, Orissa, set up in 1946.
- (10) The Indian Systems of Medicine Enquiry Committee, Bombay, set up in 1947.
- (11) Scheming Committee to report on the steps to be taken for the development of Ayurveda in Assam, set up in 1947. The Government of United Provinces also set up an Ayurvedic and Unani Systems Reorganisation Committee in 1947. The report

of both the above Committees are not yet out. We have thought it fit to include the Reports of the Committees set up by the Governments of Burma and Ceylon, as Burma was part of the Indian Dominion at the time of the Report, and Ceylon is so closely related to India. And the findings of these Committees also may be helpful to us.

MADRAS

44. The Committee on Indigenous Systems of Medicine was set up by the Government of Madras on 17th October 1921, and it submitted its report on 17th February 1923. This Report is easily the most outstanding of similar reports published in India. Apart from its weighty recommendations, the report is illumined by a very learned Memorandum on the *Science and Art of Indian Medicine*, by its Member-Secretary Capt. G. Srinivasa Murti. In some ways this memorandum is the first best attempt made so far at substantiating the claim of the Ayurveda, Siddha and Unani systems as fully scientific in nature.

45. *Terms of Reference.* The Terms of Reference of this Committee were "to report on the question of the recognition and encouragement of the indigenous systems of medicine in vogue in this (Madras) Presidency". The declared object of the enquiry was "to afford the exponents of the Ayurvedic and Unani systems an opportunity to state their case fully in writing for scientific criticism, and to justify State-encouragement of these systems."

46. *The Committee's Findings and Recommendations.* Regarding the Scientific nature of the Indigenous Systems, the Committee in the main, were agreed :

"(1) that from the standpoint of Science the Indian systems are strictly logical and scientific.

"(2) that from the standpoint of Art, they are not self sufficient at present, especially in the surgical line, though in the medical line, they are generally speaking quite self-sufficient, efficient and economical".

The other recommendations of the Committee were :

(a) "In the best interests of science as well as of suffering humanity, it is highly desirable that the followers of Indian Medicine should study the scientific methods of the West and adopt into their system whatever is useful in Western Medicine and vice-versa.

(b) "To practise the art of medicine without a study of the science on which the art is based, is quackery, whether it is undertaken

by the followers of Indian or European Medicine, such quackery is always undesirable and sometimes dangerous or even disastrous.

(c) " It is only through the promotion of the Indian systems of Medicine that, under the present circumstances, the State can hope to achieve the ideal of bringing medical relief within easy reach of all people-especially in the rural areas.

(d) " It is therefore incumbent upon the State to explore to the full the possibilities of the Indian systems of medicine with a view to make them wholly self-sufficient and fully efficient in both its medical and the surgical branches.

(e) " The first and the most important step that is now to be undertaken by our Government is to make an immediate declaration of its policy to accord State-recognition and State-encouragement to the Indian systems of medicine, viz., the Ayurveda, the Siddha, and the Unani."

47. *Registration.* The principle underlying medical registration is not foreign to Indian tradition. The Committee observes :

" Medical registration is necessary in the best interests of both the public and the practitioners.

" The purpose of medical registration is only to discourage the pretentious ignorance and dishonest practice of any particular system whatever it may be.

" Absolute prohibition of unregistered practice as obtaining in many states of the United States of America is not suitable for our present conditions. What may now be attempted is only to secure certain rights and privileges to the Registered as in the United Kingdom."

48. *Education.* " The establishment of an adequate number of medical schools and colleges from which a sufficient number of efficient practitioners may be expected to be sent out every year is the first step that ought to be undertaken before medical registration is introduced in respect of the practitioners of Indian Medicine "

49. *Control.* (a) " The General Council of Medical Registration for practitioners of the Indian Systems must be quite distinct from, and independent of, the existing Madras Medical Council. It should be empowered to directly supervise both medical registration and medical education.

(b) " The first register of indigenous practitioners shall include the names of all practitioners who apply for registration within a specified period from the passing of the Registration Act.

28 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

(c) "The Madras Medical Registration Act IV of 1914 should be amended on the lines of section 26 (2) of the U. P. Medical Registration Act III of 1917 so as to provide for free professional association between practitioners of the Indian and the European systems of Medicine. A similar provision should also be introduced in any legislation that may be undertaken to make provision for the registration of practitioners of Indian systems.

(d) "The details of such legislation be settled with reference to conditions that actually obtain at the time when medical registration for practitioners of Indian medicine is definitely decided upon. It is also desirable that the draft of the contemplated legislation is drawn up in consultation with a committee of experts containing representatives of all the three Indian systems practised in this Presidency, viz., the Ayurveda, Siddha and the Unani."

50. *New Department of Indian Medicine.* (a) "It is a mistake to think that encouragement of Indian Medicine consists merely in promoting the investigation of a few indigenous drugs. It is likewise a mistake to think that a knowledge of the science of Indian Medicine is not necessary for a doctor who is to investigate the indigenous drugs.

(b) "Foundation of Chairs of Indian Medicine, in existing schools and colleges of Western Medicine, may be useful in helping Western trained doctors to acquire a knowledge of the essentials of Indian Medicine; but that is not enough to ensure the progress of Indian Medicine itself, any more than the institution of pandits and munshis in our Arts Colleges is enough to ensure the promotion of Oriental classics or vernaculars.

(c) "The *sine qua non* for the ordered progress of our indigenous systems is the establishment of a new Department of Indian Medicine directed by a Commissioner of Indian Medicine working under the Minister holding the portfolio of Medicine and Public Health. It is desirable that the general policy of this new department is directed by a 'General Council of Indian Medicine.'"

51. *Institutions for Teaching Indian Medicine.* (a) "It is necessary to train as rapidly as possible, a large number of qualified practitioners of Indian Medicine who will be fully self-sufficient to deal with both medical and surgical ailments; to this end, it is highly desirable that students of Indian Medicine should come into actual touch with the practice of Western methods especially on the surgical side.

(b) "To attain the object specified in the above paragraph we think it necessary that the Government should immediately establish colleges and schools, hospitals and dispensaries for the Indian systems

of Medicine. If the Government find it impossible to do so under the present conditions, we suggest, as an alternative, that the existing centres of European medical education and medical relief should be made to subserve the interests of Indian systems of medicine also."

52. *Co-operation Between Practitioners of the Western and Indian systems.* "In the best interests of Science and suffering humanity, it is best that the followers of each system should appreciate and learn the excellences of the other ; to this end, it is highly desirable that the followers of either systems should learn to ring out the existing feelings of mutual dislike and unhealthy isolation, and ring in the spirit of mutual helpfulness and fraternal co-operation."

53. (a) "One of the greatest needs of the hour is the willing and enthusiastic co-operation of Western trained doctors sufficiently learned in Indian Medicine as to be capable of visualising its immense potentialities and therefore zealous in helping Indian Medicine to rapidly regain the ground it has now lost, especially in the field of surgery.

(b) "One of the first duties of the Commissioner of Indian Medicine will be to organize the three committees mentioned below :

(i) Medical Administration Committee.

(ii) Medical Education Committee.

(iii) Library and Text-book Committee."

(c) *Two Standards of Proficiency—Higher and lower.* "Under our present conditions two types of practitioners are required to be trained, with two standards of proficiency—a higher and lower—the principal aim in the training of the latter being the rapid multiplication of fairly efficient practitioners who may be expected to settle down or take up employment in rural areas, while the chief aim in the training of the former should be to provide for higher grade general and consultant practice, specialization, teaching and research. Suitable provisions should also be made for allowing the lower grade practitioners to qualify themselves for the higher standard of proficiency.

(d) "Vernacular is to be the medium of instruction in all lower grades ; in the higher grades, the question of using the classics or the vernacular as the medium may be left to be settled by the teaching staff in any particular institution or linguistic area.

(e) "A working knowledge of English, is desirable for all students—more especially for those preparing for the higher standard.

54. (a) *Basic Qualification for Admission.* "The standards of preliminary qualification to be fixed for each of the two standards mentioned above may well be modelled on that laid down for the certificates of proficiency in oriental learning granted by our University; students who have followed more the study of 'The Humanities' than that of 'The Sciences' should not be debarred from pursuing a medical career.

(b) "Every scheme of study of Indian Medicine, whether Ayurveda, Siddha or Unani, should make adequate provision not only for the efficient training in subjects appropriate to itself but also for the teaching of the essentials of whatever is valuable in Western Medicine, e.g., Anatomy, Physiology, Surgery, in all its branches, Bacteriology, Medical Jurisprudence including Medical Ethics, History of Medicine and so on."

55. *Further steps to popularise Indian Medicine.* "To attract an adequate number of young and promising youths to the service of Indian Medicine, we recommend the adoption of the following among other measures.

- (i) Deputing young and promising graduates of Western and Indian Medicine to study Indian and Western Medicine respectively. They are to be first recruited into permanent Government service on the pay and prospects of the corresponding members of the existing medical service and then sent on deputation.
- (ii) Granting of suitable scholarships to promising youths and guaranteeing them suitable employment.
- (iii) Offering certain prize posts for the first two or three, from among those who qualify every year from recognized institutions."

56. (a) *Central College of Indian Medicine.* "We recommended the establishment in Madras of a Central College of Indian Medicine and an associated hospital. The cost of this institution is to be wholly met from State funds, and the resources as regards laboratories, dissection halls, clinical teaching, etc., of existing institutions are to be made available, as far as possible, for the purposes of the new College of Indian Medicine.

(b) "Approved institutions of Indian Medicine maintained or established by local bodies and private agencies should be afforded State aid and such other forms of State encouragement as are accorded to similar institutions of Western Medicine."

57. (a) *Indian Universities.* "An Indian University may well be expected to interest itself in the promotion of Indian Medicine by adopting such measures as the following :

- (i) Establishment of a University Chair of Indian Medicine.
- (ii) Providing for Post graduate lectures and courses.
- (iii) Establishment of a Faculty of Indian Medicine, with a corresponding Board of Studies, Examination Boards, and so on.
- (iv) Founding of Research fellowships and scholarships.

(b) "It is fervently hoped that, as in every other country, private and charitable agencies will contribute their utmost to promote the cause of medicine ; in particular, we appeal to those responsible for the management of our religious and charitable endowments to promote the cause of Indian Medicine in all legitimate ways open to them, and to supplement, as far as their resources permit, similar efforts of the State, the Local Boards, the University and other private agencies."

58. *Action taken.* The Government of Madras has taken the following action on this Report :

- (i) Established the Government School of Indian Medicine at Madras in 1925. This school imparts teaching in Ayurveda, Siddha and Unani Medicine, along with the essentials of Modern Medicine.
- (ii) Agreed to establish Provincial rural dispensaries and Municipal and District Board dispensaries to be staffed by the diploma holders of the School.
- (iii) Established in 1926 a Government Hospital of Indian Medicine attached to the School.
- (iv) In 1930 instituted a post-graduate course in Indian Medicine for graduates of Western Medicine (F.I.M., Fellow of Indian Medicine) and a course for practitioners of pure Indian Medicine in Modern Medicine (A.L.I.M., Associate Licentiate in Indian Medicine). The latter course was abolished in 1941, and the former (F.I.M.) was renamed as A.I.M. (Associate in Indian Medicine).
- (v) Constituted a Central Board of Indian Medicine to act as recommending authority to the Government for Registration, for supervision of pharmacies and teaching institutions.
- (vi) Established a College of Indian Medicine in 1947,

32 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

- (vii) Sanctioned the starting of a Research Institute in 1947.
- (viii) Sanctioned Village Vaidyas Scheme in February 1947 which is under revision now.
- (ix) Proposes to start a Central Pharmacy with a Herbarium close to the College of Indian Medicine at a recurring expenditure of Rs. 1,25,000. At present, the District Boards of Vizagapatam, Guntur, Nellore, and Tanjore have pharmacies of their own.
- (x) Considering a draft bill governing the registration of practitioners of Indian Medicine.
- (xi) The Andhra University has resolved to recognise a course in Ayurveda for the B.A. Ayurveda Degree. The University of Madras is also considering this question and on its decision will depend the question of the affiliation of the Government College of Indian Medicine to it."

BENGAL

59. The two Ayurvedic and Tibbi Committees were set up in August 1921 and they submitted their reports in 1925. The terms of reference of these Committees were :

"What practical steps can be taken for the restoration and development of the Ayurvedic, Unani or Tibbi System of treatment, with special reference to the question of teaching of that system, with any necessary modifications, under proper supervision and control."

60. *The Ayurvedic Committee.* Though the main business of this Committee was to suggest practical methods for the revival and development of the Ayurvedic System of treatment, the Committee "thought it necessary to enquire also into two closely related questions." The first question is whether any particular advantage is to be derived by the public from the revival of such a system, and the second is whether there are sufficient grounds to justify State aid and encouragement and the expenditure of public funds which might be involved. The opinion of the Committee was that "If the findings on these points are favourable to Ayurveda, then only can we suggest the proper lines to restore, and develop and improve the methods of teaching."

61. *The Conclusions of the Committee.* Regarding the position of Ayurveda the Committee's conclusions were :

- (i) "A very large section of the population of Bengal resort to Ayurvedic medicine, either from preference or from necessity, or from both.

- (ii) " Household medicine in Bengal to-day is based largely if not entirely on Ayurvedic medicine.
- (iii) " Medical relief, as at present available, falls far short of the need of the population.
- (iv) " The extension of Western Medicine on a scale large enough to meet the full requirements of the people does not appear to be practicable on financial and economic grounds.
- (v) " Ayurvedic Medicine is cheap, popular and efficacious.
- (vi) " Even in its present unorganised condition, it is resorted to by large masses of the population.
- (vii) " Organisation and restoration of this system of treatment to suit modern requirements is one of the best means by which we can hope to solve the problem of medical relief to the people."

62. *General Conclusions.* The general conclusions of the Committee were :

(i) " The restoration of Ayurvedic Medicine in its entirety and in its present condition, without alterations and additions cannot be expected to lead to very successful results.

(ii) " Ayurveda should be restored for its utility alone and should, therefore, be developed with modifications and additions necessitated by modern advances and by the changes in the environment of the people who use it.

(iii) " The main lines on which restoration and development can be undertaken are :

(a) " The collection and organisation of literature ; this can be done by establishing a central library (in connection with the central institution) in charge of a Committee of expert Ayurvedists, who will not only collect literature, but will also consider the question of compilation of text-books.

(b) " The training of students and practitioners on proper lines. The tol system has disadvantages, while training on entirely modern lines will neither be suitable nor practicable. An intermediate course, a judicious combination of the two systems should be adopted.

(c) " Research should be conducted into the various branches of Ayurveda, such as the pharmacological action of indigenous drugs, the Ayurvedic theories of pathology and therapeutics in their relation to treatment, etc.

(iv) " There should be two standards of training for the students :

34 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

(a) "A higher standard for training teachers, research workers and consulting practitioners trained in a well equipped central college.

(b) "A lower standard for training practitioners, fitted for rural practice, whose preliminary education will be in the tols or other private institutions, supplemented by a short course in the central institution.

(v) "The only way in which this can be done is by establishing a central institution consisting of a college and a hospital (in-door and out-door) with a staff of competent professors. This will not only be a place for instruction for students, but will form a ground where all Ayurvedists can meet and discuss and work out plans of restoration, development and expansion of Ayurveda.

(vi) "The Control of the central institution should be vested in a Council called the General Ayurvedic Council. This Council should also deal with all problems, arising from time to time in connection with Ayurvedic medicine, by appointing Committees of Experts.

(vii) "A State Faculty of Ayurveda should be established, as the number of institutions and students increase. This Faculty will lay down the standard of education and curricula of studies, it should conduct examinations and grant diploma, it should also keep a register of Ayurvedic practitioners. These functions should be performed by the General Ayurvedic Council till such time as the Faculty is established.

(viii) "The initial cost of the working of this scheme will be Rs. 90,000 and the recurring cost of Rs. 65,000 per annum, exclusive of building, which is estimated at a cost of Rs. 2,50,000, if land is given free.

(ix) "The registration of Ayurvedic practitioners should be worked on the same lines as registration of practitioners of the Western system. It should be instituted three years after effect is given to this scheme."

63. *Action Taken.* (a) On 2nd February 1937, the Local Self-Government Department, Medical, announced :

"In 1921 a Committee was appointed by Government to consider and report what practical steps could be taken for the restoration and development of the Ayurvedic system of treatment, with special reference to the question of teaching of that system under proper supervision and control. The Committee submitted its report in 1925, recommending *inter alia* the establishment of :

- (i) A Central Ayurvedic College and Hospital
- (ii) A General Ayurvedic Council, and

(iii) A State Faculty of Ayurvedic Medicine.

(b) " Government found it impossible on financial grounds to undertake a scheme for the establishment of an Ayurvedic College and Hospital as recommended in the report but considered it desirable to establish a General Council and a State Faculty of Ayurvedic Medicine with the object of stimulating a systematic study of the Ayurvedic system of medicine and of differentiating trained Ayurvedic practitioners from untrained persons.

(c) " A detailed scheme was prepared with the assistance of Mahamahopadhyaya Kaviraj Gananath Sen, Sir Jadu Nath Sarkar, K.T., and Lt. Col. R. N. Chopra, I.M.S. It was decided that, for the sake of simplicity, the two proposed bodies should be merged into one, the State Faculty of Ayurvedic Medicine being regarded as a Committee of the proposed Council. In December, 1931, the scheme was placed before a representative conference of kavirajas and with certain modifications to which Government agreed, the scheme was unanimously accepted by the conference."

64. But no action was taken till 2nd February 1937 when the Government promulgated Statutes for the constitution of a General Council and State Faculty of Ayurvedic Medicine, " on the clear understanding that no financial assistance will be expected from Government for the maintenance of the Council and Faculty ".

The main functions of the Council, according to the notification were :

- (i) " to regulate the standard of instruction in Ayurvedic Medicine ;
- (ii) to hold examinations of candidates trained in recognised Ayurvedic institutions ;
- (iii) to grant certificates or diplomas to successful candidates ; and
- (iv) to maintain a register of qualified Ayurvedic practitioners."

These functions were further detailed in the Statutes to be :

(a) " the registration of Ayurvedic practitioners according to rules and regulations made by them and approved by the Local Government ; (b) to enable persons who desire to practise medicine according to Ayurvedic system after proper training and examination to receive a diploma or licence testifying to their adequate training and proficiency in these subjects ; (c) to advise the Government and the general public on all matters relating to the advancement of Ayurvedic studies and medical relief ; (d) to appoint sub-committees for the above purposes ; and (e) to register and control the practitioners, Ayurvedic pharmacies and Ayurvedic charitable institutions of Bengal

under rules to be framed from time to time by the Council and approved by the Local Government."

65. *The Tibbi or Unani Committee.* The report of the Committee was presented as a document written by the Secretary, Major H. S. Suhrawardy, in the first person singular, and the Committee merely accepted some of his suggestions and presented them as their recommendations.

Recommendations. The recommendations of the Committee were :

(i) " We agree that an inexpensive kind of modern Tibbi School in association with an out-patients department and dispensary be started for the present at Dacca and Calcutta, if not possible at other centres, and

(ii) " also a number of selected students be sent to the Tibbi Colleges at Delhi and Lucknow, as Government scholars for study in the Colleges there.

(iii) " We agree with suggestions that the Government of Bengal should create special Tibbi scholarships for Arabic students of the Madrassas and encourage them to take up the study of Ilm-i-Tibb in conjunction with the Arabic Madrassa curriculum.

(iv) " We also agree that an adequate number of "Mohsin" Scholarships be diverted to the Madrassas at Dacca and Calcutta for encouraging Tibbi studies as suggested in the scheme.

(v) " We approve of the means suggested in the scheme for attracting Tibbi practitioners to practise in mofussil towns and rural areas

(a) by offering special scholarships to students, or

(b) granting a subsidy to rural practitioners, or

(c) creating a definite rural medical service and giving them definite appointments carrying suitable pay in it."

66. The Committee were silent on some of the other important suggestions of the Secretary which were :

(i) That " a medical register be set up. It should include the names of diploma holders of recognised Tibbi Schools or Madrassas and of well-known practising hakims of the old school."

(ii) That " special attention should be given to modernising the teaching of the Tibbi system in certain branches by imparting a working knowledge of general Anatomy, Physiology, Pathology, Surgery, Midwifery and diseases peculiar to women and children, Child-Welfare and Hygiene and general methods of diagnosis, Home Nursing, First Aid treatment in sudden illness and accidents."

(iii) That "the principles and practice of medicine and treatment and pharmaceutical methods of preparation of drugs, etc., should remain the orthodox Unani system as propounded and practised by Shaikkul-Rais-Ibni, Sina, al Razi, Ibn-i-Rushed-Al-Casis and other masters".

The Secretary also expressed an opinion that there should be two departments in the Tibbi Schools, "one in which the medium of instruction is Urdu, and the other in which the teaching, specially in the advanced branches of medicine and treatment, is in Arabic. This is also necessary for post-graduate research work and for tracing the development of the Tibbi system from its original sources. The modern branches are recommended to be taught in Urdu for both classes as modern elementary books on general Hygiene, Anatomy, Pathology and Bacteriology are likely to be got more easily in Urdu than in Arabic unless one goes in search for them outside India to places like Beirut or Cairo."

67. *Action Taken.* By resolution No. 653 Medl., of the 18th March 1941, the Government of Bengal in the Department of Public Health and Local Self Government, announced :

"The Government of Bengal are now pleased to promulgate the enclosed Statutes for the constitution of a General Council and State Faculty of Unani Medicine. The main functions of the Council will be :

- (a) to regulate the standard of instruction in Unani medicine ;
- (b) to hold examinations of candidates trained in Unani institutions ;
- (c) to grant certificates or diplomas to successful candidates ;
- (d) to maintain a register of qualified Unani practitioners."

68. The aims, objects and functions of the General Council and State Faculty of Unani Medicine were as follows :

"With a view to reviving, developing and propagating the Unani system of medicine in Bengal, to systematise its education and make proper additions of certain sciences and arts therein according to the requirements of the day and to save the public from unqualified physicians, the Medical and Public Health Department of the Government of Bengal have sanctioned these Statutes for the establishment of the General Council and State Faculty of Unani Medicine in this province. These Statutes may be amended by the Government according to requirements."

69. *"The Faculty of Unani Medicine and the General Council:* There shall be a Council consisting of elected and nominated persons called 'the General Council and State Faculty of Unani Medicine, Bengal', hereafter called 'the Council'. This Council shall come into existence on such date as the Government of Bengal may fix by notification in the CALCUTTA GAZETTE.

Function and Powers of the Council :

- (a) "To register Unani physicians according to the rules and regulations made by the Council and approved of by the Government.
- (b) "To advise the Government and the public on all matters relating to the development of the Studies in Unani medicine and medical relief.
- (c) "To register the Unani pharmacies, maternity centres and charitable hospitals of Bengal under the said rules framed by the Council.
- (d) "To inspect and supervise such pharmacies, maternity centres and charitable hospitals.
- (e) "To enable persons desiring to practice Unani medicine to undergo proper theoretical and practical training and examination in any recognised Unani medical institution and to secure such diplomas or licenses from that institution as might testify that they possess sufficient proficiency in the Unani system of medicine and allied subjects."

THE UNITED PROVINCES

70. An Ayurvedic and Unani Committee was appointed by the United Provinces Government under their resolution No. 503/V-476, dated the 6th May 1925. It submitted its report on February 25th 1926. The Government resolution appointing the Committee was as follows :

"On December 14, 1922 the Legislative Council passed a resolution recommending to the Government to open a school which should impart instruction in the Unani and Vedic systems. On April 4, 1924, the Legislative Council passed a further resolution recommending to the Government that an Ayurvedic and Unani College should be established in these provinces at an early date. In view of these expressions of opinion the Government have decided to appoint a Committee to advise and report regarding the best means of improving the traditional systems of medicine."

71. *Recommendations.* (i) "That the Government should declare the policy of State recognition and State encouragement to

the Indian systems of Medicine and direct local bodies to establish as many Ayurvedic and Unani dispensaries and hospitals as possible within their respective areas.

(ii) That "the Ayurvedic College of the Benares Hindu University should be raised to the status of State-aided Ayurvedic College and Government should sanction a non-recurring grant of Rs. 2,50,000 and a recurring grant of Rs. 50,000 a year to the said College":

(iii) That "the King's Hospital at Victoriaganj in Lucknow should be raised to the status of State-aided Unani College and Government should sanction a non-recurring grant of Rs. 1,25,000 and a recurring grant of Rs. 50,000 a year to the said institution."

(iv) That "the Rishikul Ayurvedic College at Hardwar should be converted into a State-aided Ayurvedic school and Government should sanction a non-recurring grant of Rs. 50,000 and a recurring grant of Rs. 21,000 a year to the said institution."

(v) That "the State Unani school should be located at Agra or Allahabad, the question of selecting the place being left to the discretion of Government, and that a non-recurring grant of Rs. 1,75,000 and a recurring grant of Rs. 21,000 a year be sanctioned to the said school."

(vi) That "the medium of instruction should be the vernaculars of the province for schools and classical languages for Colleges. For the former vernacular text books should be prescribed and for the latter classical text-books, which should be explained in the vernaculars."

(vii) That "there should be two grades of proficiency: the higher for college and the lower for school. That the successful candidates of the Ayurvedic College should be given the degree of 'Ayurvedacharya' and those of the Unani College 'Hakim'. A certificate of 'Ayurved Visharad' should be granted to the successful students of Ayurvedic schools and that of 'Tabib' to the successful students of the Unani school."

(viii) That "Government should sanction a sum of Rs. 50,000 a year for distribution of grants-in-aid to indigenous institutions and dispensaries."

(ix) That "the indigenous practitioners possessing the qualifications mentioned in paragraph 28 should be eligible for medical registration and should be granted privileges enumerated in paragraph 29 of the report."

(x) That "the unregistered practitioners should not be prohibited from practising their profession."

(xi) That "the research of drugs should be carried on at the Ayurvedic College in the Benares Hindu University and that steps

40 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

be taken for setting up laboratories in the State-aided Unani College at Lucknow with a view to undertake the research work."

(xii) That "a central depot for stocking pure herbs and medical preparations and compounds should be started at Lucknow through suitable private agency."

(xiii) That "the Board of Indian Medicine should be established".

72. *Action Taken.* (i) The Board of Indian Medicine, United Provinces as a statutory body was established on October 1st, 1946.

(ii) Provision of medical facilities through the Indigenous systems of Medicine: In 1939 the Congress Government established 192 Rural Indigenous Dispensaries. On its resumption of office it established 24 more such dispensaries during 1946-47, another 50 are being established during the year 1947-48 and 78 more are proposed to be established during 1948-49.

(iii) Subsidized dispensaries: Government subsidize Local Boards, suitable registered bodies and even philanthropic individuals, for the establishment of indigenous dispensaries in rural areas. The standard expenditure of such dispensaries has been fixed at Rs. 810/- recurring, per dispensary, $\frac{1}{4}$ th of which is met by the Government, and $\frac{1}{4}$ th by the body setting up the dispensary.

(iv) With effect from 1947-48 Government have started sanctioning a grant amounting to Rs. 46,000 to the Board of Indian Medicine for distribution to deserving dispensaries, practitioners and colleges.

(v) During the financial year 1947-48 a grant of Rs. 1,67,000 recurring and Rs. 95,000 non-recurring has been granted to the Ayurvedic and Unani Colleges and Schools of the Province.

(vi) Further, it is proposed to set up during 1948-49 one model State Ayurvedic and one Unani college at a cost of Rs. 2,50,000 each. The Government also propose (a) to set up a committee of eminent physicians and prepare a standard pharmacopoeia; and necessary provision has been made in the budget for this purpose, (b) the giving of grants to important institutions for the establishment of herbs garden where all the important herbs will be collected and grown and also to institute research in them.

(vii) In 1944-45 an Ayurvedic and Unani Inspectorate was established with 3 Inspectors for the inspection of the State dispensaries, the dispensaries and practitioners who are in receipt of Government aid. The number of these Inspectors was raised to 7 in 1947-48.

(viii) A Chief Inspector of Indigenous Dispensaries, U. P. has been appointed. The Office, as an interim measure, is held

ex-officio by the Deputy Secretary to Government in the Local Self Government.

(ix) The total expenditure on the Indigenous Systems of Medicine :

	1944-45	....	Rs.	5,00,000
	1945-46	....	Rs.	6,00,000
	1947-48	....	Rs.	14,66,900
Next budget :	1948-49	....	Rs.	19,74,300

73. An Ayurvedic and Unani Systems Reorganisation Committee was set up in 1947 which is expected to make recommendations on the following lines :

(i) A model State College giving courses in both the Tibbiya and Ayurvedic Systems of Medicine should be established. Co-education should be introduced in this institution.

(ii) The function of holding examinations in Ayurveda and Tibbi should be handed over to an independent State Faculty of Indian Medicine which should be established on the lines of the U. P. State Medical Faculty.

(iii) New Colleges should only be affiliated if the number of beds in the hospitals attached to them is twice the number of students getting admission in the first year class. Within 2 years, the existing affiliated colleges should have hospitals with the number of beds equal to the number of students. The number of whole time teachers in an affiliated College with five years' course should not be less than 13 and the annual recurring expenditure on it should not be less than Rs. 50,000.

(iv) The medium of instruction in both the systems should be Hindi.

(v) An Ayurvedic Academy for undertaking the work of edition, compilation and publication of ancient *granthas* of both Ayurvedic and Unani systems, their translation in Hindi and the preparation of standard text-books should be set up.

(vi) Post-graduate courses in Indian medicine should be introduced at Benares and Aligarh Universities.

(vii) Establishment of a Research Institute is fundamentally essential for the development of the Indian Systems of Medicine on scientific lines. It should also carry on research in dietetics, personal hygiene, food for convalescents and the care of women during pregnancy, etc.

(viii) Small herbs gardens at different places to grow different plants in different climates should be controlled and managed by the Government.

42 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

(ix) Two T. B. Sanatoria run on Ayurvedic and Unani lines should be established in the immediate future.

(x) The Ayurvedic and Unani graduates should be allowed to appear in the Licentiate's Course in Public Health of the State Medical Faculty, U.P.

(xi) Provision should also be made for the training of Nurses, Health Visitors, Dais and Sanitary Inspectors.

(xii) A separate Pharmacopoeia Committee should be appointed to prepare an official Standard Pharmacopoeia of Indian Medicine.

(xiii) A separate Department of Indigenous Systems of Medicine under a Director of Indian Medicine, to control the institutions of the Indian Systems of Medicine, should be created. The staff of the hospitals and dispensaries should be sufficiently qualified. The grants to aided institutions should be given on the recommendations of the Board of Indian Medicine.

(xiv) The status of the degree and diploma holders of recognised institutions of Indian Systems should be the same as that of the graduates of the Allopathic System.

(xv) Every village school teacher should be required to undergo a short training course at the Tehsil Ayurvedic-Tibbi hospital.

(xvi) There should be one hospital with at least 10 beds in every Tehsil at the Tehsil Headquarters. In District Hospitals separate wards should be allotted for the treatment on the lines of Indian Systems. At important centres, Central Hospitals with 300 beds should be established. There should be one Mental Hospital treating patients according to the Indian systems.

BURMA COMMITTEE

74. A Committee to enquire into the Indigenous Systems of Medicine was appointed by the Government of Burma under their resolution No. 14528 dated the 14th January 1928 which reported on the 22nd September 1928. The terms of reference were as follows :

(a) " to examine and report on Burmese systems of medicine.

(b) " to consider whether Burmese system of Medicine can be improved and if so in what way ;

(c) " to consider whether the training of sesayas should be undertaken by Government or left to private agency ;

(d) " If training by Government agency is recommended, to consider :

- (i) whether training should be given in Government hospitals or in a separate institution ;
- (ii) whether training should be confined to young men fresh from school, or to practising sesayas or to both ;
- (iii) what teaching staff would be required ;
- (iv) detailed proposals regarding the length and nature of the course, number of students and the conditions to be laid down as to educational qualifications, stipends etc. ;
- (v) how text books in Burmese could be provided for the use of students ;
- (vi) whether a license to practice should be granted to successful students ;
- (vii) whether Government should prohibit unlicensed practice, and if so, after what period ;
- (e) " to consider what provision should be made for the research into Burmese medicine ;
- (f) " during the course of enquiry, the Government in a note No. S 28 (R.N. 400), dated the 7th June 1928, desired the Committee to enquire further whether the people would prefer the retention of the Burmese or indigenous medical practitioners with subsidy given by Government at places far distant from the existing hospitals, on the same lines as are now followed by the Local Government with the retention of retired Sub-Assistant Surgeons or private medical practitioners."

75. *Recommendations.* "(i) The Burmese system of medicine is Ayurvedic in origin, with considerable additions and improvements, based on the metaphysical teaching of Buddhism. It had a glorious past, has a tradition of its own and has served the medical needs of the ninety per cent of the vast rural population. It possesses many good remedies of its own and has the advantage over the Western medicine in its cheapness, with no less potency.

"(ii) Disorganized owing to lack of support and supervision, the system has not been properly studied by most of the present day practitioners, many following only a branch of the system and practising as a separate entity of its own.

"(iii) Government should begin the work and undertake at least for a period of five years and also encourage private enterprise by means of grants-in-aid on the same manner as the educational

44 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

institutions. For this purpose, the Government should provide at least Rs. 50,000 a year.

“(iv) Training should be in separate institutions of its own, quite apart from the Government Hospitals.”

They observe : (1) “We feel that the Burmese system of medicine should be duly recognized by the Government and the practitioners of the system duly registered, so that they may become an organized body, their worth to be rewarded and their faults and deflections duly checked and punished.

(2) “To achieve this object we recommend the formation or recognition, if one be in existence, by Government of a Burmese Medical Council with the following functions :

- (a) to advise Government in all matters connected with the organization, conservation, development and standardization of the various branches of the Burmese System of Medicine ;
- (b) to prescribe the course of studies for examination ;
- (c) to open and supervise Burmese medical schools and colleges, hospitals etc. ;
- (d) to appoint examiners and conduct all examinations ;
- (e) to confer certificates, diplomas and degrees upon successful candidates ;
- (f) to arrange for research work ;
- (g) to distribute grants placed at its disposal by Government, local bodies or are subscribed by the public ;
- (h) to carry out medical registration of the practitioners and to prescribe the minimum standard for registration.”

The composition of the Council was also defined by the Committee.

(3) “A small Board of Research composed of three to five members, one allopath with good knowledge of Pali and Burmese, a botanist, a chemist and two indigenous practitioners, should be formed for doing research into the Burmese medical drugs and remedies.

(4) “The Government should open Burmese medical schools with hospitals attached to them as soon as possible.” To begin with, the Committee recommended that two schools, one at Rangoon and one at Mandalay, be started.

(5) “Training should be open to all youngmen fresh from schools and to the practising sesayas if they so desire. There should be no sex distinction.

(6) "At present, there are four main branches, viz., Baindaw, Adhidharma or Dat, Bedin and Paroga. All these should be taught by a teacher for each subject.

(7) "Vernacular seventh standard or its equivalent training at monastic schools or a certificate of fitness in case of practising sesayas, are suggested as educational qualifications. Government should also provide suitable stipends.

(8) "Owing to limited time at our disposal, a detailed study has been left to the proposed Medical Council.

(9) "Licenses should be granted to the successful candidates.

(10) "Prohibition of unlicensed practice is not practicable and thus it should not be attempted.

(11) "The villagers will appreciate better the retention of the Burmese indigenous medical practitioners with subsidy than the present arrangement."

C. P. AND BERAR COMMITTEE

76. The Committee to Examine the Indigenous Systems of Medicine, was set up by an order No. 12442-1830-XIV of the Government of C. P. and Berar on 21st December 1937. Its report was published on 17th April, 1939. The following were the terms of reference :

(i) "to make a survey of, and to report on, the indigenous systems of medicine in the province and the extent and nature of the facilities for medical relief that they provide.

(ii) "to investigate and report about the herbs that may be available in this province for medicinal purposes ;

(iii) "to report on the necessity and desirability of prescribing standards of qualification and courses of studies and regulating the practice of the indigenous systems of medicine ;

(iv) "to enquire and report on the adequacy of the facilities available to the residents of the province for obtaining instruction and training in these systems and to make suggestions for the improvement and extension of these facilities ; and

(v) "to determine the place which medical aid in rural areas through the agency of these systems should occupy in the scheme of medical relief provided by the State, and to make proposals, with an estimate of their cost, for deriving the maximum possible benefit from these systems."

77. *Findings and Recommendations.* (i) "The indigenous systems of medicine practised in this province are mainly of two classes, viz., Ayurvedic and Unani,

(ii) " From the reports of the Deputy Commissioners it would appear that there are about 1,100 indigenous practitioners in this province treating about 13,80,000 patients every year. While the enquiries of the Deputy Commissioners seem to have been as thorough as possible, five of us feel that the numbers reported are far below the correct figures.

(iii) " In order to ascertain the extent to which medicinal herbs are available in the province, the Committee requested the Chief Conservator of Forests and its own members to furnish lists of such herbs. The herbs ordinarily used by vaidyas and hakims are obtainable in the province, not many have to be imported from outside.

(iv) " From the evidence before it, the Committee is of opinion that most of the herbs ordinarily used in the indigenous systems of medicine, are obtainable in the Province, but some have to be imported from outside. The quality of herbs at present offered for sale in the market is unsatisfactory, and that there is urgent need for improvement in this respect.

(v) " The Committee recommend that licenses should be issued to some reliable vendors who should be held responsible to offer for sale herbs and raw materials of requisite quality. Their supplies should be liable for inspection. The prices of these drugs of good quality may also be regulated by Government.

(vi) " The Committee further recommend that a museum of standard specimens of Ayurvedic herbs and mineral crude drugs be established as a part of the proposed Ayurved College.

(vii) " The Committee also recommend that a herbarium for the cultivation¹ of useful herbs be started at a suitable place, as early as possible.

(viii) " The majority of us are definitely of opinion that the courses of studies should be purely of Ayurvedic and Unani sciences, and that allopathy and other modern sciences have no place in the curricula of the schools we have in view."

78. *Terms of Reference III.* The following resolutions were passed by the Committee :

(i) " The Committee considers that the following are the essential features of a satisfactory school of medicine of a standard equivalent to that of the Robertson Medical School, Nagpur :

Only students who have passed Intermediate examination of the Nagpur University with Sanskrit or any other examination equivalent thereto and

¹ By " cultivation " we mean the growing of standard specimen."

recognized by the Nagpur University, or any of the following examinations :

- (a) Prathama of Benares ;
- (b) Prathama of Calcutta ;
- (c) Madhyama of Madras institutions ;
or any other examination equivalent thereto and recognized, by the above three institutions should be eligible.

(ii) " That every student must attend at least 75 per cent of the working days to be eligible to appear for an examination.

(iii) " The course shall be purely of Ayurvedic science and of only five years."

79. *Registration.* (a) " The Committee recommends that registration should be optional and that non-registered people should be allowed to practise.

(b) " The Committee is of opinion that a Board of Indian Medicine should be established as early as possible."

Resolution. " To give practical effect to all the suggestions given by this Committee it is recommended that a Board of Indian Medicines should be constituted as follows :

" The Board shall consist of sixteen members three from each commissioner ; one Hakim and three more members nominated by the Government. The Board shall have a paid Secretary. The function of the Board shall be to lay down and carry out its policy with regard to the indigenous systems of medicine, to look after education and registration of Vaidyas."

80. *Terms of Reference IV. Resolutions.* (i) " From the evidence before it, the Committee is of opinion that at present there are no Ayurvedic or Unani schools in the province, which could be said to be properly equipped and staffed to impart satisfactory instruction in the indigenous systems of medicine.

(ii) " That the proposed school must be adequately equipped with museums, apparatus and laboratories for the satisfactory theoretical and practical training in all subjects.

(iii) " That to this school there must be attached a well equipped hospital containing as many beds as would give a proportion of 3 to 1 of students learning in the fourth and fifth year classes.

(iv) " That this hospital shall contain at least the following departments :

(a) medical, (b) surgical, (c) obstetrical, (d) gynaecological, (e) eye, (f) venereal, (g) tuberculosis, and (h) children's disease and the necessary out-patient departments.

(v) "The Committee recommend that Government should establish an Ayurvedic school satisfying the above characteristics to serve as a model for any private institution that may be started in the province.

(vi) "So long as the proposed Ayurvedic College is not established, Government should grant financial aid to the existing colleges, in the province so as to bring them up to the standard required. It is also desirable that these Ayurvedic Colleges should get Government grants in future."

81. *Terms of Reference No V.* "We are of opinion that medical relief on Ayurvedic and Unani lines should be extended on a large scale wherever possible. One Ayurvedic or one Unani dispensary should be established for every area 10 miles in radius."

82. *Action Taken.* "The most important task of the Committee was to determine the place which medical aid in rural areas through the agency of these systems should occupy in the scheme of medical relief provided by the State. In this connection the Committee has recommended, 'that medical relief on Ayurvedic and Unani lines should be extended on a large scale wherever possible' and that 'one Ayurvedic or one Unani dispensary should be established for every area ten miles in radius'. Government accept this recommendation in principle. They have great faith in the Ayurvedic and Unani systems which have much in common. In saying this they do not, of course, wish to decry the Allopathic system which is linked up with modern science and is, therefore, progressing with it by leaps and bounds. They wish, not to supplant Allopathic medicine, but to supplement it, by the indigenous systems which are comparatively cheaper and more popular."

83. (i) "The indigenous practitioners charge much less for their practice and can be made to settle in rural areas at a much less expense. It is, therefore, the considered policy of the present Government to extend medical relief in rural areas largely through the indigenous systems. They have decided to give the same financial assistance to local bodies in the establishment of Ayurvedic and Unani dispensaries as they do in the case of Allopathic dispensaries. As an earnest of their intentions in this matter, they have made provision in the current year's budget for making grants for opening 83 Ayurvedic and Unani dispensaries—one in each tahsil, and for subsidizing an equal number of vaidyas and hakims to settle in rural areas.

(ii) "The Committee has recommended that a properly equipped college should be established to impart education in Ayurvedic and Unani sciences and that it should be 'adequately equipped with museums, apparatus and laboratories for the satisfactory theoretical and practical training in all subjects'. The cost of such an institution is estimated at 'not less than Rupees one Lakh' as non-recurring expenditure and Rs. 32,000 per year as recurring expenditure. Government are inclined to think that if the college is to be worth the name the cost will be much higher. This question, however, is not of any immediate moment, as in the present financial circumstances of the province Government are unable to find the necessary funds. Meanwhile, Government will give scholarships to enable students of the province to undergo training in recognised colleges outside the province. They will also explore the possibilities of opening classes in the Robertson Medical School to teach the indigenous systems to the Sanskrit and Arabic or Persian knowing students. As regards the proposal to make grants to the existing institutions in the province, Government note the finding of the Committee that 'at present there are no Ayurvedic or Unani schools in the province which can be said to be properly equipped and staffed to impart satisfactory instruction in the indigenous systems of medicine.' They consider that large sums of money would be required to raise them to the requisite standard and are, therefore, unable to accept the recommendation of the Committee.

(iii) "The Committee has recommended that steps should be taken to establish a Board of Indian Medicine and that Indigenous practitioners who fulfil certain conditions should be registered on an optional basis. Now that the practitioners of Ayurveda and Unani will be employed by the State and local bodies on an increasing scale it is essential that they should be registered like the Allopathic practitioners. Government accept the recommendation of the Committee generally and with a view to implementing it are considering the introduction of legislation on the lines of the Bombay Medical Registration Act, 1938.

(iv) "As regards the Committee's recommendations in respect of control over the vendors of herbs and drugs, before coming to a decision Government will await the result of the Bill now before the Central Legislature dealing with the regulation, manufacture and sale of drugs. The museum of Ayurvedic herbs and mineral crude drugs and the herbary recommended by the Committee must obviously be attached to a teaching institution and their establishment will be considered along with the establishment of an Ayurvedic College."

THE PUNJAB COMMITTEE

84. The Indigenous Medicine Committee was appointed by the Punjab Government on 18th May 1938, under letter

50 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

No. 2432-M-38/ 18591, and it submitted its Report in 1941. The following were the Terms of Reference :

- (a) " What steps, if any, should be taken to institute a register of practitioners of Indigenous Medicine ?
- (b) " What steps should be taken to improve the medical education of practitioners of Indigenous Medicine ?
- (c) " Whether any legislation is necessary for either (a) or (b), and if so, what ? "

The Committee Made The Following Recommendations

85. *Registration.* " It is imperatively necessary that the practitioners of Indigenous Systems of Medicine should be controlled with the object of :

- (a) eventually eliminating the unqualified practitioners ;
- (b) giving the public trained and qualified medical practitioners in the Indigenous Systems ; and
- (c) Raising the level of their efficiency.

" The best measure of control would be to set up a Register of Practitioners of Indian Systems of Medicine and to impose certain restrictions on unregistered practitioners and confer some privileges on the registered practitioners of these systems. The registered practitioners should also abide by the Code of Ethics to be prescribed by the Punjab Board of Indian Medicine, the formation of which we have recommended."

86. (i) " The Registered Practitioners should be entitled to the following privileges :

- (a) Facilities for professional practice as are enjoyed by Registered Practitioners of other Systems of Medicine ;
- (b) Entry into Government or Local Body service ;
- (c) Appearance as expert witnesses in courts of law only, of course, if the Registered Practitioner concerned had had training in Medical jurisprudence ;
- (d) Issuing of certificates of fitness or unfitness ;
- (e) Issuing of certificate for life insurance ;
- (f) Realisation of fees through courts of law ;
- (g) Signing of death reports ;
- (h) Use of poisonous drugs. There should be no restriction in giving licences to the Registered Practitioners of Indigenous Medicine for keeping and selling poisonous drugs."

(ii) "We are also of the opinion that Registered Practitioners of Indigenous medicine should be liable to the same restrictions as exist in the case of Registered Practitioners of other systems of medicine, but the Punjab Board of Indian Medicine may make such modifications in this connection as it deems fit for a period of five years. After the expiry of this period, however, the Registered Practitioners of Indigenous Medicine should be subject to the same restrictions which are imposed on Registered Practitioners of other systems. We have also considered the question of imposing penalties on Registered Practitioners, e.g., removal from Register, restriction on practice, or any other for unprofessional conduct, etc., and are of the view that, as in the case of Privileges and restrictions, they should be liable to the same penalties as are imposed on Registered Practitioners of other systems."

87. (a) "We suggest that early steps should be taken to establish a Provincial Board, to be called the Punjab Board of Indian Medicine, to give effect to our recommendations and to organise and control the Registration of Practitioners of Indigenous Medicine.

(b) "We have also considered the question whether the Registered Practitioners of Indigenous Medicine should be allowed to practise any other system of medicine than that in which they have qualified. The answer is simple. They should practise only that system of medicine in which they have qualified.

(c) "The most important question which has engaged the attention of the Committee and has also given rise to considerable controversy outside in the public and in the press is, firstly, whether unregistered practitioners should be debarred from practice, and, secondly, who should be entitled to Registration. We have considered this question in all its aspects. We have also taken in view the economic aspect of the matter, the present day need of the public and the profession, and are of the opinion that an embargo on practice by persons who hold no diploma or degree but have been in practice for a number of years now will throw out of employment a large number of practitioners who will find it too late in the day to embark on a new career. We, therefore, recommend that there should be three classes of Registered Practitioners."

88. *Medical Education.* "The need of improving the system of education of Practitioners of Indigenous Systems of Medicine cannot be pitched too high. We are of the opinion that the minimum standard of general education for admission of students to a training institution in the Indigenous Systems of Medicine should be as follows :

(a) *Unani Institutions:* (i) Matriculation of any Indian University with Arabic or Persian as one of the elective subjects

or (ii) Munshi of the Punjab University or any equivalent qualification of any other University constituted by law in India with a working knowledge of English and Arithmetic.

(b) *Ayurvedic Institutions*: (i) Matriculation of an Indian University with Sanskrit as one of the elective subjects, or (ii) Prajna of the Punjab University or an equivalent qualification in Sanskrit of any other University with working knowledge of English and Mathematics."

89. "Instruction should also be given to students in Modern Basic Science of Chemistry, Physics, Botany and Zoology. The Board of Indian Medicine shall, however, lay down the standard to which instruction in these subjects should conform. We have also considered the question whether or not it would be advisable to provide teaching in Basic Science subjects before or after admission to the training institutions and are of the opinion that it would be educationally more sound to teach these subjects to students after their admission to the training schools of Indigenous Medicine."

90. "We eventually aim at a 5 years course for medical institutions; but for the present, we recommend that the College course be fixed at 4 years after which there should be a post-graduate course for one year open to those who are highly qualified in Arabic or Sanskrit. The post-graduate course should provide for a comparative study of the other systems of medicine. The first four years, however, should be devoted to learning the old systems of medicine".

91. *Research*. "There cannot be two opinions about the need of research in the theory and principles of Indigenous Systems. Research is essential in every department of human endeavour and pre-eminently in old medical systems. It is, therefore, necessary that it should be carried on in :

(a) Drugs, (b) Methods and theory of treatment (Therapeutics) and (c) Compilation of text books on modern lines and to suit modern conditions."

92. (a) "Instruction should be imparted through the medium of Hindi in Ayurvedic and Urdu in Unani Systems of Medicine.

(b) "We are of the opinion that a minimum standard of teaching in medical subjects should be prescribed by the Punjab Board of Indian Medicine.

(c) "We would, however, recommend that there should be a uniform standard of medical education for all students in training institutions of Indigenous Medicine. The Government should open, as early as possible, a model teaching institution in the Indian Systems of Medicine on the lines of the Government School of Indian

Medicine, Madras, with separate departments for the teaching of Unani and Ayurveda ”.

BOMBAY

93. The Indian Systems of Medicine Enquiry Committee, Bombay, was set up on 4th March 1947.

The terms of reference of the Committee were as follows :

- (a) “ To consider and make recommendations to Government in regard to the amendments necessary in the Bombay Medical Practitioners’ Act, 1938, and the rules and regulations framed thereunder, in the light of their working for the last seven years.
- (b) “ To consider and report on the working of the State Faculties for the Ayurvedic and Unani Systems of Medicine and to suggest any changes, if necessary.
- (c) “ To consider and recommend to Government what steps are necessary to foster and raise the standard of the Indian Systems of Medicine and to promote research therein.
- (d) “ To suggest for the consideration of Government the basis on which grants—recurrent as well as non-recurrent should be paid to Ayurvedic and Unani Teaching Institutions.”

94. The more important of the recommendations made by the Committee are as follows :

- (i) “ There should at least be one first class school opened in each regional division of the province.
- (ii) “ Instruction should be carried on entirely in the mother tongue. The standard of admission should be raised to 1st year science examination with more Sanskrit; and the course should extend to four and half years after that.
- (iii) “ Rigid requirements for the appointment of teachers and the recognition of teaching institutions should be laid down with the ultimate aim of incorporating these institutions with the University.
- (iv) “ A comprehensive scheme of preparation of text books is an urgent necessity.
- (v) “ For an efficient research in the Ayurvedic system, a scheme should be worked out by a small body of eminent Ayurvedic pandits, medical men and research workers.
- (vi) “ Ayurveda may be introduced in the post-graduate studies of the allopathic graduates.

- (vii) " These graduates of Indian medicine should be guaranteed a sufficiently important status.
- (viii) " The manufacture of Ayurvedic preparations should be controlled and the present Indian drugs Act applied wherever possible.
- (ix) " Dispensaries on Ayurvedic lines should be provided at small district towns, and taluks where none exist at present and staffed by the graduates in Indian medicine.
- (x) " A separate department under a separate officer should be started to deal with all matters related to the advancement of the Indian Systems of Medicine.
- (xi) " The functions of the Board should be, registration, maintenance of ethics and recommending the qualifications for Government recognition and for registration ; while the State Faculty should concern itself with prescribing courses for training, recommend recognition of teaching institutions and hold examinations.
- (xii) " Institutions coming up to the recognised standard should be given 60 per cent of the non-recurring expenditure and 50 per cent of the recurring expenditure. The Hospitals attached to them should be treated as a part of those institutions."

95. *Action Taken.* " Government is still considering the report." In 1938 Government passed an Act to regulate the qualifications and to provide for the registration of practitioners of Indian Systems of Medicine with a view to encourage the study and spread of these systems. In pursuance of this Act Government established in 1939 a Statutory Board of Indian Systems of Medicine and it is functioning for the last nine years. It has prescribed a uniform course of 4 years training in Indian medicine and has recognised nine teaching institutions, seven in the Bombay Province, one in Baroda State, and one in Navanagar State. The examinations of all these institutions are conducted by the State Government Faculty since 1943. Government have started the R. A. Poddar Ayurvedic (Medical) College in Bombay in the year 1941 and an Ayurvedic Hospital is attached to it.

ASSAM COMMITTEE

96. The Government of Assam appointed a " Scheme Committee " to report on the steps to be taken for the development of Ayurveda in the province in January, 1947. It submitted its

report in May, 1947. The Committee, in order to get a first hand knowledge of the advanced Ayurvedic institutions, visited Calcutta, Bombay and Benares. Its recommendations are as follows :

(i) " The Government should start an Ayurvedic College on modern lines as a first step towards the development of Ayurveda in the Province.

(ii) " The course of study at this Institution should be for four years.

(iii) " The Principal of this College must possess the highest qualifications of a University like the Benares Hindu University. Preference should be given to a person who, in addition, possesses allopathic qualifications as well.

(iv) " The staff should consist of five medical graduates (M.B.), one M.Sc. and 7 Ayurvedacharyas or persons with equivalent qualifications.

(v) " The number of admission should be limited to 24 students.

(vi) " The curriculum should be limited to four years.

(vii) " The curriculum, following the example of other advanced Ayurvedic institutions, should include modern advances as well.

(viii) " A Board of Ayurvedic Medicine to encourage the study of Ayurveda and to supervise and regulate Ayurvedic education, be formed.

(ix) " To advise the Government with regard to it, a Committee of Ayurvedic and Allopathic practitioners be appointed."

97. *Action Taken.* The following action was taken :

(i) " The Government has provided funds—both recurring and non-recurring—in the budget of 1948-49 for the establishment of an Ayurvedic College on modern lines at Gauhati.

(ii) " The Government has rented a building and made arrangements for the college, hostel and dissection hall.

(iii) " An Ayurvedacharya of the Benares Hindu University has been appointed the Principal of this College.

(iv) " A separate Committee consisting of five members has been appointed to advise the Government in connection with the setting up of the Board of Ayurvedic Medicine, Assam, and the enactment of the Assam Ayurvedic Medicine Act."

ORISSA COMMITTEE

98. The Utkal Ayurvedic Committee was set up by the Government of Orissa under their resolution No. 5094-LSG & Health,

dated the 22nd July, 1946. The report by the Committee was submitted on 9th May, 1947. The Terms of Reference were :

“ to point out ways and means for improvement of the Indigenous systems of medicine and to suggest measures to control and regulate practice of medicine in the Province.”

It is to be noted that the Report concerns itself with the Ayurvedic System only.

99. *Recommendations.* The Committee made the following recommendations :

- (i) “ That Government may be pleased to declare the policy of State recognition and State encouragement to the Indian system of medicine.
- (ii) That Government may be pleased to adopt a policy to give equal importance to the Allopathic as well as to the Indigenous systems of medicine.
- (iii) That Government may be pleased to establish a General Council and State Faculty of Ayurveda at an early date.
- (iv) That a full-fledged Ayurvedic College be established by Government at Bhubaneswar with the sections mentioned in the report as early as possible.
- (v) That Government may be pleased to adopt a scheme to open 250 dispensaries in the province within 5 years to come and make provision in the budget for opening 50 Ayurvedic dispensaries each year.
- (vi) That Government may be pleased to advise the local bodies to establish as many Ayurvedic dispensaries and hospitals as possible within their respective jurisdictions.
- (vii) That the qualified Vaidyas should be registered and be allowed to practise Ayurvedic medicine.
- (viii) That the unregistered practitioners should be prohibited from practising their professions.
- (ix) That a Publication Bureau should be established to encourage medical scholars and to publish valuable books including text books.
- (x) That all the Ayurvedic Pharmacies should be registered under the proposed General Council and State Faculty of Ayurveda.
- (xi) That the local bodies should be enforced to control the drug-shops under D. & O. Trades Act.

- (xii) That Ayurvedic hospitals should be established in the District, Taluq and Sub-divisional headquarters.
- (xiii) That Government may be pleased to declare that the successful candidates of the proposed Ayurvedic College should be treated as Medical Graduates.
- (xiv) That the following privileges should be conferred on the registered practitioners :
 - (a) Eligibility of being voters for an election to the General Council and State Faculty of Ayurveda.
 - (b) Power to issue certificates of leave, age and fitness.
 - (c) Eligibility for employment by local bodies.
 - (d) Power to stock indigenous poisonous drugs included in the list published by the Board of Indian Medicine from time to time subject to taking licences and observance of conditions laid down for the Allopathic practitioners under the Orissa Act.
- (N.B. : Practitioners registered under A group should be granted all privileges which are now being enjoyed by the Allopathic practitioners.)
- (xv) That Government may be pleased to make provision for the training of at least 50 existing Ayurvedic practitioners under the refresher course of a year's duration in the proposed Ayurvedic College.
- (xvi) That Government may be pleased to make provision for imparting instruction in the pre-medical examination course at Puri, Berhampore, Balasore, Sambalpur, Jeypore and Angul in order to prepare a good number of students for the proposed Ayurvedic College and encourage private institutions which impart instructions in the pre-medical examinations course by giving them substantial grants.
- (xvii) That Government may be pleased to establish a separate department of the Indian medicine."

No action has as yet to our knowledge been taken by the Government.

MYSORE

100. A Committee "to go into the question of encouraging the Indigenous Systems of Medicine" was appointed by the Government of Mysore under their G. O. No. L. 1786-1821-L.B. 59-42-2, dated 10th August, 1942. It submitted its report on the 29th September, 1942. The Government order appointing the Committee stated the object as follows :

“ With a view to encourage the Indigenous Systems of Medicine on a large scale and for improving the status of Vaidyas and Hakims employed by the local Bodies etc., and to examine the allied matters noted below :

- (i) “ Suggestions for improving the usefulness of the Ayurvedic and Unani Colleges, Mysore.
- (ii) “ Formation of a Research Section for investigating the efficacy of herbs and drugs.
- (iii) “ Preparation and supply of standard Indian medicine to the various institutions by a central agency.
- (iv) “ Undertaking of legislation to regulate the qualifications of Vaidyas and Hakims and to provide for registration of practitioners of the Indian Systems of Medicine with a view to encourage the study and spread of such Systems.
- (v) “ Nature of encouragement to be given to hereditary Vaidyas and Hakims who have not passed the required examinations.
- (vi) “ The nature of control to be exercised over the work of Vaidyas and Hakims and the agency therefor.
- (vii) “ Grant of leave, pensions, provident fund, etc., to Vaidyas and Hakims employed in public institutions receiving grants-in-aid from Government or Local Bodies.”

101. *Some important recommendation of the committee were :*

- (i) *Encouragement to Indigenous Systems of Medicine :*
“ A separate Department of Indigenous Systems of Medicine under a full-time Director assisted by a Board of Indian Medicine be created for the control and administration of the Indigenous Systems of Medicine.
- (ii) “ That Superintendents be appointed to inspect and introduce uniformity in the various Indigenous Institutions in the State.
- (iii) “ Allotment of not less than Rs. 5 lakhs which should gradually be increased to that of the Medical Department.
- (iv) “ The 175 Indigenous Medical institutions should be increased to 350 as soon as possible.
- (v) “ In addition to the institutionally qualified, physicians with ten years experience should, also, be deemed

to have qualified themselves for Government appointments.

- (vi) " To popularise these Systems, original Sanskrit text books should be translated into Kannada, and Arabic, and Persian books on medicine into Urdu for reference purposes.
- (vii) " The Government should open fully equipped Ayurvedic and Unani hospitals and dispensaries in the headquarters of those districts and talukas where none exist at present."

I. Improving the status of Vaidyas and Hakims employed by the Local Bodies.

- (i) " These physicians should be paid according to the increased scales recommended.
- (ii) Grant-in-aid System should be abolished."

Allied Terms of Reference. (i) " The minimum qualifications for admission to the College Course should be S.S.L.C. (E.C. & P.S.) with high marks in Sanskrit and Urdu, Arabic or Persian.

- (ii) " The course of studies at the College should be for five years.
- (iii) A lower course in Ayurveda and Unani for three years be established.
- (iv) More importance should be attached to the teaching of the Indigenous Systems in all their branches. They should be supplemented by modern sciences wherever required."

II. " A Research Section with efficient staff including hereditary Vaidyas and Hakims, should be attached to this College. It should.

- (i) " Compile the research work done at other institutions and by eminent medical scientists ;
- (ii) investigate the food value of articles, preservatives and preventive medicines mentioned in Ayurvedic and Unani literature ;
- (iii) write and publish materia-medica and pharmacopoeia for the use of dispensaries ;
- (iv) study drugs according to *Rasa, Veerya, Vipaka, Prabhava* and publish the results ;
- (v) create an agency for surveying and collecting information about the herbs and drugs of medical value in the State, and

60 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

the principles of *Pancha Maha Bhuta*, *Shadrasas* and *Doshas* be made the basis of all investigation.,

(III) Legislation should be enacted :

- (a) " to regulate the qualifications of the indigenous practitioners.
- (b) to bring about a common registration of the allopathic and indigenous practitioners.
- (c) to include in the registration of institutionally qualified persons, practitioners of ten years standing and such persons who, in the opinion of the Board are qualified."

102. Another Committee to consider the question of establishing a combined Ayurvedic and Unani Hospital in Bangalore City was appointed by the Government in September, 1942. There were a few other sub-committees appointed by the Government.

103. *Action Taken.* The following action was taken :

(i) Sri Jayachamarajendra Institute of Indian Medicine was established in Bangalore with a provision for treating 100 in-patients and about 1,000 out-patients, both in Ayurvedic and Unani Systems of Medicine.

(ii) The Government have passed orders for the establishment of a Central Pharmacy for the preparation and supply of medicines to all the indigenous medical institutions in the State. The preparation of plans and estimates for its construction are being considered.

CEYLON

104. A committee was appointed by the Government of Ceylon in 1926 and it submitted its report in 1927. The following were its terms of reference :

- (a) " Whether it is practicable for the Government to assist financially or otherwise ;
 - (i) in the training of those seeking to qualify themselves as practitioners of the indigenous system of medicine.
 - (ii) and, in the investigation of the medical value of drugs used by those practising such systems.
- (b) " If practicable, to prepare a detailed scheme of such training and investigation for the consideration of the Government "

105. The following are the Recommendations of this Committee :

(i) " That a Board of Indigenous Medicine be constituted to deal with all matters connected with the education of those seeking to qualify themselves as practitioners of indigenous systems of medicine.

(ii) That the number of members of the Board be 15, and that the Controller of Revenue be the Chairman.

(iii) That a college be established in Colombo for the training of those who seek to practise the indigenous systems or any of them.

(iv) That a hospital and out-door dispensary be attached to the College, and that adequate provision be made for growing plants used in the indigenous system.

(v) That course of instruction at the College be for a period of four years.

(vi) That the course of instruction be according to the syllabus prescribed in Schedule I.

(vii) That during the last two years of the course, lectures in Siddha and Unani methods of treatment and pharmacology be delivered to such students as may desire instruction in these subjects.

(viii) That students be required to attend the hospital, dispensary and pharmacy during the last three years of their course of studies.

(ix) That privately established schools which in the opinion of the Board of Indigenous Medicine are properly conducted be paid a grant of Rs. 50 for each student who passes the first, Rs. 100 for the second, and Rs. 150 for the final examination held by the Board for this purpose. The syllabus of studies at the privately managed schools should be approved by the Board.

(x) That for the present till the college proposed in Recommendation 3 is established, 12 scholarships each of the value of Rs. 360 per annum be granted by Government to enable students to proceed to some of the schools of Indigenous Medicine established in India.

(xi) That a Register should be kept of all persons qualified to practise the indigenous systems of medicine.

(xii) That no person who is not so registered be permitted to practise medicine as a profession whether for gain or otherwise after seven days from the day specified for registration.

(xiii) That all persons who have been practising the indigenous systems for a period of not less than three years on a date to be notified should have the right to be registered.

62 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

(xiv) That after a specified date no person should be registered unless he has passed an examination prescribed by the Board of Indigenous Medicine or is a person trained by a specialist of repute and is in the opinion of the Board qualified to practice as a specialist.

(xv) That a Research Institute be established in connection with the Government Analyst's Department and every facility be given to those desirous of doing research work in the Institute.

(xvi) That two scholarships each of the value of Rs. 125/- per mensem for three years be given to graduates in *Eastern* medicine to study the Ayurvedic systems in India and after that with some physicians of great repute in this country.

(xvii) That one scholarship of the value of Rs. 300 per mensem for two years be given to one graduate in *Western* medicine to study research work in indigenous drugs at the School of Tropical Medicine, Calcutta."

106. *Action Taken.* The following Action was taken.

(i) The Legislative Council in January 1928 recommended the provision in the estimates for 1927-28 of a sum of Rs. 75,000 as a grant-in-aid to be used for such purposes as the Board of Indigenous Medicine may think proper.

(ii) The Board of Indigenous Medicine was set up in September 1928. The composition of the Board was changed at intervals of two years.

(iii) On March 31, 1936 a Sub-Committee was appointed by the Executive Committee of Health to report on the policy of subsidising the Board of Indigenous Medicine. It recommended that the Government, should to a great extent, control the Ayurvedic institutions and suggested the appointment of several Committees, partly advisory and partly administrative to deal with the various departments.

(iv) The recommendations of the Executive Committee of Health were approved by the State-Council but had not in the main been implemented by it. Since there was no legal instrument to define its position in relation to the Central Government, it was unable to discharge its duties satisfactorily.

(v) The Indigenous Medicine Ordinance, No. 17 of 1941, was passed by the State Council in March 1941. It provided for the incorporation of the Board of Indigenous Medicine and for the continuance of the College of Indigenous Medicine, Hospital, Dispensary, Pharmacy and Herbarium as Government institutions. It defined the duties of the Board, and, also, provided for the registration of the practitioners. The administration of the above institutions was vested in the Board.

107. *Commission on Indigenous Medicine, Ceylon.* The Commission on Indigenous Medicine was appointed by the Instrument of the Governor, Ceylon dated November, 1946. It submitted its report on August 29, 1947.

The following were the terms of reference :

- (i) " To examine the facilities now available at the College of Indigenous Medicine and the Hospital of Indigenous Medicine for the teaching of the indigenous systems of medicine in Ceylon and for the treatment of patients according to those systems at the aforesaid Hospital ;
- (ii) " To make recommendations as to the improvements that should be introduced into the method of instruction and training adopted at the aforesaid College and Hospital, and as to the means of securing higher standards of efficiency in the practice of indigenous medicine at the aforesaid Hospital in particular and among the practitioners of those systems in the Island generally ;
- (iii) " to advise on the measure to be adopted for fostering research into the systems of indigenous medicine and especially into their *materia-medica* and pharmacology."

108. The following are the Recommendations of this Committee.

The Teaching of Ayurveda, Siddha and Unani : (i) " The College of Indigenous Medicine, Colombo gives training in Ayurveda, Unani and Siddha." As regards these, the Committee found that (a) " the great majority of practitioners in Ceylon, practise the Ayurvedic system which includes Siddha, (b) Unani system is not practised in the island.

(ii) " We do not consider it possible in view of the absence of competent teachers versed in the three systems to effect an amalgamation of the three systems though it is desired ideal considering their common origin and also relationship.

(iii) " A fully equipped college in Ayurveda should be established in Colombo.

(iv) " A similar institution in Siddha should be established in Jaffna.

(v) " Standards of admission to the above institution should be considerably raised, but that is only possible if (a) the students seeking admission possesses preliminary qualifications of a high standard with a knowledge of subjects essential for the study of

medicine, (b) the training of Ayurvedic practitioners is controlled by the Government, (c) only registered practitioners are allowed to practice in the system, (d) persons qualifying from the above institutions are accorded recognition by the Government and a suitable number of them is given employment on satisfactory terms in the Government Ayurvedic Hospital or Dispensaries.

(vi) "The Unani Section of the College should be discontinued but scholarships should be awarded by the Government to students who wish to proceed to India to learn this system.

(vii) "The Course of studies should extend to a period of 5 years followed by six months apprenticeship in the hospital.

(viii) "The curriculum should consist mainly of subjects relating to Ayurveda and Siddha Ayurveda and principles of modern medical science, minor-surgery and midwifery should be taught.

(xi) "Both these institutions should have

(a) fully equipped libraries,

(b) Scholarships and Bursaries,

(c) Hostels,

(d) Suitable text books in Sinhalese and Tamil for which a Text book Committee should be appointed.

(x) "In Colombo a fully equipped modern Ayurvedic hospital, efficiently staffed, with accommodation for 600 in-patients and 1000 out-patients, and in Jaffna, a similar hospital with 200 beds for in-patients, should be established.

(xi) "In these institutions allopathic medicines that are considered vital in the treatment of patients, should be permitted.

(xii) "If these hospitals prove to be popular, Ayurvedic hospitals in other important towns should, then, be established.

(xiii) "Ayurvedic dispensaries, under qualified practitioners, should be set up in different parts of the Island."

(*Practitioners in Ayurvedic Medicine.* "One of the main reasons why Ayurveda has sunk into its present despised condition and its exponents are held in ridicule is the fact that anybody and everybody is permitted to practise it.)

(xiv) "No recognition should be given by the Government after the establishment of the above institutions to Ayurvedic practitioners except those who are trained in them.

(xv) "Existing private institutions should be permitted to train students for a prescribed period but these would be required to pass an examination, before they are granted registration."

(xvi) *Registration.* "All competent persons practising these systems should be registered, and after a specified date-say 5 or 10 years. Only those persons who are registered should be permitted to practise. The time limit will give opportunities to the unqualified to pursue a prescribed course of training and pass the necessary examination for registration."

(xvii) "Practitioners at the time of registration should be classified as follows :

Class A. Those who have successfully undergone a course of at least 4 years in a recognised institution.

Class B. Those who have been trained in private schools or under reputed physicians and have practised for over ten years and satisfy the Council of Ayurvedic Medicine as regards their efficiency.

Class C. Those who have specialised in a particular branch of any of these systems and fulfil otherwise the conditions in Class B.

(xviii) A Council of Ayurvedic Medicine should be established with powers to make rules for :

(a) Fees to be charged on the applications for registration.

(b) Fees for registration.

(c) Conduct of registered practitioners.

(d) All other matters relating to registration."

(xix) "A Central Ayurvedic Pharmacy which should provide standardised Ayurvedic medicines should be established.

(xx) The distribution of Ayurvedic medicines and drugs should be controlled by the Government."

(xxi) *Research.* "A Literary Research Committee should be appointed to collect, classify and index, all the available literature in the systems.

(xxii) Drugs and methods of treatment should be clinically tested under a Research Officer who should be qualified in Western medicine.

(xxiii) Persons claiming the possession of specifics should be given facilities to demonstrate the efficacy of such remedies. If found true, Government should make them available to all practitioners."

(xxiv) *Administration.* "The Board of Indigenous Medicine should be abolished and a Department of Ayurvedic Medicine which should be responsible for all matters connected with Ayurvedic medicine created.

66 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

(xxv) A Council of Indigenous Medicine, to advise the Director on matters pertaining to Ayurveda should be established. Excepting ex-officio members, members of this Council should hold office for three years with eligibility for re-nomination.

(xxvi) In the colleges mentioned above, there should be Academic Committees, Boards of discipline and wardens for the hostels who should, preferably be members of the staff. Hospitals should be under Medical Superintendents who should be assisted by the Hospital Advisory Committees.

(xxvii) The department of Ayurvedic medicine should undertake the training of the nurses, compounders and dispensers in the hospital of Ayurvedic medicine.

(xxviii) A Committee of expert physicians and botanists to compile an Ayurvedic pharmacopoeia and materia-medica should be set up.

(xxix) Herbaria should be grown in different parts of the Island.

(xxx) A Committee to go into the question of the salaries to be given to the Government Ayurvedic practitioners should be appointed.

(xxxi) A new Ayurvedic Medicine Ordinance should be enacted to give effect to the recommendations of the Commission."

109. A perusal of the recommendations of these Committees and of the action taken by their Governments shows that no Committee has either been asked to report on, or has dealt with, all the important problems that this Committee has been asked to deal with. The Madras Committee, though it made a strong case for the further study of the fundamental principles of Indian medicine yet made no recommendations to implement this study. Nor did it suggest the means by which a Synthesis of the Indian and the Western medicine was to be arrived at. Various Committees have mentioned the importance of Research, but have either confined their recommendations mostly to drug research, or, if they have mentioned other topics and dietetics, have suggested no methods or machinery for implementing these recommendations. Reports of the Burma, Ceylon and Mysore Committees are exceptions to this. They have made definite suggestions for setting up Boards or Committees or Research Sections. All these Committees have recommended that proper use should be made of Indian medicine in the medical relief to the population, particularly in rural areas. Some of them have also recommended that instruction in these systems should be improved by Governments themselves establishing educational institutions or subsidising the existing ones.

110. Without, however, being too critical we feel that the matter has not received the attention it deserves. No doubt, in

part, this brief treatment of these subjects in these Reports, is due to the limited scope of their terms of reference and to their being only Provincial Reports. In our Report therefore, we have considered in great detail all matters relating to Education, Synthesis, Research, Pharmacopoeia, Control, etc. It may be noted here that while some Provincial Governments have endorsed the recommendations of their Committees regarding the recognition and encouragement that should be given to the Indigenous medicine, others have taken no action.

CHAPTER V

THE EXISTING CONDITIONS OF MEDICAL RELIEF

111. The health of people is the result of many variable factors such as food, sanitation, housing, education, medical relief and their general economic condition. It is beyond the scope of the present enquiry to go into all these variables. But, at the same time, we cannot ignore the fact that India with a very large population-one fifth of the total world population-is economically one of the poorest of countries. The people cannot spend enough on food and housing, and the Government cannot afford to have a full-fledged system of sanitation and medical relief. Without a proper consciousness in the people of the value of their health, sufficient nutrition and ample provision for medical relief, maintenance of public health is not possible. Many diseases to which India falls a prey so constantly are the diseases of poverty and consequent under nourishment and malnutrition. Education which helps to build up the mental and moral vigour of the people is backward, and whatever there is of it, is not always on the right lines. Social conditions of the vast majority, because of their poverty, ignorance, and the system of untouchability are in a woeful state. As a result of all this the health of the people is far from being satisfactory and the majority of them remain constantly on the fringes of ill-health. Figures for the expectation of life and mortality rate, which are some indices of the health of the people, put India very near the bottom of the chart. For example, the death rate of British India in 1937, was 22.4 compared to 9.1 of New Zealand and 11.2 of the United States of America. The expectation of life at birth in India, is 26.91 years as compared with 59.67 of the United States of America and 58.74 of England.

Medical Relief

112. Medical relief is of crucial importance both in the prevention as well as the cure of the disease. It comprises of the health personnel, medical institutions and the quality of service rendered by them. The enquiry entrusted to the present Committee is most intimately related to the problem of the medical relief. There are, at the present time, two agencies of medical relief in India-the Western and the Indigenous. Though in some provinces the practitioners

of the Indigenous systems are taken into the scheme of health organisation, for the most part it is the Western system which has received the attention and patronage of the Governments-Central and Provincial. Yet, with State patronage and help, the Indian systems can be employed with immense benefit both in regard to the personnel, and the cheapness of medicaments. It is therefore, regrettable that the Health Survey and Development Committee, in their comprehensive report, found themselves unable to deal with the position of the Indigenous systems in a scheme of medical relief. They say :

“ We are unfortunately not in a position to assess the real value of these (Indigenous) Systems of medical treatment as practised today, as we have been unable, with the time and opportunities at our disposal to conduct such an investigation into this problem as would justify clear cut recommendations.”¹

113. Yet with its present resources the Western medicine can only provide a part of the country's medical relief. Not only this. The programme projected by the Committee on Health Survey and Development will take a period of about 40 years to provide full relief, and will cost the country an immense sum of Rs. 362,99,00,000 non-recurring and Rs. 601,82,00,000 recurring in the first ten years. The Report of the Health Survey and Development Committee gives the number of qualified graduates and licentiates of the Western system in 1941-42 as 47,524 in the then British India, i.e., excluding the (Indian States) which works out to one doctor for every 6,300 of population. This is in great contrast to one doctor for every one thousand of population in the United Kingdom. This unsatisfactory state of affairs becomes all the more alarming when we examine the average population served in each province per medical institution, i.e., hospitals and dispensaries put together. The figures taken here relate to 1942² :

Province	Average population served by a medical institution in 1942		Province	Average population served by a medical institution in 1942	
	Rural	Urban		Rural	Urban
Punjab	30,925	15,188	Orissa	52,548	15,276
Assam	44,562	172,962	Bombay	34,927	17,127
Bengal	37,996	19,730	Bihar	62,744	18,630
Madras	42,672	28,496	C. P. & Berar	66,038	11,379
			U. P.	105,626	17,668

114. Turning to the personnel available as far as the Western system of Medicine is concerned, we find that out of 47,524

¹ Report of the Health Survey and Development Committee, Vol. IV, Page 281.

² *Ibid.*, Vol. II, p. 455.

doctors available in the country only about 13,000 are reported to be on the staff of the medical institutions maintained by Governments and other agencies. Others must be in private practice. Their tendency is to start their practice, in cities and towns, and because of this, the rate of doctors to the population is $3\frac{1}{2}$ times more in urban than in rural areas. The Health Survey and Development Committee in their Report remarked that "it may not be far from the truth if the conclusion is realised that at least 70 or 75% of the total number of available doctors in the country must be practising in Urban Centres." ¹ A study of the figures relating to available personnel and medical institutions will show how extremely inadequate the state of medical relief of the Western type is in India at the present time. The need for expansion of medical ministrations is not only physical, but psychological as well and the people will not do without it. The big gaps left in the state-sponsored and state-maintained institutions of Western medicine have, therefore, to be filled by the Indigenous systems.

THE PRESENT STATE OF THE INDIGENOUS SYSTEMS

115. But when we look closely in the present state of the Indigenous systems, we find that the condition is far from being satisfactory. Their practitioners in most cases are ill-trained and their institutions of education and relief are ill-equipped, ill-housed and poorly staffed. In spite of all these drawbacks, the people still have recourse to these systems, not merely because of the unavailability of institutions and practitioners of the Western system, but perhaps even more because they prefer the Indian medicine and method of treatment. The grounds for this preference are many and varied. For one thing, the Vaidyas and Hakims are more easily available, as a large number of them live in the villages, and they use local language, and locally available and inexpensive drugs and preparations. For another, the treatment of their patients by the Vaidyas and Hakims is generally more sympathetic and personal than that of those in charge of Government dispensaries and hospitals. Besides this, many people hold the belief that the medicine of the Indian system are more suitable to their constitution and climatic conditions. Moreover, particularly in the country side, there are many simple prescriptions handed down from generation to generation which are known to the housewives or the elders, and are of time-tried efficacy. The orthodox too, whose number is considerable, both in the towns and the country prefer herbal Indian medicines to the animal products and alcoholic extracts sometimes prescribed by the practitioners of Western medicine.

116. The result of all this is that, by far the larger number of the people in the village and possibly also in the towns prefer the Indian medicine to the Western. In view of this preference alone

¹ Report of the Health Survey and Development Committee, Vol. 1, Page 36.

we should be justified in laying down that the Indigenous medicine should receive the fullest support and patronage of the State. But the Indigenous medicine has more than the familiarity of the public with them, the cheapness of their medicaments, and the sympathetic treatment of its practitioners, to commend themselves to the people. They are time-tried, are based on sound observation and many of their theories are capable of withstanding scientific investigation. At the same time, it has to be admitted that the Indigenous medicine as practised at the present time, leaves much to be desired. There is very considerable amount of improvement and addition needed both in its content, its method of education and its method of treatment. Before, however, we proceed to make our recommendations regarding improvement in these directions a short survey of the conditions of Indian medicine existing at the present time is necessary. This we attempt below.

PRACTITIONERS

117. According to the figures supplied to us, the number of practitioners of Indian medicine, is about 1,09,600. Of this number only about 51,700 are reported as Registered. But our information is incomplete, as some Provinces and many States have not been able to give us any figures at all, nor all those that have supplied us with these figures can vouch for their accuracy. Other estimates put the number as between 2,00,000 and 2,50,000.¹ But here too it is possible that the number may be greater than what has been reported.

INSTITUTIONS OF RELIEF

118. As far as we have been able to ascertain we have a total of 51 hospitals and 3,898 dispensaries under the Indigenous system—large and small-serving roughly 14,806,584 out-door and in-door patients throughout the Country. These figures, incomplete though in all probability, do show the vast popularity of the Indian systems, especially when we consider that they do not include the very large numbers that get treated by private practitioners.

EDUCATIONAL INSTITUTIONS

119. The number of educational institutions available as given to us is 57. Of these, some are fairly well-equipped and adequately staffed, but the large majority are indifferently equipped and manned. The number of students in these is given as 3,133. But these figures, again, are incomplete and probably the number is considerably greater, especially if we take into account the old type of *Pathasalas* and *Maktabs*.

120. The information we have been able to obtain is given in the table below.

¹ Dr. P. B. Mukerjee. Presidential Address, All-India Medical Conference, Madura, December 1946.

72 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

EXISTING CONDITIONS

(Educational and Medical Relief Institutions)

Province	Educational Institutions	Relief Institutions								
1. Assam	<p>1. A class in Ayurveda in the Munikul Ashram Vaidya Tul. Provision in the budget of 1948-49 for the establishment of a Government Ayurvedic College at Gauhati.</p> <p>2. Surma Ayurved Vidyapith, Silchar. Government expenditure Rs. 7,992 for 1945-46.</p> <p>In 1948-49 non-recurring expenditure on the establishment of the Ayurvedic College will be Rs. 4,30,000.</p>	<p>There is a Government scheme for the establishment of Ayurvedic hospitals and dispensaries.</p> <p>25 Unani dispensaries (including those in the Sylhet District).</p> <p>Number of patients treated—9,000 (figures available only for Unani system).</p>								
2. Bengal	<p>1. Ganga Charan Ayurved Vidyalaya, Calcutta. (Number of Students—5).</p> <p>2. Vishwanath Ayurveda Mahavidyalaya, Calcutta (Number of Students—20; Corporation Grant Rs. 16,000 annually).</p> <p>3. Maharaja Cossimbazar Govind Sundari Ayurvedic College and Hospital, Calcutta. (Number of Students—12; number of beds in hospital—80).</p> <p>4. Jaminibhushan Astanga Ayurveda Vidyalaya and Ayurvedic Arogyasala, Calcutta. Number of Students in 1945-46—306, and now about 70. Hospital with 175 beds including Tuberculosis Section. Corporation Grant—Initial Rs. 75,000 and annual recurring grant Rs. 41,000.</p> <p>5. Shyamdas Vaidya Shastrapith, Calcutta. (Number of Students—70. Corporation Grant Rs. 16,000 annually. Hospital with 75 beds.)</p>	<p>There are some private charitable dispensaries; namely, Sri Vishudananda Saraswati Charitable dispensary, Marwari Relief Society—a charitable institution, which maintains several free Ayurvedic dispensaries both in Calcutta and the mofussil. Vishudananda Marwari Hospital and Bhagawan Das Bagala Hospital, having out-door dispensaries, and maintaining several in-door beds in the hospital.</p>								
3. Bihar	<p>1. Government Ayurvedic and Tibbiya College, Patna. Hospital with 50 beds and 12 isolation beds. Government expenditure Rs. 26,815 annually.</p> <p>2. Dharamsamaj Sanskrit College. Number of Students—64.</p> <p>3. Astanga Ayurvedic College, Bhagalpur. Government Grant Rs. 16,000 annually.</p> <p>4. Ayodhya Shri Kumari Ayurvedic College. Government grant Rs. 2,000 annually.</p> <p>5. 200 Tols where Ayurvedic teaching is imparted only in theory. Total Government expenditure Rs. 26,815.</p>	<p>7 Ayurvedic Hospitals and 401 dispensaries. Government opening 300 more Ayurvedic dispensaries and 28 Unani dispensaries.</p> <p>Number of patients treated 1,22,047</p> <p>Number of practitioners:</p> <table> <tr> <td>Qualified-Ayurvedic</td> <td>2,100</td> </tr> <tr> <td>Unani</td> <td>6,000</td> </tr> <tr> <td>Non-qualified-Ayurvedic</td> <td>254</td> </tr> <tr> <td>Unani</td> <td>250</td> </tr> </table> <p>(Applications for registration are still being received).</p> <p>Government opening an Ayurvedic T.B. Hospital at Digha.</p>	Qualified-Ayurvedic	2,100	Unani	6,000	Non-qualified-Ayurvedic	254	Unani	250
Qualified-Ayurvedic	2,100									
Unani	6,000									
Non-qualified-Ayurvedic	254									
Unani	250									
4. Bombay	<p>1. R. A. Podar Medical College, Bombay. Number of Students—110. Hospital with 50 Beds. Accommodation for 30 more available.</p> <p>2. Government expenditure on college Rs. 52,175 and hospital Rs. 91,647.</p> <p>3. Ayurvedic Mahavidyalaya, Poona. Students—207. Hospital with 80 beds. Government Grant Rs. 12,000. Total College and Hospital expenditure Rs. 81,215.</p>	<p>6 Hospitals and 253 Ayurvedic dispensaries subsidised by Government. Besides there are a number of dispensaries maintained by local bodies and private agencies. Number of patients treated 1,73,266. Number of registered practitioners 11,789.</p>								

Province	Educational Institutions	Relief Institutions
	<p>4. Aryangala Vidyalaya, Satara City. Students 59. Hospital with 44 beds. Government grant Rs. 1,900. Total expenditure Rs. 28,023.</p> <p>5. Seth U. P. Ayurvedic College, Patan. Students 22. Hospital with 10 beds. Baroda State Grant Rs. 36,000. Total expenditure Rs. 26,915.</p> <p>6. Ayurved Mahavidyalaya, Jamnagar. Students 110. Hospital with 150 beds. College expenditure Rs. 84,000. Hospital conducted by the State.</p> <p>7. Ayurveda Mahavidyalaya, Ahmednagar. Students 37. Hospital with 40 beds. Govt. Grant Rs. 1,900. Total expenditure Rs. 31,452.</p> <p>8. O.H. Nazar Ayurveda Mahavidyalaya, Surat. Students 19. Govt. Grant Rs. 1000. Total expenditure Rs. 23,000.</p> <p>9. The M.C. Ayurvedic College, Nadiad. Students 12. Govt. Grant Rs. 1,000. Total expenditure Rs. 8,000.</p>	
5. Central Provinces & Berar	1. Shree Bharwata Ayurved Vidyalaya.	<p>58 institutions dealing with the Indigenous medicines. Some local bodies running their own dispensaries but their number is not known to the Provincial Government. The Government has sanctioned the establishment of 83 Ayurvedic and Unani dispensaries on a total expenditure of Rs. 78,020.</p> <p>No. of patients treated 13,80,000</p> <p>No. of practitioners 1,300 (approximately)</p>
6. Madras	<p>1. The Govt. School and College of Indian Medicine, Madras. Students 300. Hospital with 180 beds. Government approved proposals for suitable buildings for this Hospital and the College at a cost of Rs. 5 and 10 lakhs respectively.</p> <p>2. Venkataramana Ayurvedic College and dispensary, Mylapore. Students 22.</p> <p>3. Sree Rama Mohan Ayurvedic College, Guntur. Students 31.</p> <p>4. Bhoshna Kuteeram Gurukulasaram, Guntur. Students 22.</p> <p>5. The Venkateswara Ayurvedic Kalsala, Bezwada.</p> <p>6. Arya Vaidya Patasala, Kottakal, S. Malabar. Students 89. Hospital with 101 beds.</p>	<p>The total Government expenditure Rs. 3,29,881. 1947-48 budget Rs. 7,66,400 (1 hospital and 636 Ayurvedic and 51 Unani dispensaries.) The budget for 1947-48 provides Rs. 2,44,700 for the hospital and Rs. 1,30,300 for the subsidized dispensaries. Proposals made for starting a Central Pharmacy with a Herbarium close to the College of Indian Medicine at a recurring expenditure of Rs. 1,25,000.</p> <p>No. of patients treated 43,34,411</p> <p>No. of practitioners Registered: 23,340</p> <p style="padding-left: 40px;">Ayurvedic 13,340</p> <p style="padding-left: 40px;">Unani</p> <p>Unregistered: No. separate figures available.</p> <p style="padding-left: 40px;">Ayurvedic } No. separate</p> <p style="padding-left: 40px;">Unani } figures available.</p>
7. Orissa.	<p>1. Government Ayurvedic College Hospital with 7 beds.</p> <p>2. Puri Sanskrit College, Students 3. Government setting up an Ayurvedic Institution at an annual recurring cost</p>	<p>47 Ayurvedic and 2 Unani dispensaries. Annual Government expenditure Rs. 30,000. Government opening a new T. B. Sanitorium.</p>

74 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

Province	Educational Institutions	Relief Institutions
	of Ps. 75,000 and spending Rs. 25,000 on its equipment.	No. of patients treated 1,93,902 No. of practitioners 5,000 (approximately)
8. United Provinces	1. Ayurvedic College Benares Hindu University. Students 315. Hospital with 100 beds. Government Grant Rs. 60,000.	8 Hospitals and 1,583 Ayurvedic dispensaries, and 5 Hospitals and 510 Unani dispensaries.
	2. Unani Tibbya College, Muslim University, Aligarh. Students 61. Hospital with 50 beds. Government Grant Rs. 60,000.	No. of patients treated 64,12,684 No. of practitioners 50,000 (approximately)
	3. Ayurvedic-College, Gurukul-Kan-gari, Haridwar. Students 32, Hospital with 48 beds (Run by Aryasamaj fund).	Registered : Ayurvedic 8,101 Unani 3,052
	4. Unani Medical College, Allaha-bad. Students 60. Government Grant Rs. 5,500.	Unregistered : Ayurvedic } 39,000 Unani } (approximately)
	5. Kannya Kubja Ayurvedic College-Lucknow, Hospital with 12 beds. No. of Students 84. Government Grant Rs. 3,000.	
	6. Mambaul Tibbia College, Lucknow, Students 64. Government Grant about Rs 2,000.	
	7. The State-aided Unani Medical College, Lucknow. Students 64. Government Grant Rs. 19,300.	
	8. Mool Chand Rustogi College-Lucknow, Students 56. Hospital with 20 beds Government Grant for 1947 Rs. 2,000.	
	Following receive Grants from the Governments.	
	1. Rishikul Ayurvedic College, Haridwar. Students 130. Grant Rs. 13,000.	
	2. Philibhit Hari Ayurvedic College. Students 115. Grant Rs. 10,000.	
	3. Bundhal Khand Ayurvedic College, Jhansi. Students about 90. Grant Rs. 10,000.	
	4. Shri Darshanand Ayurvedic Col-lege, Benares. Students about 72. Grant Rs. 2,000.	
	5. Takimul-ul-tibi, College. Dhawal Tola, Lucknow, Students about 80. Grant Rs. 4,500.	
	6. Gurukul Ayurvedic College, Dorli, Meerut. Students 45. Grant Rs. 2,000.	

EXISTING CONDITIONS (Contd.)

(Educational and Medical Relief Institutions)

CHIEF COMMISSIONERS PROVINCES

Province	Educational Institutions	Relief Institutions
1. Ajmer Merwara	Shree Kalyan Ayurvedic Vidyalaya, Beawar. Run by private agency. No Government grant is given to this institution.	28 Ayurvedic and 9 Unani dispensaries. No. of patients treated 5,42,000 No. of practitioners 154 Registered : Ayurvedic 22 Unani 9 Unregistered : Ayurvedic 89 Unani 34
2. Coorg	Nil	One Unani hospital and 8 Ayurvedic dispensaries. No. of patients treated 17,642 No. of practitioners 9 (all diploma holders)

3. Delhi	1. Ayurvedic and Unani Tibbi College. Students 75. Hospital with 48 beds. 2. Banwari Lal, Ayurvedic Trust, Vidyalaya, Students 75.	No information.
----------	---	-----------------

STATES

4. Cochin	Education in Ayurveda given as a part of Sanskrit studies in the college situated at Thirupunithura.	12 hospitals and 56 Visha-Vaidyasalas. No. of patients treated 4,11,105.
5. Gwalior	State Ayurveda Vidyalaya, Lashkar, Students 30.	No information.
6. Hydrabad	1. Nizamia Unani College and Hospital. Students 100, Hospital with 100 beds. State Grant Rs. 44,538. 2. Nizam's Ayurvedic College. No Hospital at present but one is going to be established.	One hospital and 11 Unani dispensaries. No. of patients treated 13,90,024 No. of private dispensaries not known.
7. Indore	Rajkumar Singh Ayurvedic College, Biyabani. Students 50. Hospital with 30 beds.	1 Hospital and 45 Ayurvedic dispensaries. State grants-in-aid Rs. 2,000 No. of patients treated 5,26,533 No. of practitioners 38 (all qualified).
8. Jaipur	Rajputana Ayurvedic and Unani Tibbi College. Students 17. No Hospital. Government Ayurvedic College, Jaipur. Students 55. Hospital of 20 beds—medical only. Ayurveda and Unani Institute—here is a Government pharmacy.	2 Ayurvedic Hospitals, 31 Ayurvedic and 5 Unani dispensaries. 855 Registered practitioners.
9. Jodhpur.	Nil	22 Ayurvedic dispensaries and 70 aid-posts. No. of patients treated 7,63,123

76 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

Province	Educational Institutions	Relief Institutions
10. Khairipur	Nil	One Unani dispensary. No. of patients treated 2,700
11. Pudduk-kottai	Nil	One Unani dispensary. No. of patients treated 57,306
12. Patiala	Ayurvedic Department, Patiala, Students 4.	7 Ayurvedic dispensaries. No. of patients treated 2,57,158
13. Mysore	1. Government Ayurvedic and Unani College Hospital, Mysore. Students 59. Ayurvedic Hospital with 12 beds, Unani Hospital with 12 beds. Grant Rs. 68,000. 2. Sree Rama Krishna Vidyapeeth, Basawangudi. Students 14. Sri Jayachamarajendra Institute of Indian Medicine, Bangalore. Research Institute-both Ayurvedic and Unani. Grant Rs. 1,08,800. (1947).	In-patients 308 (1945-46) Out-patients 1,72,070 (1945-46) In-patients 261 (1946-47) Out-patients 2,11,207 (1946-47)
14. Rampur	Nil	30 Unani and 28 Ayurvedic dispensaries. No. of patients treated 1,77,522 No. of practitioners 143 Registered Ayurvedic 92, Unani 101. Unregistered No. not known. Unani 30.
15. Travancore.	Government Ayurveda College, Trivandrum. Students 145, Hospital with 50 beds. Total Government expenditure. Rs. 10,497.	6 Hospitals and 217 dispensaries. Some of them exclusively devoted to the treatment of Visha (snake bite etc.). No. of patients treated 8,73,824 No. of practitioners 8,052 Registered : Ayurvedic 6,671 Unregistered : Ayurvedic 1,381

The following is the list of examining bodies of which information could be obtained.

- All India Ayurveda Vidyapith, not recognised by Government.
Examinations : Bhishak, average No. of students passing per year 1,400
Ayurveda Visharad 550
Ayurvedacharya 240
- The Benares Hindu University. Recognised by Government.
- The Aligarh Muslim University. Recognised by Government.
- The Board of Indian Medicine U.P. Recognised by Government.
- Bihar Sanskrit Association. Recognised by Government.
- The Bengal Ayurvedic and Unani Faculty. Recognised by Government.
- The State Ayurvedic and Unani Faculties. Recognised by Government.
- Jaipur State examining Body in Ayurveda and Unani.
- The Board of Examiners in Indian Medicine, Madras. (Government).
- Travancore. (Government).
- Mysore. (Government).
- Hyderabad. (Government).

CHAPTER VI
SYNTHESIS OF MEDICINE

INTRODUCTORY

121. One of the terms of reference of our Committee is the question "*whether a synthesis can be made of the three systems—Ayurveda, Unani, Tibbi and Modern—into one all comprehensive system.*" We have given most careful thought to this question, and have also taken into consideration the practical working of actual schemes that have been adopted for the last two decades towards this end, in the teaching institutions of Indian medicine in the Presidencies of Madras, Bombay and Bengal and in the United Provinces. Our considered opinion is that such a synthesis is eminently practicable. We are further of the opinion that this synthesis will be the best answer to another of our terms of reference, which requires us to suggest the measures to be taken "*to increase the usefulness of the systems to the public as part of a comprehensive plan.*" Before, however, we proceed to describe the lines on which this synthesis can be made, it would be worthwhile first to take stock of the position the two systems occupy at the present time in the country.

122. *Western Medicine.* The advance made by Western medicine, particularly in the last 100 years or so, has been truly wonderful. Great strides have been made in the art of surgery and obstetrics and much progress achieved in bacteriology, immunology and in synthetic medicine. Attempt is also being made to widen the scope of medical studies by incorporating the angle of 'positive' health. The progress of Western medicine is, however, mostly on the scientific side and we would be the last to deny the value of the scientific method. In fact we hold that it must be prosecuted with vigour and zeal. But we also realise that along with this type of study and research, there must be some attempt at synthesising the large harvest of factual data received from scientific investigations. In the absence of any attempt at the formulation of generalisation, Western medicine has now become so highly technical and complex that an average student is finding it increasingly difficult to assimilate. Due to the emphasis laid on laboratory studies and from relative neglect of studies at the bedside, even the cost of diagnosis and treatment has become so great that an average person especially in

a poor country like India, is still *unable* to benefit from them ; so much of its treatment is still purely symptomatic. As Dr. O. G. Gruner says : " It should be clear to the candidate that our modern technique does not avail for 100 per cent of cases ; for those who do not benefit, at least an experiment with other systems of treatment should not be denied." Since Western medicine cannot be regarded as being perfect, as some of the practitioners of this system would have us believe, we should rather admit that in this system of medicine there is much room for advance not only in the direction of finding new remedies for the cure of disease but also for simplifying the methods of diagnosis and treatment.

123. *Indian Medicine.* It is admitted by all that at the present time Indian medicine ministers to more than 80 per cent of the population, and that it is perhaps the only kind of medical relief available in the rural areas. But the popularity of Indian medicine is not confined to the poor and the unlettered peasantry, or to the orthodox and the conservative in our cities. Patrons of Ayurveda and Unani are found among the intelligentsia and the rich, and even among the practitioners of Western medicine. Indian medicine also boasts of some very eminent physicians—both Vaidyas and Hakims—who are not only believed to have some hereditary prescriptions of great value, but have established their reputation through sound diagnosis and remarkable cures. But while admitting the popularity and soundness of Indian medicine, we cannot shut our eyes to certain gaps in it which prevent it from meeting all the requirements of the people. The whole field of surgery, obstetrics, structural physiology and pathology has suffered a woeful neglect, and in these directions it must look to Western medicine for help. In diagnostic methods and appliances too Indian medicine is weak and could profitably borrow a great deal from the West. Even though we admit its weakness as an Art, the fact remains as Sir Pardey Lukis has pointed out " Many of the empirical methods of treatment adopted by Hakims are of the greatest value, and there is no doubt whatever that their ancestors, ages ago, knew many things which are now-a-days being brought forward as new discoveries." It has also been suggested that a careful study of the theories of Indian medicine is likely to offer many helpful generalisation for integrating the disjointed facts of modern science.¹

124. *The Comprehensiveness of Indian Medicine.* The very name Ayurveda means the knowledge of life in its entirety *i.e.* body, mind and soul. Another claim, equally great, is that from the very outset, Ayurveda has taken as its objective not merely the cure of disease, but the prevention of ill-health, and the promotion of health of those who are well, *i.e.* maintenance of positive health. The

¹ "Basis of medicine", by Lt. Col. M. H. Shah.—Journal of the Indian Medical Association, May, 1947.

Health Survey and Development Committee has stated that the indigenous systems lack in the knowledge of Hygiene and Sanitation. It is however, evident from the arrangement in the Ayurvedic classic, such as the "*Ashtanga Hridayam*", that a place of honour has indeed been given to rules of hygiene and sanitation for those who are well-*Dinacharya* (rules of daily conduct), foods, drinks, etc. and it is only after these have been dealt with, that we are introduced to *Chikitsa* (Curative Medicine) necessitated by the non-observance of the rules of hygiene and preventive medicine mentioned earlier. Ayurveda, thus goes beyond the scope of modern medicine which has been defined as the "Art or Science of healing disease, especially the healing of disease by administration of internal remedies". (Dorland: Medical Dictionary). Even the definition of *Tibb* (Medicine) given by Bu Ali Senna (Avicenna), the great Persian Physician 980/1036 A.D. goes beyond the modern definition: "Tibb is a branch of knowledge which deals with the states of health and disease in the human body for the purpose of adopting suitable measures for preserving and restoring health." Indian Medicine therefore concerns itself not only with the cure of disease but with the preservation of health. Thus, it will appear that centuries earlier, Avicenna, as before him the Ayurvedic masters, practised what modern medicine has only perceived in recent years. It is also clear from the works of Avicenna as from Charaka that medicine must look to the man as a whole and not to the part that is diseased or the function that is disorganised. They also gave due importance to the "*Soil Factor*," which has come to be recognised only recently.¹ Western medicine has chiefly considered the study of disease as the result of outside agencies like the microbes. Indian medicine considers disease as a state of disharmony in the body as a whole and a result not only of the external factors, nor merely of the internal factor but of the interaction between the various internal and external causes. Hence, according to it, treatment should aim at not only the finding of appropriate internal remedies but the employment of all available means to restore the normal balance or equilibrium. The comprehensiveness of the Indian medicine is further evident from the attention it gives to diet—both in health and disease. It takes into account not only the prevailing season and climate but also the temperament and constitution of the individual. In recognition of the fact that food influences not only the body but also mental activities, it prescribes diet according to the various avocations. Thus there are special diets for the *Satvika* (Intellectuals), *Rajasika* (Martial classes) and *Tamasika* (Labouring classes). This aspect of Ayurveda has not been studied sufficiently by the Westerners. We are, however, sure that from this branch of the Ayurveda, Western medicine will find much

¹ As a matter of fact, Ayurveda goes even further than this. It considers the "*Soil factor*" in much greater completeness than is done even at the present time. It considers not only the "*Athura desa*" (soil factor of the patient) but also the "*Bhumi Desa*"—(Soil factor of the environment).

to incorporate in its science of dietetics. It is also worth recording that Hindu and Muslim writers not only gave equal place to health and disease but they also studied man in the context of the whole universe. In this way they came to regard medicine not as some narrow speciality but as a branch of philosophy. The upholders of the Western system, however, may very well retort that it is through this very mixing of science with philosophy, that confusion has been caused and Indian medicine reduced to a position of quakery.

125. *Science and Philosophy.* We are however of the opinion that it is not the admixture of science and philosophy which has led to the degeneration of the Indian medicine. The causes of its degeneration are those which we have stated elsewhere. On the other hand we are convinced that if the Western medicine is to develop into a more comprehensive system it is necessary that science and philosophy are permitted to join hands in the growth of medicine.

126. *Science*—Many of the eminent scientists are already agreed that science and the scientific method are limited in their range. Science is accepted to be “systematised knowledge based on accurate and controlled observation of the facts of sensory experience. . . . Science aims to be precise and as far as possible, to measure and prove. It is essentially analytical, although it purposes to synthesize groups of observed phenomena in terms of formulated laws which an army of human robots can operate without having to employ original thought. Strictly speaking, science cannot include anything which is outside the boundary of current sensory observation, although there is no certainty that the five senses of the modern man represent any kind of absolute limit to what may one day become part of man’s sensory mechanism. Science being analytical, cannot prevent itself from splitting up into many separate branches, each of which comes to represent a specialised study and tends to limit itself to a single angle. This makes it quite impossible for any single branch of science to know the scheme of things as a whole. It perpetuates partiality and inclines to obstruct the broader synthesis. Science, it has been succinctly remarked, spends its time discovering more and more about less and less—in point of fact, if it is to function efficiently, that is what it has to go on doing.

“There are thus three main defects in the scientific method so far as universals are concerned :

(i) Science has to take certain preliminary assumptions for granted, and these may prove to be false when improved methods of observation are discovered or invented. A notable case is the materialistic outlook of nineteenth century science, which used to be of fundamental and unquestioned assumption, but was exploded by the splitting of the Atom.

(ii) It is limited to sensory observation, aided by mechanical instruments.

(iii) It concentrates on a partial view of the scheme of things."¹

127. *Philosophy*: "Philosophy on the other hand aims at giving us a knowledge of the whole. It tries to elucidate ultimate causes, reasons and principles. Its method is that of induction from the facts of experience and deduction from previously accepted hypotheses. In this way, it could help science to synthesise the disjointed information it has at its disposal and in elucidating the causes of phenomenon which defy observation. Philosophy, however, is privileged to go beyond the realms of observation. "It is not compelled to exclude any thing unponderable or not observed by the five senses, and is completely justified by the argument that Reality is not confined to that which may be observed and measured by modern mens' sensory technique. For example, the law of cause and effect may be deduced from observations of phenomena, but it might also be logically reasoned out in the Rationalist Sense."²

128. The importance of philosophy to science, has been well expressed by Sir James Jeans as follows: "There is a widespread conviction that the new teachings of Astronomy and Physical Science are destined to produce an immense change on our outlook on the universe as a whole, and our views as to the significance of human life. The question at issue is ultimately one for philosophic discussion."³ But it is not non-medical scientists alone who emphasise the importance of philosophy to science. Wilfred Trotter in his article "General Ideas in Medicine," says ". . . a branch of knowledge strictly limited to experiment and without any kind of speculative admixture tends in time to lose its inspiration and drift into a dry and rigid orthodoxy."⁴ Sir Robert Hutchinson, writing with reference to 'Specialism' in "Scientific Studies" remarks, "though favourable to the accumulation of facts, it is bad for philosophy of knowledge. There is little speculation and too little use of imagination: and most scientific literature is barren in ideas."⁵

129. From the foregoing account it is quite clear that the Indian systems were fully justified in having employed the help of philosophy. While the Unani Tibb restricted its studies only to the use of observation and reason, the Ayurveda went much further in that it embodied in its knowledge truths cognised by supra-sensory perception. Ayurveda, thus can claim to be a much more complete body of knowledge and one which appears to be in line with modern

¹ Furze Morrish: *Outlines of Metaphysics*, p. 10.

² *Ibid.*

³ Sir James Jeans, Page vii.—The "Mysterious Universe".

⁴ *British Medical Journal*, October 5, 1935.

⁵ Quoted by Walshe in "Integration of Medicine," *British Medical Journal*, 1947.

trends. We feel that these aspects of the Indian medicine are of special importance and that it is from these that it can make even more valuable contributions than from its rich store-house of medicaments.

NEED OF SYNTHESIS

130. From the above it is clear that both the Western and Indian systems have much to give to each other, and that keeping them exclusively in water-tight compartments will be detrimental to the growth of medicine, and for humanity. It needs no stressing that mankind has a right to all that is best in the sciences of health and healing. Yet, the attitude of superiority or of aloofness from one another which is so often maintained by most practitioners of Western medicine and by some practitioners of Indian medicine, not only prevents the coming together of the two systems, thus impoverishing medical knowledge, but also creates unseemly bickerings and unnecessary acrimony. Not unoften the rival practitioners appear like litigants challenging each other in a court of law, forgetting that at the bar of history humanity will judge them and the judgment will be a very condemnatory one. Utmost efforts should therefore be made to put together the best in both the systems, and to evolve one unified system for the advancement of Medicine and the benefit of mankind. In regard to our own country such a unified system will give our people (i) all the benefits of the advances that Western medicine has made and (ii) at the same time provide them with a system which will be more in keeping with their habits, tastes and requirements, and (iii) which from its comparatively cheaper medicines will be more suitable to their economic circumstances as well.

131. *Synthesis not difficult*: The evolving of such a unified system is not a task of insuperable difficulty. Western medicine, after all, represents a development of the ancient system of Ayurveda which had been adopted firstly by the Greeks and then through them by the Arabs, and later by the Europeans in accordance with the genius and needs of their own country. In effect, "the so-called different schools are only progressive stages of the same science of healing pursued on the same lines of investigation and experiment."¹ The difference in the fundamentals of these systems is, therefore, not so great as it is sometimes imagined and in reality there is much more in common between them. The part played by nature in the cure of disease is a principle common to all the systems and is acknowledged by all of them. Indeed, in recent years, all the three systems have borrowed extensively from each other, and incorporated these borrowings into their practice. The Committee are convinced that an integration of the Ayurvedic, the Unani and the Western is both possible and practicable. It is only in this way that we can collect and bring together all the good points from each and

¹ Shri C. Rajagopalachari: Inaugural Address to the Medical College Association of Madras, July 1947.

use them in the preservation of health and the treatment of diseases. Even if a line of treatment does not appear to have a scientific basis but is effective, it should not be discarded but efforts should be made for finding its scientific basis. In further support of our conviction we quote below the views of certain eminent Indian and Western authorities.

132. *Some Opinions.* The earliest authority, in favour of taking from other systems whatever is useful, can be found in no less a person than the great Acharya Charaka (4th Century B. C.): "There is no end to the Science of Ayurveda: hence constant application in its pursuit should be practised vigilantly; this should also be done to acquire skillfulness in practise from others without feeling any humiliation. Unto man possessed of intelligence, the entire world acts as a friend; unto men destitute of intelligence, the entire world acts as an enemy. Hence, everything should be examined thoroughly by the wise and counsels of even an enemy should be heard and practised if they are found to be excellent, praiseworthy, life-preserving and beneficent to the people." Sir Pardey Lukis, the then Director General of Indian Medical Service, Government of India, in accepting a resolution asking for investigation into "the possibilities of placing the ancient and Indigenous systems of Medicine on a scientific basis and increasing their usefulness," said: "I do not recognise any fixed line of demarkation between the Eastern and Western Medicine. . . . Many of the so-called discoveries of recent years are merely rediscoveries of facts known centuries ago I will merely remark, that I am not alone in my opinion as regards the value of the ancient systems of medicine. If I err, I do so in good company amongst whom I may mention my friends and colleagues, Sir Havelock Charles, Colonel King of Madras, to whom India owes the magnificent Research Institute at Guindy, and that distinguished Sanitarian Dr. Turner, the Health Officer of Bombay."¹

133. The Director-General is not alone in this view. Many other Western medical authorities can be quoted. "This ancient psychology and medicine is not so absurd, nor these thinkers as foolish, as current caricatures of their teaching would lead us to imagine." (M. Mehr). . . . "Arabian medicine rated at its

¹ The Gazette of India, March 25, 1916. This resolution was supported by:

1. The Hon'ble Mr. Rama Rayanaengar.
2. Raja Saidhid Abdur Jaffar of Pirpur.
3. Maharaja Ranjit Sinha, Nazhipur.
4. Mr. Surendranath Banerjee.
5. Rai Seethanath Ray Bahadur.
6. Sir Gangadhar Chitnavis.
7. Mr. Madhusoodhan Das.
8. Mr. Qumrul Hudu.
9. Sir Pardey Lukis.
10. Mr. C. Vijaya Ragavacharya.
11. Pandit Madan Mohan Malaviya.

lowest deserves careful study."¹ Dr. Rama Subramaniam, M. B. B. S. in his address as Chairman, Reception Committee, XXXII All-India Medical Conference, Madura, December 1946, expressed similar views: "Charaka and Susrutha were admittedly scientific pioneers in the field of medicine. It is illogical that Ayurveda and Allopathy should be bigotedly considered irreconcilable inimical systems. Would it not be in the best interest of the world that both these systems and all other systems which have any scientific basis should be built into one scientific whole . . . The best in all the systems can be included into one system if we approach them in true spirit of scientific inquiry." Dr. Rajan, the then Minister of Health, Madras, in his opening address to the All-India Medical Conference, 1938, observed, "Personally I hold the view that it is certainly possible to evolve a Synthesis of these systems." Dr. Lakshmpathi, the well-known Physician of Madras whose exposition of Ayurvedic system is well known, and whom we are fortunate in having as our colleague on this Committee, has observed: "The National System of Medicine would assimilate the best of what is in the Western system thus arriving at the synthesis of systems," Dr. M. C. Kini, President, IX Annual Conference of the Association of Surgeons, India (1947), in a letter to the Chairman observed, "all our efforts should be for synthesis of medicine and not creation of practitioners of different systems with doubtful utility for the nation."

134. In an editorial of the Indian Medical Gazette, December 1922, it was stated: "What we look forward to is mutual cooperation, the evolution of a type of tropical medical practice consisting the elements derived from both Western and Indian sources, containing the best of both and adapted to the country's needs." In an editorial in the same journal of March 1947 it was stated: "The system of Western Medicine, without modification does not suit the rural masses. Symptomology which is subjective and based entirely on the outlook, imagination and psychology of the simple folk brought up on simple centuries-old folk-lore is the chief difficulty." Mr. H. F. Knight, Adviser to the Governor, Bombay, expressed similar views in declaring open the Government Podar Ayurvedic College, Bombay.² The then member for Health, Raja Ghaznafar Ali Khan in his Address to us, when we met for the first time at New Delhi on March 22, 1947, also pleaded for a synthesis: . . . "It (Medicine) should not be exclusive; but should include all that the experience of mankind has

¹ Dr. Donald Campbell, *Arabian Medicine*, Vol. 1, Page 50.

² "Today marks an epoch in the science of Ayurveda in the province of Bombay, for, in the Rembilas Anandilal Podar College efforts will be made to raise the standard of education in the Science of Ayurveda and to supplement that system in those directions in which in the past, the Ayurvedic system appeared deficient, perhaps especially in surgery and gynaecology and to add to its methods hallowed by traditions the scientific advancement made recently in other systems of Medicine. . . . If a science fails to do so and adopts a policy of isolation and of withdrawals from the stream of human progress, then power of helping humanity inevitably ceases and eventually that science fossilises into a mere superstition, an affair of spells, incantation, mantrams and charms."

proved to be efficacious, all that practice of experts has shown as beneficial. Why not then a synthesis, a gathering into one, of the Medicine and Surgery—ancient and modern, Indian and Western? So, gentlemen, medical science should have no barriers of systems, of civilisations and of cultures, of the Eastern and Western. Medicine should be the common possession of mankind, and as such anything which is of value, anything which the systems old or new have to contribute should be pooled together and placed at the service of suffering humanity."

135. We may quote other authorities but it is not necessary. The trend of oral as well as written evidence was overwhelmingly in favour of the integration of Western and Eastern medicine, leading eventually to a complete synthesis. The exponents of Western medicine, however, hoped that given the time they would absorb all that is best in the Indian medicine and the exponents of Ayurveda maintained that their system was strong enough to absorb all that was useful in modern medicine, and could maintain its individuality.

136. The opposition to this integration has come from only a small number of orthodox Vaidyas and Hakims and from some practitioners of Western medicine who consider that there is such a great diversity in the basic principles of these systems that integration is not possible. Pandit K. G. Natesa Sastri, a member of the Madras Committee (1921-1923) said that "though truth is always the same without racial or geographical limits, yet difference in the ideal and modes of their thinking in East and West is so great that the impact rather disintegrates them than strengthen and fuse the two systems."¹ Similar views were also expressed by others before our Committee. Some of the Vaidyas and Hakims who gave evidence appeared to be afraid that, an attempt at synthesis would be merely an attempt to kill their systems and that, the older systems will lose their identity and will be swallowed up by Western medicine. Some of them allege that the indigenous systems are complete and perfect and are not only scientific but super-scientific. They are therefore convinced that modern scientists are not competent to sit in judgment on their systems. Some of the practitioners of Western medicine on the other hand appear to think that the indigenous systems are so archaic and unscientific that they cannot mix with modern medicine. Be that as it may, after careful consideration of the question, the Committee have come to the conclusion that there should be no such apprehension on the part of Vaidyas and Hakims if they have any real faith in the strength of the Science and the Art of the medicine they practice. Through investigation and research into their fundamental theories they should be able to show that their medicine is equally strong, scientific and based on solid foundation.

¹ Sri K. G. Natesa Sastri Avergal—A note to the Report of the Madras Committee on the Indigenous Systems of Medicine—Vol. I, p. 46.

If they cannot do this, their systems have no right to exist. They should, therefore boldly face the prospect of integration and synthesis in the interest of humanity and agree to the pooling of all that is best anywhere to alleviate suffering and to combat disease. This is certainly in keeping with the best traditions of Ayurveda. To the practitioners of Western medicine who are against integration and final synthesis we would suggest a study of the Indian medicine without prejudice before they call it unscientific and useless. Our experience is that those medical scientists who have made this study with an unbiased mind have realised the value of the writing of the ancient sages who expounded the original doctrines of Ayurveda or of Unani.

THE ALTERNATIVE TO SYNTHESIS

137. It is also worth considering, what the alternative to a synthesised system will mean. It will mean a surreptitious or overt-borrowing by one system from the other, without fully understanding the implication of what is borrowed, and without its integration into its own system. For instance it is an open secret that many indigenous practitioners have taken to using penicilin, and sulfa-drugs, not to mention quinine and its new substitutes and several types of injections. Such borrowings without proper training and understanding in regard to their use is briefly to inflict serious injury on many patients. The absence of a synthesis will therefore mean the permanent perpetuation of the present condition but in more aggravated form. There will be a number of systems working side by side in unpleasant rivalry and unhealthy competition. There will also be an insistent clamouring by each system for preference by the State, in the form of financial help. Each will want its own Colleges, Hospitals, Clinics and Dispensaries in preference to those of the others. Moreover the population of each town and village will be putting up demands for the establishment of Hospitals and Dispensaries favoured variously by them. If these demands are met it would mean a colossal expenditure. If they are refused, then there will be an awful clamour. A perusal of Chapters IV and V will show the demand for extension of these systems during recent years which has led to the appointment of this Committee and the place at which Hospitals and Dispensaries of different systems are being established in the various provinces.

138. We are, therefore, forced to advocate the urgent necessity of evolving one unified system of medicine—a synthesis of the Western, the Ayurvedic and the Unani—and have therefore suggested that a start in this direction should be made at an early date. It must, however, be admitted that its successful working will neither be easy nor quick. It will require the continued and painstaking research of many first class experts for many years to evolve a complete integration that could be of real value to India in particular,

and to the world in general. How this research is to be organised and carried out, will be dealt with in Chapter X. Here we shall point out the various steps which have to be immediately taken to make a beginning in the right direction.

INTEGRATED STUDIES

139. By integration we mean the arrangement of studies in such a way that whatever is weak in one system is supplemented and strengthened by the strong points of the other system or systems. From the very nature of the case the scheme of integrated studies will have to be bilateral. The curricula of Indian systems will have to be strengthened in their weak points by the addition of material from the Western medicine and vice-versa. The Indian systems will have to supplement their knowledge of the basic science by including modern advances of anatomy, physiology, pathology, surgery, obstetrics, bacteriology, etc., and the Western system, the study of the basic principles of the Indian systems such as the *Panchabhuta*, (theory of matter), *Tridosha*, *Rasa*, *Guna*, *Veerya*, *Vipaka* and *Prabhava*. So far as the Western medicine is concerned we quote the words of Col. Knowles, Director, School of Tropical Medicine, Calcutta who stated: "It is impossible for any body of men to work out a scheme of medical education which is divorced from the tradition of the past." (Quoted by Dr. A. Lakshminpathi in his memo to Congress Government 1938). Dr. Jivraj N. Mehta, Director General, Health Services in an address delivered at Madras observed. "It should be our function to encourage the study of these (Ayurvedic) books and to help those who have taken up such study and find out if they contain some observations which still baffle modern scientists. I would further suggest that Medical graduates might submit thesis on their studies on Ayurveda for M. D. or Ph. D., examinations. . . . It is a matter for consideration whether a Chair on Ayurvedic Medicine could not be established in the Medical Colleges for post-graduate study and examinations."¹ We would suggest that a Chair of Indian Medicine should be established in each Medical College to educate the students in the principles of Indian medicine in which many of their countrymen believe and by which they benefit. This will create better understanding of the patient and will be the first step towards integration in these institutions. As research brings out more and more of utility, the teaching which might at first be merely of historical nature may be gradually added to.

140. *The First Step.* In the beginning Indian and Western subjects should be taught side by side in both types of institutions. The process will be that of supplementing and not of real integration at this stage. We consider, however, that an integration of the

¹ Address as the President of the Association of Physicians of India, Madras 1945 - The Proceedings of the Academy of Indian Medicine, Madras, June, 1945—page 4.

basic principles of the Indian and Western medicine can be started even at this stage but synthesis of details can only be effected as research progresses. The Committee on the Indigenous Systems of Medicine, Madras, Bengal, U. P. and Bombay have all favoured this. According to the Bengal Committee: "The tol system has disadvantages, while training on modern lines will neither be suitable nor practicable. The intermediate course, a judicious combination of the two systems, should be adopted". Hence we propose that the line of studies in the first stage should be much the same as is being followed in the well known colleges of Indian Medicine at Madras, Bombay, Poona, Calcutta, Benares and Aligarh. A brief statement of the curriculum in these colleges of Indian Medicine is given below. It will show how, the studies are supplemented by the study of Modern subjects at present.

<i>Ayurveda Section</i>	<i>Western Section</i>
1. Padartha Vignana (Darahanas pertaining to Ayurveda)	1. Basic Sciences (Physics, Chemistry and Biology)
2. Sharira	2. Anatomy
3. Dosha-Dhatu-Mala Vignana	3. Physiology
4. Draya-Guna Vignana, Rasa Shastra and Aushada Nirmana	4. Materia-Medica
5. Swastha Vritta	5. Hygiene and Public Health
6. Nidana (Roga-Vignana)	6. Pathology
7. Kaya Chikitsa	7. Medicine
8. Shalya and Shalakyas	8. Surgery including disease of eye, ear, nose and throat
9. Prasuti-tantra, Stri-Roga, Kaumarabhritya	9. Midwifery, Gynaecology and Pediatrics
10. Agada-tantra and Vyavahara-Ayurveda	10. Toxicology and Medical Jurisprudence.

141. It is to be noted that, although similar subjects have been included in both sections, the teaching of some of these is not being given in a correlated manner. We however hold, that the study should as far as possible be made more "synthetic and comparative", rather than as a detached study of pure allopathic principles and practices. For this purpose the teaching of Ayurvedic and Western subjects should preferably be by teachers holding both allopathic degree, as well as a diploma or degree in Indian medicine. In this way in course of time the lecture notes in each subject could form the basis for the preparation of what may be called "unified text-books" suitable for use by every student of Medicine in India, no matter what special branch—Allopathy, Ayurveda, Siddha or Unani—he may wish to pursue. It is also hoped that when the unified text-books

have been made ready, it would not be necessary to continue the present practice under which each subject is being taught by two separate type of lecturers and the examination in each subject is conducted by two sets of examiners.

142. *The Second Step.* The second step will be the teaching of each subject by the same teacher, instead of by two or more as previously, who will give the students a unified view of the Indian and Western medicine. Every attempt must be made to reach this stage as soon as possible, for only then, shall we have qualified practitioners imbued with the spirit of ancient Ayurveda, and well-equipped with all that modern science can give, who will be capable of ministering fully and satisfactorily to the needs of our people.

143. *The Final Step.* The final step will result from the work in the Research Institute, where eminent experts of the Western and Indian systems will work side by side—discussing, testing, checking and verifying the various hypothesis and theories, with a view to either rejecting or harmonising them. It is also possible that some of the theories may be such as can neither be reconciled yet nor rejected, but can be used as parallel hypothesis, in the same manner as Modern physics uses the *Wave* and *Corpuscular* theories to explain the phenomenon of light, as has been shown by Vaidyaratna Capt. G. Srinivasa Murti in his memorandum to this Committee.¹

¹ "Two theories may be different, but need not, on that account, be contradictory. On the contrary, different theories may be complementary and serve to explain the unexplained features of one another. Further, the teaching of different and even apparently contradictory theories is inevitable at the present state of our knowledge of our different sciences—whether we are votaries of a mainly experimental Science like Physics or of an "exact" Science like Geometry or an imperfect Science like Medicine. Everywhere, we have to accept different and even apparently contradictory theories and try to reconcile and harmonise them as best as we could. As the great Mathematician and Physicist Prof. Bohr reminded us in his stimulating Article on 'Light and Life' contributed to 'Nature,' we have to accept the theory of *Electro-Magnetic waves* to explain certain phenomena of light and also the theory of *Light-Quanta*, to explain certain other phenomena. Each theory is helpful in explaining certain phenomena but neither is sufficient to explain all phenomena; hence, in practice, it was inevitable that, on a Monday, while dealing with certain phenomena of light I have had to proceed on the basis of wave theory and assume that I was dealing with *Electro-Magnetic waves*, while, on Tuesday, working with certain other phenomena, I had to proceed on the theory of *Light Quanta* and assume that I was dealing with material particles or corpuscles—the discarded Newtonian corpuscle re-incarnated in a new form. We have also tried to harmonise the two apparently contradictory theories on the basis of 'Wavicle' (both waves and particles—and other assumptions. Similar is the difficulty regarding Modern theories of Matter—the very foundation on which basic sciences like physics as well as applied sciences like medicine are built. In reviewing a recent publication entitled 'Matter and Light: The New Physics', by Louis De Brogli translated by W. H. Johnson, the distinguished Scientist, Prof. Herbert Dingle stated as follows: 'The central theme of the book is the appearance of the concepts of waves and corpuscles in physical theory. Newton thought of light as crowds of corpuscles; but his views were long ago discarded in favour of wave theory. Matter, on the other hand, has in modern times always been regarded as composed of corpuscles, of which electrons and similar entities are at present the ultimate representatives. The reasons for these views were that they explained experiments; neither waves of light nor electrons had been, or indeed could be, observed directly. More recent experiments, however, appear inconsistent with such explanation; they seem to demand that light should be corpuscular, and that matter would be ultimately wave-like. Thus there arises an incompatibility in the theories of both light and matter. Each behaves in some experiments as though it were a wave, and in

OBJECTIONS AGAINST INTEGRATION ANSWERED

144. The various objections that may be raised against integrated studies have centred mainly around the following :

- (i) It is not possible to work with the differing basic theories of both Indian and Western medicine without causing mental confusion ; and
- (ii) even if such a working is considered feasible, it will not be possible to find time for both type of studies in the five to six years period of study at the Medical Colleges.

These objections are not really new. They were also raised in Madras a few years ago with a view to persuade the authorities to give up their scheme of bilateral studies at the Government School of Indian Medicine.

145. In regard to the first it may be stated that confusion can only arise when teachers are not well versed in both systems. But given good text-books, competent teachers and keen type of students this is not likely to happen. We have evidence to believe that, even with the existing bilateral studies the results have not been altogether unsatisfactory. In any case, experience of the work of practitioners from the Colleges of Indian medicine shows that many have done excellent work whether as private practitioners or as government servants.¹

146. The second objection, in regard to insufficiency of time to teach both systems has not much weight. Experience gained at the Madras School of Indian Medicine and elsewhere has shown that the required time can well be found by the removal of unnecessary details from the schemes of study of our teaching institutions of both Indian and Western systems. According to eminent authorities in

others as though it were a corpuscle, and the problem is to form a conception of it which will explain both sets of experiments. There is a further difficulty. A wave demands a medium in which to manifest itself. The luminiferous ether, in spite of certain contradictory properties, supplied this need for light, more or less satisfactorily until the theory of relativity appeared ; but thereafter it could be maintained only if one eased to demand that it could even conceivably be a standard of reference with respect to which a body could be said to move, and this is justifiably regarded by most physicists as equivalent to a denial of its reality. The medium in which material waves exist is, if possible, still more inapprehensible. Hence with regard to both light and matter, we appear to be forced to accept incompatible conceptions, one of which is also impossible to realise." Similar is the case with even an 'exact' science like Geometry. While engaged on problems to which Euclidian Geometry is applicable, I may assume that three angles of a triangle are equal to two right angles and that parallel lines never meet ; but I may have to discard these 'axiomatic' truths the very next day while engaged in surveying Non-Euclidian spaces to which Euclidian Geometry is not applicable. Similar is the case in Medicine. It is commonly understood that treatment by 'similars' is Homeopathy while treatment by 'Dissimilars' is Allopathy ; but, vaccine-therapy so much in use in modern medicine (in both preventive and curative medicine) is treatment by 'similars' and in that sense, 'Homeopathy.' The two principles may appear contradictory, but be capable of being reconciled and harmonised. These instances from the different sciences are only illustrative ; they could easily be multiplied and instances taken from other sciences also."

¹ Report of the working of the Hospitals and Dispensaries, Government of Madras, G. O. No. 4241, 25th November 1938, page 4.

Great Britain, nine-tenths of the dissections are an absolute waste of time and it is wholly unnecessary for the students to acquire such an amount of detail in anatomy, physiology, pathology, and bacteriology as is at present taught. Similar views were expressed by the Health Survey and Development Committee.¹ Hence by suitable modifications of the existing curriculum, sufficient time could be found for the suggested combined training during the course of five years.

147. On the other hand, the proposed scheme will bring into better contact, the teachers and students of the two systems, and will thus, lead to greater understanding and a mutual regard and respect of one another. The present hostile attitude of the exponents of the Indian, and the supercilious attitude of the exponents of the Western systems could in this way give place to an honest mutual appreciation. In fact we can hope that the students of these Colleges inspired by ancient texts and infused with the spirit of the new science will be better fitted for research in the Indian systems of medicine than the laboratory trained practitioners of the Western system.

148. In order to facilitate the integration of teaching and studies some further steps should be taken simultaneously :

- (i) Improvement in the basic qualification of entrants to medical studies.
- (ii) Compilation of special text-books for students of integrated studies.
- (iii) The training of special teachers for the integrated studies.

149. *Improved Basic Qualifications.* In order that the students may take full advantage from the new type of studies, it is essential that their basic qualifications should be higher than those recommended for the diploma course. At present not only matriculates but all those who have qualified in equivalent examinations in Sanskrit, Hindi, Arabic or Persian are allowed admission in both Medical Schools and Colleges of Indian Medicine. We are of the opinion, and this opinion is backed by a large majority of evidence written and oral,

¹ "As regards Anatomy a disproportionately large amount of the total period devoted to the medical course appears to be spent in this country on the teaching of this subject as compared with the practice in countries in which medical education is on more progressive lines. For instance, in King Edwards' Medical College, Lahore, the subject appropriates to itself, 1,274 hours, out of a total of 4,546 hours for the entire medical curriculum, and in the Andhra University, 1,124 hours out of 4,158. At Harvard, on the other hand, the corresponding periods are 480 hours out of 4,000 and in Russia 438 out of 5,760 hours. It is believed that the time taken by lectures and demonstrations and by the dissections can be curtailed to an appreciable extent." Report of the Health Survey and Development Committee, Vol. II, page 159. Views supporting this are also expressed in a minute signed by six members of the Committee (Sir Frederick James, Dr. Viswanath, the Hon. P. N. Saprú, Mr. M. N. Joshi, Pandit L. K. Maitra and Dr. A. H. Butt) : "Several distinguished medical officers have now, during our discussions, expressed the opinion that by a suitable modification in the curriculum an effective medical training can be given in three and a half years including a six months' interneeship"—*Ibid.*, Vol. II, page 348.

that the basic qualification for admission into the Colleges of Indian Medicine, should be the same as that for Colleges of Western Medicine, *i.e.* intermediate or equivalent, with Physics, Chemistry and Biology as special subjects. Only if the basic qualification is improved, can we hope for success of the integrated system. For only then, will there be some guarantee of good material coming out of these Colleges.

150. *Special Text Books.* The provision of special text books is of the utmost importance. We have devoted a great deal of our attention to this question and have made some detailed recommendations in Chapter VII on Medical Education. On the speed with which they are written and on their quality will depend the progress of integration and full achievement of a complete synthesis. Here we may, however, emphasise that the aim in these text-books should be not only to present the special features of both Indian and Western medicine in an inter-dependent manner; but the texts should be scientific in spirit and exposition through its pages. Only then will they be of real service and deserving of respect and attention.

151. *Teachers.* The most pressing need at the present moment is a sufficiency of trained and experienced teachers. The teachers for integrated studies must be of high academic attainments and should have a thorough mastery over their subjects, so that, they can not only expound special features of each system, but also can present them in harmonised manner. We confess that at present, there are not many such available. The question of teachers is still more important when it is considered that, it is from the ranks of these that our researchers and synthesisers are to come. This is the real bottleneck of the problem of integration and synthesis. The first source of supply that suggests itself is the existing Colleges of Indian Medicine. The number of students qualifying from these, is however, not large enough to staff the projected Colleges, and, it must also be confessed, they are not of the high academic attainments which should be expected from College professors. Hence it will be necessary to avail the services of eminent scholars of Indian medicine.

152. Another source of supply can be the promising graduates of the Western medicine who have received a special training in the Indian medicine. These graduates must be inspired more by the zeal for knowledge and the spirit of service, than by any monetary prospect. For this purpose, a specially attractive cadre will have to be created, to attract able men to take up the work of teaching after their training is over. To benefit fully from this training, the graduates in Western medicine must have a good knowledge of Sanskrit or Arabic, and of Indian medicine. In addition to this scheme of training it would also be worthwhile to send abroad some of the teachers of Indian medicine to acquaint themselves with first hand

knowledge of modern methods of scientific research, provided they have the necessary background and aptitude for research.

153. *Summary of Chapter.* We have carefully considered the question whether by gradual and careful integration of the Indian and Western medicine we can effect a synthesis of the two and whether by doing this we will increase the usefulness of Indian medicine to the public as part of a comprehensive plan. We have come to the conclusion that such a synthesis though not easy, and will be time-consuming is not only possible but practicable and essential. There is not any great diversity in the fundamental principles of Indian and Western medicine and the ultimate object of curing the disease, is the same for both. Further, integration of the two will be advantageous from the point of view of medical relief particularly in the rural areas. Indian medicine even at present serves more than 80 per cent of the population in rural areas; the intelligentsia and the well-to-do class in large towns, who could afford and could easily get relief from the Western medicine, also make use of it. Indian medicine is defective in the field of surgery, obstetrics, structural physiology, and pathology and must look for help to Western medicine in these branches. It would also profit by borrowing a great deal from the Western medicine in diagnostic methods and appliances. Indian medicine, on the other hand would give a great deal to the Western medicine in the conception of the body as a composite unit, *i.e.*, of body, mind and soul, in other words, the theory of 'vitalism' which the modern physiology is reluctant to admit. Western medicine is an experimental science and at present, is divorced from philosophy; this, though favourable to accumulation of facts, renders it devoid of speculation and has too little use of imagination. It is therefore likely to become barren in ideas. In the realm of science and philosophy, the modern medicine could get a great deal both from Charaka and Avicenna. Great emphasis is also laid in Indian medicine on the prevention of disease by improving the 'soil' factor by adopting suitable dietary which has been elaborately worked out according to seasons and climates, and the temperaments and avocations of individuals. Western medicine has yet to formulate a coherent system of principles of medicine and is in marked contrast to Indian medicine in this respect. Western and Indian medicine have thus much to give to each other and a proper synthesis of the two will greatly benefit humanity as a whole. On the contrary if such a synthesis is not effected, there will be (i) unpleasant rivalry and unhealthy competition, (ii) surreptitious or overt-borrowing by one system from the other without fully understanding the implication of what is borrowed and without its integration into its own system, (iii) the insistent clamouring by each system for preferential treatment in the form of financial help from the State and (iv) a colossal expenditure to the State in having to maintain parallel institutions in the various systems.

94 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

154. We are therefore forced to the urgent necessity for evolving one unified system of medicine ; and hold that a synthesis of the Western and Indian medicine comprising of what is best in each can and should be effected :

- (a) Firstly, by bilateral integrated study, *i.e.*, by the arrangement of the curriculum in such a way that whatever is wanting in one system is supplemented and strengthened by the strong points of the other system or systems.
- (b) Next, by unified tuition by a common teacher who will give reconciliatory views of the Indian and Western system.
- (c) Finally, by research work in testing and checking the various hypotheses and theories with a view to reconciling or rejecting them. This will eventually lead to a complete integration and final synthesis of both.

155. We are convinced that the objection raised that a synthesis will lead to mental confusion of students, and that in an ordinary course of five years such a synthesised system could not be taught is not valid. Our opinion in all these respects is backed by eminent authorities who have studied the question.

CHAPTER VII

EDUCATION AND MEDICAL INSTITUTIONS

INTRODUCTORY

“ Truth and science are one. There can be no competition between truth and truth, but only between truth and error. I would, therefore, entreat you to remember three things. The first is to demand and not to oppose a high standard of education and equipment and careful selection in admitting students to your colleges for courses in medicine. The second, is to include modern scientific knowledge alongside our traditional Ayurveda in your institutions so that truth may run in a single course and prejudice and ignorance vanish to the minimum point. Thirdly, scientific research should be encouraged and there should be no opposition but full co-operation in this between the western doctors and the learned kavirajas ”.

In these words H. E. Sri C. RAJAGOPALACHARI, (the then Governor of Bengal) replied to the farewell address presented to him by Bangia Ayurveda Mahasabha in Calcutta (on 17th June 1948). In formulating our proposals we have kept this sage advice as our ideal.

156. Before discussing the future programme of education and the type of institutions that should be developed, it will be well to give some idea of the present condition of the schools and colleges of Indian medicine as they exist. We can say without hesitation that the majority of these educational institutions are neither properly equipped nor adequately staffed. Further, they get no grants from the Government towards their maintenance in most of the Provinces. The basic educational qualifications of the entrants are low and the technical education given to them is very unsatisfactory, the products turned out do not obtain proper status so far as Government employment is concerned. The practitioners so trained have thus no prospects except to resort only to private practice. For these reasons young men of talents do not consider it worth while to embark on a five years course in these institutions, and the number of entrants has fallen enormously

during recent years. It has thus come about that practically all the students with intermediate qualification in Science, who are eligible for entrance to medical colleges (Western medicine) either get admitted into those institutions or failing in this take to other technical professional courses that offer better prospects. For these reasons we have laid stress on better equipped and properly staffed institutions and their recognition by the Government. Only then will they attract candidates of the right type for the courses of Indian medicine we have recommended. We have also put up a scheme in the Chapter on Medical Relief for absorption into the cadres of rural medical relief of all alumni qualified from these institutions. Such a scheme in our opinion is essential for the extension of medical relief in rural areas so urgently needed.

157. In dealing with the question of the teaching of Indian medicine we are treading on difficult ground. It is only in comparatively recent years that any attempts have been made to put this teaching on a sound basis. Up to the time of the establishment of colleges and schools of Indian medicine, only a few decades back, there was no systematic teaching in Indian medicine. Most of the teaching has been given for hundreds of years in Sanskrit *Vidyalyayas*, as a specialised branch of Sanskrit learning. In addition there were 'tols'¹ or schools conducted by 'Guru,' collecting round himself a number of aspirants who boarded and lodged with him. The course of studies was based on the Sanskrit classical works on Medicine and extended to an indefinite period extending from 2 to 6 years or even longer. During this time the students were taught practical methods of identifying drugs, preparing medicines and of dispensing them. Clinical instruction was given by the 'Guru' in the course of his practice. But such 'tols' and Sanskrit *Vidyalyayas* have mostly ceased to exist now. In any case their products were not generally sufficiently equipped to meet the necessities of our times.

158. As mentioned above, the teaching in the present schools and colleges of Indian medicine too, is handicapped through lack of full governmental support, and consequent inefficiency of their equipment. In marked contrast with the state of education in Indian medicine is the teaching and equipment of the schools and colleges of Western medicine. These institutions have not only a much longer history (-the Calcutta College was founded in 1833 and the Madras Medical College in 1836-) but have had the advantage of having up-to-date institutions of Europe and America, to serve as their models and ideals. In addition, they have a vast amount of literature, standard books and periodicals, which can help their teachers and students, if these so desire, to keep abreast of modern medical discoveries and processes. Though starved of support and poor in human and material equipment, in several cases, the new

¹ This is still the case in the Tripunithura Sanskrit *Vidyalyaya* (Cochin State) visited by us.

Colleges of Indian Medicine have yet done very useful work and have provided valuable experience for suggesting further advance.

THE PLAN OF THE CHAPTER

159. In this chapter, we propose to discuss the following subjects relevant to Education:

- (i) The kind of Future Practitioner for India.
- (ii) The Curriculum of Studies.
- (iii) The basic qualification for admission into a College of Indian Medicine.
- (iv) Improved methods of teaching.
- (v) Elimination of unnecessary details from existing studies.
- (vi) The duration of the Course of Study.
- (vii) The provision of Text-Books.
- (viii) The medium of instruction.
- (ix) The institutions of Medical Education.
- (x) The examinations and Degrees.
- (xi) Post-graduate studies and Research in Medical institutions.

I. THE KIND OF FUTURE MEDICAL PRACTITIONER FOR INDIA

160. "Not for self, not even for fame, but for the service of the people"¹ thus Charaka lays down the ideal that a practitioner of medicine should keep before him. This noble ideal may have been approachable in the ancient days when the needs of the physician were fulfilled by the willing contribution of his patients and the dutiful service rendered by his pupils. But times have changed. There is a drying up of voluntary gifts, a scarcity of the right type of teachers and a rise in the cost of minimum requirements of ordinary living. No more can the physician, like his counterpart, the lawyer, depend on voluntary offerings, and dedicate himself to honorary service. Yet, the physician and this includes the surgeon can still keep the ideal of service in connection with his own utility to the public before him as a guide. In a poor country like India, there is particular need of this even now. National welfare and public opinion both demand that the physician should take up his duties in as non-acquisitive a spirit as possible. But Charaka's ideal of service implies more than mere non-mercenary attitude. Just as one must be worthy to receive i.e., be a good *Patra* so one must also be a worthy donor, i.e., a good *Data*. The donor, in this case the physician, must be well equipped with knowledge and

¹ नास्मार्थं नापि कामार्थं अथ भूतदयां प्रति ।

experience. In modern times, he must not only know his subject well, but must keep himself abreast of the latest information.

161. *Equipment of an ideal Physician.* In the recent past the physician contented himself with a knowledge of medicine and surgery only, and the educational institutions contented themselves with imparting no more than this. But experience now tells us otherwise. The new physician must not only know his own subjects but must have been well-grounded in such fundamentals as the position of man in the universe, and in society, and in the family. In addition he must have studied man in his completeness—body, mind and soul. In short to be a complete physician he must understand the position that man occupies in the entire scheme of the universe, and the full complexity of man himself. To do this he must, to an extent, be a philosopher. What Plato held to be necessary of political rulers, “unless philosophers are kings, and kings philosophers, there shall be no cessation of the ills of mankind,” is equally, if not more true of physicians. The Health Survey and Development Committee, too have emphasised the need of wider outlook for the new doctor, though they do not mention this philosophic outlook. They say “. . . the physician of the future should be an even more highly cultured individual, than his predecessor and that he should have to a greater extent, the wider outlook which will enable him to interpret health and disease in relation to the social background of the life of the community.”¹ They quote with approval the remarks of the Inter-Departmental Committee on Medical Education in Great Britain, that, “Medicine is a branch of human thought and activity that demands and provides opportunities for the fullest development of humanistic and scientific talents.” (Italics ours).

162. It is only when our medical practitioners are thus equipped that they will be able to discharge the duties that centuries ago they were expected to discharge. Susrutha had laid down that the family doctor should not only be a guide in matters of health but must be consulted in arranging marriages according to equipment and temperament of the parties, and prescribe the line of education according to the capacity and inclination of the child.² This is precisely the new medical outlook which is now being envisaged under the name of ‘social medicine.’ Our new medical practitioner must therefore not only be a medical expert, but a friend, philosopher and guide. We realise that such physicians are not easy to produce, and that the ideal is a very high one. Yet, it is this very kind of medical practitioners that India needs, and not the

¹ Report of the Health Survey and Development Committee, Vol. II, p. 433.

² Susruta, Sarira, Ch. I.

kind that generally sit on chairs in Government dispensaries and perfunctorily discharge their functions. This means that our conception of the education needed by our practitioners must be considerably altered and enlarged.

163. *The Courses of Study.* Before, however, we proceed with the actual details of Education, we must consider a very important question. Are there to be two courses of study in Indian medicine—a Licentiate Course and a Degree Course—or is there to be one Course only—a Degree Course? In reference to the modern medicine this question was considered at length by the Health Survey and Development Committee. The decision of the majority of the Committee was in favour of a single Degree Course. They say: "We have given considerable thought to the question and the conclusion which the very large majority of our members has arrived at is that, on the whole, having regard to the limited resources available for the training of doctors, it would be to the greater ultimate benefit of the country if these resources were concentrated on the production of only one and that the most highly trained type of doctor, which we have termed the "basic" doctor. We have made detailed recommendations, later in this chapter, regarding his training."¹ There were, however, a minority of the Committee who were not in favour of there being only one course and that, the Degree Course.² They wanted, for some time to come at least, two courses of study—a Licentiate Course and a Degree Course. They based their opinion on:

- (i) The need of India for a very quick and wide extension of medical-relief.
- (ii) The good services rendered by the old Licentiate Class.
- (iii) The experience of the U. S. S. R. regarding the "Feldshers" (medical assistants).
- (iv) The fact that a very large proportion of the ailments are amenable to simple treatment.

164. It is undeniable that India needs medical relief on a wide scale, particularly for the rural population, which is about 80 to

¹ Report of the Health Survey and Development Committee, Vol. II, Sec. 15, page 340.

² In their minute of dissent, Sir. F. E. James, Dr. Vishwanath, the Hon. P. N. Saprú, Mr. N. M. Joshi, Pt. L. K. Maitra and Dr. A. H. Butt, say: "In our view the experience of the U.S.S.R., where conditions are comparable with those in India, is a more helpful guide. Remarkable progress in the provision of public health and medical relief services to the people of that vast country has been made in the last 25 years. During the greater part of that period, the training of medical personnel was undertaken on a mass scale, by utilising, unorthodox methods and accepting wide variety in the duration and standards of the courses prescribed." Report of the Health Survey and Development Committee, Vol. II, page 350. For a fuller discussion refer to the Report of the Health Survey and Development Committee, Vol. II, Chap. XVIII, Sections 12-17 and the two minutes of dissent attached to this chapter and our chapter on organisation of Rural Medical Relief.

90 per cent of her total population ; and these need this relief as quickly as possible. According to the plan approved of by the majority of the Health Survey and Development Committee, however, it would take at least 40 years for the country to be supplied with its full personnel of doctors trained on the Western system. We consider that this period is too long to wait for.

165. There is also the factor of the heavier cost of a longer period of education required for a Degree course, to be taken into account. The national bill of costs for the training for a shorter period will be materially less than that for the training for a longer period. We have also an apprehension that the graduates of the Western medicine would not be eager to settle in rural areas, and if they do, they will demand not only comparatively high salaries, but a good deal more in the way of amenities of life for themselves, and in the way of educational and other facilities for their children. The financial burden of these would be too high for a country like India to bear. We further feel that the present day graduates in Western medicine trained for the most part in big cities, would be temperamentally somewhat out of tune with their prospective patients in the rural areas. We are in full agreement with the view of the Health Survey and Development Committee, that there shall be only one common and high standard of qualification for all medical service. That should be our constant aim. But on the grounds of the length of time and the higher cost involved and the urgency of the need for supplying a large personal for rural medical relief, we are of the opinion that as an interim measure we should plan for turning out a maximum number of medical personnel, within a minimum period and cost, yet possessed of a safe minimum standard of knowledge and efficiency. We realise that, in part, there will be an increase in the number of qualified practitioners through the influx of the Graduates of the Colleges of Indian Medicine. But such an influx is not on a scale big enough to satisfy the full demands of the country. We therefore recommend, two courses—one the Degree course and the other a Licentiate Course—as an interim measure. In this way we shall not only be able to increase very considerably the number of qualified practitioners so urgently required, but we may also be able to create through the Licentiate Course a type of service for relief work in the rural areas which while being less expensive may be more suited to the requirements of our village population. In order to give these Licentiates opportunities for further studies they should be made eligible for admission to the Degree Course. In States and Provinces where Boards or Faculties of Indian Medicine do not exist, Boards or Faculties should be established for conducting examinations and awarding diplomas. The syllabus for this course is given in the annexure to this chapter.

II. CURRICULUM OF STUDIES

166. Though we give below our suggestions for the Curriculum of Studies, yet we are of the opinion that this should be entrusted to a special committee of experts for final decision. This curriculum of studies is for all sections namely, Ayurveda including Siddha and Unani. The names of the subjects are given in English so as to be applicable to all the three sections, but instructions in the various subjects will be based upon Ayurveda, Siddha and Unani writings respectively. The subjects included in Western medicine, will be taught, for the present, in accordance with English books on the Subjects.

CURRICULUM

*1st and 2nd years—Pre-Clinical Course**Indian Medicine**Western Medicine*

- | | |
|--|---|
| 1. Padartha Shastra (Darshanas pertaining to Ayurveda) | 1. Anatomy |
| 2. Sharira (Anatomy) | 2. Physiology |
| 3. Dravyaguna Vignana (Materia-Medica) | 3. Materia-Medica (only most essential drugs) |
| 4. Dosha, Dhatu, Mala Vignana (Ayurvedic Physiology) | |
| 5. Rasashastra and Aushadha Nirmana (study of minerals and pharmacy) | |

Examination at the end of 2nd year in all these subjects. Except subject No. 1 on the side of Indian medicine all other subjects will have practical examination also.

3rd year—Clinical Course

- | | |
|--|---------------------------------------|
| 1. Swastha Vritta (Hygiene) | 1. Hygiene and Public Health. |
| 2. Nidana (Roga Vignana) (Pathology and Diagnosis) | 2. General Pathology and Bacteriology |
| 3. Agadha-Tantra (Toxicology) | 3. Toxicology |
| 4. Vyavahara Ayurveda | |

Examination at the end of the 3rd year in the subjects of 3rd year.

4th and 5th year—Clinical Course

- | | |
|--|--|
| 1. Kayachikitsa (including Bhuta-Vidya, Rasayana and Vajikarana) | 1. Medicine including mental diseases. |
| 2. Shalya-Tantra (Surgery) | 2. Surgery |
| 3. Shalaky-Tantra (Diseases of eye, ear, nose and throat) | 3. Diseases of eye, ear, nose and throat |

102 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

4. Prasuti-Tantra, Streeroga and Balaroga (obstetrics, gynaecology and pediatrics)
4. Midwifery, Gynaecology and Pediatrics

5. Medical Jurisprudence

Clinical Practice

1. Medical Out-patient Department 4 months.
2. Surgical Out-patient Department 3 months.
3. Medical In-patient Department 8 months.
4. Surgical In-patients Department 8 months.
5. Maternity Department 4 months.

Final Examination at the end of Vth year.

On the side of Indian medicine, the names of Ayurvedic subjects only are given but the corresponding subjects of Unani and Siddha are to be taken for the Unani and Siddha courses respectively.

167. Diploma course of three years for Rural Medical Relief as an interim measure.

Qualification for admission—Matriculation or S. S. L. C., examination with Sanskrit for Ayurveda, Tamil for Siddha and Urdu for Unani.

Or

Madhyama in Sanskrit of Queens College, Benares or its equivalent, if the candidate passes an entrance examination in general knowledge (of the standard of S. S. L. C. in subjects like regional language, Arithmetic, History and Geography).

CURRICULUM

Pre-Clinical Course—1½ years

1. Padartha Shastra (Darshna) pertaining to Ayurveda
2. Elementary course in Physics, Chemistry and Biology.
3. Sharira and Dosha, Dhatu, Mala Vignana (Anatomy and Physiology).
4. Dravya-Guna, Rasashastra and Aushadhi Nirmana including essential modern drugs (Materia-Medica and Pharmacy)
5. Anatomy and Physiology.

Theoretical and practical examinations at the end of the course in all these subjects will be held. (No practical for No. 1)

Clinical Course—1½ years

1. Swastha Vritta (Hygiene and Public Health)
2. Roga-Nidana and Kayachikitsa (Pathology, Diagnosis and Medicine)

3. Shalya and Shalakya-Tantras with elements of modern Surgery and surgical diagnosis.
4. Midwifery, Gynaecology and Pediatrics with only the treatment part of both these subjects from Indian medicine.

Clinical Practice

Medical and Surgical Out-patient Department 6 months.

Medical In-patient Department 6 months.

Surgical and Maternity Departments (In-patient) 6 months.

Examination at the end of the course—theoretical and practical—in all the subjects.

168. All the subjects of this course are to be taught in a practical and integrated manner mainly designed to suit rural requirements. Suitable common text books for this course will have to be prepared first and then only the course should be introduced.

169. We have not given a detailed syllabus as the modern trend even in Universities in the West is to discard detailed syllabuses altogether, as these are likely to become rapidly out of date. Broad outlines are, however, given in the annexure.

170. *Curriculum too Heavy.* But a question may be asked, how the student is to assimilate all that he is expected to of both the systems within a period of 5 years. To this we will answer as follows :

- (i) Through a higher standard of basic qualifications for admission to medical studies ;
- (ii) through the adoption of improved methods of instructions ; and
- (iii) through an elimination of unnecessary details.

We shall discuss these below :

III. BASIC QUALIFICATION FOR ADMISSION

171. The basic qualification for admission to medical colleges of the Western system, in India, is the intermediate with science optionals (physics, chemistry and biology). In colleges of Indian medicine, the qualification varies between the matriculation and the intermediate. Knowledge of science is not always expected, and this deficiency is sought to be made good by studies in the medical institution itself, through a pre-medical course of six months or one year. We are of the opinion that in the colleges of Indian medicine the basic qualification for admission should be raised to the intermediate with the three sciences—physics, chemistry, and biology, for the Degree Course. In forming this opinion we have the support of a very large section of the witnesses who appeared before us. But this is not all. We expect that with the gradual introduction of instruction through the mother tongue, it should be possible to raise considerably the standard and extent of general knowledge of the

intermediate students. Such subjects as civics, history, geography and the elements of sociology could then be taught on a considerably higher level even in the matriculation classes. This will also ensure a higher standard of intelligence and ability in the entrants to this Degree Course. These are the basic qualifications that our future medical students should possess.

172. Upon the vexed question of the classical languages, in the evidence given before us, we admit that a great deal of emphasis was laid on the necessity of Sanskrit or of Arabic and Persian for the students of Indian medicine. Yet, a contrary opinion was also expressed. This opinion was not in favour of advanced knowledge of the classics being considered indispensable for the study of medicine. It was urged that it was quite possible to translate all the necessary classics into the Provincial or Regional languages and that just as the Western medicine is no longer studied in Greek or Latin, so in India too, medicine could well be studied through the living languages. We are in full agreement with this latter view. We hold that for the general run of the practitioners advanced knowledge of the classical language should not be made compulsory. Of course, for advanced studies and research such knowledge of the classical languages would be essential. To sum up, we recommend that students wishing to join the Colleges of Indian Medicine should have :

- (i) A general background of sociological subjects ;
- (ii) Passed the intermediate examination with physics, chemistry and biology ; and
- (iii) A working knowledge of Sanskrit, for Ayurvedic, and of Arabic or Persian for Unani Tibbi. ¹

IV. IMPROVED METHODS OF TEACHING FOR DEGREE COURSE

173. An improvement in the methods of teaching is urgently called for. Much has already been written about the subject though few of them have been brought into actual use. The first step in this direction, we would suggest is the imparting of instruction through either the National or the Provincial or Regional language. The adoption of a language familiar to the students, instead of the present use of English would serve a double purpose. It would increase the grasp of the subject by the students and also reduce the time taken to master it. A fuller discussion of the question of medium of instruction is given in Section VIII below. Another improvement in the method of teaching that we would strongly recommend is the use of cinematograph films as aid to oral lectures. It is fully recognised that through their use the intelligibility of the subject under discussion, is very considerably increased, and the

¹ Hakim Nazir-ud-din Ahmed Khan suggested that Persian may be dropped and Arabic retained.

time taken to understand the subject very materially decreased. Another suggestion which will facilitate teaching would be for the lecturer to prepare summaries of lectures to be delivered, get these typed and multiplied and given to students before the lecture or notes of the lecture delivered may be taken by a stenographer, typed and multiplied and distributed to the students after the lecture.

V. ELIMINATION OF UNNECESSARY DETAILS

174. As has been conclusively pointed out by the Health Survey and Development Committee a great deal of the time and the attention of the students in Medical Colleges in India, is wasted in the learning and teaching of too much detail and in too much attention being paid to subjects like anatomy and physiology.¹ The Committee also drew pointed attention to "imperfect correlation" in the teaching of several subjects and the consequent "repetition of the same theme, possible divergence in the methods of teaching and waste of time and energy". On the clinical side, too, they note "little or no co-ordination and planning in instruction among different clinical teachers of a department" so that there is needless repetition. These are avoidable matters, and if suitably looked into will lead to a substantial curtailing of the time taken by studies in Western medicine in Colleges of Indian Medicine too. A considerable saving in the period of studies could also be made on the side of the teaching of Indian medicine. We suggest that :

- (i) In subjects like surgery and midwifery, only the fundamentals be taught and that portions dealing with the practical side may be omitted where these are taught fully according to the Western method.
- (ii) In subjects like medicine, too much emphasis should not be laid on teaching the various medicinal preparations that are mentioned in the texts. Only the principles and methods of treatment should be taught. The students can easily refer to the preparations later on when necessary.
- (iii) A large amount of unidentified drugs taught in the Materia-Medica classes should be omitted. Only the most common and useful drugs should be taught.

VI. DURATION OF COURSE OF STUDY

175. In the curriculum of studies mentioned in Section II above we have fixed the duration of the medical course as 5 years. But we are of the opinion that this length is necessary only as long as there is parallel teaching of Indian and Western medicine. As

¹The Report of the Health Survey and Development Committee, Vol. I, Chapter XIII, Sec. 6.

soon as integration of studies takes place, and a unified course of lectures is made possible, the length of the course, could, in our opinion, be easily reduced to 4 years. The other improvements suggested by us in Section IV above should also be helpful in this. In view of the possibility of this reduction in the period of study in a few years' time, we are not in favour of instituting two distinct courses of studies—a longer Degree Course, and shorter Licentiate Course—as a permanent measure. We propose to meet the immediate shortage in medical personnel through a short term course of training for the existing Vaidyas and Hakims (vide. Chapter VIII. Medical Relief). It is not desirable to have two kinds of Vaidyas and Hakims in addition to the large numbers of non-institutionally qualified ones. Too many kinds of studies only create difficulties for the administration and distrust among the practitioners. We must, however, refer to the opinions expressed before us, regarding the length of the course of study, and in regard to there being two courses or one only.

176. With regard to the length, the opinions of our witnesses varied between 4 years after matriculation or equivalent examination, and 6 years after the intermediate examination. Our decision to have a five years' course after the intermediate (Science) examination has been arrived at after a careful perusal of the actual courses of studies in the existing Colleges of Indian Medicine and consideration of these opinions. Opinions favouring two courses of studies—Degree and Licentiate—were expressed by a number of witnesses in Madras and Bombay. Except as a transitory arrangement and for reasons expressed earlier in this chapter, we do not favour two different courses of studies.

VII. PROVISION OF TEXT BOOKS

177. The problem of text books for students of Indian medicine is a very urgent and important one. Even in the existing Colleges of Indian Medicine much difficulty is being experienced on account of the lack of suitable ones. For the new type of integrated studies new text-books will be all the more necessary. At the present time certain text-books for Ayurveda, Siddha and Unani are available mostly in Sanskrit, Tamil and Arabic or Persian, respectively. These classics were compiled centuries ago, and many of them, particularly those on Ayurveda are not available in their original forms. Nor is it possible to say, without further research, as to what they were like originally. Moreover, there is considerable confusion in their treatment of various topics. Information about any one topic is not found in any single chapter, and frequently the author seems to digress from the main topic into less relevant ones. Thus there is the urgent necessity of thoroughly editing the classical text-books, and of compiling new ones based on the classical ones. We suggest the setting up of a Government Board of Experts for the purpose.

The functions of this Board to be :

- (i) To lay down the general lines on which the text-books on all subjects—ancient and modern—are to be written.
- (ii) To divide the study of medicine, surgery etc. into special topics under which each book or part of a book is to be written.
- (iii) To appoint experts for writing on special topics.
- (iv) To appoint an Editorial Board for correlating the manuscripts of the experts after they have been written so as to guarantee a unified treatment of the subjects.

178. While the policy and the compilation of text-books will be decided by the Board, we give below our suggestions on the various aspects of the work.

- (i) The new text-books should aim at a harmonising of the ancient and the modern knowledge. The best in the old and in the new, on any topic or subject should be embodied in them.
- (ii) The language of the first text-books to be compiled should be Hindi in the case of Ayurveda (including Siddha) and Urdu in the case of Unani medicine. This, however, is to be a transitional step pending preparation of completely unified and integrated text-books.

179. No doubt, there was a considerable volume of opinion which wanted the first text-books to be compiled in Sanskrit for Ayurveda and in Arabic for Unani and then to be translated into different Provincial and Regional languages. But in this we anticipate two serious difficulties. Firstly, the text-books have to include a good deal of modern knowledge. It is hardly worthwhile translating material from English, and other languages into Sanskrit and then translating the translation into a Provincial language. It would be much more rational to translate the books of Western languages into Hindi straightaway. Secondly, if the text-books are compiled in Sanskrit then large extracts from the original classical books are bound to find a place in them. This will lead to a great deal of confusion, for, there is wide divergence of opinion regarding the precise meaning not only of several passages, but even of terms. It is our considered opinion that the precise meaning of Sanskrit terms and texts must be settled first, though the text books are compiled in a current language like Hindi or Urdu.

180. Opinion was also expressed that the text-books should be in Sanskrit only, and not translated into Hindi or the Provincial languages. We are in total disagreement with this. To impose

text-books in Sanskrit on the students will be to put them under an intolerable linguistic burden. Our medical students will now be expected to know their Provincial language for Provincial purposes, Hindi for national purposes, and English for the sake of studying the most recent advances in the science and arts. The burden of a fourth language which is neither required for daily use, nor can give up-to-date information is altogether unnecessary in the case of those who have to become general medical practitioners.

VIII. MEDIUM OF INSTRUCTION

181. It is our considered opinion that the medium of instruction should be the Regional language. In holding this opinion we have the almost unanimous support of those who tendered either oral or written evidence before us. There were only a few, out of these, who favoured either the classical language for the Indian part of the studies, or English for the modern subject. But such suggestions are not considered to be in accord with the interests of good and sound education.

IX. INSTITUTIONS OF MEDICAL EDUCATION

182. After a careful study and inspection of many of the institutions imparting medical education we are of the opinion that it is in the interest of the students and the public that medical education is confined to those institutions only which can come up to a certain prescribed standard. No others should be allowed to take in students and turn out half-baked products with high sounding titles. Such products are dangerous; for, their titles give a spurious guarantee of qualifications which are no qualifications. We have been shocked to see institutions with high-sounding names, which were ill-housed, ill-equipped and ill-staffed, with little or no in-door hospital accommodation and which yet were engaged in training the future Vaidyas and Hakims. Such institutions should be put an end to, and certainly they should not be the recipients of any financial help from the Centre or Provinces. The case of endowed private institutions presents some difficulties. We are, however, of the opinion that these too, should cease to be teaching institutions and should convert themselves into medical relief institutions or amalgamate themselves into a proper teaching institution.

183. In our opinion, which is shared by those who gave evidence before us, there should only be well-equipped institutions even if they are fewer in number to begin with. We are also of the opinion that more high-grade institutions should be started in the country, and that each major linguistic region should have at least one such institution supported or subsidised by the Government of that particular area.¹ Each of these institutions or colleges should be well equipped with laboratories, dissection rooms, operation

¹ At the end of this chapter we give our suggestions regarding the places where such Colleges can be advantageously located.

theatres, pathological museums, herbaria, pharmacies and botanical gardens, as their counterparts in the modern Western medicine side. The staff in these institutions should be well-qualified and appropriately paid. In the beginning, no doubt, qualified teachers of Western medicine will have to be employed, along with the qualified Vaidyas and Hakims, each teaching his own subjects. But in a few years' time we hope that there will be available a number of new graduates who will be able to take up the teaching of integrated medicine. For teaching purposes the proportion of teachers to students should be 2 to 25 for each subject.¹

184. *Attached Hospitals.* Each of these colleges should have attached to it a well-equipped hospital with in-patient and out-patient sections. The beds in the in-patient section or wards should be sufficient in number to provide the students with clinical material in all the branches of medicine. In our opinion, the minimum proportion of students to beds should be 1 to 5 for every student admitted to the institution.

X. UNIFORM STANDARD—EXAMINATIONS AND DEGREES

185. We have given careful thought to the question of who should examine and grant appropriate degrees. In our opinion all examinations of Colleges of Indian Medicine should be conducted and controlled by their Provincial or Regional Universities. If however, it is not possible for the Universities to introduce the Degree Course in the near future, the appointed or recognised by Governments examining bodies should continue to perform these functions.

186. The standard of teaching and examinations should, as far as possible, be the same all over the country. Allowance should, however, be made for the teaching of subjects specially favoured in any region. For instance, colleges in Malabar may have special teaching in *Vishatantra* (toxicology of reptiles, and other poisonous creatures) and *Dhara* and *Pizhichal* (pouring of medicated liquids on the head and massage). The Degrees granted by the Universities should be uniform and based on the same standard of examination.

XI. POST-GRADUATE STUDIES AND RESEARCH

187. It is essential that each College of Indian Medicine should, in addition to its teaching work, provide for post-graduate studies and research. Post-graduate work should be in two directions: (i) specialisation in different branches of medicine and (ii) teaching of Indian medicine to graduates of Western medicine and vice-versa.² We would also like to mention that graduates of Indian medicine also should be given facilities for post-graduate work in institutions of Western medicine.

¹ Details regarding the staff—Senior and Junior teachers—are given at the end of this Chapter.

² For curriculum of studies see at the end of the chapter.

188. Such post-graduate studies will be doubly beneficial. They will invite the attention of students to the necessity of higher work and better qualifications, and they will keep the staff alive to the necessity of keeping themselves abreast of the latest advances and discoveries. Too often the students are content with a minimum of qualification, and the staff are content to repeat the same lectures year in and year out, with deadening monotony. Research too should be an integral part of the work of a college. In an atmosphere of research the students learn to be inquisitive and observing, and are impelled to reason out their problems. The staff too, learn to make use of the clinical material that is at present being wasted, and to turn it to good account.

189. *Summary.* To summarise what has been said in this chapter, it may be stated that only during recent years attempts have been made to modernise the teaching of Indian medicine by superseding the old *talim* system of education. Unfortunately instruction in most of the existing educational institutions is handicapped on account of lack of sufficient or any Government support and consequent poor equipment and inadequate staff. This state of affairs should be remedied. The educational institutions of the future should be so planned that the type of the practitioner trained does not only receive good technical education, but also has a good grounding in the fundamentals of the position of man in the universe and in society and in the family. Medicine is a branch of human thought and activity that demands and provides opportunity for the fullest development of humanistic and scientific talents so that the practitioner can also serve as a friend, philosopher and guide to his patients. We have envisaged a scheme of education by which the teaching of Indian medicine should include the essentials of Western medicine, particularly in those branches where Indian medicine is deficient. Such bilateral instruction should be given till such time as our ultimate object of integration leading to synthesis is accomplished. Our object will be attained through: (a) higher standard of basic qualifications (Intermediate Science), (b) improved methods of instruction and (c) elimination of unnecessary details. To facilitate and improve the methods of teaching, a special Central Text-Book Committee should be appointed. This Committee will lay down the general lines on which text books on all subjects given in the curriculum are to be written; their particular aspects should be stressed in such a way as to harmonise the ancient knowledge with that of the modern teachings. As an immediate and transitory measure, new text books should be written in the first instance in Hindi (in the case of Ayurveda) and Urdu (in the case of Unani) and translated into provincial and regional languages. Compilation of Text-books embodying complete integration and synthesis should be taken up later. The educational institutions in the various Provinces and States should be adequately subsidised

by the Government. They should be enlarged, well equipped, and properly staffed to train at least 50 students per year per institution. The teachers should be highly qualified and in proper proportion to the number of students. Adequate accommodation should be provided for laboratories, museums and proper hospitals. Curriculum of studies has been drawn up and a syllabus in broad outlines giving the subjects and portions of subjects to be taught have been furnished. These teaching institutions should also provide facilities to teachers and the students to do research work.

Note to Chapter VII (Education)

190. In our opinion, Colleges of Indian Medicine can with great advantage be located at the following places. It is to be noted that in some of these places, either there are existing colleges or there are other institutions which can be easily converted into colleges.

Province	Town	Unions & States	Town
Assam	1. Gauhati or Silchar	Baroda	Baroda
Bengal	1. Calcutta and 2. Navadvipa	Cochin Gwalior	Ernakulam Gwalior
Bihar	1. Patna and 2. Bhagalpur	Indore Mysore	Indore 1. Bangalore 2. Mysore*
Bombay	1. Bombay* 2. Poona* 3. Ahmednagar	Travancore	Trivandrum*
C.P. & Berar	1. Nagpur	Sourashtra	Jamnagar*
Delhi	1. Delhi*	Hyderabad	Hyderabad*
Madras	1. Madras* 2. Bezwada 3. Bellary 4. Malabar region 5. Tanjore		
Orissa	1. Puri		
Punjab	1. Jullundur 2. Ambala		
U.P.	1. Benares* 2. Aligarh* 3. Lucknow 4. Hardwar		

If the college at each of the suggested places take in about 75 Students each in the first year, they may be producing 50 graduates at the end of the course. We may, when these

* Colleges of Indian Medicine are already established at these places. We suggest that these should be incorporated into the scheme of education and treated on the same footing as the Colleges of Western Medicine.

112 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

colleges have started functioning, expect to have on an average 1350 graduates a year.

Annexure I

The probable requirements of the staff for a college of 100 students.

Professor	1	for each subject
Asst. Professor	1	for each subject
Demonstrator	1	for each pre-clinical subject
Clinical Assistant	1	for each clinical subject

In this proportion we may require 32 teachers in the case of modern Western medicine and 32 for teaching Indian medicine. This large number will be required only for the short time that the bilateral system of education is in vogue. When the synthesis of both the systems has taken place this large number may be proportionately reduced.

N. B. According to the finances of the provinces this number may be reduced as some of the Assistant Professors may take up some minor subject as pathology, hygiene etc. The number we have given is only an ideal one, as with one person for each subject each will be in a position to devote his time completely to his subject and also attend to research in his own subject.

Annexure II

Course of study in Indian Medicine for those qualified in Western Medicine

This course of study is instituted with a view to provide facilities for qualified practitioners of the Western medicine to obtain special courses of instruction in Indian medicine. The course extends to over a period of two academical years.

Lectures—First year (Pre-Clinical subjects) :

- (i) Fundamental Principles of Indian Medicine (including anatomy, physiology, psychology, etc.)
- (ii) Materia-Medica and Pharmacy,
- (iii) Pathology and Diagnosis.

Second year (Clinical subjects) :

- (i) Medicine (including mental diseases, toxicology, etc.)
- (ii) Surgery (including diseases of the eye, ear, nose, throat, etc.) and
- (iii) Midwifery and diseases of women and children.

Hospital Practice: To commence six months after the commencement of the course.

Annexure III

Course of study in Western medicine for those qualified in Indian medicine

This course of study is recommended with a view to provide facilities for approved and qualified practitioners of Indian

medicine to obtain special courses of instruction in Western medicine.

The Course extends to over a period of two academical years. The curriculum of studies will be as under :

First year. (a) General Science (elements of physical and biological Sciences), (b) Anatomy including dissections, (c) Physiology including elements of histology and psychology, (d) Materia-Medica (with reference to certain selected drugs).

Second year. (a) Medicine (preventive and curative) and allied subjects. (b) Surgery and allied subjects. (c) Obstetrics including Gynecology and Pediatrics. (d) Pathology including elements of Bacteriology. (e) Hygiene and Public Health. (f) Medical Jurisprudence.

Clinical instruction will commence after six months of preliminary scientific training are completed and will continue throughout the rest of the course.

CHAPTER VIII

THE ORGANISATION OF RURAL MEDICAL RELIEF

“The health of the villages requires special attention. The country derived its vitality from the villages It was not enough for large imposing hospitals and other buildings to be put up in the towns; the benefits of health must be extended to the whole country-side.”

191. So said Prime Minister Pt. Jawaharlal Nehru in his speech inaugurating the conference of Health Ministers in Delhi in 1946. The importance of this statement is apparent when it is realised that more than 70% of the population of India live in rural areas. In this chapter we shall take up the consideration of the possibility of providing adequate medical relief measures in the rural areas and the part which the Indian Systems of Medicine could play to solve this important problem. We have been directed to this enquiry by the 4th function assigned to us under the terms of reference to our committee viz., “the measures to be taken to increase the usefulness of the (Indian) Systems to the public as part of a comprehensive plan.” A comprehensive plan of medical relief must deal with (I) the personnel and (II) the institutions of relief.

I. PERSONNEL

192. On the side of personnel, account must be taken of the numbers of Doctors, Vaidyas and Hakims, and of the auxiliary staff—nurses, midwives, dais, masseurs, physical trainers (Ustads) public-health inspectors, health-assistants and pharmacists. In so far as the auxiliary staff for Indian medicine is to be of the same kind as for Western medicine we need make no special recommendations regarding it. This part of the subject has been fully and admirably dealt with by the Health Survey and Development Committee and we agree with what they have said regarding the ways and means of improving their qualification and increasing their numbers.

193. There still remains the problem of the higher personnel, the fully trained practitioners of Indian medicine. So far as the permanent increase in their number and improvement in their qualifications are concerned these have been already dealt with in the chapter on Education and Medical Institutions. We also realise that the full requirements of the country will not be met, for many

years to come, even by the combined products of the Colleges of Indian and of the Western Medicine. Moreover, the majority of these persons will settle by preference in towns and cities and will require extra monetary and other inducements to make them take up work in the countryside. And, even if this extra cost is borne by the Government, the numbers of such practitioners will still not be very large. The urgent problem of immediate rural medical relief therefore still remains to be tackled.

194. *Our Suggestions.* We, therefore, suggest that (i) a three years Diploma course as indicated in Chapter VII, Medical Education, be introduced to ensure a continuous supply of medical practitioners to the rural areas during the interim period; (ii) use should be made of the registered practitioners of Indian medicine by giving them the necessary training in public-health and other essential subjects. We propose :

- (a) That, a six months' course¹ in the elements of public-health, minor-surgery, obstetrics and other subjects be devised. This course will have to be followed by an examination.
- (b) That, such registered practitioners² as wish to participate in the scheme of rural medical relief be asked to take this course and to sit for the examination.
- (c) That, graduates and diplomates of Colleges and Schools of Indian Medicine, who wish to participate in the scheme, may be exempted from taking the course, though they must pass the examination.³
- (d) That, those persons who pass the examination should be taken into the scheme of the medical relief (the details of the scheme are discussed further down).

195. *Possible Criticism.* We realise that our suggestions may provoke criticism. It may be said that we are giving the rural population an inferior kind of medical service. Our answer to this is that in the absence of any scheme like the one proposed by us, the villagers will have to wait for some decades before they will get any better service, and in the meanwhile will have to depend upon the local practitioners, whatever may be their worth. We agree with the view of Lt. General J. B. Hance and Lt. Col. D. P. McDonald that "Though there is undoubtedly danger in having half-trained

¹ Curriculum of Studies appended at the end of the Section.

² According to our proposals only such practitioners are to be registered as have at least ten years certified practice to their credit, (vide Chapter on Control), or those selected by a special Committee appointed by the Government for the purpose.

³ Those graduates and diplomates whose courses of training and examinations provide for the training and examination in the prescribed subjects by Boards of Examiners appointed by Government or recognised Universities may be exempted from passing the examination also.

doctors practising medicine, yet, in rural districts, it is better to have a half-trained doctor than no doctor at all." Moreover, it is to be borne in mind " that most of the ailments that commonly trouble the villager are of a comparatively simple kind and are amenable to simple remedies, and do not require highly skilled practitioners." ¹ Our suggestions may also be criticised as being novel and unorthodox. They may be so; yet a country like ours, with its backward state of medical relief, has to adopt methods that are unusual. It cannot afford to proceed along the path of slow, and steady but delayed progress. Delay in such matters is fraught with much danger and misery.

196. *Experience of the U.S.S.R.* The expedient tried in the U.S.S.R., in conditions of backward medical relief corresponding to ours, is illuminating. In the Tsarist Russia, they had the Feldsher, " a survival of medieval barber-surgeon who accompanied the armies of those days. When most European armies replaced the Feldsher with army surgeons of academic standing, the Russian Army kept theirs, and they practised also among civilians. Their special functions in the Army were to assist physicians, carry out their instructions, practise minor-surgery, vaccinate and in general, fight epidemics. They worked hard and were miserably paid (25-30 roubles a month).

" After the Revolution there was a tendency to discontinue this institution; but it was soon realised that the country needed them especially in rural districts, where fully trained doctors were hard to come by. Eventually in 1935, special schools giving a 3 years' course, were established for the training of Feldshers." ² So useful was the Feldsher class found that a decree was issued in 1936, stating that the number of persons to be enrolled in the Feldsher schools for 1937 should be 44,770. It is interesting to note that any and every one who wanted to be a Feldsher was allowed access to proper training classes, provided he had passed the requisite qualifying examinations. Not only this. The period of 10 years after school, prescribed for those desirous of entering technical schools, was cut down to 7 years for those wanting to join the medical classes. The scheme of the training of Feldshers is as follows:

" Before admission to the *Technicum*, education may first be completed at a Medical Workers Faculty. These Faculties were designed, soon after the Revolution, to prepare adult workers for higher educational institutions. If a talented labourer who had been

¹ " In a statistical study spread over six years in Bhopal State, it was found that 83 per-cent of the total ailments were amenable to simple treatment if given in time, that 13 per-cent needed hospital care, and that 4 per-cent required specialised treatment." Minute of Dissent II, Report of the Health Survey and Development Committee, Vol. II, Chapter XVIII, Page 352.

² A note on 'Short' and 'Long-terms' proposals for Medical Relief with special reference to the Russian and Chinese Systems by Lt. General Hance-vide Appendix No. B. I (8).

working for at least two years in industry wanted to study medicine, he could be admitted to a Medical Workers' Faculty. There, while still working in the Factory, he would be instructed during a three or four years' course in languages, literature, mathematics, physics, chemistry and political science, so that he might meet the entrance requirements of the medical school.

"Alternatively, a student may get his additional education where he can find it, in evening classes or home work. The entrance requirements are known, and whoever is able to meet these can apply for examination.

"The medical *Technicum* exists for the training of middle medical workers, feldshers, midwife, medical nurse, nursery nurse, laboratory technician, dentist and pharmacist—those comprising what are called the middle medical personnel.

"Candidates are admitted on passing the entrance examination to the medical technicum, or secondary medical school, from which they will be graduated after a three years' course of training as feldsher, nurse or midwife.

"After three years of practice the feldsher may apply for admission to a proper medical school for training for a doctor's diploma."¹

197. In China, a still more unorthodox approach was used. According to Hance and McDonald, farmers were given training to enable them to return to their villages and carry out certain medical measures, e.g., minor dressing, vaccination, sanitary well and latrine construction, simple health education, recording of births and deaths etc. A comparison of what has been done in the U. S. S. R. and China, with our suggestion brings out the strong points of the latter. Instead of taking up workers from factories and fields, we have the advantage of starting with persons who have been either engaged in the practice of medicine for ten years at least, or already hold Degrees of Colleges of Indian medicine, and have, in addition, passed the special test in public health, minor surgery and obstetrics.

198. Lt. General Hance and Lt. Col. McDonald have made two suggestions for the successful adoption of the Feldsher scheme in India:

- "(i) Uniform all—India standards of professional and technical education for health personnel centrally controlled.
- (ii) A stable and continuous long-range health policy, centrally directed, involving the rapid expansion of the Health Services so as to absorb the projected technical personnel and at the same time to provide

¹ Notes on the training of Feldshers or Medical Assistants in Russia, extracted from the Report on Medical Education in the U. S. S. R. by the League of Nations, 1935.

them with facilities for progressing to full medical or nursing status."

199. We entirely agree with them that there should be all-India standards of professional and technical education, and that there should be "a stable and continuous long-range health policy, centrally directed." We therefore propose that those who have qualified from a three years' course envisaged by us in the previous chapter should be regarded as being eligible for admission to the Degree course and spared the obligation of having to pass the I. Sc. examination.

200. Below we give the syllabus of study carefully worked out with the help of experts in Public Health and Rural Medical Practice which we propose should be adopted all round in India for the training referred to in Para. 194.

The Syllabus for Six Months course of training for entrants to Preventive and Curative Medicine for Government Health Service. The whole course of intensive post graduate training is to last six months and is intended for such practitioners of indigenous medicine as have duly qualified from recognised Schools and Colleges after undergoing the full course of 4 or 5 years and other Registered practitioners. The teaching of this course should as far as possible be given in an integrated manner.

CURRICULUM AND SYLLABUS OF STUDY

General

	Lecture hours	Demonstration hours
I. FIRST AID		
(i) Treatment of shock, faint and collapse.		
(ii) Treatment of Haemorrhage.		
(iii) Treatment of burns and scalds.		
(iv) Treatment of drowning, suffocation, asphyxia, artificial respiration.	6	12
(v) Treatment of poisoning and the use of stomach tube.		
(vi) Treatment of minor injuries, fractures, dis-location and the use of splints.		
II. MINOR SURGERY		
(i) Incision and treatment of infected wounds: sepsis, asepsis, local-anaesthesia.		
(ii) Extraction of tooth.		
(iii) Removal of foreign bodies from eye, ear, nose etc.		
(iv) Injections:		
(a) Sub-cutaneous.	5	20
(b) Intra-muscular.		
(c) Intra-venous.		
(v) Catheterisation and Treatment of retention of urine.		
(vi) Enema.		
(vii) Flatus tube.		
(viii) Administration of saline:		
(a) Rectal.		
(b) Sub-cutaneous.		
(c) Intra-venous.		
(ix) Paracentesis and aspiration.		
(x) Rectal examination.		
(xi) Vaginal douching and plugging.		
(xii) Snake-bite-tourniquette.		
(xiii) Reduction of hernia.		

	Lecture hours	Demonstration hours
III. PREGNANCY AND LABOUR		
Pre-natal, Natal, Post-Natal (Obstetrical Instruction). (For maternity and child welfare see syllabus under public health).	10	15
IV. GYNAECOLOGICAL BLEEDING		
V. COMMON INSTRUMENTS AND THEIR USE	1	2
Thermometer		
Stethoscope		
Sphygmomanometer	2	4
Trocar and Canula		
Scalpel		
Scissors		
	24	53

Hygiene, Preventive Medicine, etc.

	Lecture hours	Demonstration and practice hours
A PART I.		
I. INTRODUCTORY		
(i) Health in general.	1	—
(ii) Health Services ; duties and obligations of-Medical Officers of Health.	2	—
(iii) Elementary Anatomy and Physiology.	6	12
2. Personal Hygiene. Habits, massage exercise, cleanliness, attention to skin and bowels, clothing materials, hygiene parades in schools.	4	6
3. Nutrition. General principles and requirements of diet, wholesomeness of food, adulterants of milk and its products. Foods in common use. Diseases specially connected with food. Protection of food from infection. Methods of taking samples of food for analysis.	4	4
4. Elementary Bacteriology.		
(i) Place of bacteria in nature ; their universality in soil, air, water, etc.	1	—
(ii) Exposure of a petri-dish to air, inoculation of broth tubes with tap water, well water, cleanest handkerchief in class, incubation. Growths of colonies.	—	4
(iii) Demonstration of bacteria of different shapes, cocci, diplococci, rods, motility, spores.	—	4
(iv) General relation of bacteria to different diseases, channels of infection, modes of exit from the body.	—	—
(v) Sterilisation by chemical and physical processes.	1	2
(vi) Demonstration of organisms on slides, plague, cholera, typhoid, diphtheria, staphylococci, streptococci, gonococci, tuberculosis, leprosy, malarial parasite, L.D. bodies, acarus scabie and hook-worm.		4

120 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

	Lecture hours	Demonstration and practice hours
B. PART II.		
5. Communicable diseases.		
(i) Infection, modes of transmission, channels of infection, incubation period, quarantine, contacts, carriers, missed cases, preventive measures.	2	—
(ii) General methods of prevention of epidemics. Notification, investigation, isolation, quarantine, disinfection.	4	—
(iii) Epidemic and endemic diseases.		
(a) Diseases spread largely through alvine discharges; enteric fevers, cholera, dysentery, hookworm and other cestodes and nematodes; their prevention and treatment.	3	—
(b) Diseases spread largely through discharges from the mouth, nose, tuberculosis, diphtheria, measles, whooping cough, mumps, influenza, cerebrospinal fever, their prevention and treatment.	3	—
(c) Diseases having specific or special prophylactic measures. Small-pox (vaccination), rabies, tetanus; venereal diseases their prevention and treatment.	3	—
(d) Insect borne diseases: malaria, dengue, filariasis, yellow fever, plague, relapsing fever, typhus, kala-azar, scabies, their prevention and treatment.	3	—
(e) Other diseases: chicken pox, leprosy, trachoma, ringworm, their prevention and treatment.	2	—
(f) Management of an out-break of infectious disease. Taking of specimens for bacteriological examination in plague, cholera and typhoid.	4	—
6. Animals and insects etc., carrying diseases:		
(i) Mosquitoes, anopheles, culex, stagomyia; ecology and preventive measures, D.D.T., spraying, oiling, larva-eating fish.	2	4
(ii) Flies; ecology and preventive measures.	2	1
(iii) Rats and fleas; ecology and preventive measures.	2	1
(iv) Bedbugs, lice; ecology and preventive measures.	1	1
7. Disinfection and Disinfestation:		
(i) Disinfectants-physical and chemical, strength in which used; how prepared; special disinfectants for particular diseases and particular articles; equipment necessary for disinfection.	2	2
(ii) Concurrent and terminal disinfection and disinfestation in infectious diseases of persons, clothes, burrows, shops, godowns, discharges.	1	4
(iii) Fumigation and D.D.T. Spraying.	1	4
8. Environmental Hygiene:		
(i) Buildings; building materials.	1	2
(ii) Principles and methods of ventilation applicable to Indian conditions.	1	2
(iii) Area and cubic space required in dwellings.	1	1

	Lecture hours	Demonstration and practice hours
(iv) Sanitary served privies ; bored hole latrines and septic-tanks, their construction.	1	2
(v) Surface cleanliness ; collection of refuse and nightsoil.	2	4
(vi) Disposal of refuse and nightsoil, rubbish pits, trenching grounds, sewage farms, nightsoil godowns, pail depots, composting.	2	4
(vii) Sanitary administration of fairs.	2	—
(viii) Water supply sources from wells, rivers and tube wells. Methods of purification of water with particular reference to rural water supplies.	2	4
(ix) Drainage methods : house and street, drainage, soakage pits, urinals, catch pits.	1	2
(x) Rat-proofing and damp-proofing of houses.	1	—
9. Public Health administration :		
Local and Provincial set-up.	1	—
Relation with other departments.	1	—
Publicity methods.	1	—
Sanitary laws-general.	2	—
10. Preventive vaccinations and inoculations :		
Cholera, plague, smallpox, typhoid ; technique and equipment necessary ; preparation of apparatus ; sterilisation, dosage, contra-indications, extent and duration of immunity.	3	30
11. Elements of vital-statistics and health education :		
(a) Population, census, registration of births and deaths ; personnel engaged in registration ; meaning and methods of calculation of birth rate, death rate, infant death rate, maternal death rate.	2	1
(b) Health education ; objectives, plan of work ; equipments, means of education-methods, group talks and group teaching, village-schools.	2	2
12. Maternity infant and child welfare :		
PART I: Pre-natal, infant and pre-school hygiene.	15	15
Historical outline of child hygiene work. The need for child health work-administration. Maternal hygiene ; Pre-natal care ; objects, aims, plan of work. Natal care ; post-natal care, infant and child welfare ; objectives, plan of work, care of the pre-school child ; objectives, plan of work, baby clinics ; growth and development ; nutrition as it applies to infants and growing children, mother ; diet during pregnancy and lactation. The feeding of normal infants. Breast feeding ; formula—feeding of normal infants ; common errors in infant feeding. The feeding of young children. Diet construction. General management of infants. Hygiene and care of premature and immature infants.		
PART II: Care of the school child, programme of school health work. Routine of the	4	4

work. Teacher's role in school health.
 Doctor's role in school health-work.
 Value of home units and follow up
 work, work at clinics. Records and
 returns.

99

126

201. As it will be desirable to give this number a training as early as possible, we suggest that the six months' course be started in at least 6 district hospitals, on an average, in each of the 9 provinces, and in at least 16 district hospitals in all the Indian States put together, and in at least 15 Colleges of Western and Indian Medicine. This gives us 70 district hospitals ($6 \times 9 + 16$) and 15 institutional centres i.e., 85 centres in all. The total admission at one time, at the rate of 50 per centre, will give us the number of trainees as 4,250. If two thirds of these pass the examination we get the number of trained personnel as 2,832 per six months. It will then be possible to have over 5,000 such trained personnel every year, and to train all the 25,000 within 5 years. To this number should be added at least 3,000 who, out of the 5,000 qualified practitioners, will take to the course and pass the examination. These two categories of practitioners will mean a substantial increase in the total number of medical practitioners available for relief in rural dispensaries.

202. To enable our scheme of rural medical personnel to be put into early working order, we suggest that the Central Government should immediately take up the preparation of a suitable text-book for them. This text-book should contain information about public health, minor-surgery and obstetrics according to the syllabus suggested by us. The writing of the book should be entrusted to one who has large experience of Public Health training and of organisation. He should also have the assistance of experts on the other sections. If necessary the book may be written first in English. But it should be immediately translated into all the major provincial languages.

203. *The Expected Increase in Personnel.* We have taken the number of practitioners of Indian medicine, throughout the country as roughly between 2,00,000 and 2,50,000¹ including about 5,000 of the products of recognised schools and colleges of Indian medicine. We do not expect all of the non-institutionally qualified ones to take the six months course, though almost all the 5,000 of the latter may be willing to take the new examination for rural medical workers. Still, we are of the opinion, that on a conservative estimate about 25,000

¹We have arrived at this number tentatively from the available information with us. Correct figures could not be given as number of States and Provinces were not able to supply us the figures. Capt. P. B. Mukerjee also quoted this number in his presidential address to the XXIII All-India Medical Conference, Madura.

of the non-institutionally qualified will be willing to take the six months' course, provided there is a prospect of either whole time or part time employment for them under the Government.

204. *Measures for Immediate Relief.* We have given very careful thought to the question of how to provide immediate medical relief to the countryside. We find that on account of the paucity of qualified practitioners and on account of their reluctance to settle in the villages, most of the rural relief is provided by the local Vaidyas and Hakims. Whether they want it or not the rural population has to have recourse to the local practitioners. The question therefore suggests itself, can not these local practitioners be utilised in a scheme of rural relief? Here, however, we are faced with one great difficulty. Most of these rural practitioners are either mere sellers of drugs, or ignorant and ill-educated persons. To use them, as they are, in a scheme of rural relief, through the grant of subventions, etc. would be disastrous. It will be to put the seal of approval on incompetence. But we have reasons to believe that a proportion of these practitioners have received some medical education privately or through apprenticeship, and have passed the examinations of the All-India-Ayurvedic Vidyapith, or of some provincial bodies. We are of the opinion, that given some extra training, these persons can be usefully employed for rural public-health work and medical relief. Progressively, every year, there shall be available for employment in Government schemes of health and medical relief—over five thousand trained workers. In a period of 5 years we shall then have about 25,000 workers to man as many rural dispensaries.

205. *Subventions.* It is possible that there may be some reluctance on the part of rural practitioners to leave their place and practice, to take up a 6 months' training in a district hospital or a Central College. To overcome this reluctance we suggest that a subvention of Rs. 30 per head per month be paid to them for the duration of the course. This will mean an expenditure of a little over Rs 18,000 per centre of education, per year, for every batch of 50 students. Indeed to attract sufficient number of Vaidyas and Hakims for the urgent work of rural medical relief, we suggest that the Government should undertake beforehand, to employ all those who qualify through this course on a salary of Rs. 75 to Rs. 150 per mensem depending upon their being employed in posts where they are permitted to have private practise or not.

II. INSTITUTIONS OF MEDICAL RELIEF

206. In our scheme of health organisation we visualise the following dispensaries and hospitals.

- (i) Rural Dispensary or Primary Unit—One for every 3,000 to 3,500 of population.

- (ii) Secondary Unit—one for every 10,000¹.
- (iii) Panchayat Dispensary with a mobile Unit²—one for every 50,000.
- (iv) Tehsil or Taluk Hospital with 25 to 30 beds—one for every 100,000.
- (v) District Hospital with 100 to 250 beds—one for every 5,00,000 to 10,00,000.
- (iv) Provincial Hospital with 500 to 2,000 beds.

207. This is our proposal for the full programme of medical relief. It is, no doubt, an ambitious one. But it is one not hard to realise. It must also be borne in mind that five years after our full programme of medical relief is set going, there will be, at the average rate of 50 students qualifying per year, from out of the 27 institutions envisaged by us, an annual output of 1350 qualified persons (see note at the end of Chapter on Education). This number of qualified practitioners added to the trained rural practitioners give us a total of considerably over 29,000 practitioners. If we add to this number the then probable number of the qualified practitioners of Western medicine about 64,000³ we get a total personnel of nearly 93,000. This works out to one trained practitioner for every 3,225 instead of the present proportion, of one for every 4,906 for the whole of the Indian dominion.

208. *Higher Personnel.* For manning the Tehsil, District and provincial hospitals we are of the opinion, that as soon as the Colleges of Indian Medicine have come up to the desired level, the graduates of the Indian and Western medicine should both be employed and no discrimination should be made between them. The employment of graduates of both systems will give the much needed fillip to

¹ *Secondary organisation* :—The second medical relief unit having a good sized village as headquarters will serve a population of 10,000. In this there will be full time salaried government doctors who will supervise and unify the working of the primary units. There will also be two midwives and a public health inferior personnel for each such unit. Provision should be made in each centre for 10 beds to admit such cases as may be referred to by the village Vaidyas.

² *Panchayat Organisation* :—This will provide for a population of 50,000, that is groups of five of the secondary units. They will have a better equipment and personnel for the treatment of every kind of disease—medical, surgical and obstetrical. In this unit a motor van fitted with emergency requirements, two nurses and two midwives and four skilled attendants should be provided under a qualified doctor. They are to visit the villages under their jurisdiction periodically by turns and harmonise the working of the village physicians.

³ This number is arrived at as follows :

1. Existing practitioners of Western medicine according to the Report of the Health Survey and Development Committee 1941-1942	...	47,500
2. Annual increase at the rate of 1500 per year	...	16,500
		64,000
Total	...	64,000

⁴ It is to be noted that the figure of one doctor for every 6,300 of population is worked on the basis of population of the then British India, i.e. exclusive of the population of the Indian States.

medical relief all over the country. We however, suggest that till the synthesis of the systems is carried out, the graduates of Indian medicine be preferably employed on the medical side to treat the patients chiefly with the Indian medicines. This use of Indian medicine will help considerably to reduce the cost of the Medical ministeration.

SUMMARY OF THE SCHEME

(Medical Relief)

No.	Units	Population	Medical personnel	Other personnel	Equipment
1.	* Village or Primary Unit	3,000	Village Vaidya or Hakim	Nil	Subsidised dispensary and P.H. equipment
2.	* Secondary Unit	10,000	Physician fully qualified. Full-time Govt. doctor	Midwives 2 Inferior P. H. Personnel 2	Provision for 10 beds for in-patients
3.	* Panchayat Unit	50,000	Male Doctor Lady Doctor	1 1 Nurses 2 Midwives 2 Skilled attendants 4	Motor Mobile unit fitted with emergency requirements
4.	† Taluk or Tehsil Hospital	1,00,000	Medical Officer (Western) Medical Officer (Indian) Lady Medical Officer (any system)	1 1 1 Nurses 2 Midwives 2 Skilled attendants 4	30 Beds Hospital to treat medical, surgical and obstetrical cases
5.	† District Hospital	5,00,000 to 10,00,000	Highly qualified medical Officers of both systems	Adequate to run the hospital according to bed-strength	100 to 250 beds X-Ray apparatus Pathological Laboratory Bacteriological Laboratory
6.	† Presidency Hospitals in metropolitan cities	Varying according to provincial population figures	Highly qualified medical officers of both systems Specialists to treat all types of medical and surgical cases	Adequate auxiliary staff according to bed strength	To give medical education To give medical relief Provide for medical research work

* Mostly Indian Medicine.

† Synthesised Medicine.

209. *Organisation of Medical Relief—(Summary)*. To summarise, it may be said that a comprehensive plan of medical relief must deal with (i) personnel and (ii) the institution of relief. It is realised that the full requirements of the country will not be met, for many years to come, even by the combined products of the Colleges of Indian and Western Medicine. The majority of these practitioners tend to settle by preference in the towns and cities and would require extra monetary and other inducements to make them take up work in the countryside. The urgent problem of immediate rural medical relief thus remains unsolved. It is, therefore, suggested (i) A three years diploma course be introduced and (ii) use should be made of the existing practitioners of Indian medicine by giving them necessary training in public health, minor surgery, obstetrics and other subjects for a period of six months. Those who qualify in the examination held at the end of the course should be employed by the Government in the scheme of rural medical relief. In arriving at this conclusion, the Committee have carefully studied the Feldsher scheme of U.S.S.R. and a similar short term course in China. We are of the opinion that the scheme recommended by us is far superior to those mentioned above. There are more than 2,00,000 practitioners of these systems and out of these we should be able in the course of 5 years to get 25,000 trained, in addition to the existing qualified practitioners of Indian medicine estimated to be about 4,000 and those who are already employed in the existing dispensaries. This number will be sufficient to make up the primary units we have proposed. As the existing text books on public health, surgery and midwifery would not be of use for this type of training, special text books should be written for this purpose by competent persons and translated into various provincial and regional languages. To overcome the reluctance of the practitioners to give up practice and take up this course the Government should give a subvention of Rs. 30/- per month to each practitioner during the course of his training and a salary of Rs. 75/- to Rs. 150/- per month after employment. The secondary and panchayat units will supervise and harmonise the working of village dispensaries in charge of them. All difficult cases which cannot be dealt with by the primary and secondary units will be sent to Taluk and District Hospitals where efficient advice in both Indian and Western medicine will be available.

CHAPTER IX

STATE CONTROL

“One who has taken a thorough training—both theoretical and practical—in medicine should start his practice after securing the permission of the king.”¹

(Sushruta Sutra, Chapter 10).

210. Maintenance of health of its citizens, and adequate provision for medical relief, both curative and preventive, is the primary duty of every State. It, therefore, follows that the State should have control and supervision over the institutions and practitioners that minister to these. Advocates of a medical *laissez faire* may object to this, but the trend of events does not support such an objection. “The right of the Legislature or the State to enact laws or regulations controlling the practice of medicine is broad-based on the solid rock of public safety and founded on that inherent and plenary ‘Police power’ of the State to control all things hurtful to the comfort, safety and welfare of Society.”² There is another reason for State Control also. The Central and some Provincial Governments, are either spending, or proposing to spend their revenues, to maintain and to encourage institutions of Indian Systems of Medicine. It is therefore all the more necessary that the State should have a voice in their control.

211. It is worth recording that control of medical practice and even of medical institutions by the State has a long history and tradition behind it. In ancient days of Aryan civilisation only those medical practitioners, who had ample theoretical and practical knowledge, were allowed to practise. Royal permission was necessary for performing serious operations and careless surgeons were likely to loose their heads. Rules for regulating medical practice have been put down by Kautilya (4th Century B.C.) in his *Artha-Sastra*.³ Legal restrictions used to

¹ Quoted in the Report of the Madras Committee on the Indigenous Systems of Medicine, p. 17.

² *Ibid.*

³ Kautilya has also enjoined severe punishment or a heavy fine for the medical practitioners in case the patient dies as a result of his negligence or if he performs serious operations which are likely to endanger the life of the patient without giving a previous warning. (Kautilya Arthashastra, Adhi—4, Chapter 1).

prevail in ancient Egypt, Greece and Rome, and were enforced by drastic punishments, such as confiscation of property, imprisonment, and even death. There were many such controls in Europe even in the Middle Ages, when things may have been supposed to be rather lax. At the present time, State Control, in some form or another, exists in every civilised state. In the U.S.A., it is most strict, no unregistered practitioner being allowed to practise. In the U.K. it is not so strict, and unregistered practitioners are allowed to practise, but they do not enjoy the protection and privileges of the registered. India so far has rightly or wrongly followed U.K. generally in this respect.

LEGISLATION REGARDING WESTERN MEDICINE

212. In recent times the beginnings of State Control as regards practice in India, are found in the Bombay Medical Act of (1912), the Bengal Medical Act (1914), the Madras Medical Registration Act (1914), the Punjab Medical Registration Act (1916), the U.P. Medical Act (1917). But these Acts concerned themselves only with the practitioners of Western system, with certain minimum qualifications. There was no insistence on compulsory registration, even by the limited number of Western practitioners, and no reference at all to the innumerable practitioners of Indian medicine. The Government of India Medical Council Act of 1938, which is the latest Act of the Central Government on the subject seeks to give the Indian Medical Council certain supervisory powers over "certain medical qualifications which are granted by Indian Universities and which are incorporated, in the first Schedule of the Indian Medical Council Act." This Act deals with the Western medical education only, and does not concern itself with education in the Indian Systems of Medicine. Nor does it deal even with the registration of Western practitioners. Thus there are serious lacunae in it with regard to control over practice and teaching of medicine as a whole, i.e., including Western and Indian systems.

213. The question of registration and control over education of the Indian systems have however, been taken up on a Provincial basis by the Governments of Madras, Bengal, U.P. and Bombay, and the Governments of some Indian States. The Government of Madras, by an Executive order G.O. No. 231, P.H. 2nd February 1933 made rules regarding the registration of practitioners of Indian medicine. The Madras Medical Registration Act of 1914, was subsequently amended on the lines of the U.P. Medical Registration Act III of 1917, so as to permit the association of registered Western medical practitioners with "institutionally qualified practitioners of Indian Medicine". The Government of Bengal promulgated Statutes in 1938, for the constitution of a General Council and State Faculty of Ayurvedic Medicine to (i) regulate the standard of instruction in Ayurvedic medicine, (ii) hold examinations of candidates trained in recognised Ayurvedic institutions, (iii) grant of certificates or diplomas to successful candidates and (iv) maintain a register of institutionally

qualified Ayurvedic practitioners. The Government of Bombay by the Bombay Medical Practitioners Act of 1938, sought "to regulate the qualifications and to provide for the registration of practitioners of Indian System of Medicine", and "to encourage the study and spread of such systems." Registration was made compulsory and penalties were provided for practice by the unregistered. The Bombay Government have recently set up a Committee to report on the working of this Act, and its report is expected shortly. The Government of U.P. passed an Indian Medicine Act (X of 1939) and enforced it from October 1, 1946; when the Board of Indian Medicine was established as a Statutory body, with wide powers, including those of registration of Vaidyas and Hakims of their Province. The Indigenous Medicine Enquiry Committee of the Punjab in their report published in 1941, strongly recommended (i) the setting up of a Register of practitioners of Indian Medicine, (ii) the imposition of certain restrictions on unregistered practitioners, and (iii) the conferring of some privileges on the registered practitioners.

214. Some Indian States too have made Acts for the control of medical practitioners. The Indore Medical Act of 1936, and the Travancore Medical Practitioners' Act of 1944 are the more outstanding of these. An important feature of both these acts is that they legislate for the registration of all medical practitioners—whether of the Western or of the Indian Systems. Inaugurating on 12th June 1944 the Travancore Medical Council set up under the Travancore Medical Practitioners' Act of 1943, the then Dewan, Sir C. P. Ramaswami Aiyar said: "It has been the idea of this Council to do what has not been so adequately or so fully attempted in many other localities, and to try to bring into a common programme the practitioners of many different systems of medicine. Such systems have got profound divergences both of doctrine and of practice, but the idea underlying the minds of legislators and certainly the mind of the Government was that however different may be the sources of inspiration for these systems of medicine, and however much they may differ as to their methods and conceptions, yet every system is vitally concerned in seeing that those practising that system use the best methods they can within the limits set by that system and in accordance with the principles and doctrines of that system so that it might be open to the practitioners of any system to claim that he is not there as a fraud or a charlatan but that steps have been taken to ensure that the doctrine which he wishes to bring into operation are those well recognised by a body of institutionally qualified experts. It may also be difficult always to reconcile divergent points of view because the root ideas of some of the systems of medicine are either really or apparently so contrary to one another. But we are here concerned only with the professional standards, professional integrity and the maintenance of those standards and that integrity."

POLICY OF STATE

215. With this brief survey of the past history we now proceed to discuss the policy which, we consider, should be adopted by the State in this matter, and the machinery which should be set up for the control of education and practice, and for registration. At the same time, it is our view that the Government should set up a special Committee to go into the matters of Control and Registration so that an All-India system of control is evolved, and, if possible, one Register for all recognised systems set up on the lines of the Travancore Medical Registration Act. In our opinion time has come for the Government to deal with the matter of control of education and of practice in a comprehensive manner. Piecemeal legislation about the different systems, and the different Provincial Acts regulating practice and teaching, should give place to one comprehensive Act of the Central Government, laying down a common policy for all regional and Provincial Governments.

RECOGNITION

216. A preliminary to such legislation is the question of recognition of the different systems of medicine which are in vogue in the country. The position in India differs materially from that prevailing in most other civilised countries. In the latter, there is only one system of medicine and this receives state-recognition. In India, we have several systems such as the Western, the Ayurvedic, including the Siddha, the Unani, the Homeopathic and some others. Of these only the first, the Western, is so far recognised and aided by the Central Government. The Provincial Governments too, till about twenty years back, mainly aided this system, and had no concern with the others. We feel, that if the problems of health and medical relief are to be tackled on a national footing, the State should take into its purview some of the other popular systems also, and should accordingly extend its recognition to them. In suggesting this we have the example of the U.S.A. in mind, where the Government has recognised at least three systems as represented by the New York Medical Society, the Homeopathic Medical Society and the Eclectic Medical Society. In all these, however, the basic qualification is a degree or qualification in medicine of a recognised body.

THE BASIS OF RECOGNITION

217. It is difficult to lay down the basis on which State recognition should be given. The best solution of this is found in the American case of *State vs. Biggs* (133 N. C. 723) where "the courts have held that of the many schools of medicine and surgery, the legislature could not prescribe that anyone was orthodox and others heterodox, but that those professing the different systems, Allopathic and Homeopathic, Thompsonian and the like, should be

examined upon a course, such as is taught in the best colleges of the school of practice".¹ We are of the opinion that this principle should be accepted for according recognition to the medical systems of India.

STATE REGULATION AND NATIONAL MEDICAL BOARD

218. In legislating for the control of recognised systems of medicine, the following fundamentals should be kept in view ;

- (i) Adequate provision for the supervision of medical education of all the recognised systems, and treating institutions.
- (ii) Registration of practitioners of the recognised systems.
- (iii) Disciplinary control over practice.
- (iv) Setting up of a consultative and advisory body on matters relating to public health and medical relief.

219. Following the example of the advanced countries we suggest that the actual carrying out of the above desiderata should be made over to a statutory body, which may be called the National Medical Board. In making the suggestion for one National Board, we realise that we may be raising a great deal of apprehension in the minds of practitioners of the Indian systems on account of the generally poor standard of the educational institutions and the rather low position assigned to the practitioners (Vaidyas and Hakims) even in the provinces which have given recognition to them, and on account of the preponderance of influence of Western system in the seats of authority in the immediate past, and even at the present time.

220. We feel that it would not be only in the interest of the country as a whole, but also of the adherents of the Indian medicine also, to meet the practitioners of the other system at one Board on terms of equality. On one side, this association will lead to a better understanding, between the practitioners of the two systems, an improvement in the standards of their education and qualifications and on the other, it will help them to secure the right of 'association' and 'common register' and will thus, re-establish their self-respect which a century and half of neglect by the State had considerably undermined. The effect on the standard of education will be particularly noticeable and wholesome, as it will enable the Indian systems to absorb a great many of the developments of Western medicine in particular, and of Western Science in general. Western medicine too will gain not inconsiderably from its association with Indian medicine. Thus a way will be paved for the much desired Synthesis of the Systems. Moreover, it is only

¹ Report of the Committee on the Indigenous Systems of Medicine, Madras—page 18.

such a Board which can take a comprehensive national view of the health requirements of the people, and can give the Government a well balanced and an authoritative opinion. We are, therefore, strongly in favour of the setting up of such a joint Board, and can not endorse the suggestion put forward by a very small section of witnesses, for an altogether separate organisation of Indian medicine.

TWO MEDICAL COUNCILS AND PROVINCIAL BRANCHES

221. At the same time we cannot ignore either the apprehension of practitioners of Indian medicine or the differences which exist between the two systems. We therefore, suggest, in agreement with an overwhelming majority of oral evidence given before us, that the Board should consist of two autonomous sections—the Indian Medical Council, and the Council of Indian Medicine—which should have the fullest authority over laying down and maintaining standards of teaching and appellate authority over disciplinary actions taken by the Provincial Branches, of their respective Systems. The National Medical Board should have, affiliated to it, provincial and regional branches, which will exercise detailed control in their respective spheres over teaching and practice. It will be going beyond our functions to go into the details of the constitution and composition of the Board. We, therefore, content ourselves with making suggestions about the Indian Section, *i.e.* the Council of Indian Medicine, while presumably the present Indian Medical Council will take the place of the Western Section. The Council of Indian Medicine, must have two sub-sections inside it *viz.*, (i) a section dealing with registration and discipline and other general matters, and (ii) a section dealing with medical education (courses of study, examinations, degrees etc.) and the inspection of teaching institutions and the recognition of such institutions. Division into these sub-sections is necessitated by the fact that, quite a large proportion of the electorate of the Indian section or the Council of Indian Medicine will consist of practitioners not properly qualified who may not have the same interest in, and experience of matters relating to education as the institutionally qualified ones. Indeed, we have reason to believe that in some provinces there is considerable agitation by the qualified against the Provincial Boards of Indian Medicine, exercising control both over education and registration etc. While not wishing to go into further details of composition, we feel that at least in the sub-section on Education etc., the proportion of teachers of recognised institutions, must be larger than that of the non-teachers.

REGISTRATION

222. Registration of medical practitioners means the entering of the names of practitioners on a special register. The purpose of registration is fourfold :

- (i) To safeguard the public ;

- (ii) To facilitate control of practice.
- (iii) To enable practitioners to get the privileges and rights of bonafide medical practitioners, and to protect them against unfair competition by the unqualified persons.
- (iv) To provide an electorate for the Provincial branches of the National Medical Board.

223. A subsidiary purpose of registration can be the ready availability of a list of properly qualified men for any national emergency.

SAFETY OF PUBLIC

224. As already mentioned above in Section 1 there is a long history behind State-control of medical practice. The obvious purpose of such control is to protect the public from being exploited by quacks, charlatans, and imposters. The preamble to the British Medical Act tersely expresses the benefit of registration to the public thus: "persons requiring medical aid should enable to distinguish an institutionally qualified from a non-institutionally qualified practitioner." The device of registration enables the public to do so. In general, only such names are entered in the Medical Register, as possess the accepted minimum qualifications. It must be made quite plain that it is not the purpose of registration to prevent the individual from having recourse to whomsoever he likes. Yet, while allowing the individual this liberty, the State still has the responsibility on its shoulders to see that the individual does so with his eyes open, and is not cheated into it by false practitioners, quacks and charlatans.

CONTROL OF PRACTICE

225. It is obvious that a profession like the medical, which enables a practitioner "to enter into the closest and most confidential relations with the sick and the afflicted at all hours and all seasons, to enter the home, the family circle and the private chamber of persons suffering from disease or injury" must have some control imposed over it, so that it is practised with due regard to responsibility to the public and to professional ethics and rectitude.

226. *Privileges and Rights.* In return for the limitations imposed on the registered practitioners, there are certain privileges and rights also. These are :

- (a) The right to practise.
- (b) The right to appear in a Court of Law as an expert witness.
- (c) Eligibility for employment by the Government or Local Bodies.

- (d) Permission to stock and prescribe poisonous drugs.
- (e) Realisation of professional fees through a court of Law.
- (f) Power to issue certificates of leave, age, death, and for life insurance purposes.
- (g) Privilege of association with other registered practitioners.
- (h) Right of voting or standing for elections to the Provincial or National Medical Boards and Councils.

227. In addition to these rights and privileges, the fact of his being a registered practitioner will secure him, to an extent, a protection against the competition of unqualified persons. To quote from a 51 years old article in the Indian Medical Gazette of May 1897 "In the interest of the general welfare of the public the Government has a duty to perform and that duty is to give every one who is anxious and willing the means not only of obtaining a proper medical education, but also the means of earning an honest living, by protection against competition with ignorant and dangerous non-institutionally qualified practitioners." We feel that every one who has gone through a long and expensive course of approved studies has fully earned this right.

REGISTRATION : COMPULSORY OR OPTIONAL

228. The necessity of Registration is now fully acknowledged in every civilised country and the evidence before the Committee has been overwhelmingly in its favour. The next question that arises is : Should it be compulsory or optional ? Must a practitioner be compelled by law to register himself or may it be left to his choice whether to do so or not ? It must be admitted that there is considerable diversity in policy and practice between various countries, and even between the Provinces of India. In the United Kingdom, for instance, law does not aim at absolute prohibition of practice by unregistered practitioners, and contents itself with giving some rights, to the registered and with imposing some restrictions on them. In U.S.A. on the other hand, registration of all practitioners of medicine is compulsory, and its objective is to prohibit absolutely any unlicensed practice. In India, through the Provincial Medical Councils, there is optional registration of those practising the Western system. As regards the Indian systems, there are differences even between the Provinces which have the system of registration. In the Provinces of Bombay registration has been made compulsory by the Bombay Medical Practitioners Act of 1938. In Madras, Bengal, the United Province it is optional. We are glad to record that in the views put before us by the witnesses as well as written memoranda there is an overwhelming majority in favour of compulsory registration. This presents

a marked change from the view expressed by the Madras Committee in 1923, and the Bengal Committee (1921-24) which favoured optional registration. Perhaps at the time these Reports were written, registration for the Indian systems, was a new thing, and it was feared that compulsory registration might lead to non-co-operation by eminent Vaidyas and Hakims. But with the passing of time this fear has been dispelled, and now there is a genuine demand, for protection from the non-institutionally qualified and the quack. The Committee have given careful consideration to this important question and are of the opinion, that considering the vast prevalence of quackery, registration should really be made compulsory not only for the practitioners of Indian medicine but for all other practitioners as well. Only in this way will it be possible to squeeze out the quacks and to prevent the credulous public from being exploited.

ONE REGISTER OR TWO

229. In connection with registration there is also the vexed question of one Register for all (Western and Indian Practitioners), or two separate Registers. As far back as May 1897, the Indian Medical Gazette argued in favour of one Register in its article on Medical Registration, "In dealing with this question of (Registration) some consideration would have to be shown to the large number of non-institutionally qualified practitioner, Kavirajs, Vaidyas and Hakims at present plying their trade. They should, however, all be registered." It is also worth noting, as pointed out by Hakim Ajmal Khan Saheb, in his memorial to the Government of India in March 1919, that "Previous to the establishment of Medical Councils in various provinces according to the provisions of the Medical Acts, no preferential distinction existed between practitioners of the Western and the Indigenous Systems of Medicine . . . Rivals between themselves they stood equals in the eyes of law. Their professional opinion was not discounted in official circle, and on the whole they enjoyed the privileges appertaining to men of recognised qualifications and standing. No invidious lines of demarcation existed between Hakims, Vaidas and Doctors."¹ From this it is clear that prior to the establishment of Medical Councils (of the Western system) there was no discrimination between the practitioners of the two systems and both were considered, by law, to be on the same level. A common register at the time, might have been a practical possibility.

230. But the Medical Councils by excluding the practitioners of Indian medicine from registration have shut the door on a common registration, and they have two valid reasons to support their action.

- (i) There is a marked qualitative difference in the qualifications of persons trained in the Colleges of Western

¹ Report on the Indigenous Systems of Medicine, Madras, Para 38, P. 23.

Medicine, and those trained in Colleges of Indian Medicine.

- (ii) An overwhelmingly large proportion of the practitioners of Indian medicine have no academic training, and therefore registrable qualifications at all.

231. In view of these reasons, our opinion is that the Register of practitioners of Indian medicine should be separate from that of the practitioners of Western medicine for the present. We, however, hope, that as the standard of education in Colleges of Indian Medicine rises, and as in time, the non-institutionally qualified practitioners fade out, the question may be reviewed and the desirability of having one Register considered. Meanwhile there will have to be two registers, one for Western and the other for Indian medicine. Our proposal to set up a Council of Indian Medicine, will facilitate the setting up of the separate register for Indian medicine.

THE REGISTER OF INDIAN MEDICINE

232. In setting up a Register of Indian Medicine, we have to face the problem presented by the large mass of the non-institutionally qualified Vaidyas and Hakims. Should they be allowed to have their names included in the Register or not? The concensus of practice and of opinion is that to begin with, the non-institutionally qualified too should be allowed to get themselves registered. Fairness demands that persons who have been allowed to practise their profession for several years past, should not at one stroke of legislative enactment be deprived of their livelihood and their individual right. At the same time fairness to the public demands that non-institutionally qualified practitioners should not be allowed to ply their trade indefinitely. The general compromise between the two considerations is that persons of a fixed number of years standing as practitioners should have the right of getting their names on the Register. Further, that a period of some two or three years be allowed during which the register may be left open for the non-institutionally qualified to come in. This will lessen the hardship in the case of those who have been practising for a period shorter by 2 or 3 years, than the minimum period prescribed by the Act. In agreement with the practice of Provinces where registration has already been introduced, we suggest that all non-institutionally qualified practitioners should be allowed registration provided they can get a certificate from a first class Magistrate who should satisfy himself, after an enquiry, that they have been in practice for more than 10 years on the date of applying for registration.

233. After careful consideration the Committee are of the opinion, that in so far as those who have no recognised academic qualifications, include well-known Kavirajas and eminent Hakims and hereditary practitioners, no distinction should be made in the register

between the institutionally qualified and non-institutionally qualified. By showing no distinction we shall be able to overcome the reluctance of these eminent practitioners to getting themselves registered. This will also get over the vexed question of perpetuation of various grades of practitioners with varying privileges. We fully realise that in the beginning it may give rise to difficulties for predominance of this group in elections to the Councils. This, however, can be safeguarded by making such provision as separate electorates for the institutionally qualified and the non-institutionally qualified.

SUMMARY (State Control)

234. To summarise what has been said in the chapter—the Central and Provincial Governments, are either spending or proposing to spend their revenues to maintain and encourage institutions of Indian medicine. It is therefore necessary that the state should have a voice in their control. In ancient India only medical practitioners, who had ample theoretical and practical knowledge were allowed to practice. In recent times the beginnings of State control as regards practice in India of Western medicine, are found in the various acts of Provincial Governments. The Government of India Medical Council Act of 1933 was the latest of the Central Government on this subject, which gave the Indian Medical Council supervisory powers on medical qualifications. The question of registration and control over education of the Indian systems have however, been taken up on a Provincial basis by the Governments of Madras, Bengal, United Province and Bombay and by the Governments of certain Indian States. It is our view that the Government should set up a special committee to go into the matters of Control and Registration so that an All-India system of Control is evolved, and, if possible one Register for all recognised system on a comprehensive Act of the Central Government. A preliminary to such a legislation is the question of recognition of the different systems of medicine which are in vogue in the country and to see that adequate provision is made for their teaching and relief institutions. A statutory body which may be called National Medical Board should be appointed to control recognised systems of medicine and to have disciplinary control over practice. In making the suggestion of common register and common control of different systems of medicine, we are aware of the difficulties in the working, because of the different status and equipment of the practitioners at present. But we have to deal not only with the present, but also with the future. This association of practitioners of different systems will lead to better understanding of each other and better comaraderie. At present we will content ourselves with making suggestions about the Indian medicine. There should be a Council of Indian Medicine with two sub-sections (i) a section

138 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

dealing with registration and discipline and other general matters and (ii) a section dealing with medical education, inspection and recognition of teaching institutions.

235. The necessity of Registration is now fully acknowledged in every civilised country. The question now is should it be compulsory or optional? We are of opinion from the evidence at our disposal that it should be compulsory if we are to weed out the quacks. In setting up a register of Indian medicine we have to face the problem presented by the large mass of non-institutionally qualified Vaidyas and Hakims. As we have no intention to deprive them of their livelihood by an act of legislation, we have come to the conclusion that they may be permitted to register themselves within a period of two to three years from the date of legislation. To avoid bogus persons from registering, we recommend that (a) those that are qualified in Indian medicine from recognised teaching institutions and (b) those who produce evidence of being practitioners of Indian medicine for at least 10 years before the passing of the Act should only be registered. Control over the education of these systems should rest only in the hands of those who are institutionally qualified and are practitioners in these systems.

CHAPTER X

RESEARCH

INTRODUCTORY

236. The very first term of reference of the Committee is :
“ *The provision that should be made for research in and the application of scientific methods for the investigation of the indigenous systems of medicine with reference to the maintenance of health and the prevention and cure of disease.*” In view of its being somewhat involved we have interpreted this to mean :

- (a) The provision that should be made for research in Indigenous Systems of Medicine.
- (b) The provision that should be made for the application of scientific methods for the investigation of the Indigenous Systems of Medicine.

237. *The Need of Research.* Though from the above it may appear that the Government have already accepted the necessity of research, yet, in view of the attitude adopted by some prominent advocates of the Western system who allege the Indian systems to be so obsolete as not to be worthy of any attention ; and the attitude of some orthodox Vaidyas and Hakims who take their systems to be so perfect as not to need either substantiation or improvement, we feel that the case for research must be finally and conclusively established. Moreover, realising the vital importance of the Indian systems in the medical relief of the country, we strongly feel that their rehabilitation and popularisation can be possible only if there is constant research in the directions—both of investigation of the old theories, medicines, and modes of treatment.

238. The necessity of general research in Indian systems, has been stressed in most of the Provincial Reports so far published, and of some special aspects of research have been stressed in the Report of the Health Survey and Development Committee.

- (i) In the Report of the Committee on Indigenous Systems of Medicine, Madras (1923) on page 8, it is stated :
“ In any case it does not certainly seem to us to be

in the interests of science or suffering humanity to refuse to explore to the full the possibilities of these systems of medicine ”.

- (ii) The Ayurvedic Committee, Bengal (1925) was strongly of the opinion that research should be undertaken in the various branches of Ayurveda—its literature, drugs, theories of biology and pathology, and their bearing on the lines of treatment.
- (iii) In the Report of the Ayurvedic and Unani Committee, Allahabad (1926) on page 45, it is stated: “ In their opinion the proposed Medical College of Indian Systems should make adequate provision for the research of drugs. We also consider that research work in indigenous drugs, if conducted along right lines, will enhance the value of the Indian Systems of Medicine and enrich the medical knowledge of their practitioners who are at present out of touch with the modern spirit of research and investigation.”
- (iv) The Report of the Indigenous Medicine Enquiry Committee, (1941,) page 13, states: “ There cannot be two opinions about the need of research in the theory and principles of Indigenous Systems. As we have already observed, much of the present stalemate is due to the lack of research and our failure to profit by progressive developments in modern medical thought. Research is essential in every department of human endeavour and pre-eminently in old medical systems. It is, therefore necessary that it should be carried on in :
 - (a) Drugs.
 - (b) Methods and theory of treatment (Therapeutics).
 - (c) Compilation of text books on modern lines and to suit modern conditions.”
- (v) Calcutta University Commission presided over by Sir Michael Saddler, also opined: “ That the entire system of indigenous medicine as practised in India affords a fruitful field of study and investigation, is indeed clear from the testimony of many competent authorities.”
- (vi) The Ceylon Commission on Indigenous medicine quote with approval from the Proceedings of the Academy of Indian Medicine, Madras (1945): “ At the present

moment, the most promising line of investigation is clinical research into the reputed values of recipes and methods of treatment (including dietetics) followed in Indian medicines and conducted in Institutions where there are facilities for a hearty co-operation between the practitioners of Indian and Western medicine."

239. Report of the Health Survey and Development Committee while endorsing the plea of Dr. Henry E. Sigerist for the establishment of a Chair of the History of Medicine, says:—"In this country, we believe that the historian of medicine can also perform the eminently useful function of investigating the indigenous systems of medicine not only for their ideological content, not only as aspects of India's ancient and mediaeval civilisations and as end products of a long development but also for the purpose of assisting in the evaluation of their practical achievements. As a result of his studies, he may be in a position to point out to the clinicians and pharmacologists which drugs and treatments employed in these systems can be tested."¹ The opinion of the Court of Deputation of the League of Nations (Health Organisation) in favour of research is worthy of being quoted: "European Medical science is everywhere invading Asia, where it encounters what has remained of the old Chinese institutions—all of them based upon traditional empiricism. The importance of all these should not be underestimated and official medical science over confident of its own infallibility and of the inferiority of this ancient popular medicine, has made the mistake of scorning it. Yet many an old precept can be found which accords with our own views even though put in a somewhat different form. The study of these ancient medical cultures and of their remaining vestiges would be of value. They should have a place in the training so that the young Doctor may have at least an elementary knowledge of these questions when he begins practising. Such knowledge is essential if he is to adopt himself to his social environments. Lastly it would be desirable honestly to consider how far these old medical traditions can be reconciled with our own principles instead of rejecting them in a body as useless and obsolete."

240. We also give below the opinions of some eminent scholars who have urged the need of research into the Indian Systems of Medicine. Dr. Hugh S. Cuming, Surgeon General of the U. S. Public Health Service and President of the U. S. A. Pharmacopoeia Commission supports the case for research when he says: "Any system of medicine or for that matter, any usage or custom that has held its own for generations usually has something at the back of it, no matter how little it appears to be supported by modern

¹ The Report of the Health Survey and Development Committee, Vol. 11, p. 433.

142 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

science."¹ Lt. Col. R. Knowles, I.M.S., Director of the School of Tropical Medicine, Calcutta has said : " Old Ayurveda modernised and rejuvenated will not only be the national medicine of India but will play no small part in the uplift of the International Medical system of the World". In the same strain Sir Pardey Lukis, I.M.S., the then Director of Indian Medical Service, Government of India, said " Many of the empirical methods of treatment adopted by Hakims are of the greatest value, and there is no doubt whatever that their ancestors, ages ago, knew many things which are now-a-days being brought forward as new discoveries."

241. In his "Need of Scientific Medicine in India," Dr. B. Thirumalrao, F.R.C.S., (Edin.), D.L.O., (Lond.), Professor of Oto-Rhino-Laryngeology, Andhra Medical College, and Surgeon, King George Hospital, Vizagapatam, says : " There is still a great deal to learn from the ancient systems of medicine. They have got an extensive and wonderful Pharmacopoeia. They have developed dietetics almost to a fine art. It is possible that even the *Tridosha Siddhantha* may be interpreted and correlated in some sort of manner with the knowledge of modern bio-physics and bio-chemistry. We may have yet to learn from observations the ancient physicians made of diseases, the principles they laid down and the methods they adopted for the treatment. Even their errors and pitfalls cannot but be very interesting."² Dr. B. Mukerji, Director of the Government of India, Drugs Control Laboratory remarks : " It has been repeatedly seen, particularly in the realm of ancient *Materia-Medica* that there are many century old remedies which fully deserve the reputation accorded to them as 'cures' when judged by the critical yard stick of modern pharmacology and therapeutics."³

242. Dr. M. B. Govindaswamy, M.A., B.Sc., M.B.B.S., (Mysore), D.P.M., (Eng.), Superintendent, Mysore Government Mental Hospital, Bangalore, in his memorandum on the need for Research in Systems of Philosophy and Ayurveda with special reference to Psychological Medicine, observes : " The theory of Ayurveda, in some of its essentials has been derived from the *Nyaya* and *Vaisesika* Schools of Philosophy, and during my studies I have been profoundly impressed with the analytical insight and powers of observation of the ancient

¹ In support of the above Lt. Col. Cuming gives some interesting instances of the wisdom of traditional medicine. " For thousands of years the Chinese have prescribed the powdered heads of toad fish as a remedy for heart trouble and now Adrenaline, the most up-to-date drug for the treatment of heart disease, has been found to exist in the head glands of the fish. For generations the fact that American Indian hunters always chose the liver, and the whitemen the meat when the animals they have trapped or killed were divided, was quoted as proof of their ignorance and primitive development. Yet in the last five years the great nutritive value of liver has come to be recognised and it is prescribed in cases of anaemia." Quoted from Col. R. N. Chopra's "The Indigenous Drugs of India."

² Journal of Indian Medical Association, Vol. XVI, No. 1, Oct., 1946.

³ Dr. B. Mukerji, "Research in Indigenous System of Medicine", Journal of the Indian Medical Association, Vol. XVI, No. 8, May 1947, p. 261.

sages of India. Specially to be noticed in the writings is the emphasis on the psycho-somatic concept in medicine and philosophy, and the manner in which problems of personality which forms a subject matter of psychological medicine are dealt with by them. . . . Many psychological doctrines and results of modern research have been anticipated and commented upon with great insight by ancient sages of India. . . . Modern Medicine is now beginning to appreciate the usefulness of psycho-somatic concept of health and diseases. . . . Psychological medicine is still in its infancy and there is plenty of scope in it for intelligent speculation. This can only be achieved by an intensive research in and application of Indian Philosophical system in the original."¹

243. Regarding the great contribution to our present knowledge and future advance which a research into the Arabian or Unani System can give we may quote the opinion of Prof. E. O. Brown, M. D., F. R. C. P. : "Even if we rate the originality of Arabian Medicine at the lowest, I venture to think it well deserves more careful systematic study."² Regarding the value of the Canon of Avicenna the great authority on Arabian Medicine, Dr. C. G. Gruner, M.D., has said ; "In the ancient philosophy there is material capable of useful application today."³ Also, "The scope of the subject is great and its study, with intent to serious practical application, should not require an apologia."⁴

244. In his evidence before the U. P. Enquiry Committee on Indigenous Systems of Medicine, Dr. Jivraj N. Mehta said the following about the spirit of Research : "It was the quest for truth which guided our seers who loved probing into the mysteries of nature that gave the Ayurvedic System of Medicine a high place in the systems of medicine existing in the ancient days. A similar spirit of research should guide us likewise and let our knowledge bear the testimony of experimental research . . . Knowledge wherever it is found should be preserved for all mankind. I therefore fully support Research into the pharmacopoeia, as in other aspects of the Indian systems." Col. Sir Ram Nath Chopra, I.M.S., (Retd.), C.I.E., has for the past quarter of a century been laying great stress on the need of research, and has pointed out several directions in which it should be carried out. In his recent General Presidential Address to the Thirty Fifth Session of the Indian Science Congress, Patna, 1948, he once again urged : "I would earnestly suggest that careful research be made by the exponents of the Indigenous medicine so as to link their system with the modern medicine."⁵

¹ Vide Memorandum ; Appendix No. B II, (3).

² Prof. E. O. Brown, "Arabian Medicine", p. 115.

³ Canon, p. 17.

⁴ *Ibid.*, p. 565.

⁵ Sir R. N. Chopra, General Presidential Address, 35th Indian Science Congress, Patna, 1945, p. 11.

245. *Importance of Research.* From these views of the various Committees of Enquiry, and of the eminent scholars and scientists, it is clear that there is a wealth of medical knowledge and experience in the Indian medicine which needs proper investigation. Even as they are practised today these systems represent considerable accumulation of traditional and hereditary knowledge and experience in respect of drugs and medicines of value. Moreover, the countryside has treasured and preserved customs and practices bearing on hygiene and sanitation many of which had their beginnings in a scientific background in the ancient days but which are today practised blindly as part of routine and formal religious duties. Valuable knowledge and experience of drugs and recipes is still extant in homely sayings and in simple prescriptions of the grandmothers. The same applies to the rules of diet in health and sickness. It should be the purpose of painstaking research to salvage and collect this knowledge and make it available to the country.

246. In this connection we invite special attention to the following memoranda :

- (i) The memorandum on 'the Science and Art of Indian Medicine,' contributed originally to the Madras Committee on Indigenous Systems of Medicine 1923, abridged and revised specially for our Committee by our co-opted member Vaidyaratna Capt. G. Srinivasa Murthi, B.A., B.L., M. B. & C.M.
- (ii) (a) Report of the Conference of Vaidyas, Scientists, Research-workers and Doctors, held at Poona, December 1947, under the auspices of the Scientific Memoranda Sub-Committee of our Committee.
- (b) Memoranda on Ayurveda compiled by Dr. B. A. Pathak in English and Vaidya Jadavji Tricumjee Acharya in Hindi compiled for and approved by the Scientific Memoranda Sub-Committee Ayurvedic.
- (iii) Proceedings of the Scientific Memoranda Sub-Committee Unani-Section.¹
- (iv) "The Constitution of Medicine" by Lt. Col. M.H. Shah.

The above memoranda not only very cogently establish a strong *prima facie* case for research, but appear to give definite proofs of the Indian medicine being scientific in the modern sense of the word. We have, therefore no hesitation in stating that there is not only the vital necessity for inaugurating research on the Indian medicine, but also that this research may, in an abundant measure, contribute to the corpus of medical science and art. Indian medicine, which has remained static for so many centuries, may once again

¹ These memoranda are given in the appendices.

make its contribution to the welfare of the people of this country and of the world.

AIM OF RESEARCH

247. This Research on Indian medicine should have the following aims :

- (i) To clear these systems of accretions of centuries of doubtful value.
- (ii) To give scientific meaning and significance to the fundamentals of these systems so that they may be accepted by science.

Note : If these aims are fulfilled, we can look forward to the development of a unified system of medicine for our country.

APPROACH TO RESEARCH

248. In the evidence given before us it was repeatedly stressed that the methods of research employed in Indian medicine should be one which is in accord with the systems themselves. Some may wonder as to what special approach to Research other than that of observation and experimentation there can be. Yet, research cannot be based on these methods of approach alone. It is being realised, more and more, that there is another, and we may say an even higher method of approach than that of observation and of experimentation in the laboratory. This is the approach through the Meditational or Intuitional method.¹ It was the greatness of the ancient sages that they combined the two methods of approach, and with the help of both, reached the conclusions that the world will more and more marvel at, the more it understands them. The observational and experimental methods are sure and good as far as they go. They test and verify, collect and classify, discover casual relations, and confirm the phenomena presented to them as facts or reject them as false and untenable.

249. But they have serious limitations. They can deal with that only which is put before them. By themselves they can invent no new hypotheses, can have no flights into the higher realms

¹ "Indeed" says Plancke in the Universe through Modern Physics, "if we want to grasp reality of the world beyond the world of sciences, it can only be perceived indirectly through the medium of senses and by means of certain symbols which our senses allow us to comprehend." Swami Akhilananda quoting in his book on Hindu Psychology—Its meaning to the West, from "The New Frontiers of Mind" by Prof. Rhine of Duke University that "the mind has certain powers for getting knowledge other than through the nervous system," proceeds to observe, "It is true that the ordinary perceptions are gathered through the nervous system. But extraordinary experiences are achieved without direct contact of the sense organs and the object. They have exact and immediate value."

ideas arrived at intuitively.¹ The relationship between Idea and Method in Research is well expressed in the following extract from the Journal of the American Medical Association (Issue No. 15 of October 1928) quoted in the Presidential Address of Dr. Srinivasa Murti to the 19th Session of the All-India Ayurveda Mahamandal Conference, Nasik : " Claude Bernard in his ' Introduction a Letude de la Medicine Experimentale ' summed up briefly the relationship between the Idea and Method in Research : ' Men with a presentiment of new truths are rare in all the sciences ; most men develop and follow the ideas of a few others. We usually give the name of discovery to recognition of a new fact ; but I think that the idea connected with the discovered fact is what really constitutes the discovery . . . ' Obviously only a small proportion of those actually engaged in medical research are born investigators ; what may be expected then, from the vast majority in whom training in the methods of investigation is substituted for creative genius ? From the majority of them, nothing. ' *The experimental method cannot give new and fruitful ideas to men who have none : (italics ours) : it can serve only to guide the ideas of men who have them to direct their ideas and to develop them so as to get the best possible results. As only what has been put down in the ground will ever grow in it, so nothing will be developed by the experimental method except the ideas submitted to it. The method itself gives birth to nothing. Certain philosophers have made the mistake of according too much power to method along these lines.*" Hence there is a need to utilise both the intuitional and experimental methods in research.

250. If we look at research in Indian medicine from the point of view stated above, the fears entertained by a section of Vaidyas that, the employment of modern methods of research will only

¹ Examples of discoveries made in modern science during recent times by intense concentration and meditation on the subject under investigation have not been wanting. We may recount here the circumstances under which August Kekule discovered the structural formulae of organic compounds, when he was travelling in a bus on his way to London. In his own words, " I sank into reverie. The atoms flitted about before my eyes. I have always seen them in movement, these little beings, but I had never succeeded in interpreting the manner of their movement. That day I saw how two small ones often joined into a little pair ; how a larger took hold of two smaller, and a still larger clasped three or even four of the small ones, and how all span round in a whirling round-dance. I saw how the larger ones formed a row and only at the end of the chain smaller ones trailed along. The cry of the conductor, ' Clapham Road ' woke me up from my reverie but, I occupied part of the night in putting at least sketches of these dream products on paper. Thus originated the structure theory." Quoting the above G. E. Kenneth Mees, D.Sc., F. R. S., in his book on the ' Path of Science ', continues : " In 1865 Kekule, then professor of chemistry at Ghent was engaged one evening in writing his text-book. ' But it did not go well ; my spirit was with other things. I turned the chair to the fire place, and sank into half sleep. Again the atoms flitted before my eyes.' His imaginative eye, sharpened by repeated visions of a similar kind, could by this time distinguish large structures of complicated construction. He had seen rows of atoms linked together, but never yet rings ; nor had any one else. This is how the idea came to him. ' Long rows, variously, more closely, united ; all in movement, wriggling and turning like snakes. And see, what was that ? One of the snakes seized its own tail and the image whirled scornfully before my eyes. As though from a flash of lightning I awoke.' But the picture Kekule had seen of the snake that had seized its own tail gave him the clue to the most puzzling of molecular structures, the structure of the Benzene molecule ". Quoted by Kenneth Mees from John R. Baker, " Scientific Life," page 13, London—Allen and Unwin, 1942.

succeed to the extent of adding a number of indigenous drugs to the pharmacopoeia of the Western medicine, (while the truths underlying the fundamental theories which they believe transcend modern scientific methods will be lost to the world) will prove to be groundless. By whole-hearted collaboration between the workers of the two systems, valuable ideas will find expression through experimental methods. The exponents of Indian medicine need have little to fear that by adopting modern scientific methods, their systems will lose their identity and become extinct. On the contrary, the ancient and modern scientific methods have many things in common. Their application, we are sure, will establish Indian medicine on a firmer footing and make it contribute its own to the corpus of medical knowledge and practice of the world as a whole.

RESEARCH CATEGORIES

251. We now proceed to lay down the main categories under which research should be conducted :

- (I) Literary Research.
- (II) Research on fundamental doctrines of Ayurveda (including Siddha) and Unani Tibb viz. :
 - (a) The *Panchabhuta* theory of matter.
 - (b) The *Tridosha* theory of physiology and pathology.
 - (c) The *Rasa, Guna, Virya, Vipaka, and Prabhava* principles of pharmacology and therapeutics.
- (III) Clinical Research.
- (IV) Pharmacological Research in drugs and medicinal preparations—both organic and in-organic.
- (V) Research in Diet.
- (VI) Research in Psychological Medicine.

I. RESEARCH ON LITERATURE

252. *Unani*. In regard to the Unani system the position is comparatively simpler. In the *Qanoon*, Avicenna gives a concise and yet a comprehensive account of the medicine up to his time. Although a translation of the *Qanoon* in Urdu is already available it requires retranslation in a more modern form. Some of the other works on the Unani like those by Abu Sehl Masih, Rhazi are scarce and require to be translated into Urdu.

253. *Ayurveda*. The original works on the Ayurvedic medicine are, however, available in very small numbers. Some of the literature has been lost and the parts now available are mutilated or have suffered from interpolations. Says Kaviraj Gananath sen, " The main books such as Charaka and Susruta in their present form, are not the works of Rishis Agnivesa and Susruta in their original. The passages of the original Susruta Samhita quoted by trustworthy and ancient

commentators like Chakrapani, Shivadasa, etc., do not occur in the present day Susruta, and that, there are several passages in the current Susruta which are at variance with well-known truths. It is admitted by all commentators that the current Susruta Samhita is a work redacted by Nagarjuna or some other savant. There is also evidence that the last half of Susruta was an abridgement of the works of Videha and other authors, who probably flourished long after Dhanwantari, the divine Guru of Susruta. Charaka Samhita is a redaction of Agnivesha Samhita by Charaka. It appears that even the redacted edition of Charaka became partly extinct and deformed with age five or six centuries later, when a Kashmir Pandit known as Dhridabala made a further redaction and freshly wrote out the last seventeen chapters of Chikitsa-sthana and all the chapters of Siddhi and Kalpa-sthanas." ¹

254. "On account of the deep regard paid to these books which in most cases were passed down orally, no one had the courage to rectify any interpolations or contradictions that were bound to creep in. . . In some cases it is even doubtful if the text is the original one at all." ² There are references to descriptive anatomy, and descriptive materia-medica in some of the literature, which cannot be traced today. In addition the language of such books as are available, is too condensed, terse and aphorismic, with the result that they are open to several and contradictory interpretations. While this is the state of literature already known, there are great many valuable palm-leaf and other manuscripts which have not yet been published or made available through translation.

255. A careful search should be made in oriental libraries in India and other parts of the world and manuscripts on Ayurvedic medicine should be collected by copying or photographing them if originals cannot be secured. These along with their commentaries should be studied, edited, printed and published. Such attempts were made by certain scholars during recent years and the result was the publication about ten years ago of *Kashyapa Samhita*—a treatise on pediatrics. The work of collection, collation and editing should be taken up on a very large scale by a central organisation of the kind mentioned below.

256. Side by side with the study of works on medicine, research should also be taken up on the *Dharmashastras*, *Smritis*, *Grihyasutras* and *Arthashastra*. The three works mentioned first, deal among other things with public health, hygiene and preventive medicine, and the last mentioned with forensic medicine. A study of these texts will reveal that not only were the ancient Hindus acquainted with these subjects but also that they had made great

¹ Presidential address of Kaviraj Gananath Sen. All-India Ayurvedic Conference, Mysore, 1930.

² Presidential Address of Kaviraj Jogendranath Sen. 14th All-India Ayurvedic Conference, Colombo, 1924.

advances in them. It is also to be noted that though the study of these *Sastras* and *Smritis* has been neglected for many centuries, yet their precepts are practised as daily duties by large sections of the people, particularly in the country side, and the wisdom of these books has passed into current life through sayings and proverbs repeated in daily talk. A critical examination of these popular sayings would repay itself many times. Most of the answers to the questionnaire issued by this Committee and the oral evidence given before us, have stressed the urgent need of the preparation of standard books for purposes of reference. We are of the opinion that this work must be given priority, and standard versions of the texts should be prepared. Incidentally, this will help in the preparation of text books for use in Schools and Colleges of Indian Medicine.

257. The work of collection, collation, revision, translation, separation subject-wise, should be carried out by several agencies :

- (i) The most important of these will be a Central Editorial Board consisting of learned Ayurvedists and of experts in Western medicine. It must be noted here that mere linguistic scholarship, however great, will not be helpful in this type of work. What is really wanted is *karmakusalathva* (practical knowledge) in special branches of literature.
- (ii) Provincial centres of teaching and research can also undertake work on literature.¹ The learned scholars, professors and lecturers could prepare monographs in various branches pertaining to their respective subjects from a comparative stand-point. Such monographs simplified could very well form the basis of text-books for students, in various provincial and regional languages.
- (iii) A Central Library, attached to the Central Research Institute with which we shall deal later on, and subsidiary libraries attached to the provincial centres of instruction is a necessity. All existing books and old manuscripts should be collected and made available to teachers, students and research workers. The literary research work done should be published periodically in the organ of the Central Research Institute—the "*Archives of Indian Medicine*". The provincial centres may also have their own journals.

¹ Bhandarkar Oriental Research Institute, Poona.
Tanjore Palace Library.
Royal Asiatic Society of Bengal etc.

II. RESEARCH ON THE BASIC DOCTRINES

258. The two basic doctrines of Ayurveda are the *Panchabhuta* and the *Tridosha*. The memoranda mentioned in para 246, above and reproduced in Appendix have shown that the *Panchabhuta* doctrine, (which relates to matter), and the *Tridosha* (which relates to biology, physiology and pathology), though propounded centuries back, bear striking resemblance to the theories that have been set out as the result of some of the most recent advances in the field of science. It must also be borne in mind that these two doctrines, though often confused with the Greek theories of matter and the humours, are claimed to be quite distinct from them. If anything, the *Panchabhuta* is said to correspond, in a striking manner, to certain modern views on Atomic structure and the *Tridosha*, in some respects, to the modern theories of Physiology, Endocrinology, Psychology etc.¹ In his memorandum on the Psychological aspects of Indian medicine, Dr. M. V. Govindaswamy has pointed out that these Ayurvedic doctrines are corroborated by the recent emphasis of modern science on psycho-somatic concept of life.² The ancient doctrines are therefore worthy of our closest study, and research on them is likely to reveal material of greatest value to science in general and to medicine in particular. In regard to the basic conceptions of the Unani medicine, Arkan (Elements), Akhlath (Humours), Mizaj (Temperments), Quawa (Faculties), Rooh (Vital energies) which appears to be archaic, Col. M. H. Shah has put forward a tentative interpretation in his paper on "Constitution of Medicine."³ These require corroboration by other workers.

LINES OF RESEARCH

259. The following are some of the important directions in which research on the basic doctrines should be taken in hand :

- (i) *On the side of Pure Science.* In the region of physical and chemical sciences, the study of *Darshanas* (which deal among other subjects with natural sciences, e.g., physics of matter) in terms of modern physics, and chemistry, particularly atomic and nuclear physics.
- (ii) *On the side of applied Science.* (a) The study of the teachings of *Darshanas* (regarding *Panchabhutas*) and *Rasasastra* (Chemistry and Iatro-chemistry) in relation to the *Samyoga-viyoga* (combinations and dissociations) of the *Paramanus* (atoms) in terms of physics and physical-chemistry (atomic and nuclear), (b) the study of

¹ "Science and Art of Indian Medicine," by Capt. G. Srinivasa Murti, Appendix No. B. II. (1).

² Memorandum on "Need for Research in Indian Philosophy and Ayurveda with special reference to psychological Medicine" by Dr. M. V. Govindaswamy. Appendix No. B. II. (3).

³ "Constitution of Medicine", by Lt. Col. M. H. Shah, Appendix No. B. II. (2).

- Tridosha* physiology and pathology in the light of modern bio-physics, bio-chemistry, endocrinology, immunology, and psycho-pathology; the role of 'Vitalism' (Rooh) not recognised by modern physiologists should be studied, (c) the examination of the Indian theories of heredity and evolution in the light of their modern counterparts, (d) investigation into the possibility of combining the ancient diagnostic art which is based on Clinical methods, with the modern methods based on laboratory and instrumental technique. (e) The correlation of the properties of *Dravyas*, viz., of *Rasa*, *Guna*, *Virya*, *Vipaka*, and *Prabhava*¹ with modern pharmacology.
- (iii) *On the side of Pure and Applied Science*: (a) The study of the theory of *Prakritis* (temperaments)—*Satwika*, *Rajasika*, and *Tamasika*—and their relationship to such modern classification of individuals as *vagotonics*, *sympatheticotonics*, etc.. (b) the biological and psychological study and interpretation of *Trigunas*², *Tridhatu*, *Koshas* and *Pranas*. (c) The study of *Jagrat avastha* (waking consciousness), *Swapna avastha* (dream consciousness), *Sushupti* and *Tureeya* (higher levels and states of consciousness) as given in the *Trantric* and *Yogic* literature.³

III. CLINICAL RESEARCH

260. Clinical Research is one of the most fruitful lines of approach for the clarification of the principles and methods of diagnosis and treatment of diseases as mentioned in the old texts. It is particularly suited for a critical appraisal of the Indian theories of pathology, symptomatology, clinical methods of diagnosis and prognosis; principle lines and methods of treatment, and also drug therapy and other lines of treatment peculiar to Indian medicine. It has been shown in the Report of the Madras Committee on Indigenous Systems of Medicine (1924) and by our Scientific Memoranda Sub-Committee among others, that the clinical methodology of Indian medicine is akin to the modern methods and

¹ For the meaning of these terms refer to memorandum Appendix No. B II (1).

² *Ibid.*

³ With reference to the states of Consciousness, Aldous Huxley observes in his appraisal, quoted in 'Hindu Psychology—its meaning for the West,' by Swami Akhilananda that "According to the theories of Western psychology, the human mind may be visualised as a structure consisting of a ground floor and basement, a conscious and a sub-conscious. To Hindu Psychologists this simple model of the soul seems inadequate to the observable facts. These facts, they maintain, demand the addition to the model of a paranormal mezzanine to accommodate extra-sensory perceptions and psychic phenomena and above that, a purely spiritual second floor, having no roof but communicating directly (if the rubbish and lumber of egotism can be cleared away) with the open sky. Tat-tvam-asi—the space within each second floor room is identical with the infinite spaces of the universe; Atman and Brahman are one."

deserves a close attention. The principles laid down, the methods of treatment and therapeutic measures adopted including the dietetics are described in the ancient books. The fact, however, remains that many diseases have changed their phases and many new ones have come in since the days of Charaka, Susrutha and Vagbhata. Some old diseases have exhibited variations in their manifestations from age to age, country to country and also in relation to changed conditions of the individual and his social and other environments. The old time principles and methods of diagnosis and treatment, and the description of many diseases will have to be studied, where necessary, revised and re-orientated or supplemented in the light of new and known facts. In doing this the existing indigenous clinical methodology will have to be supplemented by the diagnostic and prognostic techniques and methods evolved by modern sciences. Attempts may also be made to explain the rationale of the original methods of diagnosis and lines of treatment of Indian medicine. Incidentally, this will help in eliminating methods of doubtful value and utility.

261. It is not suggested that the physician should become a slave to laboratory and other techniques to the exclusion of well known clinical methods of physical examination. We are in agreement with Samuel A. Lowenberg who observed in his *Diagnostic Methods and Interpretations in Internal Medicine* (1937) that, "the basis of diagnosis is physical examination. It is true that today we have multitude of other means of ascertaining the presence and cause of disease, and that in certain conditions our final decision must be based upon methods other than physical examination such as Röntgen-rays or other laboratory aids. Yet, useful as these are, it is to physical examination that we are obliged to look for our chief source. It is much to be deplored that the availability of chemicals and instrumental diagnosis has tended to make the physician undervalue the importance of facility and skill in physical examination and to mislead students into the belief that the time spent in acquiring and perfecting such skill is today of small importance. The fallacy of such reasoning is at once apparent to the young physician whose work leads him away from the big centres of population and the facilities of well equipped hospitals. Disease, like death is no respecter of persons or places. In a mountain camp or remote rural districts the man who has put his faith in X-Ray machines, calorimetres, etc., and neglected to perfect himself in the art of physical examination will find that his labour has been largely misdirected." These observations which were made for a

¹ Quoted by Dr. Bhasker Govind Ghanekar, B.Sc., M.B.B.S., in his "Comparative Survey of the Ayurvedic Nosology." Publication of the Hindu University, Benares, p. 35.

Note :—Referring to Laboratory methods of diagnosis Sir James Mackenzie observed : "It should be realised and should be strongly and persistently insisted upon, that all these special methods (laboratory and other techniques of diagnosis) fall far short of

progressive country like America are particularly applicable to India where ample laboratory facilities are not available and where specialised equipment and trained personnel are not often at the disposal of the practitioners.

262. This does not, however, mean that, we should not make full use of such equipment as will help our senses to understand the disease better and cure it in an effective manner. Clinical research into the value of time-tested principles and methods of diagnosis, reputed therapeutic measures such as the *Panchakarama* (*Dhara*, *Pizhichal*, *Navarakizhi* etc.) which are used particularly in the treatment of rheumatic affections of joints, and certain forms of nervous, mental and metabolic diseases in Malabar and other parts of South India, and the treatment of snake bites used in those parts should be carried out. The same applies to the testing of large number of reputed drugs, diets, and remedies which texts and tradition prescribe for different diseases. Green leaves and roots of common plants are sometimes administered by village Vaidyas in certain diseases. Many of them are not included in any of the texts but are largely prescribed in practice. These are sometimes said to produce remarkable cures. Attempts should be made to collect information regarding these, and extensive clinical trials have to be carried out in respect of their value.

263. It must be pointed out here that reputed drugs and medicines can only be tried in diseases for which they are indicated and correct clinical diagnosis will therefore have to be made according to the tenets of Indian medicine, but controlled by modern clinical methods of diagnosis and prognosis. Since most of the Ayurvedic medicines, (and the same is true of Unani) occur as compound preparations, it is not easy to assess their value by purely chemical and pharmacological methods. The claims made for them should, in the first instance, be tested by careful clinical trials under controlled conditions.

264. Research on the above lines can only be carried out in institutions where ample clinical material is available and co-operation between capable workers of Indian and Western medicine is forthcoming. The actual treatment should be left to practitioners of

the ideal of what is wanted in clinical medicine and that, the pursuit of clinical medicine involves problems, peculiar to itself, which none of these methods can ever hope to solve. There is not a single mechanical or laboratory method ever introduced but has had an extremely limited sphere of usefulness. The impression that the results obtained by mechanical methods are more reliable and more scientific than those obtained by the use of the unaided senses is but a belief based on a false analogy. . . . In laboratory experiments it is impossible to obtain any information from the great field of subjective impressions. In man, this is the most important field and far outruns the field for mechanical exploitation in giving us information as to the nature of disease. . . . The physician has to train his senses, and this can only be done by a long process of education, only capable of being acquired by the constant contact with the patient." Quoted by Dr. G. Srinivasa Murti in the Presidential Address to the scientific session of the 16th L.I.M. Conference—Cocanada (January 1947).

Indian medicine, while specially selected workers of the Western medicine, preferably those who know Indian medicine also, would watch and maintain careful, detailed and accurate records of the clinical features, diagnosis, treatment, and daily progress of all cases under investigation. While such work should be undertaken by special research institutions, it can also be done in provincial centres of teaching where proper hospital and other facilities are available. There are in existence such institutions in Bombay, Poona, Benares, Aligarh, Madras, Bangalore, Hyderabad and Calcutta, which could play a very important part in elucidating problems of clinical research. In fact the School of Indian Medicine, Madras, during 1932-36 did much valuable work on comparative-diagnostic terminology of diseases according to Western and Indian medicine side by side, by detailed studies of their symptomatology. Unfortunately the data collected were not sufficiently large as to lead to any definite conclusions. This is an important type of work which should be extended and brought to its logical conclusion. If proper equipment by way of laboratories, X-Ray apparatus, etc., are provided and sufficient number of competent workers are made available, this type of work could be considerably expedited in these institutions. In teaching institutions it is essential that the teaching of clinical medicine and research should go hand in hand. If this is done they will turn out much better types of practitioners than hitherto.

IV. PHARMACOLOGICAL RESEARCH

265. We have already referred under Clinical Research to the testing of drugs on patients. Clinical and Pharmacological Researches are complementary to one another and in the case of medicines found in the texts of Indian medicine, the former should precede the latter. In different parts of India today, as many as 900 indigenous drugs (vegetable, mineral and metallic) and over 1000 preparations made from these drugs are used by the Ayurvedic and Siddha physicians and Unani Hakims. There are again many crude drugs and finished preparations which are not mentioned in the books but which have been handed down from generation to generation. "There seems to be little doubt that out of the large number of drugs used by the Hindu physicians for centuries past and still in use, there are some that deserve the reputation they have earned as cures."¹ The Bengal Ayurvedic Committee (1925) opined that "the first line of research should be into the value of the indigenous drugs. These form the basis of treatment of diseases and the system is particularly rich in them. Here a very large field awaits exploration and confirmation which will not only develop the system and enhance its efficiency and utility, but will also bring it closer to the Western System."²

¹ Chopra, R. N.—Indigenous Drugs of India.

² Report of the Bengal Ayurvedic Committee, 1925, p. 15.

266. *Difficulties in Drug Research—Whole drug vs. its component parts.* The real difficulty in the way of assessment of the proper value of indigenous drugs is twofold. Firstly the modern scientists are not acquainted with the exact connotation of terms of Indian Pharmacology. For instance, the fundamental terms like *Panchabhuta, Tridosha, Rasa, Guna, Virya, Vipaka* and *Arkan* and *Akhlata* are often wrongly and inadequately understood. Nor, are the Vaidyas and Hakims on their part, able to give correct Western equivalents of the Indian terms. Secondly, whereas, Western medicine tries to explain the action of a drug in terms of its chemical components, such as alkaloids, glucosides, essential oils, anti-biotics, hormones, etc., Indian medicine takes into account the action of the drug in its entirety. They hold that the action of the whole drug is often different from that of any one of its constituents considered separately. There is good deal of truth in this assertion. The researches of the late Rev. Father Caius and Dr. K. S. Mhasker, M.D., D.Sc., as the result of their work at the Hafkine Institute, support this view. They hold "It is impossible to obtain any information about the medical properties of drugs by carrying on researches in Chemical laboratories. Whether a botanical or animal drug is useful or harmful to the system can be conclusively proved only if the drug is administered in its natural state—a state in which its action has been described in Ayurvedic works; research regarding them should be carried on primarily in human hospitals or at the most in biological laboratories." Dr. Mhaskar further said: "invariably all the famous medicinal drugs which were subject to research in chemical laboratories proved to be altogether useless with regard to their pharmacological actions, not because they were so, but chiefly they were subjected to chemical reaction."

267. The Indian view has also been recently confirmed by the work done at the Indian Institute of Science, Bangalore. In an editorial in the *Current Science* of July 1946, it is stated; "Looking at the matter from a chemical point of view one is struck by the large number and variety of natural products employed successfully as curative materials by the Ayurvedic practitioners as a result of the immensity of valuable therapeutic knowledge of these accumulated by centuries of observation. It has been the practice among advocates of indigenous drugs for use in the Western System of Medicine to extract some of these drugs for what are known as active principles with a view to employ the latter for the same purposes as the crude drug. This practice which had currency for some time soon proved dangerous, as it was frequently found that, the extracted principles very often had not even a fraction of the efficacy of the crude drug. As has been shown recently by Miss Irani in the case of *Kurchi* seeds, the constituents of a crude drug responsible for its curative action may be in a different and much

more complex stage of combination than the substances usually isolated from them in the form of the so-called active principles. The question therefore of a substitution of Ayurvedic drugs by their so-called active principles may be fraught with dangerous consequences."

268. *Compound preparations.* Another difficulty that usually confronts pharmacologists is the problem of investigating the value of compound medicines which are more frequently used than single drugs. In the case of single drugs, the time and labour required to work out their composition is enormous. "This may be judged from the fact that it would take an experienced chemist about two or three months to isolate in a pure state and roughly describe the nature of different chemical constituents of a single crude drug. The determination of the chemical constitution of the active principle concerned generally takes about two years provided, the chemist could devote his time entirely to one active principle at a time. The isolation of sufficient quantity of the active principle and testing them pharmacologically takes a few months more. From this one can see that it will take years to complete the work on indigenous drugs."¹ The investigation of the pharmacological properties and therapeutic value of the compound indigenous remedies, will be a still more formidable task, especially in view of the fact that their therapeutic value is considered to be more in the particular combination than that of any one of the drugs taken separately. They, therefore urge on the need for an investigation into the combination as a whole. But, for this, no modern methods are as yet available.

269. *Mineral and metallic preparations.* There are also many mineral preparations particularly in Siddha medicine of South India, which have acquired reputation as effective remedies. It has been said that the therapeutic value claimed for them is difficult to assess from the results of chemical analysis. Such is said to be specially the case in respect of some preparations of arsenic used in the treatment of diseases like malaria, anaemia, etc. These preparations should not be dubbed as useless or harmful without a thorough investigation. It is quite possible that combinations such as those occurring in the preparation of *Makharadwaja* (a preparation of mercury, sulphur and gold), shown by usual chemical analysis to be a sulphide of mercury, may be somewhat different from those occurring in the ordinary sulphide of mercury. The therapeutic activity of the two sulphides is said to be different. *Makharadwaja* is claimed to be non-toxic in ordinary doses and therapeutically active, while, ordinary sulphide of mercury in similar doses is relatively toxic and not therapeutically active. Possibly it forms a non-dissociable compound and is therefore less toxic.

¹ Chopra, R. N.—Indigenous Drugs of India.

270. It is also possible that, it is the particular method of preparation, used in indigenous medicine, which has a vital bearing on its activity and brings about a change in the atomic and molecular arrangement of the final product. This assumption which is hypothetical, would have been ridiculed a decade or two ago, but recent advances in science, particularly in atomic physics in respect of 'Isotopes' have shown that atoms of the same chemical properties may possess different masses and therefore have different effects.¹ Considering the fact that almost all the inorganic preparations of Indian medicine such as *Bhasmas*, *Sinduras*, *Churnas*, *Kushtas* and the like, are prepared from elemental substances such as mercury, sulphur, gold, silver, copper, arsenic, lead, zinc, iron, and the like, a slight change or shift or alternation in the number of their 'Isotopes' not determinable by the usually known chemical methods, may be responsible for their therapeutic and pharmacological behaviour. There is need for research in this connection by the application of new methods of investigation such as 'spectral analysis' and others. These may give rational explanation of drugs and drug combinations. In the meanwhile, wherever such usages have been found to be of proven value these should be seriously examined. The fact that science, at present, can find no explanation in respect of some phenomena or that there are, at present, no known scientific methods by which some of the obscure phenomena can be explained, cannot be an argument for either refuting or denying such phenomena. Science has developed in proportion to the discovery of newer methods and techniques which have unravelled many mysteries.

271. We would now give some suggestions regarding the lines of Pharmacological Research in these drugs :

- (1) Modern pharmacologists working on Indian drugs should acquaint themselves fully with Indian pharmacological terminology and principles, and should supplement them with modern scientific methods. The advantage that will accrue to Indian medicine through the application of these Western methods of pharmacological techniques will be substantial. Western medicine, too, will gain considerably in so far as it will acquire new drugs and, incidentally develop new methods. Many of the doubtful items will be eliminated and effective remedies will be made available to combat disease. The best way of

¹ It has been shown by the rapid advances made in atomic physics during the last 30 years that practically all elements consist of radio-active isotopes. Gold has been shown to have three isotopes while mercury ten, and sulphur six. The separation of these isotopes has been achieved by several methods, among which, the 'thermal diffusion' method which two German Scientists—Clausius and Dickel used in 1938, has much in common with the principle underlying the indigenous methods of preparing *Kupistha aushadhas* such as *Makharadwaja* and other sublimates.

research will, however, be through a collaboration of experienced researchers of both schools.

- (2) While the pharmacological action of single drugs can and has been investigated without much difficulty, the same cannot be said of the inorganic and compound preparations. The therapeutic value of this latter group will have to be established first by clinical trials, and then corroborated by devising appropriate pharmacological methods and newer techniques bordering on physics, physical-chemistry, bio-physics and bio-chemistry. Such a method of finding rational explanation of the remedies were worked out by Dawarkanath and Sholz in Germany (1937) in respect of the Pharmacology and Therapeutics of some Ayurvedic Gold and Calcium preparations.¹ This type of research should be taken up on a larger scale.
- (3) The 2000 remedies of vegetable origin mentioned in literature are divided according to their (i) *Panchabhautic* constitution (physico-chemical), (ii) *Rasas*, etc. and (iii) therapeutic actions. These should be carefully studied and important ones taken up for investigation.
- (4) In view of the close relationship that exists between pharmacological and clinical research, adequate provision should be made for a closer and more effective collaboration between the workers of the two branches. Provision for pharmacological research should also be made in all provincial centres of teaching which have proper hospitals. This will create interest in the minds of students and teachers, and will stimulate investigation into drugs and recipes in common use in the different provinces.
- (5) The methods of purification of poisonous drugs used in Ayurveda requires careful study. How far their poisonous properties are removed and what chemical changes take place in them as a result of purification (*Sodhana*) should be studied.

V. RESEARCH IN DIETETICS AND DOMESTIC MEDICINE

272. "The subject of nutrition has been, for several years the concern of most countries in the world. We are still far from evolving an Indian dietary on modern scientific basis. Though modern scientific

¹ Pharmacological and Therapeutic Action of Calcii Aurum (a gold preparation Ancient Hindu Medicine)—A Monograph from the University Hospital, Hamburg, by C. Dwarkanath, L. I. M. and Herbert Sholz, Dr. Phil.—Current Topics: Indian Medical Gazette, Vol. LXXVI, No. 8, May 1941, pp. 306-307.

medicine has been with us for over a hundred years, we have not yet evolved a dietary suitable for those with vegetarian habits, either in acute illness or during the stage of convalescence."¹ We wholeheartedly endorse these remarks of Dr. Jivraj N. Mehta, except that we would like to add that, even a dietary for non-vegetarians has not yet been worked out. We would have expected that this would be the first step in the working out of a proper dietary by the adherents of the Western medicine. As against this, there is a great amount of knowledge of dietetics in books on Indian medicine, and what is more, enshrined in the practice and lore of the country side. As Dr. B. G. Ghanekar has observed, "Ayurveda attaches very great importance to *Pathya* (diet) in the treatment of disease. At the end of every disease, elaborate directions for the observance of *Pathya* are given. The position of *Pathya* in the treatment can be very well compared with the position of the soil in the etiology of diseases as can be gathered from the following observations in regard to *Pathya* in *Harita Samhita*: A patient should always observe *Pathya* (diet), without *Pathya* a disease cannot be cured. Without medicines a good physician can cure a disease with the help of *Pathya* only, but without *Pathya* a disease cannot be cured with hundreds of medicine."²

273. The subject *Pathyapathya*—(ahara) or dietetics—in health and disease, has been developed almost to a fine art in Indian medicine. In the texts and traditions dietary has been worked out for diseases in their different stages. The manner of taking certain common articles of diet, such as curds, milk, butter, honey, ghee etc., and food incompatibilities (*Virudhahara*), food allergies and inhibitors (*asatmyahara*) are also described with great care and precision. Likewise, the measures for avoiding such diet factors as militate against health are given in detail. So also, there are texts and traditions relating to the subject of nutrition and the properties of foodstuffs and drinks of common use in India. Articles of food and drink of vegetable and animal origin have been classified and their uses and value in dietary are described elaborately, e.g. (i) *Dhanyapanchaka*-dealing with cereals and pulses, (ii) *Sakavarga* or pot-herbs and vegetables, (iii) *Mamsa-varga* or meat group which deals with meats of different kinds, (iv) *Dravaharas* or liquids such as, honey, milk of different animals, etc. In addition to the varieties of prepared diets there are the *Kritanna Varga*, or diets prepared with medicinal and other ingredients. The approach to the subject has, however, been different from that of the Western medical science. It is based, as already stated in Chapter VII, on the assumption that living individual is not merely a material entity but has mind and soul as

¹ Dr. Jivraj N. Mehta : Presidential Address to the Association of Physicians of India, quoted in the Proceedings of the Academy of Indian Medicine, Madras, 1945.

² Dr. Bhaskar Govinda Ghanekar : A Comparative Survey of Ayurvedic Nosology, page 19.

essential parts of him. The problem of his nutrition therefore is not only a question of physics and chemistry, of calories and vitamins, but has psychological aspects also. In other words, food has a very important bearing on the mind and temperament of the individual. Accordingly certain diets are suitable for the growth of intellectual qualities (*Satvika*), others for that of Dynamic qualities (*Rajasika*), and still others for that of static qualities (*Tamasika*). The truth of this is being increasingly realised now in the West. There is thus a vast field of accumulated knowledge and experience that awaits further exploration.

274. *Domestic Medicine* or *Grihavidya* may also be considered here. Every housewife had knowledge of common herbs growing in the locality and their medicinal properties and these are usually kept readily available for any emergency. Families often grow a small garden of medicinal plants in many parts of India, along with pot-herbs which are either used fresh or made into such preparations as infusions, decoctions, etc. Thus the value of domestic medicine to deal with the common ailments should also form a subject of research on modern scientific lines. Needless to say, knowledge of this kind is not found recorded in any single work but lies scattered in many books—some in Sanskrit and others in various Indian languages. All such information should be collected and tested. In the work of collection of information a coordination of the scholars of the various provincial colleges can be of great advantage.

VI. RESEARCH IN PSYCHOLOGY AND PSYCHIATRY

275. The study of psychology and psychiatry is one of the oldest and best cultivated of studies, in Indian medicine. As Col. Shah pointed out in his paper on Medical Psychology in India,¹ the following verse in the Gita sums up the most modern psychological findings in regard to the origin of mental disturbances. "Man, musing on the objects of sense, conceiveth an attachment to these; from attachment ariseth desire; from desire anger cometh forth; from anger proceedeth delusion; from delusion confused memory; from confused memory the destruction of Reason; from destruction of Reason he perisheth." (Gita, 2, 62-63). Basing his opinion on studies of such works as Patanjali's *Yoga Sutras*, *Yoga Vasishtha*, and *Buddha Darsanas* Dr. M. V. Govindaswamy says . . . many psychological doctrines and results of modern research have been anticipated and commented upon with great insight by ancient sages of India . . . The whole system of Ayurveda is based on the psycho-somatic concept in medicine. Modern medicine is now beginning to appreciate the usefulness of the psycho-somatic concept of health and diseases."² Dr. Govindaswamy further adds that, "Hughlings

¹ Report on the proceedings of the inaugural meeting of the Indian Branch of the Royal Medical Psychological Association of Great Britain held in Lahore 1938.

² Dr. M. V. Govindaswamy's Memorandum, Appendix B. II (3).

Jackson's concepts of levels in the nervous system, their integration in health, and disorganisation in disease, is in a general manner anticipated by the Sankhya School of Philosophy. Problems of consciousness are dealt with in a penetratingly analytical manner in *Mandukya*, *Chandogya* and *Prasna Upanishads*.¹

276. Many of the conclusions of Indian medicine and *Darsanas* seem to be borne out by the researches of such Western scholars and scientists as Freud, Adler, Jung, Hughling Jackson and others. Under the Category of Basic Doctrines, we have referred to: (a) the study and interpretation of *Trigunas*, *Tridathus*, *Koshas*, and *Pranas* and (b) the study of *Jagrath avasta* (waking consciousness), *Svapna Avastha* (dream consciousness) of *Sushupti* and *Tureeya* (higher levels and states of consciousness) *Chakras* (extra-sensorial channels of consciousness), as given in the *Tantric* and *Yogic* literature. These studies unravel the various characteristics, qualities and states of human mind and are of fundamental importance in medicine.

277. During the last 50 years psychology has made rapid advances. The role of mind in the maintenance of health is coming to be increasingly recognised. A large number of diseases which were originally believed to be functional are now traced to mal-adjustments, conflicts, frustration or lack of balance with consequent disorder of the nervous system.² Among the many organic diseases which are said to be caused by emotional disturbances are now included even gastric and duodenal ulcers. Such diseases are now being treated by psychiatrists. Our attention must therefore be diverted, in an increasing measure, to the study of the psycho-somatic concept of health and disease.

278. For a study of psychiatry the dictum of Charaka is specially invaluable. Charaka gives a scheme of life in which he traces the springs of all actions to the three fundamental motives of man *viz.*, *Ayu*, *Arogya*, and *Aiswaraya* (longevity, health and freedom from disease and pain, and the possession of wealth, power etc.). According to him, these fundamental motives sum up all springs of action. Charaka's is a scheme of a well balanced life which is guided by the harmonious play of these fundamental motives and is directed by perfect wisdom and unerring judgment. Evil and mischief creep in through errors of judgment, by which the harmony of these motives is broken. All kinds of misdeeds are traced, not to feelings of attachments or anti-pathology but to errors of judgment or foolishness (*Prajnaparadha*).

¹ Dr. M. V. Govindaswamy's Memorandum, Appendix B II (3).

² "During the last forty years the conviction has steadily grown among medical men that many cases of diseases—organic as well as functional—are directly caused by mental states. The body became ill because the mind controlling it either secretly wants to make it ill, or else because it is in such a state of agitation that it cannot prevent the body from sickening. Whatever its physical nature, resistance to disease is unquestionably correlated with the psychological condition of the patient." Aldous Huxley—"Ends and Means," p. 258.

This *Prajnaparadha* may be compared to the *moha* or *avidya* (ignorance) of the *Nyaya* and *Yoga*. But, while the *Nyaya* and *Yoga* seem to refer to this *moha* or *avidya* as a fundamental defect inherent in the mental constitution and determining its activities as a formative element, Charaka's *Prajnaparadha* does not occupy any metaphysical status, but expresses itself only in the individual lapses of judgment. This has much in common with the conclusions of the students of modern abnormal psychology.

279. In view of the foregoing we suggest the following lines of research: Intensive studies by scholars of Indian and Western psychology of Indian philosophy (*Darshanas*), *Ayurveda* and allied subjects to evolve:

- (i) a terminology comprehensible to modern workers,
- (ii) a sequential explanation of mental mechanisms, leading to a more scientifically acceptable interpretative psychiatry,
- (iii) a new approach to the problems of personality, and
- (iv) an acceptable programme of mental hygiene for individuals, groups, and nations.

A preliminary to these studies must be a strict examination of the original Sanskrit texts, because there are many interpolations, irrelevant and often apocryphal additions.

THE BOARD OF RESEARCH IN INDIAN MEDICINE

280. To supervise, conduct and to co-ordinate the kind of research mentioned above, we are of the opinion that a Central Research Institute in Indian Medicine should be set up immediately. The functions of this Council will be analogous to those of the Central Medical Research Organisation proposed by the Health Survey and Development Committee.¹ We suggest that a Board or Committee consisting of eminent practitioners and research workers in Indian medicine, representatives of scientific bodies dealing with Indian medicine, and of educational institutions where research on Indian medicine is being carried on, be appointed by the Government of India to lay down the functions of the Council. These functions should cover the following points:

- (i) The formulation of policy of research in Indian medicine.
- (ii) The co-ordination of the policy with that of the other medical research activities.
- (ii) The organisation, general control and supervision over the Central Institute of Research in Indian Medicine (C.I.R.I.M.)

¹ Report of the Health Survey and Development Committee, Vol. II, Chapter XIX, pp. 411-412.

Page 162, para 280, line 3. Substitute the following :—
Research Board or Council in Indian Medicine should be set up immediately.

- (iv) The stimulation of research in Indian medicine in the Universities of India and in other institutions.
- (v) The laying down of rules for the appointment of the staff of the C.I.R.I.M. and for the recruitment and training of research workers and for the award of scholarships for research in India and abroad.
- (vi) The appointment of the Director and Superior Staff of the C.I.R.I.M.
- (vii) The appointment of Advisory Committees for research in special subjects.
- (viii) The allocation of funds and grants-in-aid for research work in the C.I.R.I.M. and in other centres.

THE CENTRAL RESEARCH INSTITUTE FOR RESEARCH IN INDIAN MEDICINE

281. It has been agreed that research in Indian medicine should keep pace with, if not precede, all efforts made for its rehabilitation. This will be the first charge on the Central Government. Research in Indian medicine, in our view, should form part of the general scheme for medical research recently worked out and approved by the Government of India. It should, however, be autonomous in so far as the organisation and conduct of its own activities in research are concerned. It should also be free to dispose off the funds budgetted for it, as it may deem necessary. A very close *liaison* should, however, be maintained between the two research organizations, viz., the Indian and Western. This arrangement will hold good during the period of transition i.e., till synthesis of the Indian and Western systems is effected. After that, all research activities may be amalgamated into one whole. The Central Research Institute (Indian medicine) should aim at organising on an adequate scale the different categories of research envisaged in paragraph 251. We would urge the very early setting up of this Institute, as on this will depend the future progress of the programme of Indian medicine envisaged in this report.

TYPE OF INSTITUTE WANTED

282. Research Institutes can be of two types :

- (i) The Multi-purpose or divergent ;
- (ii) The Uni-purpose or Convergent.

The Multi-purpose Institute deals with many kinds of subjects having no common bond of interest. The Uni-purpose, on the other hand, considers problems connected with one common subject. In such an Institute "although the actual investigations may cover as great a range of science as those undertaken in a divergent laboratory, all the investigations are directed towards a

common end, i.e., towards the elucidation of associated problems related to one subject."¹ It should have man and his health—mental, moral and physical—as its main subject. Too long has medical science in the West suffered from partial and sectional research, carried out without relation to the complete entity—Man.² We should get back to the conception of ancient Ayurveda and of Unani systems which recognise that the whole though made up of parts is other than the sum of the parts. The Institute we have proposed should therefore be of the Uni-purpose type.

THE SECTIONS

283. The Institute should have the following sections :

- (i) *Clinical*. A hospital with suitable number of beds not less than 100 to start with and an out-patient section. The equipment of the hospital should be most up-to-date, with the latest appliances and apparatus. Arrangements must be made for the employment of five kinds of Indian therapies—the *Panchakarma*.
- (ii) *Laboratories*. Well equipped laboratories for medical research of every description.

¹ C. E. Kenneth Mees : *The Path of Science*, pp. 179-189.

² Dr. Kenneth Walker, the Hunterian professor of the Royal College of Surgeons in his book "Human Physiology" (Pelican, 1948 edition) says : "The study of physiology as an isolated subject is apt to give the student a lop-sided view of man. In the preceding pages he appears before us as an isolated field of physico-chemical reactions, or as a complicated piece of machinery which takes in potential energy in the form of food and changes it into work performed and waste products discharged. If we look at man from the point of view of physiology only, it is inevitable that we should arrive at these conclusions. From the data we have studied this conception of man is justified, but it must be remembered that the data have been carefully selected. Every specialist looks at man from his own particular angle : the chemist from the angle of chemistry, the physiologist from the angle of functions, the economist studies him in terms of economics, and the religious man in terms of spiritual values. Only when we examine all the answers different specialists provide will it be possible for us to arrive at any conclusions as to what man really is. In the meantime it is sufficient to say that physiologists have abandoned efforts to explain life along purely physico-chemical lines." Mr. G. N. M. Tyrell, President of the Society for Psychical Research in the introduction to his book "The Personality of Man" observes : Knowledge is now too vast for anyone to be able to sum up its significance. The more trees are discovered the harder it becomes to see the wood. Increase in knowledge has meant increase in specialisation ; and the specialist keeps on learning 'more and more about the less and less'. Thus, when we ask for a bird's-eye view of the whole of science, we are offered a host of 'worm's-eye' views of its parts. Of course, a specialist may be a man of wide culture ; but that it is not the point. He knows only his own branch of science thoroughly and cannot speak *ex cathedra* about others. As regards the significance of them, he is in no better position to speak than is a cultured man who is not a specialist. He may even be in a worse position, for his special knowledge may colour his outlook. In a letter to *The Times* of 19th April, 1944, Professor D'Arcy W. Thompson of St. Andrews University wrote as follows : "Not long ago I sent a young graduate from my small University up to a great one in the hope that he would extend his knowledge and enlarge his mind, as we did, or were meant to do, threescore years and more ago. But he was at once told that he must 'do research,' and was set to 'work at wireworms.' For two years from his first week onwards, all day and every day he 'worked at wireworms' in company with a little team of fellow-workers : one studied the creatures in relation to temperature, another to moisture and so on. Nothing to my mind could be more deplorable."

- (iii) A *Pharmaceutical Section* for studying and experimenting on the Pharmaceutical techniques of Indian medicine, and for preparing organic and in-organic preparations of the systems.
- (iv) *Statistical Section.*
- (v) A *Central Research Library* for literary research and general reference.
- (vi) A *Drugs Museum and a Herbarium.*
- (vii) A *Botanical Garden.*

DIRECTION AND CONTROL OF THE INSTITUTE

284. *Director and Staff.* While the general policy of the Institute will be laid down by the Council of Research in Indian Medicine the actual direction and control will vest in the Director. As the success of the Institute will depend on the ability and character of the Director he should be a person of high scientific attainments, of good research work in Indian medicine to his credit, and of sound organising capacity. The chief function of the Director, in addition to any research that he may be interested in himself, will be to direct the work of heads of Sections. His function, "in the organisation is not to control the operation of the work; it is to direct the work toward the problems that seem most desirable to insure, and assist co-operation between the individual research units, to provide the necessary working conditions and environments, and . . . to see that any results obtained are applied in practice."¹ The relation between the Director and the heads of Sections of the Institute has been well-likened by Mees to that between the conductor and the members of an orchestra. "Each musician of an orchestra is important and independent; the members are correlated through the conductor, who is represented in the laboratory by the departmental head . . ." ² The Director will be assisted by a Deputy Director whose duties will be administrative, in addition to any scientific work he may be doing.

THE SECTIONAL HEADS AND TYPE OF STAFF

285. For each category of research there will be a Head of the Section. As the work in the Institute is in the nature of an orchestra, there must be whole-hearted collaboration between the Heads of Sections—the Clinical, the Laboratory and the others. For the staff of this institution, the ideal would be to secure the services of persons who are well versed in the sciences as well as medicine—both Indian and Western. But as there is a dearth of such persons, in the beginning we shall have to rely on the help of (a) learned *Darshanikas* and experienced *Vaidyas* and *Hakims*; (b) scholars who

¹ C. E. Kenneth Mees: *The Path of Science*, p. 188.

² *Ibid.*, p. 189.

have studied both the systems—Indian and Western—and (c) scientists well qualified in physics, chemistry, medicine and other related subjects. Adequate numbers of those belonging to the (a) and (c) categories will be available, but of category (b) there may be perhaps only a dozen or so in All-India who could be relied upon to take up this work. This initial arrangement will be for the period of transition, that is, till such time as the research workers trained by the Institute are made available in sufficient numbers. This period of transition should not exceed five to ten years at the most. In addition to the Heads of Sections, provision should be made for a Registrar, Assistant Physicians, Laboratory Staff, Technical Assistants, Librarians, Curators, Readers, etc.

STATISTICAL SECTION

286. One of the most important Sections in the Central Research Institute will be the Statistical Section in charge of a capable Statistician. Its purpose will be to devise the lay-out of experimental work in the Institute in such a way that, results obtained can be statistically interpreted and explained. All experiments, therefore, should be so designed, controlled and integrated that the results are statistically comparable. Only in this way the conclusions arrived at will be acceptable to scientists.

THE ARCHIEVES OF INDIAN MEDICINE

287. A reference has already been made under Literary Research, para 257 (iii) regarding a journal which might be named as *Archieves of Indian Medicine* in which all important work done in the Central Research Institute, and elsewhere should be published. This journal would very appropriately be edited by the Central Institute and be a valuable means for bringing the new knowledge to the notice of the scientists and the medical profession.

PROHIBITION OF PRIVATE PRACTICE AND SALARIES

288. In view of the heavy duties of the staff in the direction of research and the giving of special courses, they should not be allowed to take up private practice. At the same time their salaries should be sufficiently high on par with those of corresponding workers in the other research institutions, so as to attract the right type of persons. The various cadres should be permanent and should carry with them the privilege of pension, provident fund, etc.

VENUE OF THE CENTRAL RESEARCH INSTITUTE

289. With regard to the location of the Central Research Institute there are two alternatives. The first one is to locate it in a place like DELHI where it is proposed to found the All-India Medical Research Institute, and the National Physical and Drug Control Laboratories. Already there is the Agricultural Research Institute in

existence and all this should create a research atmosphere which is very desirable. The second is to locate it in one of the Provinces or States where such an atmosphere exists and other related facilities are available. In this connection we have in view the Government College of Indian Medicine, Madras, which has about 200 beds in the Hospital attached to it and a competent staff of workers, besides clinical laboratory facilities. The Government of Madras have already a scheme for organising a Research Department, which, we understand is about to be started. The Ayurvedic College, Benares, has a hospital with 100 beds, a good botanical garden for growing plants and spacious laboratory accommodation. There is also ample room for expansion. Nearby there are the physical, chemical and other laboratories of the Hindu University. At Poona, there is an Ayurvedic College with a hospital to which is attached a laboratory and a pharmaceutical section. There are in this place well established institutions such as the Bandharkar Oriental Research Institute and National Chemical Laboratories where some researches in medicine are being carried out. The Government of Mysore have lately started an institution for research in Indian medicine at Bangalore.¹ They propose to develop it as a centre of research in Indian medicine. A commodious building has already been constructed with ample provision for laboratories, library and a hospital to accommodate 125 beds. There is also a proposal to start a botanical garden to grow medicinal plants. In addition to the good climatic conditions Bangalore possesses, the Indian Institute of Science has created a research atmosphere here. When the Committee visited Bangalore the State authorities indicated that if the Government of India were to start the Central Research Institute with its own funds at Bangalore, the Mysore Government will give land, water, electricity and other facilities free of cost. The final choice of location should of course be made by the Research Board or the Council as the case may be, to be established. We have given here few suggestions of the possible places, for its consideration.

PROVINCIAL AND REGIONAL CENTRES OF RESEARCH

290. The programme of research outlined above should not be confined to the Central Institute only. We are very strongly in favour of research being carried on in Colleges, and special Institutions of Indian Medicine founded for the purpose. Indeed one of the most favourable conditions under which medical research can be carried out is that of a teaching institution with its attached hospital. It is recognised now that the right kind of instruction is possible, only when those engaged in teaching it are themselves engaged in the production of knowledge. It is under these conditions that much of research is being conducted in European countries, and it is when Medical Education, Medical

¹ Sri Jayachamarajendra Institute of Indian Medicine.

Research and Medical Relief are combined and integrated that students imbued with the spirit of scientific enquiry and with zest for social service can be trained. Such teaching and research institutions should be given liberal financial help by the Council of Research in Indian Medicine.

POST-GRADUATE COURSES AND TRAINING OF TEACHERS

291. The Central Institute should also provide for post-graduate courses in the same way as the School of Tropical Medicine, Calcutta. Such instructional courses will not detract the staff from research work but will bring them in close touch with realities which have to be faced in connection with medical relief. Such contact has proved to be of immense benefit in the School of Tropical Medicine, both from the point of view of research and of solving problems of practical importance. A course of post-graduate studies should be carefully worked out and candidates should be invited to come from all parts of India. Later, if there is demand, two courses may be given in a year. These courses should be open to (i) qualified practitioners in both the systems—Indian and Western, (ii) teachers from Schools and Colleges of Indian Medicine, and (iii) graduates of science who wish to take up research in subjects ancillary to Indian medicine. Such courses in addition to making practitioners research-conscious will also help to solve the question of paucity of teachers required for the teaching institutions envisaged in the chapter on Medical Education.

TRAINING OF RESEARCH WORKERS

292. The question of training of the research workers is important, in view of the fact, that few of the exponents of Indian medicine have so far paid any attention to this aspect. Some of the Provincial and State Governments have prepared schemes for research but none have so far fructified. One of the chief difficulties of course is that there are hardly any trained workers to take up research of this kind. The need for training of research workers is, therefore, our first and immediate charge. This could be easily accomplished when the Central Research Institute is established. Carefully selected young graduates could then work under experienced researchers and learn their technique of work. A number of research Fellowships should be established for this purpose. These Fellowships would be tenable for three years which could be extended to five years in suitable cases. As the true spirit of research is the privilege of a few,¹ if after trial for a year or so, a worker is found

¹ "Capacity for creative thinking is a relatively rare inborn talent. Under proper environmental stimulation, it develops that quality of mind essential in original research. Advances in science will depend upon discovering this talent and putting it to work. The need for doing this is well recognised to be in the national interest and is giving rise to the appropriation of vast federal funds for research and legislation towards the establishment of a National Science Foundation. These measures, valuable as they can be in encouraging the development of scientific ability, cannot create scientists. From the overcrowded

to be unsuitable, his fellowship may be discontinued. The value of the fellowships should enable a worker to live comfortably, viz., at least Rs. 150/- per month.

SUMMARY

293. One of our most important functions is to determine the provision that should be made for research in Indian medicine, by the application of scientific methods and with a view to promote the maintenance of health and the prevention and cure of disease. By taking up research earnestly we believe Indian medicine will contribute much to the welfare of the people of this country and of the world. The ancient savants not only adopted observation and experimentation in their research activities but also used meditational or intuitional methods. These latter appear to have contributed much to science in ancient India.

Research should be conducted on the following :

- (i) Research in fundamental doctrines of Ayurveda including Siddha and Unani Tibb,
- (ii) Literary Research,
- (iii) Clinical Research,
- (iv) Pharmacological Research,
- (v) Research in Dietetics,
- (vi) Research on the Psychological aspects of Indian medicine.

294. All experimental work should be so designed, controlled and integrated that the results may be statistically comparable. The theories of *Panchabhuta* and *Tridosha*, though propounded centuries ago, bear striking resemblance to the theories that have been enunciated and proved as the result of most recent advances in the field

graduate schools come hundreds each year with the doctorate in chemistry and other sciences. Yet the great majority of these young Ph. D.'s have no real ability in original thinking! Learned, proficient, and skilled they may be in experimental techniques, but these are not substitutes for intelligence and the capacity to have ideas.

It is evident that the first and most important step towards increasing the yield of men qualified for research is to seek out and recognise the essential talent when it appears. Graduate school need to become more discriminating in their acceptance of candidates for the doctoral degree and more courageous in rejecting those lacking the qualification. Too often the persistent attain what only the gifted deserve. By the assignment of problems requiring the exercise of research talent early in the first year of graduate work, it should be possible to discern latent ability if it exists. Those who display definite evidence of research capacity should then be admitted to what might be called the "higher" graduate school and go on for the doctorate. The present emphasis in graduate training on course work and doctoral thesis often fails to allow sufficient opportunity for training in and practice of research methods. As a consequence, men enter research careers lacking familiarity with the research approach to problems.

It is not more graduate school capacity that is needed today but better selection of those who are to be trained. Men possessing capacity for creative thinking deserve the full attention of graduate faculties and school facilities. Society will be the beneficiary when this comes about." (By courtesy of The Journal of the Electro-chemical Society, 93, 53N, 1948).

170 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

of science. The literature on Indian medicine is very scattered ; many of the original works have been lost and those existing have been so mutilated that, it is difficult to have proper and authentic references. Authoritative versions of these ancient texts should be carefully edited and published. Clinical research is one of the most fruitful lines of approach for the clarification of the principles and methods of diagnosis and treatment of diseases as mentioned in the old literature, in order to make them applicable to modern conditions. The pharmacological properties and therapeutic values of many remedies should be fully investigated: The study of dietetics in health and disease, and the study of their influence on body and mind as explained in ancient texts may be advantageous to Western medicine. Many psychological doctrines and results of modern research have been anticipated and commented upon with great insight in the ancient literature. To supervise, conduct and co-ordinate the kind of research mentioned above, a Council of Research in Indian Medicine should be set up immediately whose functions will be analogous to those of the Central Medical Research Organisation proposed by the Health Survey and Development Committee. Under this body the Central Institute of Research in Indian Medicine should be established by the Central Government with fully equipped laboratories and adequate personnel. Research should also be carried out in all provincial educational institutions. The Central Research Institute should also give post-graduate courses to practitioners and teachers of Indian medicine and should train research workers.

CHAPTER XI

DRUGS AND MEDICINAL PREPARATIONS

I. DRUGS

295. As was but natural, the founders of Indian medicine gave a great deal of attention to the question of remedies, drugs and compound preparations. While all the main classical works on Ayurveda such as the Samhitas of Charaka and Susruta, Ashtanga Sangraha and Hridaya of Vaghbata, deal with drugs in addition to other subjects, works like Dhanvantri Nighantu and Raja Nighantu, Kaiyadeva and Madanapala Nighantus, and Bhavaprakasa Nighantu deal exclusively with medicinal plants and their parts, their properties and therapeutic uses. Some of these works also mention the kind of soil and climate in which different drugs grow, their gathering time, methods of collection and use, etc. Most of the other works like Shaligrama Nighantu and Vanaushadhi Darpan are later compilations from the above mentioned works.

CLASSIFICATION OF REMEDIES

296. In Ayurveda, substances (*dravyas*) are generally classified into 3 main groups according to their origin, viz., (i) *Khanija* (mineral), (ii) *Sthavara* (vegetable) and (iii) *Jangama* (animal). Each of these groups is further divided into 2 sections—*ahara* (food) and *ushadha* (remedies). For pharmacological and therapeutic purposes, all *dravyas*—both remedies and food materials—are classified and described according to :

- (i) Their *Panchabhautic* or Physico-chemical constitution. There are five groups of these.
- (ii) Their *Rasa* or taste (6 tastes) into six groups.
- (iii) Their therapeutic properties, such as *Pachana* (carminative), *Deepana* (stomachic), *Virechna* (Purgative), *Mootrala* (diuretics), *Jawaragna* (antipyretics), etc.

297. In Unani Tibbi drugs are classified variously. In therapeutics the following classification which is based on clinical observation is generally followed : those (a) which act by their physical qualities e.g. demulcents, (b) which act by their temperament. The temperamental quality of a medicine being the quality of heat, cold, dryness or

moisture produced in the body after its absorption and metabolism, e.g. nucis-vomica is hot and dry, (c) which have actions on special organs e.g. diuretics, stomachics etc., (d) which have specific properties e.g. arsenic in syphilis and sulphur in scabies. There are methods laid down for estimation of the strength and quality of the medicines and in this way they are regarded as being hot or cold in 4 degrees.

DIFFICULTY OF IDENTIFICATION

298. While most of the books on Ayurveda describe the actions and uses of drugs, they do not serve the purpose of descriptive materia-medica nor lay down definite characteristics for identification of vegetable drugs. In other words, there is no proper pharmacognosy of medicinal plants in the sense known to Western medicine. This is due to the fact that the physicians of the ancient days identified and collected herbs for their own use from forests and they compounded and dispensed their own medicinal preparations. The students lived with the teacher in the *Guru-kula* and received initiation in the art directly and orally from the *Guru* during the period of their studentship and apprenticeship. The meagre and unsatisfactory descriptions of drugs now found in the available texts are not sufficient for purpose of identification.¹ There are again other factors which give rise to confusion. A single term is often used for a number of absolutely different things. For instance 'Bala' may mean one of the six entirely different things and 'Gouri' one of eleven and so on. Again the same name may be used for entirely different drugs in different parts of India. *Patha* for example is understood as *Cissampoles periera* in certain parts and as *Cycles burmani* in others. 'Jivanti' is another example. Thus on account of there being no descriptive materia-medica, there is little possibility of ascertaining the correctness or otherwise of any identification made. Of the large number of drugs mentioned in *Nigantu* and other texts, many have not been satisfactorily identified upto the present time and some are placed under the category of *Sandigda Dravyas* (drugs of doubtful identity).²

¹ "It is well known that many of the plants mentioned in the old books are difficult to recognise and the description is not always a safe guide for ascertaining whether the specimens obtained are of the particular drugs described." Report of the Drugs Enquiry Committee (1930-31).

² (a) Vaidya Jadavji Tricumji Acharya, a learned member of our Committee has suggested that the names of drugs coming under the category of *Sandigda Dravyas* should be properly investigated as there is difference of opinion about them and that the following terms may help in identifying them.

There are 4 types of such terms.

- (1) Gunagyapika Sangya = names showing property.
- (2) Parichaya " = " " " its morphology e.g. Dadirupushpa, Saptaparna, Triparni etc.
- (3) Deshya Sangya = Names readopted from vernaculars.
- (4) Rudha " = which are traditional.

(b) The Sanskrit as well as Botanical names should be fixed, taking into consideration how far their Gunagyapika Sangyas are correct.

UNSATISFACTORY DRUG SUPPLY

299. On account of difficulties involved in proper identification, it is difficult to get even the right type of common drugs in the market. From the evidence tendered by Vaidyas, Hakims and manufacturing firms of Ayurvedic and Unani medicines, it is clear that there are considerable difficulties in the way of supply of genuine drugs. Many drugs are being sold under different names and different drugs under the same name and even the learned practitioners of Indian medicine cannot definitely say which is which. All the witnesses, and in particular the leading manufacturing firms of Indian medicine have expressed their dissatisfaction with the present state of affairs and have pressed for early action to rectify the same.

IDENTIFICATION OF MEDICAL PLANTS

300. In view of these difficulties we suggest that the first important work to be undertaken should be the identification of medicinal plants in current use, described in important texts of Indian medicine—Ayurveda (including Siddha) and Unani. A beginning in this direction was made by workers such as Jones, Ainslie, Roxburg, Dymock, Watt and others in the nineteenth Century. Later, Kirtikar and Basu, Chopra and others, and among Vaidyas, Jaikrishna Indrajai, Vaman Ganesh, and Desai did much valuable work in connection with identification, distribution and the therapeutic properties of many plants. Much remains yet to be done. However, while the methods of identification is a matter of detail to be settled by workers themselves, we may suggest, that the difficulty generally felt for want of descriptive materia-medica may be got over by collecting crude drugs with definitely known names used by practising Vaidyas or Hakims and identifying them in terms of their botanical order. If in different areas different medicinal plants are known by similar names, these should be collected and identified and inaccuracies corrected. In this work, learned Vaidyas and Hakims should collaborate with botanists, and other workers in the field. It would also be advisable to avail of the help of learned scholars who could critically study the old texts and explain their significance. The work on the identification of medicinal plants should be taken up in all the provincial and regional centres but it should be co-ordinated under the direction of the proposed Central Research Institute. In this way it should be possible to identify correctly most of the crude drugs and classify them.

HERBARIUM OF MEDICINAL PLANTS

301. The work of identification will be considerably helped and accelerated, if a herbarium of properly identified and preserved specimens of all known medicinal plants is established in the Central Research Institute. There is no doubt, that there is a large

herbarium in the Botanical Gardens at Sibpur, Calcutta and there are also other herbaria in the country. But in these, the sheets of medicinal plants are so mixed up with those of the general flora of the country, that to look for a specimen for comparison for the purpose of identification would be like hunting for a needle in a haystack. A herbarium of medicinal and poisonous plants of India was built up by Chopra and Budhwar at the School of Tropical Medicine, Calcutta, after an extensive investigation and collection in the field and by laborious studies in all the existing local herbaria in different parts of the country extending over a quarter of a century. About ten thousand sheets of nearly two thousand of the common medicinal plants have been collected in consequence and properly identified. Several sheets of each specimens were prepared and to ensure perpetuity and enhance and extend their utility to scientific workers, three more or less complete sets of specimens are housed (i) in the Forest Research Institute, Dehra-Dun, (ii) the School of Tropical Medicine, Calcutta and (iii) Drugs Research Laboratory in Kashmir State. This collection can serve as a very valuable guide to workers in the Central Research Institute and enable them to rapidly build up a good herbarium of medicinal plants.

SURVEY AND CULTIVATION OF MEDICINAL PLANTS

302. Much survey work in connection with Medicinal and Poisonous plant and Food and Fodder Poisons has been carried out by Chopra and co-workers and the results are embodied in a monograph in two volumes now under publication by the Indian Council of Agricultural Research. This work may be extended further with special reference to cultivation of medicinal plants. Discussing the importance of the subject Sir R. N. Chopra stated "Further, for the extension of medical relief on rational lines it is not only necessary to make a scientific study of these plants but to cultivate them for therapeutic use if need be. The only way in which it is possible to determine the areas of optimum production with any degree of accuracy is first to find out whether a particular plant grows well and in abundance or is scarce in any particular areas. These studies alone can provide the basic information regarding the suitability of localities for the cultivation of a number of plants of great utility with as good active principle contents, as are found any where else.

303. "The medicinal and toxicological aspects of the Cryptogrammic flora of India constitute an almost unexplored field. We have very little information about the deleterious effects produced by Indian algae. Many of the fungi such as rusts, smuts, etc., attack food and fodder while poisonous mushrooms grow in many parts. Many more poisonous species exist than have been studied, and about these also little or no information is available. The same applies to

liverworts and mosses of India." ¹ It is quite possible that some of these fungi may contain valuable antibiotic properties.

304. The programme of the survey and cultivation of medicinal plants should be carefully worked out by the Central Research Institute in collaboration with the representatives of the Forest and Agricultural Departments and Botanists. This is the only way to ensure a constant supply of authentic drugs required for purposes of medical relief. The cultivation of medicinal plants needs specialised knowledge and guidance of a scientific organisation. The soil, the season of planting, the gathering time, hybridisation, plant diseases, etc., are some of the important factors which call for expert attention in connection with the active principles of plants. The collaborative efforts of plant-culturists, pharmacognosists, pharmacologists, entomologists, and chemists, are essential and these should be made available by organisations corresponding to Bureau of Plant Industry, Foreign Agricultural Relations Bureau, etc., which exist in all advanced countries and which are in the process of development in this country.

COMPILATION OF A BOOK ON MATERIA MEDICA

305. By collecting and sifting information from the ancient texts and other sources and by proper identification according to modern scientific methods, a text book on Materia-Medica should be prepared for the use of students, and practitioners giving all the particulars regarding the drugs. Most of the old books on this subject are unsatisfactory, in as much as, these do not present the subject in a form readily comprehensible to the modern students.²

STANDARDISATION OF MEDICINAL PREPARATIONS

306. We will now take up the consideration of standardisation of medicinal preparations and building up of a Pharmacopoeia of Indian Medicine. In Chapter X on Research, we have discussed at some length, the difficulties inherent in determining the pharmacological action of many indigenous drugs and compound preparations, and indicated the general lines on which research may be carried out in them: When we come to the question of standardisation of single drugs and compound preparations we are confronted with even greater difficulties. We have pointed out that even in the case of the former, enormous amount of work will have to be done before standards of their activity can be established. This is particularly so, in view of the fact that, according to Indian medicine the action of the whole drug is different from its component active principles as known

¹ Col. Sir R. N. Chopra—Presidential Address, 35th Indian Science Congress, Patna, 1948, p. 17.

² Our learned colleague Vaidya Jadavji Tricumji Acharya has been engaged in compiling such a work—Dravyaguna Vignanam, and Dr. Lakshmiopathy has already published Aushadha-Vignanam in 6 volumes in Telugu with English notes.

at present. In the case of compound preparations, this difficulty is further increased. Most of the evidence—written and oral tendered—before the Committee emphasised the necessity of establishing definite standards in connection with the purity and potency of the preparations used. It was also stressed that, there should be a Central Laboratory to standardise crude drugs as well as finished products. No helpful suggestions were, however, offered as to how this should be carried out. Even though it may be possible to formulate standards for single drugs, how compound preparations with varying constituents and divergent methods of preparations could be standardised is difficult to state at present. Reference was made to the standards given in old texts—but we find that these standards are scattered in the literature and are not available in a suitable form. Besides, they refer to the preparation of small quantities of preparations at a time and do not give the process for preparing medicines on a large scale required in these days for commercial purposes. All these factors will have to be considered before a proper Pharmacopoeia, including all preparations in current use is prepared.

A PHARMACOPOEIA OF INDIAN MEDICINE

307. It will thus be seen that, it will not be possible to prepare a proper Pharmacopoeia of Indian Medicine on the lines of Western medicine at once or even in the near future. It might, however, be possible to prepare a Pharmacopoeial List on the lines of the Indian Pharmacopoeial List (1946) prepared by an Expert Committee under the Ministry of Health recently. The List suggested by us may, in the beginning, contain a small number of drugs. As and when more information is obtained by research the List may be enlarged and revised edition issued. It must be emphasised that Pharmacopoeia is a book of standards. Its fundamental objects are to "provide standards for drugs and medicines of therapeutic usefulness or pharmaceutic necessity, sufficiently used in medical practice; to lay down tests for the identity, quality and purity, to ensure, as far as possible, uniformity in physical properties and active constituents." This Pharmacopoeial List of remedies used in Indian medicine should include all information regarding the distinguishing characters, methods of preparation, dosage, methods of administration with various *anupanas* or vehicles, and their toxicity. This work, in our opinion, should be undertaken by the Central Research Institute who will appoint an Expert Committee to consult all the literature first, collect all the data and consolidate these in the form of two lists, viz., one of single important drugs and the other of important compound preparations. These lists should be published as soon as possible for the guidance of the indigenous practitioners and pharmacutists. Work done already in this regard in the Government School (now College) of Indian Medicine, Madras and elsewhere may form the basis therefor.

II. PHARMACIES

308. The Health Survey and Development Committee has stated that, "Second in importance only to the provision of trained health personnel must come the supply of the therapeutic substances, medical appliances without which doctors and public health workers generally may be reduced to a stage of virtual impotency in the practical exercise of their profession."¹ The above holds good equally for Indian medicine also, particularly in view of the fact that the extension of medical relief with rationalised Indian medicine is now sought to be provided for the country. The present position in respect of therapeutic substances of Indian medicine can be summed up as follows: The Vaidyas and Hakims in the past (as in many cases in the present also) are their own pharmacists and therefore, consider themselves the best judges of the purity and standard of the medicines they prepare. In the evidence given before the Committee, it was stated that, they generally took care to ensure the purity and standard of their preparations, because on this depended the success of their practice. Conditions, have, however, changed; and now the professions of Medicine and Pharmacy have everywhere separated, or, are in the process of becoming so. Along with this, the demand by the public for genuine remedies has increased. This has been mainly responsible for the birth of pharmaceutical industry in connection with Indian medicine during recent years. Some of these firms have a considerable reputation, and employ modern machinery and appliances in the manufacture of medicinal preparations on a commercial scale.

309. Some Indian States such as Mysore, Cochin, Travancore, Jamnagar and some institutions in the Provinces have their own pharmacies, where reliable medicines are prepared for the use of State managed hospitals and dispensaries and in some cases for sale to the public. Some institutions of Indian medicine have pharmacies attached to them where medicines required for the use of the attached hospitals and public are prepared. To meet the needs of the dispensaries of Indian medicine maintained by the local bodies, central and co-operative pharmacies have been organised in a few provinces and these we understand effectively meet the demand of hundreds of dispensaries and private practitioners. The Government of Madras have arrangements for the recognition and control of private pharmacies who manufacture preparations for sale to the public institutions. Periodical inspection of these firms is carried out by Inspecting Medical officers appointed for the purpose. A number of provincial and State Governments are considering the question of establishing central pharmacies and stores.

310. The Pharmaceutical industry in relation to Indian medicine is still in its infancy. Yet there are a few large firms of drug

¹ Report of the Health Survey and Development Committee, Vol. IV, page 72,

manufacture in the country who are successfully meeting the rapidly increasing demands for Indian Medicines. Taken as a whole, it cannot be said that any uniformity of standards of preparations is being maintained by all these firms. This, it is said, is due to the difficulty of securing genuine crude drugs of standard quality in the market. The Drugs Enquiry Committee (1930-1931) stated in this regard that, "at present raw drugs are collected by ignorant persons and prepared for the market, regardless of any care which may be necessary to prevent the destruction and the decomposition of the active principles for which the drug is required. Further, adulteration is rife, sometimes due to carelessness on the part of the collector, but very often due to fraud. So serious is the state of affairs that, outside India, crude drugs of Indian origin are beginning to be considered unreliable; and trade is in consequence, suffering. The bark of *Holarrhena antidysenterica* has lost its undoubted position as a specific against amoebic dysentery through the substitution of worthless bark; the Indian aconite is equally unreliable. We are strongly of opinion that steps should be taken promptly to end this state of affairs. Unless and until the practice of adulteration and substitution ceases to exist, the drug industry in this country is bound to suffer grievously." The position as stated above still remains unchanged.

311. We are of opinion that (a) the collection and distribution of crude drugs should be carried out under a license by the Government and, (b) those who sell crude drugs in the market should also be licensed and controlled by a competent inspecting agency created for the purpose. The demand for the preparation of Indian medicines is large and is expected to increase manifold with the progressive implementation of the programme of extension of medical relief envisaged by us in this report. Steps should therefore be taken to ensure that the manufacture of these drugs by commercial and other agencies is properly controlled. In view of the increasing demand for reliable medicines and the inadequacy of agencies for ensuring the same, we wish to reiterate the views of Health Survey and Development Committee which stated, "We believe that it should be possible adequately to provide for these essential needs through a combination of private enterprise suitably assisted where necessary and production by the State where this is found to be in the public interest. The final responsibility should rest with the Government for seeing that the essential needs of the country in respect of all important medical requisites are met and this responsibility should be interpreted as covering the necessity for ensuring that these requirements are met satisfactorily in regard to quantity, quality and price."¹ We are in full agreement with these views.

312. With regard to the exercise of control on the Industry, we consider that it is necessary to lay down at least the minimum

¹ Report of the Health Survey and Development Committee, Vol. IV, p. 73.

requirements in respect of technical staff, equipment and accommodation that is necessary for their efficient working. A small Committee consisting of the representatives of the Industry, Vaidyas, Hakims, and few modern pharmacists should be appointed to examine the requirements of the country in respect of indigenous drugs and finished products and the way this control could best be exercised. The following are some of the subjects which this committee might investigate :

- (a) What are the crude drugs and finished preparations essential for use in Indian systems of Medicine ?
- (b) What practical steps should be taken to ensure the procurement of the right type of crude drugs and the preparation of finished products ?
- (c) What should be the nature of aid and assistance that may have to be given to private agencies engaged in this work and under what conditions ?
- (d) What machinery should be set up to ensure a steady flow of trained technical personnel ?

313. All the commercial firms who gave evidence before the Committee complained of the difficulties they face in respect of procuring excisable and poisonous drugs such as opium, ganja, alcohol, arsenic, etc. We feel that the complaint is genuine. We are of the view that these firms should have the same facilities with regard to the above as are available to the manufacturing firms of Western medicine.

PHARMACISTS

314. There is as yet no organised training in pharmacy connected with Indian Medicine. Even the training of pharmacists of Western medicine covering a period of about 3 years is of recent origin in this country. There are, however, a few centres in the provinces for training compounders of Indian medicine who are taught in addition to compounding and dispensing, elements of pharmaceuticals of Indian medicine also. The unsatisfactory nature of an arrangement by which compounders are utilised as pharmacists has been recorded by the Drug Enquiry Committee (1930-31). This led to the institution of a suitable course of pharmacists in the Western medicine open to candidates with sufficient basic qualification at Madras, U. P. and Bombay. A similar course is very desirable for training pharmacists for Indian medicine also. Its absence is a source of danger to the public. Well trained pharmacists in Indian medicine are essential for making available reliable preparations to the public and we suggest that a suitable course in this connection be worked out by the Committee suggested above and in the meanwhile, we are of opinion that, a class of pharmacists could be

trained in the pharmacies attached to teaching institutions of Indian medicine. We must also stress here that, the profession of pharmacy in connection with Indian medicine, should also be controlled by proper registration in the same way as is proposed under the legislation which has been enacted for the profession of Pharmacy in connection with Western medicine.

SUMMARY

315. To briefly recapitulate, the Acharyas of Indian medicine have given a great deal of attention to remedies—both single drugs and compound preparations. They have classified the drugs (*dravya*) under two headings. (i) *Ahara* (food), (ii) *Aushada* (remedies). Another classification is from the standpoint of their origin, as (i) mineral and metal, (ii) vegetables and (iii) animals. All these are described in terms of their *rasa*, *guna*, *virya*, *vipaka* and *prabhava*. In spite of these definitions and descriptions which relate to their therapeutic properties there is a great deal of difficulty in identifying many of the drugs. The nomenclature of these drugs differs from one province to another and there is no uniformity of opinion between Vaidyas and Hakims with regard to their identification. The large number of synonyms for each of these drugs add further to the confusion. As a result, both private practitioners and manufacturing firms of Indian medicines have suffered considerably. The identification of plants and drugs will be facilitated much if proper botanical gardens and herbaria are established. The programme of the survey and cultivation of medicinal plants should also be carefully worked out by the Central Research Institute of Indian Medicine, in collaboration with the Forest and Agricultural Departments of different Provinces and Botanists. This will ensure for a constant supply of authentic drugs required for purposes of medical relief. As most of the existing books on *Materia-Medica* do not give all the information required for a drug, efforts should be made to compile a proper text book on *Materia-Medica*.

316. Difficulties in connection with standardisation and determination of the pharmacological action of both single drugs and compound preparations are also great. Most of the evidence—written and oral—emphasised the necessity of establishing definite standards and controls to ensure uniformity of composition, strength and purity of preparations; but no useful suggestions were made as to how this could be done. The Vaidyas and Hakims in the past were their own pharmacists and therefore the best judges of the purity and standard of their preparations. Under modern conditions, the professions of physicians and pharmaceutical chemists have become either entirely separated or, are in the process of becoming so. There is a great demand from the public for genuine remedies and as a result the pharmaceutical industry has sprung up. The industry

however, is still in its infancy. It is necessary to lay down at least, the minimum requirements in respect of the technical staff, equipment and accommodation and a system of licensing and inspection of the material used to ensure its genuineness and purity. It is desirable to have a proper training course for pharmacists. The profession of pharmacy should be controlled by legislation as is done in the case of Western medicine.

CHAPTER XII

ADMINISTRATION AND FINANCE

317. We have made a number of proposals in the preceding Chapters on RESEARCH, MEDICAL EDUCATION and MEDICAL RELIEF which would involve additional expenditure to the Central and Provincial Governments and to the States. The establishment of the Central Research Institute at the Centre, the Organisation of Rural Medical Relief and the enlarging and equipping of the educational institutions would undoubtedly increase the financial obligations of the respective Governments. We regret that we have not had the time, nor the expert advice on finance, to obtain the requisite data to work out in detail, the exact extent of the additional expenditure that may be required for giving effect to our proposals. Medical-education and organisation of medical relief are now the responsibility of the Provincial Governments. Hence the extent of expenditure on these projects would naturally vary according to the special requirements of the particular province and the budgetary sanctions of those Governments. We would however, like to point out that in the existing health condition of India, Medical Relief especially in rural areas, should receive a high priority in the Provincial budgets. We would further emphasise that the question of rural medical relief is of such importance to the State, that even a large expenditure cannot but be regarded as well worth incurring. The gain in the shape of improvement in the general health and welfare of the people though not capable of assessment in terms of money, will be considerable.

318. It is not contemplated that from our proposals the Provincial Governments would receive any revenue, though to a small extent, the educational institutions may benefit by the tuition fees of the candidates who are admitted. It is also possible that some income to the exchequer may be anticipated by licensing the trade of drugs and pharmacies which we have recommended in Chapter XI on Drug Control.

319. We have recommended that liberal Government grants be given to some of the educational institutions which are in existence and which are doing good work. In view of the supreme importance of the question of Medical Relief in general and Rural Relief in particular, we would strongly urge that such help should not be stinted, even at the risk of effecting economies in other directions.

Since these measures are associated with medical education, some of the existing institutions in the provinces and States should be properly equipped and staffed, which will only be possible by adequate grants from their respective Governments. By doing this the Governments will save considerable expenditure which will otherwise have to be incurred in starting totally new teaching institutions. If our recommendations are accepted and given effect to with regard to the amalgamation of existing smaller institutions in a given area into single units it will lead to further economy.

320. We have visited most of the educational institutions in India and have carefully scrutinised their buildings, equipment, staff and associated hospitals, etc. We are of the opinion that there are at least ten institutions in the country which can be developed by the Provincial Governments into quite good schools and colleges for purpose of imparting education of the type envisaged in Chapter VII. While, it is not possible for us to go into details here, we have no doubt, that by giving an initial capital grant of Rs. 2,00,000/- to Rs. 2,50,000 accommodation and equipment, and by giving a recurring annual grant of Rs. 1,00,000/- to Rs. 1,50,000 for staff and other expenditure, to each of these institutions in addition to what they have at present, it will be possible to convert them into very useful educational institutions to impart the type of instructions we require. The total cost for upgrading the ten selected institutions, divided among the different Provincial Governments will amount to an initial total expenditure of Rs. 20 to 25 lakhs and a recurring cost of Rs. 10 to 15 lakhs. They will not in our opinion be any great additional burden to the exchequer. We further suggest that this extra expenditure should be incurred under the advice of an expert Committee.

321. The Rural Practitioners who will undergo a three years' course will be trained in the various institutions referred to in the previous para, and therefore, no extra expenditure is likely to be involved. The training of existing practitioners of Indian medicine who will have to undergo a six months course laid down in Chapter VIII will also not be very expensive, even though we have recommended an allowance of Rs. 30 per month per practitioner during the period of six months' training envisaged by us. A rough calculation of the expenditure in this connection is given below :

Rs. 30/- per individual per mensem for } 6 months	Rs. 180/-
For 50 such practitioners for 6 months	Rs. 9,000/-
For two courses of six months per centre	Rs. 18,000/-
For 6 District Centres in a Province per year } to train 600 practitioners.	Rs. 1,08,000/-
Honoraria to the Staff of District Centres etc.	Rs. 12,000/-

322. We further recommend that the Central Government should take up immediately the question of formation of the Central Council of Indian Medicine to suggest ways and means for the establishment of a Research Institute. We appreciate that the finance is the crux of the problem in starting the new institution of Research of the extent and magnitude we have envisaged in Chapter X. Though necessarily we have left the details of the scheme and administration, to the Council or the Board, as the case may be, we would like to lay down a tentative scheme of expenditure that would be involved in giving effect to our recommendations. We are unable to give the exact amount that will be required for the accommodation and equipment of the Central Research Institute. This should be worked out by a Scheme Committee appointed for the purpose. If any of the Provinces or States are in a position to lend or give the required accommodation to the Central Government¹ then the cost of equipment and the salary of the research-staff alone may have to be found. As the need for Research is both imperative and urgent we urge that a beginning be made immediately in the direction indicated by us. There is an excellent College and Associate Hospital of 100 beds in the Hindu University at Benares where the Research Institute can be started, if the University agrees to it. The extra accommodation for the Institute could be provided by the addition of another floor to the present building at a cost of Rs. 1 to 2 lakhs. For equipment another two or three lakhs will be required, spread over a period of two years. The initial capital cost therefore would not exceed five lakhs. An estimate of the necessary recurring expenditure is given below. Another proposal is to utilise the building of the present Tibbia College in Delhi for this purpose. This may serve to maintain this national institution which is now in a bad way. This will also mean a saving of the capital expenditure of about five lakhs on accommodation and equipment. If the offer of the Mysore Government with regard to locating this institute in Bangalore is accepted the initial cost on building and equipment may go up to ten lakhs.

323. We give below the emoluments we have proposed for the various members of the Staff in the Central Research Institute in Indian Medicine. The expenditure in all three cases will be the same so far as this item is concerned.

CENTRAL INSTITUTE OF RESEARCH IN INDIAN MEDICINE

Scales of Pay for the Categories of Professional Research -

1. Director of the Institute	Rs. 1,500—100—2,000
2. Deputy Director	„ 1,000—100—1,500

¹The Government of Mysore have offered land, water, electricity and other facilities free of charge.

I. CLINICAL MEDICINE AND DIETETICS.

1. Professor and Head of Department	Rs. 700— 50—1,200
2. Associate Professor	„ 500— 50—1,000
3. Assistant Professor	„ 350— 25— 750
4. Registrar	„ 350— 25— 750

II. LITERARY RESEARCH AND TEXT BOOK COMMITTEE

1. Professor and Head of the Department	Rs. 700— 50—1,200
2. Associate Professors (2) ¹	„ 500— 50—1,000
3. Assistant Professors (2)	„ 350— 25— 750
4. Readers (2)	„ 350— 25— 750

III. DRUG RESEARCH

1. Professor and Head of the Department	Rs. 700— 50—1,200
2. Associate Professors (2) ²	„ 500— 50—1,000
3. Assistant Professors (2)	„ 350— 25— 750
4. Registrars (2)	„ 350— 25— 750

IV. RESEARCH IN FUNDAMENTAL PRINCIPLES AND DOCTRINES

1. Professor and Head of the Department	Rs. 700— 50—1,200
2. Associate Professors (2)	„ 500— 50—1,000
3. Physics Graduates (2)	„ 350— 25— 750
4. Chemistry Graduates (2)	„ 350— 25— 750
5. Darshanikas (1) (Sankhya, Vaisesika, Vedanta and Yoga)	„ 350— 25— 750

V. MUSEUM

1. Curator	Rs. 500—50—1,000
2. Assistant Curator	„ 350—25— 750
For Administrative staff and equipment	Rs. 60,000 annually

It will take probably 4 to 5 years before the full complement of the staff in all sections are available for work. Therefore the recurring cost during the first few years will be small.

324. Considering the urgency of the problems of medical education and rural medical relief and the importance of research in Indian medicine, which has been neglected for a long time, and

¹ We feel that literary research and writing of text books should be one unit under one head. That is why we have provided for an additional Professor and an additional assistant Professor under this heading.

² One for Pharmacology and the other for Pharmaceutical Chemistry.

186 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

considering the modest scheme suggested we urge that earliest steps should be taken to implement the same. A beginning should be made immediately by setting up Literary and Clinical Sections as the full scheme envisaged by us is likely to take at least 5 years to mature.

325. Further, in order to expedite the implementation of our recommendations, to inspire the necessary confidence in the minds of the Vaidyas and Hakims and in order to co-ordinate the administration of the Indian and Western branches of medicine, we recommend that a Deputy Director-General of Health Services should be appointed to take charge of the Section of Indian Medicine. We recommend that the incumbent of this post should be a specially selected person well acquainted with Indian medicine.

326. Briefly stated, the capital and, recurring annual expenditure in connection with the Research Institute, subsidies to the educational institutions and the six months course envisaged will be, as given below :

	Capital	Recurring
Central Grant for Research Institute.	Rs. 5,00,000	Starting with one or two Sections and gradually expanding to a full-fledged institution in five years when the expenditure will go up to Rs. 2,50,000 according to the time scale.
For Provincial Government and State subsidies to educational Institutions.	Rs. 25,00,000	Rs. 15,00,000
Cost in connection with six months course for one Province.	Nil	Rs. 1,20,000

CHAPTER XIII

SUMMARY OF THE RECOMMENDATIONS

INTRODUCTION

327. In spite of its static condition, Indian medicine is still largely practised in India. There is demand for it on the part of large and varied sections of the population. Ayurveda is not only the original science of medicine, but is also a rich store house of principles and generalisations of medicine, which can be of great value to modern science in general and medicine in particular. Unani Tibb closely resembles Ayurveda in this respect. This Committee does not believe that there can be separate systems of Western or Indian medicine. Science is universal and medical science is no exception to this rule. Such multiplicity of systems is only believed and encouraged by people who have not clearly grasped the significance of the noble ideals as preached by the great Acharyas of Indian medicine and the savants of the Western medicine. The so called systems merely represent different aspects and approaches to medical science, as practised in different ages and in different parts of the world. The aim of all systems is the maintenance of health, and prevention and cure of disease. Anything of value emerging from these should be integrated and utilised for the benefit of humanity as a whole without any reservations.

RECOMMENDATION OF PREVIOUS COMMITTEES

328. Though this Committee is the first of its kind set up by the Central Government, there have been a number of others set up by the Provincial and State Governments, from time to time, to deal with problems relating to Indian medicine. These Provincial Committees have made a number of recommendations which would be applicable to their respective Provinces. The Governments have taken some measure of action on the recommendations of these Committees. There are, however, many important recommendations made by them which remain unimplemented. We recommend that early steps may be taken by the Provincial and State Governments to implement them as early as possible, keeping in view our recommendations and co-ordinating them in such a manner as to effect uniform standards throughout.

EXISTING CONDITIONS

329. As the health of the people depends on economic, physical, mental, moral and social conditions, proper steps should be taken by the State to improve these factors and infuse proper health consciousness in them by educating them in all these matters.

330. The medical relief comprises health personnel and medical institutions. At present there are two agencies—Western and Indigenous—which render medical relief. Every attempt should be made to harmonise these two and unify them as far as possible in the training and relief centres.

331. The existing conditions of both training and relief centres are not satisfactory, and considerable amount of improvement in accommodation, equipment and personnel is necessary. A list of these has been furnished in a tabular form.

SYNTHESIS

332. Taking into consideration the practical working of actual schemes that have been adopted for the last two decades towards integration of Indian and Western medicine in the teaching institutions of Indian medicine in India, our considered opinion is that synthesis is not only possible but practicable, though it will be time-consuming and not easy.

333. We believe that, while Indian medicine can take much of practical value from the Western medicine, the latter can also learn much from the philosophic background of Indian system, its comprehensiveness, the importance it attaches to the soil factor and dietary, its generalisation of principles and the knowledge of truth gained by the use of supra-sensory perception.

334. Opinion in favour of integration leading to synthesis has been expressed by exponents of Western and Indian medicine and by the prominent members of the lay public and we are of opinion that immediate steps should be taken in this direction.

335. The first step to be taken in this regard will be the integration of courses of studies by arranging the curricula in such a way that whatever is weak in the one system is supplemented and strengthened by the strong points of the other system or systems.

336. The second step will be the teaching of each subject by the same teacher, instead of by separate teachers as now, giving the students a reconciliation of the views of the Indian and Western medicine. In this way the students will gain a knowledge that is unified and integrated imbued with the spirit of the ancient Indian medicine and well equipped with modern science.

337. The final step will be in the Research Institute, where experts of Indian and Western medicine will work side by side, checking and verifying the various hypothesis and theories, either rejecting or harmonising them. If the theories are such as could neither be rejected nor reconciled, they are to be used as parallel hypothesis.

338. While Western medicine is being taught in the Colleges of Indian Medicine, Chairs of Indian medicine should be established in the medical colleges (Western medicine) to educate students in the principles of Indian medicine. As research brings out more and more of knowledge of utility, the teaching which, at first, will perhaps, be merely of historical interest can gradually incorporate such knowledge in the other system.

339. To facilitate the integration of teaching and studies, the following steps should be taken simultaneously : (i) improvement in the basic education of the entrants, (ii) compilation of unified text-books giving integrated version of Indian and Western medicine and (iii) training of teachers for the integrated studies.

340. The first source of supply of teachers for integrated studies will be from the present Schools and Colleges of Indian Medicine. Though, in the beginning, they may not be of a high order they should be forthcoming in sufficient numbers soon.

341. Promising graduates of both systems, with proper training will form the second source of supply to the future colleges provided good prospects are open to them.

342. The students should have working knowledge of Sanskrit and Arabic for Ayurvedic and Unani systems respectively and sound knowledge of English and basic modern sciences viz., chemistry, physics and biology before taking to professional studies.

343. One of the main objections raised against integration is that, it will give rise to mental confusion in the student but if the teachers and the taught are of the right type this should not occur.

344. The other objection is that the integrated studies cannot be completed in the time specified for the course. If the syllabus is properly worked out and a lot of unnecessary details eliminated, as is now proposed to be done in America, and has also been recommended by the Health Survey and Development Committee, there should be no difficulty in completing the integrated course within the specified period.

EDUCATION AND EDUCATIONAL INSTITUTIONS

345. The conception of education to be given to a medical practitioner must be considerably altered and enlarged so that, he will

not only have the knowledge of technical subjects, but also acquire a general background in sociological subjects. In other words, he should have the fullest opportunities for the development of scientific and humanistic talents to enable him to be a friend, philosopher and guide to his patients.

346. The curriculum of studies should be so arranged as to give the student adequate knowledge of Indian medicine with the essentials of Western medicine, particularly in those branches where, Indian medicine is deficient, to make him become better fitted for modern conditions of practice.

347. The course of training should extend to five years. A short-term course of three years should be conducted for an interim-period, till an adequate medical personnel becomes available for work in the rural areas. In order to enable the student to undertake such studies successfully, (i) there should be a higher standard of basic qualification, (ii) methods of teaching should be improved, (iii) unnecessary details should be eliminated and (iv) the instruction should be given through either National or Provincial or Regional language.

348. A Curriculum of studies applicable uniformly to all parts of the country, has been worked out and a syllabus furnished.

349. The Government should set up a Board of experts for editing and publishing classical texts and compiling the right kind of text-books harmonising the ancient and modern knowledge, first in Hindi in case of Ayurveda and Urdu in case of Unani and later to translate them into provincial and regional languages.

350. Teaching institutions should be adequately subsidised by the State and maintained at a definite standard.

351. There should be one or more well-equipped and adequately staffed institutions in each Province and State. The teachers should be adequately paid and they should not be allowed to have private practice.

352. Those institutions which fail to come up to the prescribed standard should not be allowed to carry on with the work of instruction. Such institutions, should if possible, be amalgamated together into one good institution or used for the purpose of medical relief.

353. All teaching institutions should also be centres for carrying on research, in which, both the students and teachers should participate.

354. A permanent increase in the number of trained medical personnel will take a long time to have; and even if they are available at a distant date, these persons will be inclined to settle, by

preference in Urban areas only inspite of monetary inducements that may be offered to induce them to settle in villages. The pressing problem of immediate rural medical relief will thus remain unsolved. We, therefore, suggest that use should be made of the existing practitioners of Indian medicine by giving them necessary training in public health and other essential subjects

ORGANISATION OF MEDICAL RELIEF

355. According to the figures we have been able to collect there are more than 2,00,000 indigenous practitioners in the country and out of whom we expect at least 25,000 to come forward for this course, during five years. In addition to this, there are about 4000 of institutionally qualified practitioners. This number should be sufficient to man the primary village dispensaries so urgently needed.

356. The following suggestions have been made :

- (i) That a six months' course in the elements of public health, minor surgery, obstetrics, etc. be given to them,
- (ii) That registered practitioners who wish to take the course be given a subvention Rs. 30/- per month,
- (iii) That graduates of Colleges of Indian Medicine who wish to participate in the scheme are allowed to sit for the examination only without having to undergo the special course,¹ and,
- (iv) That those persons who pass the examination should be taken in the scheme of rural medical relief.

357. There should be All-India standards of professional and technical education for health personnel and a stable and continuous long range health policy.

358. To enable the scheme of the rural medical personnel to be put into early working, suitable text books should be written by experts. These book should be made available in all provincial and regional languages.

359. A medical practitioner trained according to our scheme Nos. (i) & (ii) of para 356 is to be put in charge of a rural dispensary to serve a population of 3,000 to 3,500 and, this will be the primary unit of our medical relief programme.

360. The secondary unit will be in charge of an institutionally qualified person whose headquarters will be in a big village and which would give relief to a population of 10,000 people. This unit shall also supervise the work of the primary units.

¹ Refer to foot note 3 in page 115.

361. The Panchayat Unit should have a mobile unit with emergency equipment and nursing staff. These practitioners will visit the various villages under their jurisdiction and give such help as may be required of them by the village practitioners. This will serve a population of 50,000 people.

362. There should be adequate provision for inpatients in the taluk, district and presidency towns. These hospitals should provide relief in all the branches of medicine, be well-equipped and manned by both practitioners of Indian and Western medicine, the latter doing surgical and obstetrical work and the former treating mainly with Indian medicine. This bilateral arrangement is only for a short time—till the synthesis has taken place and medical personnel qualified under it are available.

STATE CONTROL

363. It is our view that the time has come for the Government to deal with the matter of control of education in and the practice of Indian medicine in a comprehensive manner and that the Government should set up a special Committee to go into the matters of control and registration so that an All-India system of control is evolved, and, if possible, one single Register be maintained for practitioners of all recognised systems based on a comprehensive Act of the Central Government.

364. That, if the problems of health and medical relief are to be tackled on a national footing, the State should take up into its purview all the recognised systems in the country and legislate comprehensively for all instead of by piece-meal provincial legislation.

365. In legislating for the control of recognised systems of medicine the following fundamentals should be kept in view.

- (1) Adequate provision for the supervision of medical education of all the recognised systems, and their teaching and treating institutions.
- (2) Registration of practitioners of the recognised systems.
- (3) Disciplinary control over practice.
- (4) Setting up a consultative and advisory body on matters relating to public health and medical relief.

366. The actual carrying out of the above desiderata should be made over to a statutory body,—the National Medical Board. This Board should consist of two autonomous sections—the Indian Medical Council and the Council of Indian Medicine—one working for the Western medicine and the other for Indian medicine. The provincial and regional branches should be affiliated to the Board which will also be an appellate authority over disciplinary actions on practitioners and institutions taken by provincial branches. In the

matter of representation on the Council of Indian Medicine, the proportion of institutionally qualified must be larger than that of the non-institutionally qualified practitioners.

367. Registration should be made compulsory to all the practitioners—both Western and Indian. Then only it would be possible to squeeze out the quacks and prevent the gullible public from being exploited.

368. The Register of practitioners of Indian medicine should be separate from that of the practitioners of Western medicine for the present. Later when the standard of education in the Colleges of Indian Medicine improves and the non-institutionally qualified fade out, the question may be reviewed and the desirability of having one Register considered.

369. Those who have no recognised academic qualifications include well known Vaidyas and Hakims. No distinction should be made in the register between the institutionally qualified and non-institutionally qualified. However, there should be separate electorates for each of them for representation in the Councils.

RESEARCH

370. There is an urgent necessity for inaugurating research in Indian medicine, so that, it may, in an abundant measure, contribute to the corpus of medical science and art. By research, Indian medicine which has been static for many centuries, will once again make its contribution to the welfare of the people of this country and of the world.

371. There is overwhelming evidence from all quarters in favour of research in Indian medicine.

372. This research should have twofold aim—

- (i) To clear Indian medicine of accretions of centuries, of doubtful value and to make its Science and Art intelligible to modern minds.
- (ii) To work for a synthesis of the Indian and Western medicine so as to evolve a unified system of medical relief and education, suitable for conditions of life in India.

373. Research should be conducted under following categories :

- (i) Research in the fundamental doctrines of Ayurveda and Unani Tibbi,
- (ii) Literary Research,
- (iii) Clinical Research,

- (iv) Drug Research—pharmacological.
- (v) Research on nutrition and dietetics, and
- (vi) Research on psychological aspects of medicine.

374. A Central Council of Research in Indian Medicine should be set up immediately, whose functions will be analogous to those of the Central Medical Research Organisation. This should consist of: (i) Eminent practitioners of Indian medicine, (ii) Representatives of scientific bodies dealing with Indian medicine, (iii) Representatives of educational institutions where research in Indian medicine is being carried on. This Council or Board should be nominated in the first instance by the Government.

375. The functions of the Research Council should be the following :

- (i) The formulation of policy of research in Indian medicine.
- (ii) The co-ordination of the policy with that of the other medical and other research activities.
- (iii) The organisation of and general control and supervision over the Central Research Institute in Indian Medicine to be established.
- (iv) Stimulation of research in Indian medicine in the Universities and educational institutions.
- (v) Laying down of rules for the appointment of the Directors and superior staff.
- (vi) The appointment of the staff.
- (vii) The appointment of Advisory Committees for research work in special subjects.
- (viii) The allocation of funds and grants in aid for research work in the Central Research Institute and in other centres.

376. Research Institutes are of two types :

- (i) The multipurpose or divergent which deals with many kinds of subjects with no common bond of interest.
- (ii) The unipurpose or convergent which considers problems connected with the common subject.

The Institute envisaged by us will be of the second type.

377. The Central Research Institute should have the following sections :

- (i) *Clinical Section* with a hospital of at least 100 beds with up-to-date equipment.

- (ii) *Laboratory Section* with well-equipped laboratories to carry on research in all subjects relating to medicine.
- (iii) A *Pharmaceutical Section*—To study and experiment on the methods of preparations of organic and inorganic remedies used and the constitution of final products.
- (iv) A *Central Research Library* for Literary Research.
- (v) A *Statistical Section* to determine the lay-out of experimental work so that results thereof may be statistically comparable.
- (vi) A *Museum of drugs and Herbarium* of natural and preserved specimens of medicinal plants.

378. The actual direction and control of the Research Institute shall vest in the Director. As the success of the Institute will depend on the ability and character of the Director he should be a person of high scientific attainments having extensive research experience preferably in Indian medicine to his credit, besides sound organising capacity.

379. The sectional heads of various sections should be well versed in general science as well as in both Indian and Western medicines.

380. As the staff of the Institute will have arduous duties to perform both in connection with research and post-graduate teaching they should not be allowed to take up private practice. Their pay and emoluments and prospects should be the same as those of other similar research institutions.

381. The progress of work in various departments should be published in a journal of the Institute which may be called *Archives of Indian Medicine*.

382. The Central Research Institute may be located in New Delhi where it is proposed to locate the All-India Medical Research Institute and other research organisations or it may be located in one of the Provinces or States where research atmosphere and other related facilities are available e.g., Bangalore or Benares.

383. Provision for Research should be made in every teaching institution with its attached hospital.

384. In the Central Research Institute provision should be made for post-graduate courses and training of research workers ; research Fellowship of the value of Rs. 150/- per month tenable for three years in the first instance and to be extended to five years in special cases should be provided for.

DRUGS AND MEDICINAL PREPARATIONS

385. There is great difficulty in correctly identifying many of the medicinal plants used in Indian medicine. The task of proper identification should be taken up in all the provincial and regional centres and co-ordinated under the direction of the proposed Central Research Institute.

386. The identification of medicinal plants will be helped to a great extent if a herbarium of properly identified and preserved specimens of all known medicinal plants is established in the Central Research Institute. Such collections already exist in the Forest Research Institute, Dehra-durt, School of Tropical Medicine, Calcutta and Drug Research Laboratory, Kashmir. These may form the basis for further work on the subject.

387. For the extension of medical relief on rational lines, it is not only necessary to study medicinal plants but also to cultivate them to obtain authentic and regular supplies. To do this successfully, a careful survey of medicinal plants is necessary. This will also help to determine suitable localities for their cultivation.

388. The programme of survey and cultivation of medicinal plants should be carefully worked out by the Central Research Institute in collaboration with the representatives of the Forest and Agricultural Departments of Provinces and States and Botanists.

389. As the existing literature is scattered and not easily comprehensible to students and practitioners, a proper text book on *Materia-Medica* should be compiled giving all the necessary particulars of different drugs by collecting and sifting all available information on the subject.

390. It is not possible to prepare immediately an Ayurvedic Pharmacopoeia on the lines of Western Pharmacopoeias, in the absence of the necessary data required for this purpose.

391. The Central Research Institute should appoint an expert Committee to collect data, and consolidate them to form two lists—one of important single drugs and the other of important compound preparations. This will form the basis of a Pharmacopoeial List of Indian medicine. It should give all the information, regarding the character, method of preparation, dosage and modes of administration with various vehicles (*anupana*) etc. of the medicinal preparations.

392. As there is great difficulty in securing supply of genuine drugs for the manufacture of standard preparations, it is necessary that (a) collection and distribution of crude drugs should be arranged to be carried out under a license of the Government, and (b) those

who sell crude drugs in the market should also be licensed and controlled.

393. A small Committee consisting of the representatives of the Industry, Vaidyas, Hakims and a few modern Pharmacists should be constituted to examine the requirements of the country in respect of indigenous drugs and finished preparations and to suggest how best the control over them may be exercised.

394. Certain minimum standards should be laid down regarding the minimum staff, equipment and accommodation that is necessary for the efficient working of commercial manufacturing firms.

395. In respect of procuring excisable and poisonous drugs such as opium, ganja, alcohol, arsenic etc., the same facilities as are available to manufacturing firms of Western medicine should be made available to the firms which prepare Indian medicine.

396. Well-trained pharmacists of Indian medicine are essential for making available reliable preparations to the public and the Committee envisaged above in (para 393) should recommend ways and means to start a suitable course of training for pharmacists.

397. The profession of pharmacy relating to Indian medicine should be controlled by registration on the lines of similar legislation enacted for the profession of pharmacy of Western medicine.

FINANCE

398. The proposals in the Chapters on Medical Education, Medical Relief and Research would involve additional expenditure to the Central and Provincial Governments and the States. The Committee are unable to give detailed recommendations regarding the extent of the additional expenditure that may be required for implementing their proposals. They urge that, in the existing conditions of health in rural India, Medical Relief should receive a high priority in the provincial budgets.

399. A liberal Government grant should be made to those selected from among the existing educational institutions, to enable them to provide for adequate accommodation, equipment and staff. This may amount to a sum of Rs. 2 to 2½ lakhs as capital expenditure and Rs. 1 to 1½ lakhs as recurring expenditure to each institution selected for the purpose by a Committee to be appointed for the purpose. The total cost will be Rs. 20 to 25 lakhs and the recurring expenditure will be Rs. 10 to 15 lakhs annually divided among all Provinces and States.

400. The subvention of Rs. 30/- per month for each trainee for the rural medical scheme would cost a sum of Rs. 1,20,000 for each provincial Government for training 600 practitioners every year.

198 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

401. The staff for the proposed Research Institute and their emoluments have been worked out. The Capital expenditure for accommodation and equipment would come to Rs. 5 lakhs and the recurring expenditure would come to Rs. 2½ lakhs annually. The latter amount would be considerably less in the beginning, as only one or two research sections e.g. Literary and Clinical will be started in the first instance. Other sections will come in probably in the course of five years.

402. A Deputy Director-General of Health Services should be appointed under the Health Ministry to hold charge of the Section of Indian Medicine. He will be responsible for implementing the recommendations of the Committee and co-ordinating the work in the provinces.

CHAPTER XIV

CONCLUSIONS

403. Our task is completed. The synopsis of our proposals set out in the previous chapter sums up our recommendations in respect of the terms of reference of our Committee. Our views in respect of Synthesis, Education, Medical Relief, Research and Control of practice and teaching of the Indigenous Systems of Medicine have been clearly stated. Our recommendations have been backed up by the views and opinions held by eminent authorities both on the professional and on the lay side. We trust that these will be implemented in the near future especially as the expenditure involved is both reasonable and essential. There is a large volume of opinion in the country in favour of the rehabilitation of the Indigenous Systems of Medicine and making use of them in the medical relief to the people of this sub-continent. We are confident that our scheme of making use of the existing practitioners of Indian medicine for rural areas after giving them a six months' course of training and of introducing a three years' course of training to obtain a continuous supply of rural practitioners will solve this very important problem expeditiously. We are also sure that improvements in Education and Research, as suggested by us, will lead to gradual integration and in due course to Synthesis of the Indian and Western medicine into one whole comprising all that is best in them.

404. We do not pretend that we have found a *panacea* for all the ills but we do claim that we have found a reasonable, practical and economical approach to the problem of medical relief to the people of this country in general and rural areas in particular without a violent disturbance of the existing state of affairs. Our scheme is the best that can be offered under the existing conditions of the country and we have to add that it may be given a fair trial—taken and worked as a whole.

1. R. N. CHOPRA—*Chairman*
2. A. LAKSHMIPATHI
3. B. C. LAGU
4. B. A. PATHAK
5. VAIDYA JADAVJI TRICUMJI ACHARYA

200 COMMITTEE ON INDIGENOUS SYSTEMS OF MEDICINE

6. B. N. GHOSH
7. M. H. SHAH
8. HAKIM NASIRUDDIN AHMED KHAN
9. A. BUTT
10. MOHD. HASSAN QARSHY
11. NISAR AHMED KHAN

C. DWARAKANATH,

Officiating Secretary.

SIMLA

28th July, 1948.