THE ROLE OF TRADITIONAL MEDICINE IN PRIMARY HEALTH CARE IN CHINA

BASED ON AN INTER-REGIONAL SEMINAR SPONSORED BY THE WORLD HEALTH ORGANIZATION IN ASSOCIATION WITH THE MINISTRY OF PUBLIC HEALTH OF THE PEOPLE'S REPUBLIC OF CHINA

9-21 October 1985

Editors: O. AKERELE
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PREFACE

In matters of health it has often been found easier to break with the past than try to live with it. And yet, for a large section of the world’s population, what is needed is to build on what they have already and bring it up to date.

This is the reason why the World Health Organization initiated the Traditional Medicine Programme some years ago, to help Member States to make a critical examination of their traditional medicine systems and practices and to see what should be retained and adapted to today’s needs and what should be discarded, as useless or patently harmful.

One country, the People’s Republic of China, has done precisely this in combining traditional and modern medicine in the health services. The Inter-Regional Seminar, which is the subject of this report, was the first of its kind. It provided an opportunity for the countries represented to share China’s experience in this endeavour.

Such exchanges can only be beneficial, in that they bring this subject to the discerning but critical attention of those responsible for developing policies for primary health care in their countries. They may also encourage those whose health services are almost entirely based on modern Western medicine to explore the advantages that certain traditional treatments may offer.

The scientific advances of recent years have certainly widened the gap between modern and traditional medicine but, paradoxically, they have triggered off a counter-reaction where the human approach of the latter is often preferred to the cold impersonality of modern medicine.

That traditional medicine has a useful and important part to play in primary health care in many countries is no longer in doubt. But the exact nature and scope of this rôle will have to be defined within the socio-cultural context of the countries where these practices continue to flourish. This is but one of the many challenges that face us in our quest for Health for All, but one which will need to be addressed.

H. Mahler, M.D.
Director-General
INTRODUCTION

The WHO Inter-Regional Seminar on the Role of Traditional Medicine in Primary Health Care in China was held in the People's Republic of China from 9 to 21 October 1985.

The purpose of the Seminar was to give those responsible for health policy at national level an opportunity of studying the utilization of traditional medicine in primary health care in the People's Republic and of discussing and examining the possibility of adopting comparable approaches in the provision of health services in their own countries.

The main emphasis, therefore, was on learning from the Chinese experience in combining two vastly different systems of medicine to obtain comprehensive coverage of the population by the health services. In the course of doing this, participants were able to see for themselves something of traditional Chinese medicine in practical use.

The Seminar was attended by 20 participants, representing 19 countries of the African, Eastern Mediterranean, South-East Asia and Western Pacific Regions of the World Health Organization. In addition, there was a representative of the World Council of Churches and a number of observers, 10 Chinese temporary advisers and members of the WHO Secretariat (Annex 1).

The programme included three main types of activity. Firstly, there were a number of formal presentations by distinguished Chinese physicians and health administrators, followed by discussions on points of special interest.

Then, there were field visits to selected health centres, hospitals, medical colleges and other institutions to demonstrate the range of rural and urban health facilities available to the people and the part that traditional Chinese medicine plays in them. In choosing the places and institutions to be visited, the Chinese authorities wished to give the participants a representative picture of the situation, showing neither the best nor, indeed, the other extreme.

Finally, to ensure that the process of exchange should be mutual, participants, who were all senior health administrators, were asked to bring with them brief accounts of the situation with regard to traditional forms of medicine in their own parts of the world and to use this material for a joint presentation and, at the end of the Seminar, there was a round table discussion on traditional medicine as a health resource, which provided an opportunity for an exchange of views on the applicability in other countries of the Chinese approach to utilizing traditional practitioners in the health services.

The Seminar was held partly in Guangdong Province, in Conghua County and in Guangzhou, the provincial capital, and partly in Nanning, the capital of Guangxi Autonomous Region. The working language was English, with translation from and into Chinese. The programme is shown in Annex 2.

At the opening ceremony, the speakers were introduced by Dr Tian Jingfu, Director of the Department of Traditional Chinese Medicine of the Ministry of Public Health, who played an important role in the initiation, planning and realization of the Seminar.
The first speaker, Dr Huang Guanghua, Director of the Bureau of Public Health of Guangdong Province, welcomed the participants, expressing the conviction that the holding of the Seminar would certainly provide a stimulus to the further growth and progress of traditional Chinese medicine in the area. He explained that Conghua County came somewhat below the average for the province in its economic status and health work. However, considerable strides in the health field had been made since the designation in 1980 of the Conghua Department of Public Health as a WHO Collaborating Centre for Primary Health Care.

Dr Hiroshi Makajima, Regional Director of the World Health Organization, delivered the inaugural speech and formally opened the Seminar. He was followed by Dr Hu Ximing, Vice Minister of Public Health of the People's Republic of China. Their speeches, which were complementary and set the tone for the whole Seminar, are given in full below.

The sections which follow these opening addresses deal with different aspects of traditional Chinese medicine, its past and recent history, and its place in the health care system of modern China. They are followed by a short account of the situation regarding traditional medicine in the participants' countries and a condensed version of the round table discussion on the theme - traditional medicine as a health resource. Brief notes on the institutions visited in the course of the Seminar are included.

ACKNOWLEDGEMENT

It is a great pleasure to acknowledge the excellence of the arrangements made by the Chinese authorities for this Seminar and to express the deep appreciation of the Organization and the participants to all who contributed to its success.
INAUGURAL ADDRESS

Dr Hiroshi Nakajima

Dr Hu Ximing, Vice Minister of Public Health, Dr Huang Guanghua, Director of Bureau of Public Health of Guangdong Province, Dr Tian Jingfu, Director of the Department of Traditional Medicine, ladies and gentlemen:

It gives me great pleasure to take the floor at the opening of this Inter-Regional Seminar on the Role of Traditional Medicine in Primary Health Care in China. I should like to express my sincere thanks to our hosts, for their kind cooperation in making it possible to hold this Seminar.

When the People's Republic was created in 1949, the leaders of the new China were faced with the almost impossible task of expanding health services to cover the population. One of the measures adopted was the integration of traditional medicine into the health care system, at all levels but particularly with regard to primary health care.

Now, thirty-five years later, it seems appropriate to take stock and to see what lessons have been learnt and what conclusions may be drawn from this unique experience, this great public health experiment, and to consider to what extent comparable approaches might be beneficial in other countries.

During the last decade, many groups have visited China to study various aspects of health care. One consequence of these visits and of the exchanges and improved communication that have followed has been the arousal of widespread interest abroad in traditional Chinese medicine, its philosophy and the methods it employs, notably acupuncture and herbal medicines, and the results obtained from their use. Much has been written on the subject in recent years and attitudes range from the unduly critical to the over-enthusiastic.

The appraisal of the place of traditional Chinese medicine in modern health care is now one of the major topics of discussion in the western medical world, as it was at the Satellite Symposium on Traditional Medicine held in conjunction with the XVIIIth International Congress of Internal Medicine, held in Kyoto in October 1984.

And this is the reason why the World Health Organization is holding this Inter-Regional Seminar in association with the Ministry of Public Health of the People's Republic of China. There are two main questions to be addressed:

What has been the result of incorporating or integrating traditional Chinese medicine into the health services?

To what extent may the Chinese approach be applied by other countries?

The first question can, of course, only be answered by the Chinese health authorities, the second only by the participants representing their national health administrations.

In the discussions and visits of the next few days, our Chinese hosts and colleagues are going to give us a broad overview of the place of traditional

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1 Director, World Health Organization, Western Pacific Regional Office, Manila, Philippines.
medicine in primary health care in this country and, in the course of doing so, will help us acquire some insight into the benefits and risks of mixing traditional and Western medicine.

It seems that the policy of integration has been in operation long enough to permit a reasonably detached and objective assessment of the use of traditional medicine in modern health care. It would be of value to know what difficulties were encountered in the process of integration, how they were overcome and what are the particular strengths and weaknesses of each system.

Perhaps the time has also come to draw some conclusions on what these different systems have brought to each other. Do doctors trained in Western medicine find it difficult to accept the traditional Chinese concepts of disease and its causation? Are traditional and modern Western medicine really integrated or have they remained essentially separate systems? Is traditional medicine gaining in strength and professional and popular support or is it gradually being replaced by the extension of Western medicine?

These are some of the subsidiary questions that will, no doubt, be asked and answered during the Seminar. Such questions, it should be stressed, carry no hint of criticism but are inherent in our attempt to understand China's experience in this field and its relevance for other parts of the world.

In any assessment of the role of traditional medicine in primary health care one has, of course, to consider the place of each component part of the system. What, for example, is the relative importance today of acupuncture, moxa, exercise, massage and herbal medicines in treatment? For which types of condition are these methods considered to be specially indicated and for which are they regarded as inferior to modern Western medicine? Presumably, after many years of using both systems, it has been possible to establish what are the limitations of the various traditional forms of therapy.

At this point, I should like to mention briefly some examples of the traditional medicine activities carried out by the Western Pacific Regional Office of the World Health Organization, which continues to promote the use of traditional medicine through the organization of regional working groups, national workshops, study tours, and the provision of consultancy services to countries. In the field of herbal medicine, seminars have been held, support given for research activities, and fellowships awarded. Three meetings on the standardization of acupuncture nomenclature have been held and national and international courses conducted in the various training centres for traditional medicine.

The thirty-sixth session of the Regional Committee in Manila in September this year adopted a resolution which calls for the further development of traditional medicine in the countries of the Region.

Obviously, within the space of a few days, no one could hope to obtain more than a very general idea of such a complex subject as traditional Chinese medicine but, if our Chinese colleagues can distil the results of their experience, we should be able to obtain a balanced perspective and come to some conclusions on the chief issues involved, without getting lost in the details of individual therapies, however fascinating these may be.
Our Chinese hosts have gone to a great deal of trouble in making the necessary arrangements to ensure that this Seminar will be an enjoyable as well as a valuable experience for all concerned. I wish to express again, my deep appreciation to all concerned.

I now have pleasure in declaring open the Inter-Regional Seminar on the Role of Traditional Medicine in Primary Health Care in China.
ADDRESS

Dr Hu Ximing

Respected Dr Nakajima, dear representatives and friends, ladies and gentlemen:

It is a great pleasure that WHO has convened this Inter-Regional Seminar on the Role of Traditional Medicine in Primary Health Care in China. On behalf of the Ministry of Public Health, I warmly welcome you, Dr Nakajima, your colleagues from WHO, and our friends from all over the world.

In addition to the traditional medicine of the Chinese nations, there are also African, Arabic, Indian and Latin-American traditional medicines, but traditional Chinese medicine is the one that serves the largest section of the population in the world.

China is one of the developing countries. It has a population of one billion, of which 80% live in the rural areas. Therefore, strengthening primary health care is an important aspect of our health work at large. So, in carrying out this task in the rural areas, we lay special emphasis on giving full play to the role of traditional medicine and pharmacology. In our experience, traditional Chinese medicine is effective in the prevention and treatment of disease, with negligible side effects, and it enjoys the confidence of the great mass of our people. Hence, our Government advocates and actively fosters its development. Since the founding of New China, our Government has worked out a series of far-sighted policies to protect the development of traditional medicine, and this is provided for in Article 21 of our Constitution. Recently, our Government has again pointed out that traditional and Western medicine should be placed in an equal position. That is to say, on the one hand, we should continue to study and evaluate our heritage of traditional medicine, and on the other, we should apply the sophisticated scientific technology of today to support and promote its further development. At present, we are drafting "The Law on Traditional Chinese Medicine", which will ensure the balanced development of traditional medicine in our country.

Traditional Chinese medicine is one of the important parts of the splendid cultural heritage from our ancient civilization. It is the summation of the Chinese nations' experience in struggling against illness through centuries. It has played an important role in the prosperity of the Chinese nations, and is still of incalculable value. With its unique and complete theoretical system, it stands firmly among the medical sciences of the world, and also exerts a profound influence on the medical thought and practice of several countries.

Many countries have their own traditional medicine, which contributes to the prevention and treatment of disease of their people. By convening this Seminar in China, WHO has enabled the participants to have an opportunity to exchange their experiences on traditional medicines. In this conference, some of our health administrative officers and experts in medicine and pharmacology will give a brief introduction on the situation of traditional medicine in China. I hope that, through the discussions, the traditional medicine systems of each country can be mutually enhanced.

1 Vice Minister, Ministry of Public Health, Beijing, People's Republic of China.
We are willing to cooperate with all our colleagues from the different countries and to work towards the achievement of the goal set by WHO of "Health for All by the Year 2000". We will also do our best for the peace of the world and the welfare of mankind. We, the Ministry of Health of China, will make our own contributions to improve the health of mankind.

Finally, please allow me, on behalf of the Ministry of Public Health of China, and also in my own name, to wish this Seminar on the Role of Traditional Medicine in Primary Health Care in China complete success, and wish all our friends and colleagues present good health.

Thank you.
TRADITIONAL CHINESE MEDICINE: PAST, PRESENT AND FUTURE

Dr Tian Jingfu

Traditional Chinese medicine forms a very important part of the Chinese cultural heritage and includes not only Han medicine but also the theories and practices of the various national minorities, such as the Dai, Mongolian, Tibetan and Uighur nationalities, each with their own unique systems.

As practised today, it is still largely based on the philosophical concepts and on the methods described in the ancient classics. These include the theories of Yin and Yang; the Wu-Xing (five evolutions or elements) Concept; the influence of nature and the seasons; the detailed examination of the pulse and other diagnostic methods; and the use of herbal remedies, acupuncture, moxibustion, cupping, breathing exercise therapy, systematic exercise, massage, hydrotherapy and other methods in the prevention and treatment of disease.

In considering the place of traditional medicine in primary health care in China, it is useful to set some of the methods and concepts employed in their historical context.

ANCIENT CHINESE MEDICINE

It was in the early Zhou dynasty (c. 1121-249 B.C.) that the duties of doctors were defined. This dynasty was one of the most outstanding periods in Chinese history and literature, art, religion, philosophy, and all that is usually included in the term civilization flourished and reached a high degree of development. Medicine, formerly an effective and practical art, based upon observation and experience, adopted the philosophical speculations of the time. Health, it was thought, was a question of the body maintaining a relative balance, not only internally but also with the external environment. Thus, diagnosis and treatment were aimed at identifying the type of imbalance present and then restoring it to normal, a very scientific concept for all its antiquity. From the various theories on the causation of disease, the concepts of Yin-Yang and the Five Evolutions came about, which formed the basis of the whole of traditional Chinese medicine for over two thousand years, right up to the present day.

The Nei Jing or Canon of Medicine

The oldest and the greatest Chinese medical classic is the Nei Jing or Canon of Medicine. Upon it is built most of the medical literature of China. Tradition ascribes it to Huangdi, the Yellow Emperor (2698-2598 B.C.), but without clear historical evidence and it probably dates from about 250-220 B.C., being a compilation by various writers.

The Nei Jing sums up the clinical, physiological and theoretical knowledge of all the centuries which preceded it and is the earliest attempt to systematize the medical thought of these ancient times. The work consists of two distinct books: the Su Wen and the Ling Shu. The former covers the general principles of health,

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1 Director, Department of Traditional Chinese Medicine, Ministry of Public Health, Beijing, People's Republic of China.
the influence of nature on diseases, the Wu-Xing Concept, the maintenance of a proper balance of Yin and Yang, the theory of disease, the four diagnostic methods and the principles of treatment by medicines, blood-letting, and acupuncture. The latter is more or less a special treatise on the art of acupuncture, which was the accepted method of treatment of the day.

The Nei Jing describes the standard methods of diagnosis: observation to note the complexion and expression of the face and the appearance and character of the tongue; auscultation to listen to the sound of the voice and olfaction to smell the odour of the patient; interrogation to inquire into the history, symptoms and cause of the illness and into the condition of the appetite and excretion; and palpation to examine the pulse and abdomen. The relative value of these four methods was in the order named.

Acupuncture and moxibustion

Acupuncture and moxibustion are peculiarly Chinese, for they are not mentioned in the medical history of any other nation. As Lu and Needham point out, the mountainous landmark of acupuncture literature is indeed the Nei Jing. A great many of the chapters in the Ling Shu are concerned mainly with acupuncture. Some give anatomical descriptions, still very intelligible today, of where the 12 regular channels begin and end, and what structures they pass through or over; and others again relate the physiology of the channels to the diagnosis of disease by the four diagnostic methods.

Great physicians

The Han dynasty (206 B.C.-A.D. 220), which is considered the most glorious epoch in Chinese medical history, was rendered especially memorable by the fact that during this period there lived Zhang Zhongjing and others, the greatest physicians of China. Much stress was laid upon direct observation, thus placing medicine on a more scientific basis.

Zhang Zhongjing, often spoken of as the Chinese Hippocrates or the "saint of medicine", is especially known to posterity for his Shang Han Za Bing Lun, or Treatise on Fevers and Miscellaneous Diseases, which ranks with the Nei Jing in importance and deals not only with febrile diseases but with other non-febrile diseases such as asthma and jaundice. With the advent of Zhang Zhongjing a new era was inaugurated. Diseases were studied more from a clinical standpoint, emphasis being laid on the physical signs, symptoms and course of the illness, the methods of treatment and the action of drugs; and, most important, a clinical system of "treat the patient according to syndrome differentiation" was established for the first time, which is still widely used nowadays. His book is regarded as one of the most valuable works in medicine. His prescriptions, the first of their kind in Chinese medicine, contain only a few potent drugs.

The outstanding contribution of the Ming dynasty (A.D. 1368-1644) was the publication of the Compendium of Materia Medica by Li Shizhen, completed in A.D. 1578 and published in A.D. 1596, after the authors' death. Li Shizhen devoted 27 years to it, carefully consulting the preceding monographs on materia medica, correcting mistakes, deleting duplications and introducing much new material. Of the drugs listed, 1074 are derived from plants, 443 from animals, and 354 from minerals and other substances. Under each drug, the proper and popular names are given, together with information from the literature and critical remarks by the author. The source, form and general history are then given, with details
concerning collection, preparation, dosage and presentation, and a description of the nature and properties of each drug, with recipes and indications for use. The Compendium is undoubtedly the best of the many works on materia medica in traditional Chinese medicine. As early as the seventeenth century, it was translated successively into Latin, Russian, Japanese, English, German and French, and it spread all over the world.

The contribution of the Qing dynasty (A.D. 1644-1911) was a further understanding of the Wen Bing (infectious febrile diseases). Famous monographs were published and a Wen Bing school headed by Ye Tianshi and Wu Jutong was formed.

THE BEGINNING OF THE MODERN PERIOD

In the beginning of the nineteenth century, Western medicine entered China along with foreign traders and missionaries and the opening of dispensaries and hospitals. With the introduction and increasing influence of Western medicine, appeared the coexistence of the two systems of medicine. Some traditional physicians tried to interpret the theory of traditional medicine in terms of Western concepts to facilitate the link up between the two systems of medicine.

Inevitably, there was conflict between the old and the new, with the practitioners of traditional Chinese medicine organizing opposition to the Government's attempts to impose restrictions or even total prohibition on their activities. Eventually, a form of compromise was reached. The traditional practitioners were allowed to practise, but they were despised and discriminated against in all fields. Thus, traditional Chinese medicine reached its lowest ebb before the founding of the People's Republic.

At the time of the creation of the People's Republic of China, in 1949, only a very small proportion of the population had access to proper medical care. When, therefore, the Ministry of Public Health began its programme of strengthening existing hospitals, establishing a network of new facilities and expanding medical schools and training institutions, the integration of traditional practitioners into the health system was an obvious step.

Experience during the war years had shown the value of these practitioners and, moreover, they enjoyed the confidence of the population. The official policy in 1950 was: "Unite all medical and health workers, new and old, of the traditional school and the Western school, and form a solid united front to strive for the development of the great cause of the people's health".

In the years that followed, there was a rapid improvement in the health manpower situation, with a greatly increased output of doctors and the production of large numbers of auxiliary health workers of different categories. Traditional Chinese medicine came to be incorporated at all levels of the health services, receiving much support from Mao Zedong's teaching that: "Chinese traditional medicine and pharmacy constitute a great treasure house that must be explored and raised to the highest level".

As a result of the great programme of expansion of the last 30 years or so, there are now nearly 2.4 health care personnel and 2.0 hospital beds per 1000 population for the country as a whole. Figures for individual provinces or autonomous regions show considerable variation while those for the municipalities are, as might be expected, much higher - Table 1.
TABLE 1. HEALTH CARE PERSONNEL AND HOSPITAL BEDS, 1984*

<table>
<thead>
<tr>
<th>Provinces</th>
<th>Health care personnel (per 1000 population)</th>
<th>Hospital beds (per 1000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Autonomous regions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guangxi Zhuang</td>
<td>2.19</td>
<td>1.43</td>
</tr>
<tr>
<td>Inner Mongolia</td>
<td>5.40</td>
<td>2.48</td>
</tr>
<tr>
<td>Ningxia Hui</td>
<td>4.17</td>
<td>2.05</td>
</tr>
<tr>
<td>Tibet</td>
<td>4.23</td>
<td>2.43</td>
</tr>
<tr>
<td>Xinjiang Uighur</td>
<td>6.53</td>
<td>4.26</td>
</tr>
<tr>
<td><strong>Municipalities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beijing</td>
<td>13.16</td>
<td>3.65</td>
</tr>
<tr>
<td>Shanghai</td>
<td>11.91</td>
<td>4.43</td>
</tr>
<tr>
<td>Tianjin</td>
<td>9.64</td>
<td>2.99</td>
</tr>
<tr>
<td><strong>National average</strong></td>
<td>4.09</td>
<td>2.10</td>
</tr>
</tbody>
</table>


The general organization of the health care system is shown in Fig. 1. The unique feature which has enabled China to achieve an exemplary degree of population health coverage is the three-level network, in which the county-level health institutions provide technical guidance and training facilities for professional health staff for the whole country, while the district health centres do the same for the township health stations that come under them.
FIG. 1. GENERAL ORGANIZATION IN THE HEALTH CARE SYSTEM IN THE PEOPLE'S REPUBLIC OF CHINA

Ministry of Public Health

Provincial, Municipal, Autonomous Regional People's Government

Prefectural (Municipal, Autonomous Prefectural) People's Government

County People's Government

District/Sub-District

Township/Village

Bureau of Public Health

Department of Public Health

Chinese Academy of Medical Sciences
Academy of Traditional Chinese Medicine
Academy of Preventive Medicine
Institute for the control of pharmaceutical and biological products
Serum and Vaccine Institute
"Jiangkang Bao" (Health newspaper)
People's Health Publishing House
Hospitals, colleges of medicine and pharmacy, college of traditional Chinese medicine and research institutes

General and specialized hospitals, and traditional hospitals
Epidemic prevention centres
Maternal and child health centres
Institute for the control of pharmaceutical and biological products
Colleges of medicine and pharmacy, colleges of traditional Chinese medicine and research institutes
Health schools (middle grade)

General and specialized hospitals, and traditional hospital
Specialized prevention and treatment centres
Epidemic prevention centres
Maternal and child health centres
Laboratories for the control of pharmaceuticals
Health schools (middle grade)

County hospital, county traditional hospitals
Specialized prevention and treatment centres
Epidemic prevention station, maternal and child health station
Drug quality control station
Health schools (middle grade)

District health centre/urban sub-district clinic/clinics and health centres in factories, governmental organizations, and schools

Health stations with rural doctors, health aides, birth attendants

Adapted from: Primary Health Care - the Chinese Experience, WHO, 1983.
Traditional Chinese medicine, which came near to being officially suppressed in the early part of this century, is now firmly established. A Vice Minister, a graduate from the Beijing College of Traditional Chinese Medicine, has been appointed in the Ministry of Public Health with overall responsibility for the application and development of traditional Chinese medicine throughout the country. There is a Department of Traditional Chinese Medicine within the Ministry, which formulates policies, plans programmes for their implementation, evaluates progress, ensures the appropriate exchange of experience and information, and directs work in traditional medicine in the provinces. Directly related to the Ministry is the Academy of Traditional Chinese Medicine, with its own research institutes and affiliated hospitals.

A vast network of traditional medicine facilities has been created, which extends throughout the health care system, from the provincial, municipal and autonomous regional levels down to the county, district and township levels. By the end of 1984, there were over 1100 traditional medicine hospitals (with a total of more than 80,000 beds) at the county level or higher, while departments of traditional medicine had been set up in nearly 90% of the 10,000 general hospitals. More than 470,000 traditional medical personnel and pharmacists work in the health services and, of these, some 220,000 are located in the rural areas. Trends in the allocation of resources for traditional medicine over the years since the creation of the People's Republic are indicated in Table 2. In 1980, some 34% of physicians or middle-grade doctors, or their equivalent, were traditional medicine personnel.

This great increase in the number of traditional medicine personnel has required a comparable expansion of training facilities. Twenty-three Colleges of Traditional Chinese Medicine and an Inner Mongolian College of National Minority Medicine have been established, together with 11 Faculties of Traditional Chinese Medicine in other medical colleges. Altogether, there are 25,000 traditional medicine undergraduates. In addition, 21 middle-grade technical schools of traditional medicine have been set up, with over 11,000 enrolled students.

Along with the undergraduate teaching, there is an extensive programme of training which includes advanced classes for teachers and traditional doctors, and instruction in traditional medicine for those already trained in modern Western medicine, of which over 4000 have completed the course of two years or more. To ensure that their learning and experience are handed down to the next generation, old traditional doctors are encouraged to take apprentices to study under them and even to run their own classes. There are 46 research institutes of traditional Chinese medicine, carrying out studies of basic theory and clinical investigations.

The Twenty-first article of the Constitution of the People's Republic of China stipulates that "The State develops medical and health services, promotes modern medicine and traditional Chinese medicine". In 1985, the Government adopted the principle - "To put traditional and Western medicine in a position of equality". The main points of the government policy on traditional medicine are as follows:

1. Endeavour to take up, explore, systematize and elevate the level of traditional medicine.

2. To unite and depend on the traditional and the Western doctors so as to develop and raise the level of traditional medicine.

3. To organize the Western doctors to learn and study traditional medicine and to achieve the aim of integration.
4. To apply modern science and sophisticated technology to attain the goal of modernization of traditional medicine.

5. To develop traditional medicine and integrated medicine in a planned and proportionate way and to provide suitable conditions for their development and enhancement.

6. To protect and utilize drug resources in a rational way so as to develop traditional pharmacy.

Thus both types of medicine are promoted and protected by the State.

**TABLE 2. TRENDS IN RESOURCES FOR TRADITIONAL MEDICINE 1950–1984**

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<tbody>
<tr>
<td>Western medicine</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Physicians</td>
<td>38 000</td>
<td>73 590</td>
<td>188 660</td>
<td>292 980</td>
<td>447 290</td>
<td>597 140</td>
</tr>
<tr>
<td>Middle-grade doctors</td>
<td>49 000</td>
<td>135 700</td>
<td>252 710</td>
<td>356 100</td>
<td>443 760</td>
<td>457 690</td>
</tr>
<tr>
<td>Pharmacologists</td>
<td>480</td>
<td>2 390</td>
<td>8 260</td>
<td>12 770</td>
<td>25 240</td>
<td>33 660</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>2 870</td>
<td>18 410</td>
<td>37 200</td>
<td>57 200</td>
<td>83 960</td>
<td>87 950</td>
</tr>
<tr>
<td>Chinese medicine</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Physicians</td>
<td>276 000</td>
<td>337 020</td>
<td>321 430</td>
<td>228 640</td>
<td>262 180</td>
<td>324 270</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>-</td>
<td>53 500</td>
<td>71 850</td>
<td>86 200</td>
<td>106 960</td>
<td>147 510</td>
</tr>
<tr>
<td>Professionals</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Hospital beds</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>84 620</td>
<td>461 800</td>
<td>1 033 300</td>
<td>1 764 330</td>
<td>2 184 420</td>
<td>2 412 360</td>
</tr>
<tr>
<td>Chinese medicine</td>
<td>220&lt;sup&gt;a&lt;/sup&gt;</td>
<td>5 680</td>
<td>9 250&lt;sup&gt;b&lt;/sup&gt;</td>
<td>13 680</td>
<td>49 980</td>
<td>86 540</td>
</tr>
<tr>
<td>(County level and above)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> 1952; <sup>b</sup> 1963.

Note: Figures round to nearest 10

The pursuit of this policy has brought about a mutual infiltration between the traditional Chinese and the modern Western systems of medicine and the development of a form of integrated medicine, which combines the best features of each. Such a process is, of course, a long-term one but it has already proved to be highly beneficial.
In China, the basic guiding principle of health work is to serve the people and, since 80% of the population live in the rural areas, the main emphasis of our health service should be on extending coverage and improving the quality of the services available to the rural population. In this endeavour, traditional Chinese medicine has a very important role, as it is culturally fully acceptable and continues to enjoy a great deal of popular support, even where modern Western medicine is also employed. Most rural doctors and health aides have an elementary knowledge of traditional medicine and are able to use simple, effective and inexpensive techniques in clinics and health stations.

As a result of the health service coverage of the population, obtained by making full use of all the resources available for health care, whether traditional Chinese or modern Western, the overall mortality rate of the population has decreased dramatically and is now less than seven per thousand. Naturally, there is still considerable variation in morbidity and mortality rates between different parts of the country and much remains to be done.

Although the place of traditional medicine in modern health care in China is firmly established, the situation should not be regarded as static and further progress will require the allocation of resources to raise academic levels and improve the quality of research, to bring institutions and their equipment fully up to date, and to widen the scope of education and training in this field. Such a programme of development is already planned by the Government and will be implemented over the next five years.

Interest in traditional Chinese medicine has spread far beyond the borders of our country and many delegations and groups wishing to study the subject at first hand have been received and missions sent abroad to share the Chinese experience. To facilitate the international exchange of information, WHO has designated six Collaborating Centres for Traditional Medicine, in China.¹

To sum up, traditional Chinese medicine not only has a glorious past but still is of great value at present and has a bright future in contributing to human health and medical science.

REFERENCES


¹ There are three in Beijing, two in Shanghai and one in Nanjing. A seventh Centre, based in Beijing, has since been designated.
RURAL HEALTH CARE IN CHINA

Dr Zhang Zikuan

China covers an area of 9.6 million square kilometres and has a population of over 1 billion. There are 56 nationalities, the Han people being the majority and making up about 90% of the population. Administratively, the country is divided into 21 provinces, 5 autonomous regions and 3 large municipalities, which come under the direct control of the central Government. It is further subdivided into some 300 regions and 2000 counties. Below the county level there are townships, altogether about 90,000 in number. The village is considered as the basic administrative unit and there are about 800,000 villages in China. Traditionally, the concept of a rural area refers to those administrative units below the county level.

Health care for the rural areas, in which more than 80% of the population of China live, only started after the founding of the People's Republic in 1949. Prior to this, the greater part of the rural population had no access to any form of organized medical care, and malnutrition and disease were rampant and mortality high, particularly in infants and young children. And now, in the space of thirty-five years, the picture has changed dramatically.

The expectation of life at birth has nearly doubled, from 35 to 68 years, and the crude death rate has fallen from 25 to less than 7 per thousand.

Malnutrition has disappeared and smallpox has been eliminated. Venereal disease, diphtheria and poliomyelitis, which formerly were extremely common, are now very rare and plague, kala azar, relapsing fever and typhus are no longer public health problems. Great progress has been made in controlling the endemic parasitic diseases - malaria, filariasis and schistosomiasis.

Over the same period, the number of rural medical personnel has increased five-fold, from 328,000 to 1,630,000; the number of rural hospitals by 41 times, from 1,460 to 60,300; and the number of rural hospital beds by 62 times, from 20,000 to 1,247,000.

THE THREE LEVEL NETWORK

This tremendous expansion in health care coverage in rural China has been made possible by the creation of a network of medical and health facilities at county, township and village levels - the three level network, as it is called.

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1 Director, Department of Medical Administration, Ministry of Public Health, Beijing People's Republic of China.
At county level, medical and health institutions and services are mainly financed by government. Health services at district and township levels are supported about two-thirds by the community and one-third by government, while for those at village level, costs are entirely met by the community.

Generally speaking, each township has a health centre, responsible for medical care, public health, maternal and child health and family planning in its own area or district. They have an average of 18 health personnel and 18 beds. Some of them, about one in five, are larger, have more staff, and are better equipped than the ordinary health centres, for which they provide technical guidance and receive referred patients. They have an average of 37 health personnel and 28 beds each.

The village level health stations are mostly run by villagers' committees or by collective economic organizations. Some 87% of villages in China have their own health stations, of one form or another, each with 2 to 3 rural doctors or health aides, responsible for medical care, maternal and child health, family planning guidance, immunization and health education. An idea of the magnitude of the three level network may be obtained from Table 1.

Traditional medicine represents a significant proportion of the total. Just as traditional practitioners are instructed in Western medicine, so are other professional medical workers taught the essentials of traditional medicine. Moreover, there are, in addition, the non-professional health workers - some 1.25 million rural doctors and 1.9 million health aides and birth attendants - in whose work traditional methods of treatment play an important part.
<table>
<thead>
<tr>
<th>Level and type of facility</th>
<th>Institutions</th>
<th>Beds</th>
<th>Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUNTY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals</td>
<td>2 310</td>
<td>361 340</td>
<td>432 920</td>
</tr>
<tr>
<td>Traditional hospitals</td>
<td>550</td>
<td>29 000</td>
<td>40 860</td>
</tr>
<tr>
<td>Epidemic central stations</td>
<td>2 060</td>
<td>690</td>
<td>72 840</td>
</tr>
<tr>
<td>Maternal and child health stations</td>
<td>1 860</td>
<td>8 030</td>
<td>29 590</td>
</tr>
<tr>
<td>Drug quality control stations</td>
<td>880</td>
<td>-</td>
<td>4 280</td>
</tr>
<tr>
<td>Health schools (middle grade)</td>
<td>1 370</td>
<td>1 320</td>
<td>18 130</td>
</tr>
<tr>
<td>DISTRICT/TOWN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ordinary health centres</td>
<td>44 930</td>
<td>434 000</td>
<td>658 170</td>
</tr>
<tr>
<td>Central health centres</td>
<td>10 620</td>
<td>297 410</td>
<td>354 760</td>
</tr>
<tr>
<td>VILLAGE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health stations</td>
<td>707 170</td>
<td></td>
<td>1 250 000</td>
</tr>
</tbody>
</table>

Note: Figures rounded to nearest 10.

There are also many hospitals and clinics in the countryside, in addition to those run by the Government or rural collectives. In recent years, with the development of the rural economy, there has been an increasing tendency towards private medical practice. According to the Constitution, any competent doctor may engage in private practice. This kind of practice is seen as a necessary and beneficial supplement to our socialist health system and the legitimate rights and interests of private practitioners are protected by the Government.

HEALTH MANPOWER

Among the many difficulties encountered in developing rural health care, the main problem has always been a shortage of qualified personnel. We have attacked this problem in three main ways, adapting them to local circumstances, namely:

1. Expanding medical education,
2. Promoting in-service training,
3. Training rural health staff on the spot.

China has 114 medical colleges and these produced 528 530 medical graduates from 1949 to 1984. There are 506 middle grade health schools, with an output of 113 200 graduates over the same period. Some 200 000 physicians, trained in modern Western medicine, now work in the rural areas supported by middle grade doctors, traditional Chinese doctors and other health personnel. In addition to the
enrolment of students from rural areas by provincial medical colleges and schools, and of those in the autonomous regions, the five key medical colleges affiliated to the Ministry of Public Health are responsible for training highly qualified medical personnel for outlying districts. For example, each year they enrol 165 students from the two national minority areas of Tibet and Hainan Island, to which they return after training, something which is warmly welcomed by their own people.

Strong support has been given to in-service training so as to create favourable conditions for rural medical and health personnel to improve their professional knowledge and standing. All health staff are entitled to be released from their duties every three years for six months of refresher study. As a result of this government rule, in-service training for health staff has made considerable progress. Many provinces, cities and autonomous regions have colleges, schools or evening universities for further education, while many of the health schools at county level run special classes in the various branches of medicine for advanced studies. Besides going to medical colleges for further education, most health staff attend clinical courses run by the city medical institutions (above the county level), lasting from several weeks to a year, during which they receive full pay and after which they return to their former posts. By making advanced education and training widely available, it has been possible to raise professional standards of technical health personnel and to maintain them at a proper level.

Since 1977, the College of Traditional Medicine in Liaoning Province, in the north-east of China, has offered correspondence courses for rural doctors, health aides and certain types of basic health worker. The aim is to train students to master the fundamental theory of traditional Chinese medicine, to diagnose patients by "syndrome differentiation" and to treat the common diseases with medicinal herbs. This training lasts from two and a half to three years and includes courses on fundamental theory, Chinese materia medica, the science of prescribing, acupuncture and moxibustion, as well as internal medicine, gynaecology, paediatrics, traumatology etc. Students work under the supervision of training stations with full-time or part-time teachers, from county or urban medical units, who come to give lectures or provide guidance on a regular basis, so as to ensure a proper level of instruction.

Early in the nineteen fifties, it was clear that drastic and innovative methods were required if any impact was to be made on the health manpower situation. We, therefore, started training large numbers of rural doctors or "barefoot doctors", as they came to be known at the time. The essence of the scheme was to take suitable young villagers, with a primary education, give them a short course of training in the elements of health care (usually 3 to 6 months but some for 1 to 2 years) and then return them to their communities as part-time health workers. Training was given on the spot, using local facilities and materials. The story is now well known.

Most of these rural doctors are peasants of fairly high cultural level and are enthusiastic about their new duties and responsibilities. Some were originally folk herbalists, born and brought up in the countryside, with a long and close association with the peasants. These rural doctors, drawn from and serving the masses, and carrying out all the basic health work for the community, represent a vast and potent force in bringing primary health care to the rural areas.
The training of rural doctors and health aides is now mostly carried out at the county level health schools and in county and township level health institutions. Standard textbooks are used, supplied by the Government or by the provincial authorities, which cover the essentials of diagnosis, treatment and prevention of disease from the points of view of both modern Western medicine and of traditional Chinese medicine. Thus, most rural doctors can use both systems of medicine in their work, modern drugs as well as medicinal plants, acupuncture, moxibustion and massage. There are now some 1.25 million rural doctors and another 1.9 million health aides and rural midwives.

MOBILIZING THE PEOPLE

With such a vast territory, such a huge population and an underdeveloped economy, the Government simply did not have the resources for the capital investment needed to finance the whole cost of construction, environmental hygiene, waste disposal and the provision of safe water. For this, there was no other way but to mobilize the population itself to undertake this work, through the great patriotic health campaigns. The truly remarkable results that have been obtained in the past 35 years are a testimony to the necessity of having full popular support if any major endeavour in improving the health of the people is to succeed.

By mobilizing the masses it has been possible to create the infrastructure for rural health care and to finance a great part of its running costs, although the Government, of course, also makes very large investments in rural health care each year. The same approach has been taken in encouraging the peasants to develop and operate various voluntary rural medical insurance schemes. The exact form such medical insurance takes depends on local conditions and the wishes of the people but the principle of freedom to join or withdraw from the scheme is maintained.

To involve the masses in combating the diseases that threaten them and the conditions and practices that jeopardize their health, demands very close collaboration between them and professional medical and health teams. It also requires a willingness on the part of health staff, at different levels, to listen to people's suggestions and criticisms with an open mind, so as to improve their work constantly.

URBAN SUPPORT IN RURAL HEALTH WORK

After the founding of the People's Republic, urban medical workers were mobilized to support rural health development. As time passed, firm links were established between cities and rural areas and between the large hospitals and smaller ones, for the provision of technical support and professional guidance. The focal points of such support came to be the county level health institutions.

Amongst the varied forms of technical and administrative support may be mentioned the following. Special technical teams or teaching groups may be sent to county level institutions to help them in developing new techniques and in solving difficult problems. In return, key staff from the county may be sent to urban hospitals for special training.

A system of joint appointments is operated, under which senior specialists in urban hospitals may be invited to serve also in county hospitals and to accept one or two county physicians as personal assistants so as to pass on to them their experience and knowledge.
On a larger scale, some urban hospitals may establish branches at county hospitals or rural health centres or may send complete medical teams to organize and run cooperative speciality wards in them.

Providing facilities for further studies and conducting training courses in various subjects is a regular feature of such collaboration and is directed at improving the technical skill and administrative ability of county level personnel.

This type of cooperation between urban and rural health units is usually established by signing a contract between them, setting out their respective rights, duties and responsibilities. Experience has taught us that creating the kind of relationship described has been of critical importance in speeding the development of rural health services and in improving the quality of their personnel.
CONGHUA COUNTY

Dr Fu Huixiang

CONGHUA COUNTY is situated in a hilly region about two hours' drive north-east of the provincial capital Guangzhou, and covers an area of 2000 square kilometres. It has a population of 375,000 and the average per capita income is 440 Yuan (US$157) per annum. Agriculture is the main source of livelihood, the peasants growing rice, cassava, groundnuts, litchi and oranges, etc. The population is largely rural (86%), with some 37% under the age of 15 years.

THE THREE LEVEL NETWORK

The three level network for health care comprises the county public health and medical institutions, the district health centres; and the township health stations and their branches. The general organization is shown in Fig. 1.

FIG. 1. GENERAL ORGANIZATION OF HEALTH CARE IN CONGHUA

COUNTY BUREAU OF PUBLIC HEALTH

COUNTY HEALTH INSTITUTIONS

General hospital
Epidemic prevention station
M.C.H. centre
Tuberculosis unit

Traditional hospital
Drug inspection unit
Health school
Chronic disease unit (Leprosy)

HEALTH CENTRES

CONGHUA town health centre 1
District health centres 13

HEALTH STATIONS

Township health stations 121
Branch health stations 122

1 Director, Bureau of Public Health, Conghua County, Guangdong Province, People's Republic of China.
The Bureau of Public Health is a department of the Conghua County People's Government and is responsible for health and medical care for the whole county. The general hospital has departments of Western, traditional Chinese and herbal medicine and about 25% of the outpatients are treated by traditional methods. The traditional hospital also provides general medical care.

Each of the 13 districts in the county has a health centre which serves a population of about 28,000. Each centre has 16-40 beds, with a staff of 46-58, over 90% of which are health professionals. These provide a comprehensive range of medical services, including maternal and child health and birth control, epidemic control, health statistics, and technical supervision to 121 township health stations and 122 branch health stations. Some 80-200 outpatients are seen daily, and 30% of them consult the traditional Chinese physician. The referral rate to hospital is 3-6%. The health centre sends out medical personnel to tour the rural area and holds short training courses for rural doctors.

The county has 834 professional health staff – Table 1. On average the doctor/population ratio is 1:2,000 and that for nurses 1:1610. In addition, there are 2-4 rural doctors and health aides for each health station.

<table>
<thead>
<tr>
<th>TABLE 1. PROFESSIONAL HEALTH PERSONNEL - CONGHAU COUNTY 1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors - Western and traditional medicine</td>
</tr>
<tr>
<td>Traditional practitioners - high and middle grade</td>
</tr>
<tr>
<td>Nurses</td>
</tr>
<tr>
<td>Pharmacists</td>
</tr>
<tr>
<td>Other categories</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

In 1984, expenditure on health in Conghua County amounted to 6.5 million yuan or about 17 yuan (US$ 6) per person, with 14% of the total being provided by the State.

TRADITIONAL MEDICINE IN PRIMARY HEALTH CARE

At the basic level of primary health care, that is to say, the township health stations, the main emphasis in treatment is on traditional methods. These health stations are supplied with 74 Western drugs and 120 traditional Chinese drugs. The rural doctors and health aides who work there are taught the use of some 200 medicinal plants, 30 classical Chinese prescriptions and 80 acupuncture points. There are 4 rural doctors and 12 health aides with one traditional birth attendant in a health station.
The district health centre represents the second level in the health care network. Each centre has different kinds of medical personnel, including Western-trained physicians and middle-grade doctors, traditional Chinese doctors and those with training in both types of medicine.

Both Western and traditional medicine are used in the three level network and the patient may choose whichever system he or she prefers. Often the two are combined, as in the case of a patient with lumbago treated at first with analgesics by a Western doctor and then referred for acupuncture, moxibustion or some other form of traditional therapy. The reverse also occurs, as when a child with diarrhoea fails to improve with traditional remedies and requires rehydration and correction of acidosis and disturbed electrolyte balance. Taking the county as a whole, traditional remedies account for 40% of all prescriptions for outpatients.

Each health station and health centre has a Western and a traditional pharmacy, with its supply of medicinal plants and other animal and mineral substances used in Chinese medicine. Conghua has considerable natural resources of this kind and a survey has shown that over 200 items from the Chinese materia medica are to be found in the area.

While some medicinal plants are gathered locally, most are obtained in bulk form from a supply company and the dried roots, leaves, stems and fruit are prepared on the spot and then mixed and dispensed by a traditional pharmacist.

Typically, a patient is given the medicine in dried form, boils it in about 300 ml of water for 20 minutes, and takes the resultant liquor in two doses. Though simple, making a decoction in this way is not very convenient for patients and Chinese medicines are increasingly being supplied in the form of tablets or granules, or as mixtures or syrup, prepared by the county hospitals and district health centres, while injections are manufactured by the provincial pharmaceutical factory. The organization of distribution of pharmaceutical materials is shown in Fig. 2.

Traditional Chinese medicine is very much a medicine of the people and is widely used in self-treatment in one form or another. For example, folk remedies include herbal therapy and treatment by diet, certain foods being considered to have special actions, while many of the middle-aged and the elderly use Taiji or Qigong exercises to improve or maintain their health. There are 30 traditional drugstores and people's clinics in the county.
FIG. 2. DISTRIBUTION OF PHARMACEUTICAL MATERIALS

MUNICIPAL PHARMACEUTICAL COMPANY

COUNTY PHARMACEUTICAL COMPANY
Purchase of medicinal plants, Wholesale and retail of drugs

COUNTY LEVEL INSTITUTIONS

DISTRICT LEVEL WHOLESALE STATIONS

HEALTH CENTRES

HEALTH STATIONS

TRAINING IN TRADITIONAL MEDICINE

When the New China was founded in 1949, there were 40 private traditional practitioners in Conghua County. Gradually, they were recruited to work in the county and district medical institutions, which now have: 2 visiting traditional physicians; 27 middle-grade traditional doctors; and 42 traditional doctors, in all 71 traditional doctors. In addition, there are 2 traditional pharmacists, 25 middle-grade traditional pharmacists, and 44 traditional pharmacy workers, making a total of 71 traditional pharmacists.

Training in traditional Chinese medicine is being actively promoted in Conghua County and the following approaches are used:

1. Formal 2-3 year courses in Chinese medicine and pharmacology, with graduates being subsequently assigned to the county hospitals and district health centres.

2. In-service training of medical staff, who are sent to provincial or municipal hospitals of traditional medicine for 1-2 years of advanced study.
3. Traditional medicine and pharmacy are included in the training courses for middle-grade doctors as well as for rural doctors and health aides. Training in traditional pharmacy includes the collection, preservation and processing of Chinese medicinal plants and substances of animal or mineral origin.

4. A system of apprenticeship has been introduced in which, after 2-3 years practical instruction by experienced traditional doctors and pharmacists, those passing the examination are permitted to practise independently.

Economically speaking, Conghua County is about average for Guangdong province but it has made tremendous progress since the founding of the People's Republic. The entire population has easy access to a reasonable level of health care and, in bringing this about, the incorporation of traditional practitioners and pharmacists into the health service has made a valuable contribution, since traditional medicine retains the confidence of the population and plays as important a role as that of Western medicine in primary health care.

* * *
Much of the treatment used in primary care is based on traditional medical plants or modern drugs. Non-drug therapy, however, plays a very important role and includes acupuncture and moxibustion, massage and acupression, heat, magnetotherapy, cupping, hydrotherapy, remedial exercise and controlled breathing. These modes of treatment may be combined and are often given in association with medicinal substances in one form or another.

It is, of course, not possible to go into detail, nor is it necessary to dwell on the historical aspects of the subject. The purpose of this presentation is to show how the ancient techniques of traditional Chinese medicine are being used on a very large scale in modern China in practical everyday health care. They are not restricted to a hospital or health centre situation but often form part of the general way of life of the people, as in the case of Qigong and Taiji, which have beneficial effects on health but are not strictly medical.

ACUPUNCTURE

Acupuncture holds an important place in non-drug therapy in Chinese medicine and is the form of treatment that has attracted most interest abroad. In remote antiquity, our ancestors discovered that puncturing the skin at certain locations or applying heat at these points brought relief from the pains and ailments from which they suffered. Over the centuries, experience taught them that certain of the points had similar therapeutic values and, by linking them, the system of channels (meridians) and collaterals was gradually evolved, which has formed the basis of all acupuncture teaching for over two thousand years.

The channels generally run longitudinally and at a deeper level while the collaterals, or branches as their name implies, are distributed superficially, forming a network. This system links the viscera internally with the extremities externally, the interior of the body with its exterior, the upper parts with the lower, and all the tissues and organs to form an organic whole. Through these channels and collaterals, it is believed, circulates the Qi (vital energy). Although the effectiveness of acupuncture in practice has been demonstrated over many centuries and in millions of subjects, no anatomical structure has yet been discovered for the channels and collaterals on which it is based and the nature of the Qi remains a matter for dispute.

Traditionally, metal filiform needles are used for puncturing at the acupoints selected for the disease concerned, either on the basis of channel theory or simply as local treatment. Once inserted, the needles are manipulated so as to induce the propagation of the "needling sensation" along the channels, for reinforcement or reduction in states of "deficiency" or "excess" respectively. The basic manipulations of acupuncture are lifting and thrusting, twisting and twirling. The needling sensation they induce is felt by the patient as local soreness, numbness, distension and heaviness, with radiation of these sensations to a certain degree. Once the sensation is induced, the needles are retained for less than 30 minutes and then withdrawn. Other forms of needle are also used, for example: the three-edged needle, the skin and intradermal needles, the burning and pricking needles, the tapping or plum-blossom needle, the head and auricular needles, and the electro-needle.

1 Professor and Vice-President, Guangzhou College of Traditional Chinese Medicine, People's Republic of China.
During the past few years, there has been considerable development in acupuncture technique and the methods in common use are briefly described below:

1. **Electro-acupuncture.** This employs electric currents of varied frequencies, wave forms and intensity, applied through filiform needles to increase the therapeutic efficacy of acupuncture. At first, electro-acupuncture was used mainly in certain neuro-psychiatric disorders. However, its indications have been expanded to include some more common conditions, which have been treated with fairly successful results. Electro-acupuncture induces analgesia and has anti-inflammatory and anti-shock effects. It corrects multiple physiological disturbances, increases the body’s resistance against disease and promotes the recovery of tissue lesions.

2. **Acupoint injection.** This is an example of combining traditional and Western medicine, in which very small doses of certain remedies are injected by syringe into the appropriate acupoints. The therapeutic effect is due both to the acupuncture and to the drug injected and the results are better than those obtained by either method alone.

3. **Thread embedment at acupoints.** Chronic catgut sutures are embedded at the selected acupoints and provide a sort of continuous acupuncture stimulation. This form of treatment developed from acupoint injection.

4. **Acupoint magneto-therapy.** In this therapy, magnetized metal discs are applied to acupoints or to tender areas, the magnetic fields having a sedative, analgesic and anti-inflammatory effect.

5. **Acupoint laser irradiation.** Laser irradiation of superficial acupoints is used in a wide variety of diseases, having analgesic and anti-inflammatory actions and the effect of “draining the channels”.

**MOXIBUSTION**

Moxibustion was very popular in ancient China and there have been many modern studies on it, though not so many as on acupuncture. It is also extensively used in self-treatment. Moxibustion is the burning of a tinder, or moxa, made from the leaves of *Artemisia* spp. The moxa, varying in size from that of a grain of millet to that of a large pea, is placed either directly on the skin or with a layer of some substance intervening, lighted and allowed to burn, which it does without causing much discomfort. Alternatively, it may be prepared in the shape of a cigar, which, when lighted, is passed to and fro close to the points selected. Depending on the type of moxibustion used, the effect varies from warming of the skin to mild cautery. The points chosen for the application of moxa are usually but not necessarily the classical acupoints.

**ACUPUNCTURE AND MOXIBUSTION IN PRIMARY HEALTH CARE**

Acupuncture and moxibustion are commonly combined and are used in the treatment of many conditions. Their simplicity and relative safety make them suitable for self-care. To train an acupuncture-moxibustion practitioner competent to manage simple ailments takes three to twelve months, while for a middle-grade acupuncturist two to three years are needed. Three to six years’ experience is required for sufficient expertise to engage in clinical teaching and research. Acu-moxibustion is practised worldwide nowadays and many international meetings have been held on the subject and societies established. It is of particular importance in Japan, where there are 50 000 acupuncturists and some 20 schools of acupuncture.
These methods of treatment are in general use at the primary health care level. Rural doctors learn how to manage the common clinical conditions and which type of treatment to select.

The indications for acupuncture are numerous and include: hemiplegia, facial paralysis, headache, migraine, trigeminal neuralgia, toothache, stomach ache, vomiting, rheumatic arthralgia, hypertension, insomnia, dysmenorrhea, malposition of the fetus, infantile diarrhoea, asthma and urticaria. Altogether there are over 100 diseases and conditions for which acupuncture is beneficial.

Rural health staff are also taught when acupuncture and moxibustion should not be used and when they may be harmful. The most important contraindications are skin infections, tumour sites, spontaneous bleeding tendency, pregnancy and over-fatigue or nervous states.

MASSAGE AND ACUPRESSURE

Massage is highly developed in China and is one of the most important of the non-drug therapies, being extensively used.

Acupressure, called 'shiatsu' in Japan, developed out of acupuncture and is a form of massage in which selected acupoints are rubbed with the fingers, thumb or knuckles. As no needles are used, it is very suitable for self-treatment. In most cases, the index finger held perpendicular to the skin is used to massage the acupoint. The indications for acupression are almost the same as for acupuncture.

HEAT

A traditional way of applying local heat and external medication, is the use of mixed dried medicinal plants which are made into a pack and boiled or steamed and placed on the affected part. This is really a type of combined therapy.

EXERCISE AND CONTROLLED DEEP BREATHING

Qigong is a form of exercise which aims at conserving and strengthening the body's vital energy or Qi and is based on achieving control of body, respiration and mind, ultimately leading to control of oneself, which is essential for mental and physical well-being.

Several forms exist. Tranquil Qigong uses meditative stances to help the mind to become quiet and refreshed, while active Qigong teaches that only through regulated movement can proper equilibrium be achieved. Another form claims that both are equally necessary.

There are also other forms of Qigong, one allied to the martial arts, and another in which a skilled Qigong practitioner or master endeavours to transmit external Qi to the patient.

Qigong is not in fact restricted to China, because similar practices, such as yoga, exist in other countries. Such methods of attaining bodily and mental relaxation obviously help to offset the stress of modern life.
CONCLUDING REMARKS

Considerable use is made of the various forms of non-drug therapy at the primary health care level in China. This is to be expected because such treatment is part of our cultural and medical heritage from the past, but it also offers certain advantages which make it worth serious examination by anyone responsible for the provision of medical care in other situations.

These advantages include simplicity, efficacity, economy and acceptability. It may seem strange to use the word simplicity in connection with acupuncture, with its many channels, collaterals and large number of acupoints. Yet this discipline, which can be infinitely complicated and requires great skill and experience to be used at its best, has also been adapted and simplified to the point where it can be used to good effect by health personnel with relatively elementary training, though in a more limited way.

Outside China, with perhaps a few exceptions, non-drug therapy does not play much part in primary health care. This is a pity, for it has much to offer, not least the opportunity of making use of local traditional medical practices of real value, but which are at present being ignored.

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COMBINING TRADITIONAL CHINESE AND MODERN WESTERN MEDICINE

Dr (Mme) Xu Tong

When the Government adopted the policy of promoting both traditional Chinese and modern Western medicine, the immediate objective was to bring together all available resources so as to obtain a rapid improvement on the state of health of the Chinese people. The need was urgent and the integration of the two systems of medicine was the only way to bring a reasonable level of health care within easy reach of the population.

The nature and extent of the health system that subsequently grew up has already been described. The implementation of the Government's policies brought about a great expansion in health facilities and personnel. The decision to combine traditional Chinese and Western medicine at all levels of the health services and in medical research has led to the evolution of a new form of "integrated" medicine, which seeks to apply the best of both systems, and to offset the weaknesses of each. The integration of traditional with Western medicine applies the knowledge and methods of modern science and technology to the use and development of traditional medicine. In this way, the two systems are being gradually fused together. But it is a huge task which will take a long time.

The following measures have been taken:

1. Scattered traditional practitioners have been organized to set up traditional hospitals and clinics.

2. Twenty-four colleges of traditional Chinese medicine have been established.

3. At the most basic level of the health services, all rural doctors and health aides receive training in both the traditional and the Western systems of medicine. The same applies in the middle-grade health schools.

4. Every effort is also made to encourage doctors trained in modern Western medicine to learn traditional medicine, as recommended by the Leader of the country, who said that some of those learning Western medicine should also learn traditional medicine and materia medica and, using modern scientific methods, should combine the knowledge of traditional medicine with that of Western so as to create a new medicine.

In this respect, the Ministry of Public Health has organized many courses in traditional Chinese medicine all over the country. Graduates in modern Western medicine, with five years of clinical experience, have been given two to three years' training in traditional medicine so as to equip them for research on the integration of both systems. There are now more than 5000 doctors with formal training in both systems, who constitute the main technical and academic resource for this kind of research and who have much valuable work to their credit.

5. On a much larger scale, many short courses, of six to twelve months, have been run by various general hospitals and about a third of the Western-trained physicians have received instruction in traditional medicine and are able to use it in their work. They are the foundation upon which a new, scientifically sound and comprehensive Chinese medicine is being built.

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6. In research, there are the institutions that come directly under or are related to the Academy of Traditional Chinese Medicine and, in addition, there are 46 provincial institutes of traditional Chinese medicine. In their hospital wards and laboratories, their research workers are applying the rigorous methods and sophisticated techniques of twentieth century science to the study of traditional Chinese medicine and are evaluating its role in diagnosis, treatment and the understanding of disease processes.

The decision to merge the two totally different systems of medicine, one ancient and one modern, is so revolutionary in its nature and far-reaching in its implications that students of the Chinese experience in health care will naturally have some searching questions to ask. Some of these are outlined below, together with a brief response, as a basis for further discussion of the subject.

FIVE QUESTIONS ON COMBINING THE TWO SYSTEMS

1. ARE TRADITIONAL AND WESTERN MEDICINE REALLY USED IN COMBINATION OR DO THEY REMAIN ESSENTIALLY SEPARATE?

Obviously, there is not complete integration: it is still too early to expect this. Generally speaking, traditional medicine is used to the greatest extent (about 40% of cases) in primary health care and much less in hospital practice, except in the traditional hospitals and wards. Most of the general hospitals use modern medicine and add some traditional medicine. According to the condition, diseases are treated with a traditional, Western or integrated approach. There is, of course, much overlap, where one system is tried first and then changed for the other. In effect, there are now three systems: traditional, Western and integrated.

2. WHAT HAVE THE TWO SYSTEMS Brought TO EACH OTHER?

Combining them has compelled the traditional and the Western physicians to take a much broader view of health and disease and to recognize the strong points and the limitations of each system. In general, the traditional doctor usually considers the disease, the patient and the environment together as a whole, while the Western doctor investigates the patient with sophisticated techniques and the diagnosis is based on anatomy, physiology, pathology and biochemistry, etc. In diagnosis, the traditional "syndrome differentiation" and the Western "disease differentiation" are often complementary, while the integrated approach in therapy makes for better results than are obtainable with either system alone.

3. WHICH ARE THE SPECIAL STRENGTHS AND WEAKNESSES OF EACH SYSTEM?

The strongest feature of traditional Chinese medicine, and a most important one, is that it is holistic in its approach, it takes the patient as a whole, making a comprehensive assessment of the body's reaction to the pathogenic factor. Diagnosis and treatment, therefore, are based on the recognition and differentiation of certain main syndromes - such as deficiency, excess, cold or heat - rather than just on symptoms. Treatment is highly flexible and individualized, it does not treat the patient according to one fixed treating principle and prescription, because the patient's condition is changing constantly. It employs medicinal herbs both in single-item remedies and in compound prescriptions, the latter being more commonly used. A prescription is
based not only on the properties of the medicaments - the "monarch, minister, assistant and guide" drugs - but also on their compatibility. A weakness of traditional Chinese medicine is that pathogenic and therapeutic mechanisms are not very clear and in some critical cases its efficacy is not satisfactory.

As to modern Western medicine, there are many special strengths, in that the pathogenic factor is often clear, the diagnosis is based on investigations with objective parameters, the aim of the treatment is also clear-cut, and it is effective and rapid in action. Its shortcomings are that it does not always treat the patient as a whole and that the chemical drugs used are often toxic and may have serious side-effects.

4. **FOR WHICH CONDITIONS IS TRADITIONAL MEDICINE BEST AND FOR WHICH IS IT CONTRAINDICATED?**

The disease spectrum for which the traditional therapy is effective is wide, but it is best indicated in chronic conditions, functional disturbances and some diseases that have marked symptoms and signs, such as hypertension, chronic hepatitis, coronary heart disease, chronic bronchitis, hyperthyroidism, and diabetes mellitus.

There are no absolute contraindications but relative ones only. For certain critical and emergency cases, Western medicine and therapy are more suitable than traditional medicine.

5. **WHAT ROLE DOES TRADITIONAL CHINESE MEDICINE HAVE IN THE PREVENTION OF DISEASE?**

It lays stress on the strengthening of the body's resistance, it replenishes the vital energy and vital essence, regulating the Yin-Yang to resume their balance and thus prevent the onset of disease. Some drugs are used for preventing disease, for example: purslane (Portulaca oleracea) and garlic against dysentery, Cyrtomium against influenza, and rice bran against beri beri.

Although the integration of traditional and Western medicine has achieved much, clinically and therapeutically, it is still an arduous task to establish this new integrated medicine. Our doctors and medical personnel are striving to promote such an integration so as to contribute to the health care of the people.

* * *
EDUCATION AND TRAINING IN
TRADITIONAL CHINESE MEDICINE

Dr Chen Youbang 1

From time immemorial, the training of traditional practitioners was through a form of apprenticeship, a man teaching his son or assistant over a long period. Thus, when the New China was founded in 1949, there was little in the way of an educational infrastructure and no way of ensuring academic standards.

To correct this situation and to bring traditional medicine into line with higher medical education in China as a whole, four colleges of traditional Chinese medicine were established in 1956, in Beijing, Chengdu, Guangzhou and Shanghai. Their purpose was to train senior professional staff in traditional medicine and pharmacy, giving them an all-round education - morally, intellectually and physically - to prepare them to serve the people by the treatment and prevention of disease.

TRADITIONAL MEDICINE COLLEGES

Since then, great progress has been made. There are now 23 colleges of traditional medicine, set up by the Government to provide a country-wide educational system in this discipline. There is also an Inner Mongolian College of National Minority Medicine and, in addition, 11 Faculties of Traditional Medicine have been established in medical colleges.

The admission of new students each year is by an entrance examination, candidates being drawn from those completing senior or middle school. There are, at present, more than 25,000 undergraduates studying traditional Chinese medicine, between 1500-2000 in each college. It is a government policy that admissions to colleges of traditional medicine should represent 20% of the total admissions to the higher level schools of medicine and pharmacy.

The period of education and training extends over 5 years for traditional medicine, with the final year being spent as a hospital intern, and over 4 years for Chinese materia medica. The key colleges require an extra year of study. The 5-year course comprises 3900 hours of instruction, about two-thirds being devoted to formal classroom teaching and one-third to practical work.

As might be expected, history plays an important part in the study of traditional medicine and students are required to study the famous classical works, to be able to read them easily and even to be able to decipher the ancient Chinese. They have to master the basic theories and techniques, being able to diagnose and treat some 50-100 common diseases, and to identify, process and prepare about 150 substances (plant, animal and mineral) from the Chinese materia medica. In acupuncture, they have to be fully familiar with the location and function of the acupoints on 14 channels (meridians) and certain extra points, and have to acquire practical skill in the use of acupuncture, moxibustion and massage in treatment.

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The curriculum includes the Canons of Medicine, basic theory, diagnosis, materia medica, prescriptions, as well as epidemic febrile diseases, internal medicine, surgery, gynaecology, paediatrics, acupuncture and moxibustion, orthopaedics, traumatology, E.N.T. and ophthalmology, etc. Students are also obliged to learn a certain amount of Western medicine, one foreign language, and ancient Chinese. The ratio of traditional to Western medicine in the course is about seven to three.

One or more hospitals are affiliated to each traditional medical college, which provide facilities for clinical teaching and practical experience. There are 29 such affiliated hospitals in the country, with 9300 beds and over 400 chief doctors, equivalent to professor. This system of affiliation, linking traditional medical colleges with selected hospitals, is mutually beneficial and results in a higher standard of medical treatment.

POSTGRADUATE TRADITIONAL MEDICINE

In order to train higher level personnel for clinical research, teaching, and the promotion and development of traditional medicine in general, a system of postgraduate education was introduced in 1978. Two kinds of postgraduate degree are now approved by the Degree Committee of the State Council - a Master's degree and a Doctorate. At present, 19 colleges of traditional medicine and 3 traditional medicine research institutes are authorized to accept such postgraduate students, usually for 3 years, and over the period 1978-1984, more than 700 have been enrolled. This is a pioneering undertaking in traditional Chinese medicine and is of major importance in the Government's effort to set it on a firm scientific footing.

MIDDLE-GRADE PERSONNEL

A large number of middle-grade traditional medicine personnel are also being trained. For this purpose, 21 secondary schools of traditional medicine have been established and another 21 traditional medicine classes in ordinary health schools. These train middle-grade traditional doctors, traditional pharmacists, acupuncturists, orthopaedists and traditional nurses. Training lasts 3 years, students being selected from those who have completed junior middle school.

Taking the middle-grade traditional doctor as an example, training covers the various aspects of traditional medicine theory and practice but also includes a fair amount of Western medicine (anatomy, physiology, biochemistry, microbiology, parasitology, pathology, pharmacology, the basis of internal medicine, and an introduction to surgery and hygiene), which constitutes about one-third of the course. During the final 8 months, the students serve an internship and, under the guidance of their teachers, work in the primary health care services, to which they will be assigned on graduation.

IN-SERVICE TRAINING

In-service training in traditional medicine is organized at 3 levels. The Ministry of Public Health is responsible for the training of staff at provincial and municipal levels. These, in turn, provide training for staff at county level, who then train those from district and township levels.

In selection for such training, preference is given to those who have shown promise in their work but who have not received systematic instruction in the theory of traditional medicine. Emphasis is also placed on giving in-service training to senior traditional doctors from the clinical departments so as to obtain a better balance between the various categories of professional personnel.
The Ministry of Public Health has approved 14 institutions for in-service training at Ministry level and 61 stations for training on special subjects, and allocates substantial funds for this purpose. In 1984, there were 131 refresher courses in traditional medicine, attended by over 13,000 professional personnel, and 22 teacher training or advanced courses run by the Ministry and attended by 390 senior personnel. So, it can be seen that in-service training is an important element in the promotion of traditional medicine in China today.

OTHER FORMS OF CONTINUING EDUCATION

As only a relative few of the 300,000 professional personnel working in traditional medicine can be released for in-service training, various other forms of continuing education programmes have been arranged, such as correspondence courses and evening universities.

By the end of 1984, correspondence departments, duly approved by the Ministry of Education, had been set up by 12 colleges of traditional medicine. Admission to these correspondence courses is by a state examination, and the courses themselves have to be at an academic level comparable to the special courses of medical colleges. A number of stations have been established to provide coaching and instructors are regularly sent there to give lectures and prepare teaching materials. Students who have completed the 3-4 year course and have passed the examinations, are awarded a diploma by a college for professional training. Since these courses were introduced, over 10,000 traditional medicine professionals have received such training.

Another example of continuing education is the teaching programme sponsored in 1984 by two publications; JIANKANG BAO (Health Newspaper) and GUANGMING RIBAO (Bright Daily) in which 100,000 people participated. Special courses are also organized in the various provinces and municipalities.

Those who have followed courses and gained good marks are given due recognition and are credited with additional formal schooling. Those passing the examination set by the Examination Committee for Higher Education (Self-Instruction) in Traditional Medicine, formed by the Ministries of Education and of Public Health, receive a diploma. All this has created a great deal of enthusiasm for further study and it is expected that by the end of the nineteen-eighties, over 300,000 traditional medicine professional personnel will have completed one form or another of advanced training, which will have a powerful effect on raising standards of work and in promoting the advancement of traditional medical science.

INTERNATIONAL EXCHANGES

A considerable effort is also being made to provide facilities for undergraduate and graduate students from other countries to study traditional medicine in China. Special arrangements exist for foreign students at the traditional medical colleges in Beijing, Guangzhou, Nanjing and Shanghai, respectively. In recent years, over 1100 undergraduate and graduate students from many countries have attended the 4 traditional medical colleges and the 3 training centres.
THE KEY TO FUTURE PROGRESS

The whole future of traditional Chinese medicine depends on our ability to raise academic standards and improve the quality of research, to apply modern science and its techniques to the study of this ancient form of medicine, to validate its claims or disprove them, and to explore fully its potential.

For this, we require highly qualified and expert teachers as research workers, well trained in both the traditional and the Western systems of medicine. And this is the target we have set - to establish traditional Chinese medicine firmly as a legitimate and accepted part of modern health care. In our training schemes, the educational administrative authorities are responsible for the general orientation, quality and level of instruction. The colleges of traditional medicine, however, have considerable latitude in deciding how best to carry out the teaching programmes.

We find that this provides a great stimulus and encourages schools to take initiatives and show their individuality. It brings out their strong points and helps to make education in traditional medicine lively, more interesting and effective, and improves the level and quality of teaching.

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Traditional Chinese pharmacology has a long history indeed. It was rich and vigorous in the past and continues to develop today. Over the centuries, a very large number of substances has been used in treatment and these now constitute an important part of our heritage of traditional medicine.

The Dictionary of Chinese Materia Medica contains 3767 entries comprising 4773 species of herbs, 740 items of animal origin, 82 mineral substances and 172 other processed materials. Much the greater part was developed by the Han people, who form the majority of the population. However, as China is a multi-national country, the Dictionary also includes drugs from the different systems of her minority peoples, 323 from Mongolia, 404 from Tibet and 324 from the Yi, 200 from the She and 350-400 from the Dai nationalities.

During the period of the Spring-Autumn Warring States (475-221 B.C.), at a time when the philosophical ideas of Yin-Yang and the Wu-Xing (five evolution) concept became widespread, theories concerning the properties of medicines appeared, which have remained with us until this day. These included the Four Natures (or properties) – cold, hot, warm and cool; the Five Flavours – sour, bitter, sweet, pungent and salty; and Channel Attribution, in which the five flavours are specifically related to the five viscera and also to the five elements.

At first, single-herb remedies were used to treat disease but, with the accumulation of clinical experience, the combination of several medicaments was found to be more effective. At the time of the Spring-Autumn Warring States, these compound prescriptions were already very popular.

The selection of components in such a prescription is based on the principle of "monarch, minister, assistant and guide", in which the monarch is the main drug, while the others have an adjuvant role.

Traditional remedies are processed differently - by baking, roasting, simmering, steaming, boiling, etc. – depending on the purpose for which they are intended. The properties of a medicament vary according to its manner of preparation. Thus, the purgative effect of Rhubarb root is reduced if it is steeped in wine, while its action in promoting the circulation of blood and in clearing away "heat" is strengthened. When carbonized it is used for internal haemorrhage, but when treated by lime it is useful in treating bleeding due to trauma, and so on.

The use of these ancient remedies and their composition is, of course, governed by the whole theoretical structure of traditional Chinese medicine, which has no direct counterpart in modern therapeutics. However, it is interesting that, with very different underlying concepts, the two systems may arrive at a similar result. For example, in modern medicine, the drug berberine, which is derived from the plant Chinese golden thread, is used for its anti-inflammatory effect. In traditional medicine, the plant itself is believed to have a "cold nature", because of its bitter taste, and to have the effect of clearing away "heat" from the body and of "purging the evil fire".

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The theories of the traditional medicines of the minority nationalities have many similarities with those of the main body of traditional Chinese medicine, but there are also important differences. In recent years, the study of these "minority medicines" has made some progress.

TRADITIONAL REMEDIES IN MEDICAL CARE

The production and utilization of traditional Chinese remedies has seen a tremendous expansion since the founding of the People's Republic, due to the strong support given by the Government. From 1955 to 1978, production doubled to reach 1.5 million tonnes, while the value of sales increased sevenfold. By 1982, there were 333,000 hectares under cultivation for medicinal plants and, from 1979 to 1982, the production of Chinese patent medicines increased by 25% per annum and over 2000 have appeared on the market since 1950.

The 1962 edition of the "Pharmacopoeia of the People's Republic of China" listed 446 kinds of traditional Chinese materia medica and 197 sets of prescriptions, while the 1977 edition contains more than twice as many. Besides the traditional preparations of pills, powders, extracts, pellets, etc., many new forms have been introduced, such as tablets, granules, injections, and aerosols.

There are more than 500 pharmaceutical factories producing patent Chinese medicines, with a total staff of around 100,000. Amongst these, are 30 factories with an annual output of over 10 million yuan (US$ 3.57 million). It is apparent, from these figures, that traditional Chinese remedies are very big business indeed.

In the vast rural areas, Chinese medicine plays an even more important role than it does in the cities. The peasants have their own treatments for most of the common ailments and have handed down their recipes from one generation to another.

The pattern of consumption, for both Western and traditional medicines is uneven, with only 40% going to the rural areas where the majority of the people live. This is certainly due to the better economic situation of the cities and will change as the rural economy improves. In a recent investigation by the author in Fujian and Jiangxi provinces, traditional Chinese remedies represented 30% of the total medicines prescribed, with Chinese patent medicines accounting for 40 - 50% of this figure.

A MODERN APPROACH TO ANCIENT REMEDIES

With more than 1200 herbals, a great number of classical works on the subject, and some 5000 traditional and folklore remedies requiring investigation, Chinese pharmacologists are faced with the almost impossible task of exploiting this tremendous legacy of knowledge and experience from the past.

The approach that is being taken is comprehensive and one might say that we follow three main routes in studying the traditional Chinese materia medica, namely:

1. The search for the active constituents of individual plants or other medicinal substances;

2. The evaluation of the properties of compound prescriptions, the form in which most Chinese medicines are used; and

3. The development of new drugs and new forms of preparation.
Single substances

Some 150 commonly used medicinal plants have been thoroughly studied (taxonomy, morphology, histology, etc.) and fully identified. For about 100 remedies, details of processing techniques have been collected, the principles underlying them elucidated and a chemical and pharmacological evaluation made.

This work is still in progress but experimental results using modern methods have demonstrated the value of many of these ancient remedies. For instance, the root of Astragalus membranaceus, traditionally used to strengthen the vital energy, has been found to promote tissue regeneration and to be helpful in treating suppurative skin disorders. Substances reputed to be of value in clearing away "heat" and in detoxification, not only have a bactericidal or viricidal activity but can also strengthen the body's defences and inhibit allergic reactions.

Compound prescriptions

Chinese medicine always stresses the relationship between man and his natural environment and, in disease, considers the pathological changes in relation to the body as a whole. Traditional physicians, therefore, prefer to use complex prescriptions rather than single remedies, so as to treat the body as a whole. By varying the individual constituents the action of the medicine is modified and certain effects amplified or diminished.

The factors that determine the efficacy of complex prescriptions make up an important field of study. As an example, "Zheng Chai Hu Yin", an ancient prescription dating from 1624, is used in the treatment of disease due to exogenous "cold" and "wind". It is composed of the roots of Bupleurum spp. and Paeonia rubra and four other plants. Experiment has shown that the prescription inhibits viral pneumonia but that Bupleurum, the main ingredient, is inactive given alone and is only effective against viral pneumonia when given in association with one or more of the other components.

New drugs

The traditional Chinese materia medica is being systematically screened for new drugs of high efficacy and low toxicity in the treatment of disease. By this screening process, 135 pharmacologically-active substances have been identified in traditional and folklore medicines and have been developed as new drugs. They include 23 which were previously unknown, 61 which were known but for which new uses have been discovered, and 49 which were isolated from popular remedies. Fifty-one have been synthesized, or semi-synthesized.

A quarter of these new drugs are used in the treatment of cardiovascular disease, the others in bacterial and parasitic infections, disorders of the nervous system and neoplastic disease. A notable example is the anti-malarial Qinghaosu, derived from Qinghao (Artemisia annua) a herb traditionally used against malaria. Another, called Indirubin, an anti-leukaemic agent, was isolated from Ephedracanthus cusia after the traditional remedy "Danggui Luhui Pill", of which it is a component, had been shown to be effective in treating chronic granulocytic leukaemia.

Another aspect is the creation of new and more convenient preparations of traditional remedies such as, for example, the injection "Qing-Kai-Ling", developed from the "Angong Niu Huang Pill", which is used in high fever, convulsions and coma in patients with cerebrospinal meningitis, Japanese B encephalitis or severe pneumonia. Work of this kind involves chemistry, modern pharmacy, pharmacology and clinical trials.
At the same time, the search for new drugs has brought with it substantial improvements in the cultivation of medicinal plants, in the raising of laboratory animals and in processing techniques.

The Chinese Government has paid much attention to the promotion and development of traditional medicine and its materia medica. Besides the Academy of Traditional Chinese Medicine, there are 46 institutes working in the same field in different parts of the country, and a large body of qualified research workers has been created.

The traditional Chinese materia medica embodies the clinical and pharmacological experience of much of our recorded history. Like any other heritage, it has to be seen in its proper context and this is why we lay such stress on the careful study of its use in the past because we believe that this will provide leads for further investigations.

Our aim is to bring our traditional materia medica into the twentieth century, to evaluate it by modern methods and standards, to select what seems to be useful and to discard what does not. However, in doing so, we adopt a prudent policy because of the limitations of current science and technology.

In the past thirty years, much progress has been made but there are still formidable difficulties to be overcome. Processing methods and the quality control of patent Chinese medicines leave much to be desired and we need not only more funds but better coordination of our activities in this and related disciplines.

Nevertheless, the achievements of recent years in the modernization of the Chinese materia medica make us confident of a promising future.

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Traditional Chinese medicine and its materia medica occupy an important place in the national health programme of our country. Their promotion and protection are a part of government policy and are assured by the Constitution.

PRODUCTION

The state-owned Chinese Crude Drugs Company, which has branches in all provinces, autonomous regions, municipalities and countries, is responsible for the production, collection and supply of Chinese materia medica. However, agricultural departments at all levels also take part in the formulation of policy and in establishing plantations of medicinal herbs.

Chinese crude drugs

The newly-compiled Dictionary of Chinese Materia Medica includes more than 5700 plant, animal and mineral substances. Of this total, about 1000 crude drugs are in common use, with an annual production reaching 500,000 tonnes. Thirty percent of the medicinal plants are cultivated and 70% gathered wild. Many kinds of crude drugs have still to be exploited.

Formerly, crude drugs were mostly collected in the wild state but, with the development of agriculture, natural sources are becoming depleted. Special encouragement has, therefore, been given for the cultivation of medicinal plants, the large-scale breeding of animals of medicinal value, and the domestication of wild species. Certain medicinal plants which have for long been imported from abroad - clove, sandalwood, cinnamon and round cardamom - have now been successfully grown in the tropical region of South China. Altogether, some 30,000 crude drug farms have been set up and about 333,000 hectares of land brought under cultivation for this purpose.

Patent Chinese drugs

Occupying an important place in clinical medicine, patent Chinese remedies form an integral part of the traditional prescription. About 6000 have been approved by the public health departments and are produced by 500 traditional pharmaceutical factories, with a total output value of 1.6 billion yuan (US$571 million). Manufacturing techniques have greatly improved in recent years and are now approaching mechanized or semi-mechanized production.

SUPPLY, DISTRIBUTION AND EXPORT

The purchase and supply of Chinese materia medica are also undertaken by the Chinese Crude Drugs Company. Purchase points and retail outlets are spread throughout the rural areas and in remote outlying regions. By making full use of the rural supply and marketing cooperatives and health centres in the districts, a supply and marketing network for crude drugs, basically commensurate with medical needs and distributing nationwide, has been established. Annual sales amount to 4 billion yuan (US$1.4 billion).

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A considerable proportion of the annual output of crude drugs and patent medicines is now exported, to some 80 countries. Recently, exhibitions of Chinese materia medica have been sponsored in many countries with the aim of expanding trade and encouraging medical and pharmaceutical scientific exchanges with them.

There has been a significant rise in the demand for traditional Chinese remedies, both domestically, due to the improved standard of living, and for export. Unfortunately, it has not been possible for the cultivation of medicinal plants to keep pace with this increase and, as a result, many are in short supply. However, the Government is endeavouring to develop the cultivation of medicinal plants in a planned way so as to meet the increasing need.

SUPERVISION AND MANAGEMENT

At national level, responsibility for the supervision and management of the production and distribution of drugs (traditional and modern) lies with the Ministry of Public Health and is exercised through its Department of Drug Administration and the Institute of Drug Control and, by delegation, through the equivalent organisations in public health departments at other administrative levels. Pharmaceutical factories and drug companies have their own units for the quality control of their products.

After the founding of the People's Republic, a series of decrees and regulations on drug administration was issued by the Ministry of Public Health. Recently, in compliance with the instructions of the State Council and on the basis of China's own experience and the relevant legislation of other countries, a comprehensive set of "Regulations for the Administration of Drugs in the People's Republic of China" was prepared. The Regulations were formally promulgated in 1984 and came into effect in July 1985. They mark the beginning of a new stage in the drug administration of our country.

Regulations for the administration of drugs

The Regulations comprise 11 chapters and 60 items but the main provisions are as follows:

1. The production or preparation of drugs, whether by a company or a hospital, requires a licence granted by the respective department of public health, after due examination and inspection. An enterprise dealing in drugs requires a licence to do so and similar approval.

2. All manufactured drugs must be submitted for examination by the competent authority of the health administration and permission obtained prior to production.

3. Special regulations apply to the production and use of anaesthetics, psychoactive drugs, radioactive preparations and dangerous drugs.

4. The import or export of drugs is controlled. All imported drugs require examination and approval by the Institute of Drug Control. Those being imported for the first time require the permission of the Ministry of Public Health.
5. It is legal to sell medicinal herbs in the free market in urban and rural areas, but drugs other than herbs are not allowed. Those distributed outside the area of production must bear an identification symbol. Newly discovered crude drugs and those imported from abroad require approval from the provincial department of public health. The origin of crude drugs is to be clearly marked and their processing must be in accordance with the "Standards for Processing of Chinese Materia Medica", laid down in the Pharmacopoeia of the People's Republic of China. The Ministry of Public Health is empowered to restrict or prohibit the export of drugs or medicines when supplies appear endangered.

6. The detection and control of spurious and sub-standard drugs and the principles governing them are described.

7. Drugs for sale must be registered and a trade mark used, failing which sale will be prohibited. Advertisements for drugs have to be checked and authorized by the department of public health at provincial level.

8. The penalties for infringement of the various regulations are laid down.

Quality control of traditional Chinese remedies

New regulations have also been introduced to ensure the quality of Chinese crude drugs, which combine traditional ways of preparation with modern methods of control.

Since the properties of Chinese materia medica are much influenced by factors such as soil and climate, great attention is paid to the choice of "genuine" crude drugs, for use as standards against which the quality of drugs produced elsewhere may be measured.

Long experience has shown that the particular mode of preparation profoundly affects the medicinal properties of the crude drugs used in traditional Chinese medicine. The Pharmacopoeia and the Standards for Processing lay down recommended methods so as to ensure maximum therapeutic efficacy and a minimum of undesirable side effects or toxicity.

For patent Chinese medicines, rigorous standards have been laid down and new remedies have to conform to the traditional principles for prescribing and treatment, differentiating the main from subordinate ingredients, and paying attention to compatibility between them. They have also to be examined by traditional Chinese physicians and verified clinically.

To conclude, introducing modern methods for the management and control of traditional Chinese remedies is far from simple and presents many challenges. However, a combined method of traditional identification and modern scientific examination is used to strengthen the drug control of Chinese materia medica. As a result, the problems encountered are gradually being overcome and we are confident that eventually effective control will be achieved.

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RESEARCH IN TRADITIONAL CHINESE MEDICINE

Professor Lu Weibo

Thirty years ago, six years after the founding of New China, the Academy of Traditional Chinese Medicine was established to promote and coordinate research in this field. The Academy is one of the three major research organizations affiliated to the Ministry of Public Health, the other two being the Chinese Academy of Medical Sciences and the Chinese Academy of Preventive Medicine.

The function of the Academy is to take up, explore and further develop the legacy of traditional Chinese medicine.

The Academy has some 2300 scientific and technical staff, two affiliated hospitals with a total of 700 beds, and nine research institutes - Fig. 1.

**FIG. 1. STRUCTURE OF THE ACADEMY OF TRADITIONAL CHINESE MEDICINE**

**ACADEMY OF TRADITIONAL CHINESE MEDICINE**

(2274 scientists and technical staff)

9 Research Institutes

- CLINICAL MEDICINE No. 1
  (XIYUAN HOSPITAL)
- CLINICAL MEDICINE No. 2
  (GUANG-AMHEN HOSPITAL)
- ORTHOPAEDICS AND TRAUMATOLOGY
- BASIC THEORY
- OPHTHALMOLOGY
- CHINESE MATERIA MEDICA
- ACUPUNCTURE AND MOXIBUSTION
- MEDICAL HISTORY
- GERONTOLOGY
- AND LITERATURE

It is equipped for transmission and scanning electron microscopy, nuclear magnetic resonance, mass spectrometry, gas chromatography, liquid scintillation counting, microscopic spectrophotometry, and other sophisticated methods of scientific investigation and has appropriate computer facilities. Also in relation to the Academy, though not forming part of it, are 46 provincial research institutes in traditional medicine, so it can be seen that considerable resources are being applied to research in this branch of medicine.

Traditional Chinese medicine is a great treasure house, is highly efficacious in treatment, has abundant herbal resources and a unique theoretical system.

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1 Academy of Traditional Chinese Medicine, Beijing, People's Republic of China.
It might be asked - "Do doctors trained in modern Western medicine find it difficult to accept the traditional concepts of disease and its pathogenesis"? I think the answer is generally, "yes, at least at the beginning". The theory of traditional Chinese medicine is entirely different from that of Western medicine, but it holds a fundamental position, with the Yin-Yang, the five evolutions, the five Zang (solid organs) and six Fu (hollow organs), Qi and blood, channels (meridians) and collaterals, the four properties and five flavours of the Chinese materia medica. The most important part is "treat the patient according to syndrome differentiation". Without its theory, there can be no intelligent use of the traditional system. Once the theory is mastered, the physician will find that traditional Chinese medicine, though vastly different, can be complementary to Western medicine and its addition usually leads to better results in clinical practice.

As a Western-trained doctor, graduated in the mid-nineteen-fifties and subsequently trained in traditional medicine for three years, I have found that the theory of Chinese traditional medicine is of great value in clinical work. Firstly, it is holistic in its approach, taking the patient as a whole and trying to make a comprehensive assessment of the body's reaction to the pathogenic factor, the different reaction states being designated as syndromes of deficiency, excess, cold, heat, etc. Secondly, it is flexible and does not treat a patient from beginning to end according to one principle of treatment or prescription, but according to the patient's changing condition: treatment is highly individualized in character. Thirdly, the theory of traditional medicine lays stress upon strengthening the patient's resistance to disease and not just on alleviating symptoms or counteracting some harmful factor. It emphasizes regulating the immune function of the body for the cure of many kinds of disease.

In China, many people have some knowledge of traditional medicine, which they obtain from their family or relatives. It is simple, cheap and easy to use. In fact, it is a kind of self-treatment. Many valuable drugs originated from this kind of folk medicine. The aged, people in rural areas, and those with chronic conditions prefer the traditional or integrated types of medicine while young patients and those living in towns and cities prefer Western medicine.

Research on traditional Chinese medicine is essentially practical in nature, taking clinical practice as the starting point and the end point of investigation. Therefore, good clinical results in treating intractable disease often provide subjects for scientific research. In traditional Chinese medicine, although there is no literature on bacteria or viruses, the clinical manifestations of bacterial infections such as dysentery are described in detail. Some invisible infectious pathogenic factor, like "Wen Xia", has been postulated and effective prescriptions and drugs have been discovered and used. For instance, Coptis chinensis is found to be effective in treating the heat syndrome, which corresponds to inflammation in many cases. This drug has been found to contain a bactoricidal component - berberine. As knowledge increases, the disappearance of symptoms and signs will no longer be satisfactory as the index of cure, but the simultaneous elimination of clinical manifestations and microorganisms from the body will be the aim of treatment.

Usually, Chinese herbal drugs are mild in action and have fewer side effects than chemical products, and in some the LD50 cannot be determined in toxicological tests. Therefore, they are indicated for chronic diseases, to be taken over a prolonged course of treatment. But some of them do have side effects, even severe ones like Aconitum carmichaeli, Daphne genkwa, which should be used prudently.
A great deal of valuable research, using modern scientific methods and technology has been carried out in recent years. While it is not possible to attempt any sort of comprehensive review in the course of this brief presentation, it may be of interest to highlight some of the achievements in the various fields covered by the Academy, its institutes and those working with them.

Cardiovascular disease

Preparations of medicinal plants have been found to be of great use in the treatment of coronary heart disease. In angina pectoris, a mixture called "Coronary heart No. 2" (containing Salvia miltiorrhiza, Ligusticum wallichii, Paonia obovata, Carthamus tinctoria and Dalbergia odorifera) is highly effective. Taken over a prolonged period, it reduces the frequency and severity of angina in 90% of patients, enables the dose of nitroglycerine to be reduced or abolished, and is accompanied by an improvement of the ECG in one- to two-thirds of those treated. Experimental studies show that the mixture inhibits thrombosis, dissolves thrombus and prevents platelet aggregation. It thus promotes the blood circulation and relieves stasis. Owing to its thrombolytic action, it has also been used in acute cerebrovascular thrombosis and peripheral vasculitis with good results. Coronary Heart No. 2 and medicinal herbs such as Allium orientale, Polygonum multiflorum, Curcuma aromatica and Crataegus pinnatifida also exert a beneficial influence on hyperlipidaemia.

Another mixture, of somewhat similar composition (containing Astragalus membranaceus, Codonopsis pilosula, Salvia miltiorrhiza and Paonia obovata, etc.), used in acute myocardial infarction, has lowered mortality from 30% to 6.5% within the first week. It reduces the incidence of cardiogenic shock, arrhythmia and heart failure, which are the main causes of mortality in acute myocardial infarction, and limits the size of the infarct.

For rapid relief of anginal pain, an aerosol of essential oils (Piper longum, Santalum album, Asarum sieboldii, etc.) is effective within five minutes in 72% of cases. In a controlled study it was almost as effective as nitroglycerine, but without any side effects such as flushing.

Acupuncture is also used with success in coronary heart disease, rapidly relieving anginal pain and improving cardiac function and coronary and cerebral blood flow.

Malaria

The new anti-malarial Qinghaosu was discovered by the Institute of Chinese Materia Medica in 1971. Fourteen years have passed during which time Qinghaosu has been studied pharmacologically and toxicologically and it is now going through different phases of clinical trials. Qinghaosu is not yet available on the international market because this procedure has not yet been completed.

In studying the "Zhouhou Beijifang" (a handbook of prescriptions for emergencies), written over one thousand six hundred years ago, it was learned that Qinghao (Artemisia annua) was prepared, not by the usual boiling method but by steeping and wringing out the plant and using its juice. Starting from this, a low-temperature extract was made and Qinghaosu, a sesquiterpene lactone with peroxide group, was isolated. It has proved effective in the treatment of malaria, especially the malignant and cerebral forms of malaria, and is valuable in treating patients with chlotoquine-resistant strains of Plasmodium falciparum. Experimental
study shows that it is effective against the erythrocytic stage of the parasite. Two kinds of derivative have been developed: these are sodium artesunate and artemether which is water-soluble and can be given parenterally in emergency cases. A Qinghaosu suppository has also been prepared and gives satisfactory results.

In China, over 2000 cases of cerebral forms of malignant malaria have been cured. Patients' or their relatives' consent is easy to obtain, because the condition is very serious and there is no other choice. Animal toxicological research proves that Qinghaosu is harmless and effective. However, it is not effective in malaria prophylaxis.

Treatment of fractures

Studies of over 100,000 cases have been made using the traditional method of treating limb fractures, by fixation with small splints, which do not include the joint but only the bone shaft itself. Early functional exercise may improve the blood circulation of the fractured bone. In some cases, additional treatment with Chinese herbal medicines gives excellent results. A combined traditional and Western approach is now widely employed, embodying these principles. Healing time is shortened by one-third, the functional recovery time is shortened by one-fourth, complications and sequelae are few, patients suffer less pain and inconvenience, some surgical operations are avoided and the cost is only a fraction of that of treatment by conventional Western methods. This combined form of treatment of bone fractures needs to be made much more widely known.

Neoplastic conditions

Chinese medicinal plants are used in the treatment of certain neoplastic conditions, for example:

1. To obtain complete or partial remission in chronic granulocytic leukaemia with Indirubin and Qing Huang Powder, while Harringtonin, isolated from the bark of Cephalotaxus, is effective in treating acute non-lymphocytic leukaemia.

2. To alleviate the side effects of chemotherapy and radiotherapy in postoperative late stage gastric cancer with Fuzheng granule (Codonopsis pilosula, Astragalus membranaceus, Ligusticum lucidum, etc.), allowing patients to complete the course of treatment without undue distress.

3. To reduce bone marrow suppression in the chemotherapy of primary lung cancer with Polyporus umbellatus polysaccharide. It improves the appetite and body weight of the patients and their plasma cortisol is increased, which denotes some enhancement of adrenal cortical function.

4. To treat severe oesophageal hyperplasia, a pre-cancerous condition common in Hebei Province, where people eat a lot of pickled food, which has a high content of aflatoxin, a recognized carcinogen. In Hebei Province, the incidence of gastric cancer is high and oesophageal hyperplasia is diagnosed cytologically after gastric aspiration. Because some of the patients manifested Yin deficiency syndrome (red tongue, low fever, night sweating, etc.) Liu Wei Dihuang Decoction, a famous prescription to nourish the Kidney Yin, was used in a controlled trial. The results showed that the incidence of oesophageal cancer in the treated group was markedly lower, 2.1% compared to 12.3% in the untreated group, which is statistically significant.
Haemorrhoids

Severe internal haemorrhoids cause bleeding as well as distress during defaecation, especially during the late stage. Extensive clinical experience has shown that a local injection called Xiaoshilin injection, which contains the active principle of Semen galli chinensis, alum and other components, is safe, simple, painless, and highly effective, with 93.5% cured and 4.5% improved with no complications at all, which is better than ligation therapy. This treatment can be carried out in the outpatient department.

Future direction of research

Much valuable information on clinical practice and scientific research is given in the "Journal of Chinese Medicine", published by the Academy and which is one of the most popular medical journals in China. Its English edition is a quarterly, published by the Academy, and is available abroad.

In the future research of the Academy, stress will still be laid on clinical medicine. The Institute of Clinical Medicine No. 1 will concentrate on internal medicine, particularly coronary heart disease (angina pectoris, myocardial infarction), haematological disease (aplastic anaemia, chronic granulocytic leukaemia), hepatitis, peptic ulcer and menorrhagia; while the Institute of Clinical Medicine No. 2 will specialize in the field of surgical conditions such as gastric cancer, haemorrhoids, anal fistula, urolithiasis, cholelithiasis, bone fracture and dermatological diseases such as psoriasis and eczema. The Institute of Orthopaedics and Traumatology will lay emphasis on fractures, cervical spondylosis, intervertebral prolapse and soft tissue contusion; and the Institute of Ophthalmology, which is newly established, will give priority to cataract, keratitis and atrophy of optic nerve. The Institute of Gerontology, also a new set-up, will have anti-ageing as its main study, especially since some effective anti-ageing prescriptions have been discovered in the Qing Dynasty royal palace. The Institute for Acupuncture and Moxibustion will devote itself to treating neurological disease, hemiplegia, atrophic gastritis and coronary heart disease, and will study the mechanism of acupuncture analgesia, the phenomenon of sensation propagation along channels and Qigong (breathing therapy). The Institute of Chinese Materia Medica will concentrate on studying compound prescriptions and single items from both ancient literature and present clinical practice, screening systematically those drugs which are effective in treating common and intractable diseases, and isolating their active principles. In the Institute of Basic Theory, the material basis of the Syndromes in traditional Chinese medicine, such as spleen deficiency syndrome and blood stasis syndrome will be systematically explored.

Finally, the Institute of Medical History and Literature will continue to annotate, translate and systematize the ancient medical books, like Shen Nong's Herbal, and to undertake taxonomic studies.

Traditional Chinese medicine will be further integrated with modern medicine, and studied with scientific methods and technology. A modernized traditional medicine possesses almost the same meaning as integrated traditional and Western medicine.

Conclusions

From studies of traditional Chinese medicine made over the last 30 years by scientists of the Academy, a number of conclusions may be drawn, namely:

1. Traditional Chinese medicine is still a living medicine;
2. The theory of traditional Chinese medicine is quite different from Western medicine. Though difficult to master, it is useful and yields good results in clinical practice; and

3. It is essential to study it with modern methods, to sift the grain from the chaff.

If traditional Chinese medicine contains so much of value, surely the traditional medicines of other nations also deserve intensive study. China is willing to share its experience with other countries as this Seminar has shown.
TRADITIONAL MEDICINE IN OTHER COUNTRIES

PRESENTATION BY PARTICIPANTS

In preparation for the Seminar, participants were invited to submit brief accounts of the role of traditional medicine in primary health care in their own countries. During the Seminar itself, they made joint presentations of the situation in the regions to which their countries belong. These are summarized below.

EASTERN MEDITERRANEAN REGION

(Egypt, Kuwait, Pakistan, Sudan)

The traditional medicine of these four countries is basically Unani-Tibb, a system which has its roots in Graeco-Arabian medicine, which developed under the influence of the Muslim rulers of the Khalafit era. In South Sudan, however, it is of purely indigenous origin.

In Egypt and Sudan, traditional medicine is not officially recognized and these healers practice without licence, registration or examination. Pakistan requires formal registration, after a qualifying examination, before practice is allowed.

Tibb, as a system of treatment, is well accepted by the population, particularly in the rural areas so that, for many, it forms the first level of medical care. Pakistan has an extensive programme for opening Tibb dispensaries in villages and towns, with provision for establishing sections at Provincial and Federal Secretariat level for the supervision of Tibb medical practice.

Again, in Pakistan, traditional healers in rural areas are being enlisted as community health workers, given special training and a supply of medicines for common ailments. Hakims and tabibs are also being admitted to medical technician schools to be trained in Western medicine and later absorbed as mid-level health workers in an integrated primary health care system.

Kuwait now allows the practice of Tibb through the Centre of Islamic Traditional Medicine, while Sudan has established a Centre for the Practice of Traditional Medicine, as part of the National Council for Scientific Research. Both of these centres are charged with assessing the efficacy of the traditional system, before it can be officially authorized for use in medical care.

To this end, the Islamic Medical Centre of Kuwait has initiated joint clinical studies with Western doctors and hakims, in which the former establish the diagnosis, by modern methods, after which the latter take over treatment using herbe, subject to the patient's consent, with the Western doctors keeping watch. So far, the trials have been restricted to chronic conditions - asthma, diabetes, hypertension, leucoderma, osteoarthritis and rheumatoid arthritis - and the results are said to be encouraging. In Pakistan, traditional medicine is already well established in the private sector and certain institutions have gained both a national and an international reputation for the remedies they manufacture.

In conclusion, the group was of the opinion that where medical treatments are ineffective they are rejected by the people and eliminated. If certain types of traditional medicine are still in current use, it is because their utility has been
clearly demonstrated by long experience. The need is now to standardize the remedies and techniques used and to eliminate quacks and charlatans, who are at present the biggest enemy to progress. Traditional medicine should move with the times and make full use of modern diagnostic facilities, surgery, and pathology, including bacteriology and virology.

SOUTH-EAST ASIA REGION

(Bangladesh, India, Nepal, Sri Lanka, Thailand)

Ayurveda is the form of traditional medicine most commonly used in the Region, notably in Bangladesh, India, Nepal and Sri Lanka. Unani-Tibb, of Graeco-Muslim origin, is much used in Bangladesh and India. In Thailand, traditional medicine is mainly herbal. Other forms of traditional medicine used in the Region are Siddha and Amchi (Tibetan medicine).

In general, traditional medicine might be called the medicine of the rural areas, for it is in these parts where modern medicine is seldom within easy reach, that the traditional forms are most popular. However, in Sri Lanka, where modern health services are everywhere accessible, traditional medicine is still widely used.

As a rough estimate, the percentages of the population using traditional medicine might be as follows: Thailand 20% or less; Bangladesh 30-40%; India 60-70%; and Nepal 75-85%.

While it is not part of the government health services, traditional medicine obviously plays an important role at the primary health care level, almost entirely in treatment rather than in prevention, health promotion and rehabilitation.

In Nepal, a duly qualified traditional practitioner may enter the government health service and will then enjoy the same rights and opportunities as a medical officer trained in the Western system. In India and Sri Lanka, there are numerous special institutions for traditional forms of medicine, so that traditional practitioners can work effectively but they do not form part of an integrated government health service. Similarly, in Bangladesh and Thailand, traditional practitioners are restricted to the private sector, at present.

All five countries are developing institutions for formal training in the various forms of traditional medicine:

<table>
<thead>
<tr>
<th>Training</th>
<th>Bangladesh</th>
<th>India</th>
<th>Nepal</th>
<th>Sri Lanka</th>
<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Institutional</td>
<td>Yes</td>
<td>Yes</td>
<td>Approved</td>
<td>Yes</td>
<td>Not approved</td>
</tr>
<tr>
<td>Duration</td>
<td>4 years plus 1 intern</td>
<td>5-1/2 to 7-1/2 years</td>
<td>3 years</td>
<td>4 years plus 1 intern</td>
<td></td>
</tr>
<tr>
<td>Prior school education</td>
<td>10 years</td>
<td>10-12 years</td>
<td>10 years</td>
<td>10 years</td>
<td>10 years</td>
</tr>
</tbody>
</table>
The participants in this group felt that the strengths and weaknesses of traditional medicine, its indications for use and its limitations might be summarized as follows:

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>Absence of side effects</td>
<td>No standardization</td>
</tr>
<tr>
<td>Use of a holistic approach</td>
<td>No scientific basis</td>
</tr>
<tr>
<td>Low cost</td>
<td>Not investigated by modern research</td>
</tr>
<tr>
<td>Self-sufficiency (local materials)</td>
<td>Shortages in supply of medicinal substances, where demand is heavy</td>
</tr>
<tr>
<td>A form of appropriate technology</td>
<td></td>
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<tr>
<td>Effectiveness proven by time</td>
<td></td>
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<tr>
<td>Low toxicity</td>
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</tbody>
</table>

**Indications**

<table>
<thead>
<tr>
<th>Chronic degenerative diseases</th>
<th>Unsuitable for emergencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychosomatic disorders</td>
<td>Little used for diagnosis</td>
</tr>
<tr>
<td>Geriatric patients</td>
<td></td>
</tr>
<tr>
<td>Treatment of pain</td>
<td></td>
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</tbody>
</table>

**WESTERN PACIFIC REGION**

(Fiji, Japan, Republic of Korea, Papua New Guinea, Philippines, Solomon Islands, Viet Nam)

Traditional medicine is widely used in all of the countries represented and has gained popular acceptance in both urban and rural areas. In Japan, it is popular mainly among people above middle age. The most common forms of traditional medicine used are herbal medicine, acupuncture, massage and bone setting. Fiji, Papua New Guinea and Solomon Islands have not yet adopted acupuncture as a modality of treatment.

The Governments of Japan, Korea and Viet Nam recognize all forms of traditional medical practice existing in these countries. In the Philippines herbal medicine, acupuncture and the use of trained traditional birth attendants are recognized. Although in Fiji, Papua New Guinea and Solomon Islands traditional medical practice is not yet formally recognized, it is not suppressed or discouraged. In Japan, non-medical practitioners of acupuncture, moxibustion and acupression must pass qualifying examinations before they are licensed. In Korea, practice in oriental medicine is restricted to doctors specially trained in this field while, in the Philippines, acupuncture practice is limited to physicians trained in acupuncture.

By and large, traditional medical practice in most countries represented is independent of the government health service, except in the Philippines where the recognized traditional medicine forms are integrated within the health service system. It plays an informal or limited role in the primary health care programmes of governments but, in the Philippines, there is a traditional medicine unit operating under the primary health programme.

Traditional medicine practitioners acquire their knowledge and skills through formal training and/or apprenticeship with senior traditional healers. In the latter case, such knowledge is often kept within the family, being passed down from one generation to another.
Formal training in traditional medicine in such countries as Japan, Korea and Viet Nam is conducted in schools and universities or in health institutions, as a form of in-service training. Filipino doctors formerly obtained their training in acupuncture in China, but lately, such training has been given locally.

No formal evaluation of traditional medicine has yet been made by any of the countries represented. However, in most, it is felt that its strength is evidenced by the effectiveness of its preventive and curative effects and its acceptance by the people. Its main weakness lies in its lack of a clear scientific basis, which makes it unpopular with Western-trained medical professionals, as is the case in some countries, for example, Fiji.

Traditional medicine has been found to be effective in the prevention and treatment of common ailments, in conditions associated with pain, and in chronic diseases common to elderly patients.

Much additional work is required in traditional medicine to standardize nomenclature, procedures, dosages, indications and contraindications and to identify adverse effects, if any.

In conclusion, all felt that traditional medicine still had much to offer in the attempt to bring an adequate level of primary health care to the peoples of the world. With a proper understanding of its potential role and a sympathetic approach to its practitioners, coupled with a scientific evaluation of its claims, traditional medicine has a vital contribution to make to human health and well-being.

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TRADITIONAL MEDICINE AS A HEALTH RESOURCE

ROUND TABLE DISCUSSION

Towards the end of the Seminar, a round table discussion was held, at which participants were invited to consider the position of traditional medicine in their own countries, as a real or potential resource for health development, and the extent to which the Chinese approach, in promoting both the traditional and the modern Western systems of medicine, might be applicable elsewhere. The following is a condensed account of the discussion.

Dr Akerele, WHO

We are now coming to the end of our Seminar and I am sure you will share my view that it has been a very valuable experience for us all. Before we say thank you and goodbye to our generous hosts and go our separate ways, we should spend some time considering the second of the two main issues raised by Dr Nakajima, namely: "To what extent may the Chinese approach be applied by other countries?"

To guide the discussion, it may be useful to recall the outline sent to participants in preparation for the Seminar and to rephrase the points raised, as a series of questions:

What are the main forms of traditional medicine in common use in our own countries?

How can traditional medical practices be evaluated - their strengths and weaknesses, and the main indications for and limitations of such treatment?

How can government recognition of traditional medicine be obtained and appropriate regulations for its control established?

What role should traditional medicine play in primary health care?

How should training in traditional medicine be promoted, by apprenticeship or by formal courses? What should be the duration and content of such training?

What has traditional medicine to offer at the dawn of the twenty-first century?

Dr Mataitoga, Fiji

This is an excellent guide for us to take back to our own countries - it forms a basis of our activities. We have not made any real census of traditional practitioners in Fiji recently. It was proposed, very strongly, that traditional medicine as a resource should be developed and promoted by the Government. This was accepted by the Government and it has now been included in our development plan for the period 1986-1990. So, there is the political will. As recently as September 1985, we held our first national workshop on traditional medicine in primary health care, with the assistance of WHO consultants. This workshop was opened by the Minister of Health, who stated that the Government had made provision

1 Chairman: Dr C. O. Akerele, Traditional Medicine Programme, World Health Organization, Geneva.
for the promotion of traditional medicine in Fiji. The 25 participants included senior health authorities, representatives of the education and legal professions, general medical practitioners, traditional healers, and others. At the end, the Minister made a public statement concerning the adoption of traditional medicine in primary health care, saying that we would have to examine how to implement it. When I return to Fiji, we shall continue with this work.

Dr Pricha Desawadi, Thailand

Having seen something of the integration of traditional medicine in China, I realize that we need to reorganize our own policies. We will start in 1986 with the sixth five-year plan. We will have to get the money and personnel. We shall also have to take up the question of medicines, herbs and remedies in our medical research, since there are many kinds of herbs which can be used. We shall certainly benefit from what we have seen here in the last ten days. In the last five-year plan, the health policy of the Government focused on manpower development. Our health personnel are oriented towards Western medicine and we have now to educate them in traditional medicine also. Even in our universities and schools we shall have to teach this dual approach. The integration of Western and traditional medicine is likely to be very difficult in my country, but it is essential to find a way to increase the strength of both systems. My people have been forced away from traditional medicine and they should come back to it but how can we motivate them? When I went to my village recently and I talked to the people about traditional medicine, I asked them whether they liked it. They said, yes, traditional medicine was much better for the treatment of children but, for more serious diseases, they preferred Western medicine. We have to change attitudes and motivate people towards the acceptance of traditional medicine, where it is appropriate.

Dr Salaraya, Pakistan

Recognition of the indigenous traditional medicine system and the formation of a board to register the traditional healers, hakims, as they are called in our country, started with a debate on who is a healer and who is not a healer. We wanted to eliminate quacks from the healing community. We now have a Traditional Practitioners Board and a Homeopathic Board and, in the government sector, we have colleges which are producing hakims. When I look at this whole subject, I do so from the point of view of planning for Health for All by the Year 2000, which is our main target. The Government of Pakistan, in its five-year plan, has recognized the traditional system as one component of primary health care and one of our targets is to open dispensaries in the rural areas and smaller towns, where traditional medicine is really accepted by everybody. The second stage is to have a traditional medicine hospital, but there is little understanding of what such a hospital should be like, in our country. The third step is to have a research centre to draw up guidelines for the use of herbal medicines, to do research in the cultivation of herbs, to study the different effects of these herbs, and to prepare a formula of the medicinal plants that we should use in our dispensaries.

When I came here, I had some limited knowledge of these matters and I thought I would work to the schedule planned but fortunately, having seen the traditional medicine system in China, I have learned that we can aim higher, by combining Western methods of diagnosis with Eastern systems of treatment. If the two are put together, they can give us the answer to the problem of providing effective but economical treatment. After seeing the Botanical Garden, the drug factories and
the traditional medicine colleges, I have in my mind some idea of what our own research institute will be in the future. Having seen the hospitals, I also have an idea of what a traditional medicine hospital should be like. I must thank WHO for arranging this excellent Seminar, which has opened my eyes and given me much to think about, and the Chinese authorities who have been so kind in making it possible for us to obtain a balanced view of what they have achieved.

Mr Alok, India

We have, of late, recognized that traditional medicine constitutes a very valuable resource and should be used for providing primary health care. To this effect, in 1983, we drafted a national health policy on these lines. In many respects, we are not organized to implement such a policy fully and this is where Chinese experience will be of great use to us, particularly in the way they carry out and organize research, formalize training, and expose the practitioners of each system to the study of the other. I have formed a conviction that, in order for traditional medicine practitioners to become acceptable, they will have to adopt a much more scientific approach and, for this purpose, training and research may have to be reorganized as a structured system as in the People's Republic of China. Their experience of the strengths and weaknesses of the traditional system, which can be extremely useful to us. In fact, quality control of drugs, systematizing the materia medica, training and research, fit into an orderly pattern and that is what I find very useful to have learned from the Chinese experience.

Dr Akerele, WHO

Dr Mataitoga (Fiji) has described what is probably the best way to go about identifying the useful elements of traditional medicine in a country and introducing them into the primary health care system, where appropriate.

Dr Pricha (Thailand) has stressed the importance of research, of a careful reappraisal of traditional medical practices. We should neither adopt nor reject them blindly. So far as treatment is concerned, the people themselves know what is efficacious and what is plain quackery and of no use - they know.

After the Seminar, we shall keep in touch and I look forward to hearing from Dr Salatiya (Pakistan) about the action he is able to achieve in his own country, as a result of what he has seen here.

As Mr Alok (India) has pointed out, the value of the Chinese experience to other countries lies in the way it has been possible to implement what was, in fact, a far-reaching policy decision and to develop all aspects of traditional medicine in a comprehensive and orderly way. This is something which may be very difficult to do in most other countries.

Dr Mishra, Nepal

For the last ten days, I have seen the full range of traditional medicine, from the grass roots to the metropolitan level and have seen the ideal which I had in mind for my country translated into practice here. It was really exciting. In Nepal, we have officially recognized the Ayurvedic system and, very recently, we have given recognition to the Chinese traditional medicine system. A few graduates have come from Beijing to our country and have started to practice: the Government has given them recognition also. We produce certificate level, middle-grade,
personnel who are suitable for primary health care work at the health posts, modern as well as ayurvedic. We have integrated the subjects of ayurveda and modern medicine and are benefiting from it. Besides this, we have many traditional healers and traditional medicine practitioners and we have started to train them to use hygienic instead of occult practices, giving them three months special training. We have also started teaching hygienic techniques to traditional birth attendants. At the same time, we expect that the national educational level will improve very soon so that we can produce graduates who can learn both systems of healing. Our government policy, in the seventh five-year plan, is to give increased emphasis to the development of traditional medicine and to education in it. So far, our primary health care networks for the modern and ayurvedic systems remain separate and are not integrated. When I saw how these integrated institutions work in China, I was convinced that whatever we may do in this field will be beneficial. This knowledge has greatly encouraged me and I will convey my views to the Government.

Dr El Husbah, Sudan

I work in the Ministry of Health and, before coming to this Seminar, if any student had told me that he was coming to China to study traditional medicine, I would have been reluctant to let him come. But, now, I am convinced about traditional medicine. In Sudan, my country, there are many traditional practitioners and a great deal of herbal medicine, although the Government does not yet recognize it. Recently, a research centre for traditional medicine was established as part of the National Research Council. One of the objectives is to carry out surveys of traditional practitioners and their practices and to see how we can train these practitioners to make use of them. We have many traditional midwives working in rural areas and, once, a trained midwife came to me and said that, as all the work was being done by traditional midwives, none was left for her. Obviously, traditional practices are of value and the Government is compelled to take account of this and has started special courses in some provinces. Although Sudan is one of the biggest countries in Africa, it is one of the poorest and our resources are meagre. We cannot provide modern Western medicine to everyone. We have to recognize and incorporate traditional medicine into existing health services, so that we can lessen the burden on the Government and the national budget, since traditional medicine is not as expensive as Western medicine. In my country, the people suffer from a shortage of drugs and they ask us to open dispensaries and health centres. This is very difficult to organize in remote areas. One of the functions of our new research centre is to carry out surveys and we are now waiting for the results. If they are favourable, we shall then adopt some of the traditional practices in our health system.

Dr Kawahara, Japan

Among the many valuable things that I have learned from this Seminar during the past ten days, the one that has impressed me most is that, in China, traditional medicine is included as a part of the curriculum for Western medical colleges. Our friend from the Sudan has just mentioned that in rural areas, primary health care and traditional medicine are very important. This is true, but in a country like Japan, where the health delivery system is fairly well established, only 10% or 15% of people live in rural areas and, even so, traditional medicine is very important and people like it, they rely on it.

When I was a medical student, we were always told that traditional healers were an enemy to progress in medicine. We were told to protect patients from traditional healers, because they were thought to be harmful. So, when I graduated
from medical school, I believed this, but then I discovered that sometimes people do not trust modern doctors. They may try some of their medicines but then they go back to traditional healers, whose approach is more holistic. I think this is a very good chance to challenge the wisdom of the medical system which is still the mainstream of the medical care in most countries. Maybe we can recommend that the medical schools in our various countries include some traditional medicine in the Western medical curriculum.

Mr Geti Kila, Papua New Guinea

Papua New Guinea has just celebrated the tenth anniversary of Independence, and is at a stage where people are still trying to make up their minds what to do. Traditional medicine is not recognized by the Government and, even though it exists and is practised, it is not yet included in official policies. However, just before I came here, the Minister and the planners in the Ministry of Public Health emphasized strongly that Papua New Guinea’s traditional customs and cultures should be supported. Even though traditional medicine is not recognized, people still use their traditional herbs in their villages and there is no law against this practice. In rural areas, where most of the population of Papua New Guinea live, they still look up to their village healers. The decision is up to them, whether they go to a Western doctor or to a traditional healer in the village. At the same time, the training of doctors and health workers in Western medicine is in full swing. From this Seminar, I have come to realize that I can try to convince some of my colleagues at national level to think positively about integrating traditional and modern Western medicine, since I am Coordinator of primary health care in the Ministry of Health, and also Secretary of the Primary Health Care Committee at national level. Primary health care is one way to get through to the people in the rural areas, and to help them to recognize and use whatever is available. Traditional herbs, and maybe traditional healers, are part of those resources. There is a gap between people at village level and the health care delivery system and traditional medicine may be a means of closing this gap. However, there are difficulties, especially in the areas of teaching and training. Papua New Guinea is a small country and, as many of the staff of institutions like the Faculty of Medicine have been trained overseas, an orientation towards traditional medicine presents a problem. The training of paramedics has now been taken over by experienced Papua New Guineans and it is through these people that we can promote the idea of combining traditional medicine with Western medicine.

Dr Akerale, WHO

Dr Mishra (Nepal) has done well to raise the question of witchcraft and the occult which are often, but quite wrongly, associated with traditional medicine and which have brought it into discredit as a result, at least in many countries. The kind of objective and scientific approach to traditional medicine that WHO advocates has, of course, nothing to do with the occult, nothing to do with witchcraft, but aims at the critical examination by modern methods of knowledge handed down to us from the past.

To supplement the information given by Dr El Mubshah (Sudan), I should mention that WHO has been collaborating with the Sudan in the training of traditional birth attendants for over 30 years. Another point is that people keep equating traditional medicine with cheap medicine, but surveys in a number of countries have shown that it may, indeed, be more expensive than Western medicine. Like any other form of medicine, traditional medicine needs adequate regulation and control but, given this, it may be very suitable for certain conditions.
Dr Kawahara (Japan) has hit the nail on the head in saying that medical schools should teach the elements of traditional medicine. If medical and nursing students are sensitized to the value of good traditional medicine practice in their countries, I am sure they will be allies for traditional practitioners, rather than antagonists.

In promising to try and assist in the introduction of traditional medicine into primary health care in his country, Mr Rila (Papua New Guinea) has entered fully into the spirit of this Seminar, the whole purpose of which is to expose participants to the possibilities that exist if only they can tap the resources available in the traditional medicine of their own countries.

Professor Lantum, Cameroon

Even here, when we use the words traditional medicine and traditional practitioners, we appear to be referring to people outside our own society. This is the conventional way of looking at traditional medicine — to regard it as something foreign to society, and therefore to be kept out. It is only in China that we have the feeling that, throughout the various dynasties, traditional medicine was nurtured by people who loved it. Now, just because man has discovered a modern medicine, he should not therefore condemn the older system. Traditional healers have been here from time immemorial and it is the modern practitioner who is the stranger in society.

We should consider the consumer's point of view when we study traditional medicine. When he is sick, he needs someone to help him and whether it is modern or traditional treatment that is used it does not matter, so long as it works. We need to bring in anthropologists and sociologists to help us in our study. But, even where traditional medicine is very well established, we should also be prepared to accept modern technology to study and improve it further, so that we can make progress. Furthermore, if a ministry of health finds it is not able to promote the positive claims and aspects of traditional medicine, it should seek out the help of the media and the information people. In these ways, we will influence its acceptance and legislation in its favour in some of our countries.

Professor Hoang Bao Chau, Viet Nam

I have been most impressed by the experiences of the Chinese in teaching, in research, in the prevention of disease, and in the manufacture of drugs. Though traditional Chinese medicine faces many problems which still remain to be explored and resolved, I believe that with the development of science these problems will be solved. In Viet Nam, since 1955, our Government has advocated the development of traditional medicine and we try to integrate it into the whole medical system. This helps us to provide better medical and health care for the people and it also enriches and extends medical knowledge in our country. At present, medical facilities have been established in Viet Nam from the central down to the rural level and in our research we aim at the further development of the legacy of traditional medicine. We have been working hard to use this rich experience in health care for the people. However, we have to admit that we have had a hard time because it is difficult for modern doctors to accept traditional medicine. Things are now much better and, after 30 years, many scientists and doctors of modern science are engaged in research work in traditional medicine, which is also becoming popular and has spread down to the village level. Our belief is that the integration of traditional medicine with modern medicine will do us much good because of the advantages it will bring to the people, and because it is quite
economical. Sharing the rich experience of China and other countries is of great value to us and I hope we will have other opportunities to share our views and have further academic exchanges like this one.

Col. A.M. Khan, Bangladesh

Although Bangladesh is a small country, the population is large, 100 million people. Our main problems are getting medical care to the people and population control. In primary health care, we have up till now been able to reach only 20% of the population through Western medicine, because most of the people, 90%, live in villages in the rural areas. Our health care system is based on Western medicine but, at the same time, traditional medicine is recognized and there are nine traditional medical schools, of which five teach ayurvedic or unani tibbi systems of medicine. The courses are for four years and, on qualification, practitioners are awarded a diploma and can apply for registration. At Independence, in 1971, there were only three traditional medical schools; now there are nine, and the Government wants to establish a college with a five-year course. So, the Government is encouraging traditional medicine and the people in the villages like it, although Western medicine holds pride of place. In 1980, there was a national seminar in our country on traditional medicine and one of the recommendations was to integrate it into primary health care. It is now 1985 and nothing has been done. This is due to the resistance of the Western-trained doctors. Our traditional practitioners are very dogmatic and do not want to use the Western system for diagnostic purposes, which would greatly improve the quality of their work, as it has done in China. So, we should try to convince them to follow the Chinese example.

We have a research centre but the conditions are not good. Bangladesh is poor and we cannot invest a lot of money in research work. Still, we have to invigorate research institutes and, as I am now acting as Chairman of the Board of Unani and Ayurvedic Systems of Medicine, I can play a useful role in improving the situation in our country. We have a botanical garden, but we only grow plants for flowers, not for medicinal purposes. Our climate is almost the same as that of Guangzhou Province and we have a lot of medicinal plants growing wild. We should try to get the Agricultural Department to give land for the cultivation of medicinal plants. We import traditional drugs but, instead, we should try to develop our own supply points and storage and processing facilities. We have many traditional practitioners, who sell their medicines to the people in large quantities and earn a lot of money, but they are not doing any research and they work only for their own benefit. So, when I go back to my country, I will ask them to devote some of their profits to the improvement of traditional medicine.

Dr. Akersale, WHO

Professor Lantum (Cameroon) has made a crucial point. In studying, exploring, promoting and using traditional medicine, we need the help of many disciplines which do not belong to health but which impinge on it. Without their involvement, we cannot succeed — we cannot do it alone.

Though his country is strong in traditional medicine, Professor Hoang (Viet Nam) tells us, in all frankness, that the integration of traditional with modern medicine encountered much resistance at the beginning. Now, fortunately, things are easier. Conflicts between the Western-trained doctor and the traditional practitioner are bound to occur, in any society, but Professor Hoang looks to science to resolve this problem. Let us use science wisely to test the values of the past.
From what Colonel Khan (Bangladesh) has said, it is clear how very important it is to have a sound policy to guide the overall development of traditional medicine. Without one, there will be endless troubles which might be avoided. Even with one, there will be difficulties enough, but these should not hold us back, they should be a stimulus to further development.

Dr Lina Manapsal, Philippines

After ten days in China, I now realize that traditional medicine in the Philippines is still in its infancy. We have a lot more work to do if we are to develop and integrate it within our health care system. The Ministry of Health recognizes traditional birth attendants and acupuncture. Today we have about 15 or 16 medical doctors who have trained in acupuncture in China. The Ministry of Health has become interested in this method and we have now established training programmes in twelve regions of the country. We are also becoming interested in herbal medicine, and are establishing herbal processing plants for use in rural areas to treat common conditions such as fever, kidney disease and malaria. We intend to develop herbal medicine in a very cautious way because we know that this is an expensive process and we want to be sure that we have our priorities right.

There are many traditional folk healers, psychic healers and spiritual healers in the Philippines. They are accepted even by foreigners, coming to my country willing to take the chance that terminal illnesses might be cured, but are not recognized by the Government, because our Medical Act allows only licensed medical doctors to practice medicine. This is a problem and something has to be done in order that such healers may also be recognized, taking only those who are genuine.

In terms of training in traditional medicine, we have only very limited training programmes - for traditional birth attendants and acupuncturists. Our medical schools are Western-oriented and need to be convinced of the importance and significance of traditional medicine, of the good it can do. We have a shortage of medical manpower and most of our doctors do not want to go to the rural areas. As a remedy, in our primary health care programme, we have engaged community voluntary workers. We have trained them in simple health practices, in identifying common illnesses, and in helping in preventive work. They are also trained to teach household members about health and there are manuals which describe a number of medicinal plants which they may grow in their gardens. We teach them how to utilize these plants to treat common ailments.

Dr Youssof Al-Mo’men, Kuwait

Traditional Chinese medicine has a bright future, for the simple reason that our Chinese friends are really up to date and are introducing technology in all fields of medicine. Probably, after a few years, we will not hear of Chinese and modern medicine, it will be one medicine for the good of all the people. There are no remote communities in Kuwait. Thirty years ago there were a few villages outside the capital. Now these are all combined into one city state, and communication has become easier. Economic development has brought Western technology to Kuwait and Western medicine covers every part of the country. There is no system of traditional medicine and healers in the country, but we cannot say we are a people without traditional medicine, because it is there, in our own houses, and as qualified medical practitioners we see it in our own families. There are shops selling medicinal plants, but on prescription.

There is a research centre for traditional medicine, well equipped with modern apparatus, which is linked to specialized hospitals and is within easy reach of all the advanced technological facilities, laboratories and other institutions. My
feeling is that the State of Kuwait will not have the personnel or materials to introduce traditional medicine into the health service. But, the Research Centre is going to serve other countries as well. If I may add just another suggestion to one which was made earlier, that traditional medicine should be included to the curricula of medical schools, I think it should also be taught in schools of nursing, pharmacy and dentistry.

A good introduction for those who have no idea of its value would be to devote a World Health Day to traditional medicine, to help them see the contribution it can make to Health for All by the Year 2000.

Dr Akerele, WHO

Dr Manapsal (Philippines), in referring to psychic and spiritual healers, has touched on a matter that is often raised in connection with traditional medicine. Faith healing is as old as time and faith, of course, plays an important role in all systems of medicine, ancient and modern. But, in developing WHO's programme in traditional medicine for the next five years, we have had to establish priorities and decide what to exclude of all that might be considered to come within the meaning of the term traditional medicine. Being compelled to limit the field of activity, we have decided to concentrate on the study and application of those aspects of the subject that can be explained at the present time. And so, there is much that must be left for another day.

Dr Al-Ko'men (Kuwait) has underlined the importance of using science and technology in studying traditional medical beliefs and practices and this should be our approach, to consider all beliefs seriously, to put prejudice aside, but to take nothing for granted.

And now, in closing I wish to thank you all. The experience we have shared in China has given us a clear idea of one great nation's way of providing comprehensive health care for the entire population and of the role that traditional medicine plays in the whole scheme of things. We cannot copy the design in our own countries but we can, so to speak, borrow the frame to take home to help us draw a picture of our own.

Finally, I should like to ask Dr Tian to say a few words.

Dr Tian Jingfu, China

Dear Chairman and friends, we have just heard a dozen participants talking enthusiastically and they have told us about traditional medicine in their countries. We are very appreciative. Traditional Chinese medicine comes from a specific historical age and I agree with Dr Akerele, that the whole system cannot just be adopted by another country. It must be adapted according to the local situation. We are greatly encouraged by the praise of participants for our traditional medicine and the most important thing is that we have been able to learn a lot from their speeches. Thank you.

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NOTES ON INSTITUTIONS VISITED

Mr. S. K. ALOK

In addition to the formal presentations and discussions, field visits to selected health centres, hospitals, medical colleges and other institutions were made to demonstrate the range of rural and urban health facilities available to the people of China and of the part that traditional Chinese medicine plays in them. The talks and field visits were combined in such a manner as to provide the participants with a comprehensive idea of the way in which traditional Chinese medicine is integrated into the health system and gave them the opportunity of discussions with doctors, teachers and medical workers at all levels of the health network.

The programme of visits included the following institutions:

CONGHBUA COUNTY

County Health School, Conghua
County Hospital of Traditional Chinese Medicine, Conghua
County People’s Hospital, Conghua
District Health Centre, Liangkou
Township Health Station, Liangming
District Health Centre, Taiping
Village Health Station, Taiping
Conghua Hot Spring Rehabilitation Centre

GUANGZHOU

Zhongshan Medical College and its Affiliated Hospitals, Guangzhou
Guangzhou College of Traditional Chinese Medicine and its Affiliated Hospital Sai Yun Shan Pharmaceutical Factory

NANNING

Guangxi Botanical Garden of Medicinal Plants
Guangxi School of Pharmacy and its Pharmaceutical Factory
Guangxi College of Traditional Chinese Medicine and its Affiliated Hospital

COUNTY HEALTH SCHOOL, CONGHBUA

The health school is a training centre for the county health care delivery system. It trains assistant doctors, assistant doctors of traditional medicine, nurses and rural doctors. The school follows the national teaching programme and uses national standard teaching material. Traditional medicine is a required

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1 Joint Secretary, Ministry of Health and Family Welfare, New Delhi, India
(Rapporteur for the Seminar).
subject for all students. A student training to be a rural doctor spends one-third of the time studying traditional medicine. An assistant doctor of traditional medicine devotes about 20% of the time to the study of Western medicine. The students are high-school graduates, and are assigned to the county health care delivery system after completing the course.

The school also runs classes for nurses, who are required to have a basic knowledge of theory and practical skills, including the theory and practice of traditional Chinese medicine.

THE COUNTY HOSPITAL OF TRADITIONAL CHINESE MEDICINE, CONGHAU

This is a specialized institution providing medical and health services, using traditional Chinese medicine. Its responsibilities include improving the professional skills of technical health personnel, developing traditional Chinese medicine and pharmacology, imparting training in traditional medicine to both traditional and Western medicine doctors, conducting research and promoting disease prevention.

The hospital has 20 beds and various sections, including traditional orthopaedics, acupuncture, physiotherapy and paediatrics. It also has a special clinic staffed by veteran traditional doctors. The hospital is equipped with laboratory, X-ray, ultra-sonic apparatus, electro-cardiograph, etc., which are used in a combination of traditional and Western medicine. There is a separate section devoted to the cleaning, preservation and storage of herbs used in traditional medicine, which are dispensed by pharmacists according to doctors' prescriptions.

THE COUNTY PEOPLE'S HOSPITAL, CONGHAU

Although this is a predominantly Western medicine hospital, there is a separate section where traditional Chinese medicine is used. Thirty per cent. of the total outpatients are treated with traditional Chinese medicine and 15% with a combination of traditional and Western medicine methods. About two-thirds of the doctors in this hospital may prescribe either traditional Chinese or Western medicine, according to the condition of the patients. The traditional doctors may prescribe certain Western medicines, but doctors of Western medicine are not permitted to prescribe traditional remedies unless they undergo training in traditional Chinese medicine.

The hospital provides technical guidance and acts as a training base for the county health care delivery system. It receives patients referred from health centres and emergency cases, and undertakes teaching and research.

LIANGKOU AND TAIPING DISTRICT HEALTH CENTRES

Liangkou district, a semi-mountainous region covering an area of nearly 500 square kilometres with a population of 28 800, has eight townships subdivided into 134 villages. Taiping, with an area of 72 square kilometres and a population of 28 000, has one town and 12 townships comprising 109 villages. Both districts are served by health centres, each staffed with some 45 medical personnel.

In addition to providing routine medical services, each health centre is responsible for public health activities, health statistics, epidemic prevention and control and mother and child health for the whole district, besides giving technical guidance to and exercising supervision over the township health stations, which are the peripheral units of the health delivery system, each covering a population of about 2000.
Both the district health centres and the township health stations employ traditional remedies. The rural doctors serving in them are trained to treat 30 to 40 diseases and conditions and are usually adept in the use of some 200 medicinal plants, 30 classical Chinese prescriptions and 80 acupuncture.

In Liangming health station, there were four rural doctors, assisted by 12 health aides and an assistant midwife. Health aides may in due course become rural doctors after receiving training and passing an examination.

Health aides, either part-time or full-time, are paid by the community according to a fixed fee scale. At the township health station a sum of 0.60 or 0.70 yuan (US$ 0.2-0.23) is paid by a patient for each visit; medicine is extra. However, as income is not sufficient to cover the health stations' costs, the deficit is made good by the Government. In Liangming health station, the total income amounted to about 5300 yuan (US$ 1760) against an expenditure of 4300 yuan (US$ 1400), excluding salaries. At the district health centre level, running costs are mainly realized from service fees. For example, at the Taiping health centre expenditure was nearly 259 000 yuan (US$ 86 000), but an amount of only 245 000 yuan (US$ 81 000) was received from patients, the deficit being met by a government grant. Government employees or cadres have their medical expenses reimbursed by government, while factories pay the medical bills of their workers. Peasants may have their medical bills paid through health cooperatives if they are members; otherwise they pay for themselves. This more or less self-sustaining health care system is being built up gradually. In 1984, expenditure on health in Conghua County amounted to 6.5 million yuan (US$ 2 166 000), 14% of the total being provided by the State.

THE HOT SPRING REHABILITATION CENTRE, CONGCHA

The Centre has one chief doctor, seven attending doctors, three traditional Chinese medicine doctors, 18 Western medicine doctors and 72 other technical personnel. It serves people from all over China and also from overseas.

The Department of Physiotherapy and Physical Exercise Therapy provides facilities for acupuncture, moxibustion, massage and various kinds of physical re-education. Electrotherapy, infra-red lamp therapy, hot wax therapy and hot compresses with Chinese medicinal herbs are used.

The Centre mainly receives patients suffering from cardiovascular disorders, such as hypertension, coronary heart disease, the sequelae of stroke and hemiplegia, rheumatism, chronic bronchitis, sciatica, and neuralgia. It is chiefly concerned with the chronic and degenerative diseases of old age. Sixty per cent. of the medicines used are traditional preparations. The combination of traditional Chinese methods of treatment with modern diagnostic aids is considered extremely beneficial and the Centre is regarded as an example of how traditional and modern knowledge can be exploited best in the service of the disabled and the diseased.

(at US$ 1 = 3 yuan RMB.)
ZHONGSHAN MEDICAL COLLEGE, GUANGZHOU

This is one of the leading institutions of higher medical learning in the country, and was created by combining three medical colleges. The total staff number 5303, including 41 professors, 175 associate professors and 532 lecturers. The four major faculties are medicine, stomatology, public health and forensic medicine.

The College has 11 accredited programmes for doctorate degrees and 32 for master's degrees, in addition to undergraduate classes. It also runs evening courses and continuing education programmes. The Zhongshan Medical College library is the accredited catalogue centre for medical literature for Guangdong province.

There are four affiliated hospitals, an eye centre and a cancer hospital. The annual case load exceeds 33,000 inpatients, and two million outpatients. The first affiliated hospital is the largest general hospital and the second, the oldest hospital in China. In each hospital there is a wing for traditional Chinese medicine.

The Department of Traditional Chinese Medicine is headed by a traditional physician. There are five professors. The staff have either graduated from colleges of traditional medicine or have studied traditional Chinese medicine after completing a degree in Western medicine.

In the early nineteen sixties, the study of traditional Chinese medicine became compulsory in all Western medicine colleges.

Students taking a degree spend 170 hours studying traditional medicine. Students study traditional medicine in the 3rd year of the 5-year degree course and in the 4th year of the 6-year degree course. Three-fifths of their time is devoted to classroom instruction and the remainder to clinical instruction. Special attention is paid to the way traditional medicine is taught; its complicated terms and mechanisms; the anatomical and physiological similarities and dissimilarities, etc. Particular emphasis is put on the use of traditional medicine in rehabilitation and the College is planning to make community-based rehabilitation services a part of primary health care. Acupuncture, moxibustion and traditional manipulation are well suited to certain geriatric conditions and these traditional practices are included in the students' curriculum, 36 to 40 hours being spent in the last year of the degree course to teach these methods whilst discussing the subject of rehabilitative care.

THE COLLEGE OF TRADITIONAL CHINESE MEDICINE, GUANGZHOU AND ITS AFFILIATED HOSPITAL

Training in traditional medicine in China takes five years, the final year being spent as a hospital intern: the study of Chinese materia medica takes four years. The key colleges require an extra year of study. About two-thirds of the course are devoted to formal classroom teaching and one-third to practical work.

Students have to master basic theory and techniques, learn to diagnose and treat some 50-100 common diseases and to identify, process and prepare about 150 substances (plant, animal and mineral) listed in the traditional Chinese materia medica. They have to acquire skill in the use of acupuncture, moxibustion and massage in treatment. The curriculum includes the Canon of Medicine, diagnosis, prescriptions, internal medicine, surgery, gynaecology, paediatrics, orthopaedics, E.N.T. and ophthalmology. Students are also obliged to learn a certain amount of Western medicine, one foreign language and ancient Chinese. The ratio of
traditional to Western medicine in the course is about seven to three. Hospitals are affiliated to each traditional medical college, and provide facilities for clinical teaching and practical experience. There are two kinds of postgraduate degrees - a master's and a doctorate.

The training of middle-grade traditional medical personnel lasts for three years; students are selected from those who have completed junior middle school.

In-service training in traditional medicine is organized at three levels. The Ministry of Public Health is responsible for the training of staff at the provincial and municipal level. These, in turn, provide training for staff at county level, while the latter give training to those from the district and township levels. Correspondence courses and evening universities are also available for intensive training as only a few of the 300 000 personnel working in traditional medicine can be released at a time.

The main teaching hospital, built beside the College, was established in 1967 and has a staff of 886. There are two full professors, 24 associate professors, 187 attending physicians and 116 resident physicians. There are four main departments: the inpatient, outpatient, emergency and pharmaceutical departments. There are other separate departments including an X-ray department, electrocardiography rooms, clinical laboratories, all fairly well equipped with modern facilities. The guiding principle for running the hospital is to keep its distinctive character of traditional Chinese medicine, whilst developing it into a modern hospital by applying advanced techniques and using modern facilities.

The departments of orthopaedics and traumatology, gynaecology, acupuncture, moxibustion and massage, and the outpatient department were visited.

The College is actively engaged in modern scientific research in the area of traditional Chinese medicine. Over the past six years, 67 research projects have received provincial and national science research achievement awards (e.g. Qinghaosu and its derivatives in the treatment of falciparum malaria and cerebral malaria).

An exhibition hall of traditional Chinese drugs displays 1000 specimens of plant, animal or mineral origin. There is a meridian demonstration room where models have been set up as teaching aids. A scientific research centre is being set up with a loan from the World Bank, and it is involved in both teaching and research. The College has a herbarium and offers students and teachers the opportunity of studying medicinal plants at first hand. It has about 700 species of medicinal plants.

THE BAIYUNSHAN PHARMACEUTICAL FACTORY, GUANGZHOU

The factory is a relatively modern complex comprising nine subsidiary factories and has a staff of about 3500. The complex has buildings for manufacturing, research and storage and has living quarters for about 350 families. More than 180 kinds of Western and traditional patent medicines are manufactured.

A research institute of materia medica and Chinese medicinal herbs has been established within the factory. Emphasis is laid on quality control and there is a laboratory for this purpose. Government companies supply the herbs and raw materials. Half the production is herb-based and the other half, chemical-based.
The professional staff number about 230, including pharmacists, engineers and technicians. Forty-five retired professors, specialists and veteran pharmacists act as advisers and consultants. There are some 800 selling agencies in 27 provinces and cities of the country. The factory exports its products to Europe, Hong Kong, Macao, South-East Asia and the United States of America. The total sales between January and September 1985 were over 160 million yuan (US$ 53 million) with profits of about 13%. Salaries and wages account for about 4.5% of the total expenditure.

The factory has a monopoly on certain products, but is otherwise competitive. It advertises its products and marketing data are carefully considered when planning production. The factory must have sound management practices for it to develop and survive. Under the new economic reforms, businesses which incur losses and are not cost-effective are being closed down.

There is a bonus system linked to production. The maximum bonus is equal to three months' salary. Thus, good productive work is encouraged and bad or indifferent work is punishable.

THE BOTANICAL GARDEN OF MEDICINAL PLANTS, GUANGXI

The Garden is supervised by the Health Bureau of the Guangxi Zhuang Autonomous Region and covers an area of 200 hectares. It has 2120 species of medicinal plants and 11 types of animal used for medicinal purposes.

The main tasks of the Garden are: to collect medicinal plants which grow wild locally; to introduce and acclimatise medicinal plants (or animals) from other provinces or abroad; to disseminate information and promote the use of traditional Chinese herbal medicines; and to provide experimental facilities for scientific research and education in medicine.

In the Garden, there are six sections, namely: the cultivation centre; the herbarium; the garden section; the seed section; the information centre; and the animal section.

The Garden has seven exhibition areas, specially created to demonstrate the medicinal plants native to Guangxi, the various medicinal plants grouped according to their use in treatment, woody medicinal plants, herbaceous medicinal plants, medicinal plants that grow in the shade, climbing medicinal plants and animals of medicinal value.

The Guangxi Botanical Garden of Medicinal Plants is one of the three or four major institutions of its kind in the country and is being built-up to cater to the needs of scientific research and education.

THE PHARMACY SCHOOL, GUANGXI AND ITS DRUG MANUFACTURING PLANT

Pharmacists training here in traditional medicine follow a three-year course and go to the Drug Manufacturing Plant for practical instruction in the manufacture of medicines. Special courses are run for training pharmacists in minority traditional medicine systems. The factory's aims are to integrate research, training and manufacturing facilities, and to use locally grown medicinal herbs in the manufacture of traditional medicines.
THE TRADITIONAL CHINESE MEDICINE COLLEGE, GUANGXI AND ITS AFFILIATED HOSPITAL

The College has a staff of 663 and some 1040 students are either attending courses or doing undergraduate studies. Six hundred and ten people have joined either the correspondence or evening university course, sponsored by the College, to train as rural doctors.

There are two academic departments in the College, namely the Department of Traditional Medicine and the Department of Traditional Chinese Pharmacology.

Students training in traditional Chinese medicine follow a five-year course. The ratio between traditional and Western medicine in the course is 7:3, with equal emphasis on basic and clinical courses. One year of clinical practice is required before graduation.

The course in traditional Chinese pharmacology lasts for four years and includes six months in the actual production of traditional remedies.

The College has a nurses' school, a pharmaceutical plant and two affiliated hospitals for teaching purposes. The College also conducts a programme of research through its research units on the treatment of lung diseases with traditional Chinese medicine, on medicinal herbs, and on acupuncture channels.

The hospital serves as a teaching hospital for the College and is involved in training, teaching, research and treatment. It has 361 beds, a staff of 594 (11% are medical workers) and deals, on average, with 1300 outpatients daily and 5000 inpatients every month. Different wings of the hospital are given over to folk therapy, acupuncture and moxibustion, manipulation therapy, hot compresses with medicinal herbs, haemorrhoids, fractures and Chinese orthopaedics, massage, pharmacy, etc. It is equipped with modern scientific aids such as X-ray, ECG, a laboratory and ultrasonics. Students come here to do their internship.
TRENDS AND PROSPECTS

Dr O. Akerele

In his opening address, Dr Nakajima, the Director of the WHO Western Pacific Region, posed two main questions:

What has been the result of incorporating traditional Chinese medicine on the health services?

To what extent may the Chinese approach be applied to other countries?

The answer to the first question has been given in the various presentations by the Chinese authorities, whose papers constitute the body of this report.

Only time and experience will give the answer to the second question but, if the Chinese approach may be summed up in a few words - "take traditional medicine seriously and try to make good use of it," then the response of participants was enthusiastic.

It remains to be seen what action they are able to initiate in their own countries but, already, two have made significant moves as a result of the Seminar. In one country, regional seminars are being held on the use of medicinal plants in national health services, and on the place of botanical gardens in their conservation, cultivation and propagation. These regional seminars will culminate in a national seminar where a national strategy will be decided. One participant, who is the Secretary of his country's National Primary Health Care Committee, has followed-up on the Seminar with his colleagues and a number of recommendations to the Department of Health on the initiation of activities on traditional medicine in primary health care have been made.

In preparing their working papers, the Chinese authorities wished not only to give a general account of the place of traditional medicine in their health service but also to anticipate and answer some of the questions that would be asked by participants.

As these cover many important aspects of the subject, it seemed useful to present them as an annex to this report (Annex 3), together with some of the questions raised during the Seminar. Many of the questions are relevant to other countries, in which various forms of traditional medicine are practised, including those in which it has not yet been exploited to any degree.

Finally, it is appropriate to ask and answer the question "Why does WHO have a Traditional Medicine Programme?"

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1 Programme Manager, Traditional Medicine Programme, World Health Organization, Geneva.
The last decade has seen a considerable growth of popular, official and commercial interest in the use of traditional practitioners and their remedies. For the majority of the world's population these have been, and in many instances are still, the only forms of medical care readily available. Many Member States are responding to WHO's resolutions on the subject, calling for them to give adequate importance to the utilization of their traditional medicine. Consequently, traditional practices and remedies are being brought increasingly under the purview of the health services.

WHO's Traditional Medicine Programme promotes and supports the evaluation and incorporation of useful elements of traditional medicine into national health systems. These elements comprise those health practices and beliefs which were in existence, often for hundreds of years, before the development and spread of modern scientific medicine and which are still in use today. They vary in different countries, in keeping with their social and cultural heritage and traditions. The aim of the evaluation component of the Programme is to put traditional medicine on a scientific basis by: critical examination of traditional materia medica and practices; accurate identification of plants and other natural products used; identification of useful remedies and practices, and suppression of those that are patently ineffective or unsafe; and promotion of further research and exchange of information.

The role of WHO is to support Member States in making proper use of their traditional medicine as part of their primary health care programmes. The Programme is directed towards three major areas:

1. Training - oriented towards the development of knowledge and skills of all health workers and the creation of a favourable atmosphere that will encourage the formulation of viable national traditional medicine activities;

2. Evaluation - countries where traditional medicine is widely practised are being encouraged to undertake multidisciplinary studies into the efficacy and the safety of the traditional remedies used. Such an examination, of course, is much easier in systems of medicine for which the philosophy and educational content are well documented than in the case of traditional remedies handed down from generation to generation by word of mouth. However, in spite of the difficulties, the investigation of the latter may lead to significant benefit for mankind, especially in the field of drug development from herbal remedies;

3. Integration into national health services - where traditional medicine is well established and seen as a valuable asset for health promotion, traditional practitioners should be involved in the process of strengthening links with the general health delivery system. They should help in the identification of problems associated with the establishment of linkages at the local level. They should be involved in the planning, implementation and evaluation of community health activities, so as to enhance working relationships between themselves and other members of the health team. First and foremost, of course, the traditional practitioners should be involved in the evaluation of their own practices so as to facilitate the ready acceptance by their peers of suggestions for changes, including the assumption of new responsibilities - for example, in the field of health education.

The economic crises that many developing countries are facing today may well lead to severe shortages of certain modern drugs and products at the periphery, thereby forcing more people to make use of traditional medicine, whether this is government policy or not. In the worst of situations this could lead to increased
quackery and charlatanry. Where traditional medicine is intimately linked with the essential elements of primary health care, these negative consequences may be forestalled or, at least, minimized. Where such links do not exist, economic conditions may lead to a pattern of health care utilization that could be detrimental to health.

It was clear, from the Seminar discussions, that few people have any real insight into the local economic and social factors that influence the decisions taken by individuals and families regarding the use of health services. Much of their decision-making is conditioned by the availability of competing services which include traditional medicine.

An increasing number of countries are now paying serious attention to the incorporation of useful and effective traditional medicine in their national strategies for Health for All, and WHO will continue to support them in this endeavor. The Inter-regional Seminar in China gave participants a better understanding of the contribution of traditional practices to national health services and primary health care and of the constraints that may prevent or impede progress.

* * *
## ANNEX 1

### LIST OF PARTICIPANTS

#### African Region

**Cameroon**
- Dr D. N. Lantum  
  Deputy Director UCHS/CUSS  
  University of Yaounde  
  Yaounde

**Nigeria**
- Dr F. U. Edozie (unable to attend)  
  Director  
  Medical Services and Training  
  Federal Ministry of Health  
  Federal Secretariat  
  Ikoyi, Lagos

**United Republic of Tanzania**
- Dr I. A. J. Semali (unable to attend)  
  Assistant Research Fellow  
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  P.O. Box 9292  
  Dar-es-Salaam

#### Eastern Mediterranean Region

**Egypt**
- Dr Mohamad Hamood El Sayed  
  Assistant Director  
  Primary Health Care  
  Ministry of Health  
  Cairo

**Kuwait**
- Dr Youssof Al-Mo'men  
  Head of Community Health Services  
  Alshoukazz Health Area  
  Ministry of Public Health  
  Kuwait

**Pakistan**
- Dr Muhammad Ayub Salariya  
  Additional Secretary, Health Technology  
  Health Secretariat  
  Government of Punjab  
  Lahore

**Sudan**
- Dr Mohamed Abdel Rahman El Musbah  
  Director  
  Primary Health Care  
  Ministry of Health  
  Khartoum
### Region for the Americas

**Mexico**
- Dr Xavier Lozoya (unable to attend)
- Chief of Biomedical Research in Traditional Medicine in Social Security Institute

**South-East Asia Region**

**Bangladesh**
- Col. A. M. Khan
  - Joint Secretary
  - Ministry of Health and Population Control
  - Bangladesh Secretariat
  - Dhaka

**India**
- Mr S. K. Alok
  - Joint Secretary
  - Ministry of Health and Family Welfare
  - Maulana Azad Road
  - Nirman Bhavan
  - New Delhi-110 011

**Nepal**
- Dr Ram Prasad Mishra
  - Chief
  - Singha Durbar Vaidya Khana
  - P.O. Box No. 395
  - Kathmandu

**Sri Lanka**
- Mr N. W. Weralupitiya
  - Deputy Commissioner of Ayurveda
  - Department of Ayurveda
  - 385, Deans Road
  - Colombo 10

**Thailand**
- Dr Pricha Desawadi
  - Principal Medical Officer
  - Ministry of Public Health
  - Devavesa Palace
  - Bangkok

### European Region

**Yugoslavia**
- Dr A. Skoklijev (unable to attend)
- Belgrade Medical Academy
  - Crenotavska 17
  - Belgrade

### Western Pacific Region

**Fiji**
- Dr. M. V. Maitaitoga
  - Ministry of Health & Social Welfare
  - Fiji Insurance Building
  - Suva
### Annex 1

<table>
<thead>
<tr>
<th>Country</th>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Republic of Korea</td>
<td>Mr Chul Shik Byun</td>
<td>Division of Community Health Services</td>
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<td>Ministry of Health and Social Affairs</td>
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<td>Dr Ki Sunu</td>
<td>President</td>
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<td>Philippines</td>
<td>Dr Lina Menapsal</td>
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<td>Solomon Islands</td>
<td>Mr Ken Konate</td>
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<td>Viet Nam</td>
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ANNEX 2

PROGRAMME OF SEMINAR

9-21 October 1985

Wednesday 9
Arrival in Guangzhou, travel to Conghua

Thursday 10
Welcome by Dr Huang Guanghua, Director,
Bureau of Public Health, Guangdong Province

Inaugural address by Dr Hiroshi Nakajima,
Regional Director, World Health Organization

Address by Dr Hu Ximing, Vice Minister,
Ministry of Public Health, People's Republic of China

Briefing on Seminar
Dr C. O. Akerele

Traditional Chinese Medicine: past, present and future
Dr Tian Jingfu

Afternoon

Rural Health Care in China
Dr Zhang Zikuan

Primary Health Care and Traditional Medicine in
Conghua County
Dr Fu Huixiang

Friday 11
Visits to Health Institutions in Conghua County
Conghua County Health School
Traditional Chinese Medicine Hospital, Conghua
Afternoon

Liangkou District Health Centre
Liangming Township Health Station
(group 1)

Taiping District Health Centre
and a Village Health Station
(group 2)

Saturday 12
Non-drug Therapy in Medical Care
Professor Tao Zhida

Demonstration of Non-drug Therapy
Visit to the Rehabilitation Centre, Conghua

Afternoon

Preparation for the Presentation of Participants on
the Role of Traditional Medicine in other Countries
Dr Wang Liangshen

Sunday 13
Excursion in Conghua County

Monday 14
Combining Traditional Chinese and Modern Western Medicine
Dr Xu Tong

Research in Traditional Chinese Medicine
Dr Lu Weibo

Afternoon

Travel to Guangzhou
Visit to the Zhongshan University of Medical Science,
Guangzhou. (Zhongshan Medical College and its
Affiliated Hospital)

Tuesday 13
Education and Training in Traditional Chinese Medicine
Dr Chen Youbang

Visit to Guangzhou College of Traditional Chinese
Medicine and its Affiliated Hospital

Afternoon free
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Wednesday 16

Visit to the Bai Yun Shan Pharmaceutical Factory in Guangzhou

Afternoon

Presentations by Participants on the Role of Traditional Medicine in their Countries

Eastern Mediterranean Region: Egypt, Kuwait, Pakistan, Sudan
   Dr Muhammad Salariya

South-East Asia Region: Bangladesh, India, Nepal, Thailand, Sri Lanka
   Dr Pricha Desawadi

Western Pacific Region: Japan, Papua New Guinea, Philippines, Solomon Islands, Viet Nam
   Dr Lina Manapsal

Thursday 17

Fly to Nanning, capital of Guangxi Autonomous Region

Afternoon

Traditional Medicine in Primary Health Care in Guangxi Autonomous Region
   Dr Zhao Zhengbao

Management of Chinese Traditional Drugs
   Dr Li Chaojin

The Traditional Chinese Materia Medica: the old and the new
   Professor Jiang Tingliang

Friday 18

Visit to the Guangxi Botanical Garden of Medicinal Plants

Afternoon

Visit to the Guangxi School of Pharmacy and its Drug Manufacturing Plant
Annex 2

Saturday 19
Visit to the No. 1 hospital affiliated to the Guangxi College of Traditional Chinese Medicine

Afternoon
Visit to the Guangxi College of Traditional Chinese Medicine

Round Table Discussion on Traditional Medicine as a Health Resource
 Dr. C. O. Akerele

Sunday 20
Return by air to Guangzhou

Monday 21
Closing remarks by Madame Li Meiling, Deputy Director,
Bureau of Public Health, Guangdong Province

Closing remarks by Dr. Tian Jingfu, Director,
Department of Traditional Chinese Medicine,
Ministry of Public Health, Beijing

Closing remarks by Mr. S. K. Alok on behalf of the participants

Closure of the Seminar by Dr. C. O. Akerele, on behalf of Dr. R. Mahler, Director-General, World Health Organization
ANNEX 3

TRADITIONAL MEDICINE IN CHINA AND IN OTHER COUNTRIES

The following is a selection of some of the questions discussed at the Seminar, grouped under two main headings, those specifically related to China and those which are also relevant to other countries in which traditional medicine is practised.

QUESTIONS SPECIFICALLY RELATED TO CHINA

1. What has been the result of the incorporation of traditional Chinese medicine into the general health services?

2. What have these different systems of medicine brought to each other and how has each benefitted from the influence of the other?

3. Are the two systems really used in combination or do they remain essentially separate systems?

4. What are the special strengths and limitations of each system?

5. For which conditions is traditional Chinese medicine particularly effective and for which conditions is it contra-indicated?

6. Do doctors trained in modern Western medicine find it difficult to accept the traditional concepts of disease and its causation? Is there, in fact, any meeting point between modern Western and traditional Chinese medicine?

7. Does traditional Chinese medicine have any place at all in preventive medicine? If so, in what way?

8. Is traditional Chinese medicine gaining in strength and professional and popular support or is it gradually being replaced by the extension of Western medicine?

9. Traditional Chinese remedies often have many constituents, which must make it difficult to identify the active constituents. Is this considered a problem and, if so, what is being done about it?

10. Is there a trend towards the use of more simple prescriptions, with few constituents?

11. With such a vast heritage of herbal remedies derived from ancient times, what is being done to distinguish those of therapeutic value confirmed by modern studies, those with alleged properties still to be proven, and those with little or no therapeutic value?

12. What are the advantages of using herbal preparations over synthetic drugs? Why is it considered preferable to use the natural product (roots, leaves, stems, fruits) rather than to isolate the active principles?

13. Is the tendency nowadays to use processed herbal medicines, prepared in pharmaceutical factories, or are the traditional forms still preferred?
14. Is the use of herbal remedies mainly related to the practice of traditional Chinese medicine or does it also have an important place in Western medicine in China?

15. Presumably there is considerable variation from one part of the country to another in the use of medicinal plants and herbal remedies. Is there any move to develop a unified form of traditional Chinese medicine, taking the best and most useful features from each system?

16. Since the renewal of interest in medicinal plants in the last 20-30 years:
   what have been the main directions for research;
   what have been the most significant discoveries; and
   what have been the chief areas of clinical, ethno-medical, and pharmacological research?

17. How have ideas on the usefulness of acupuncture and moxa in the treatment of disease evolved in recent years?

18. Can one now state that there are certain conditions or diseases which respond well to these forms of treatment and others for which they are of little or no use?

19. Which categories of health personnel are taught the use of acupuncture and moxa and at what levels of competence?

20. To what extent do people treat themselves and each other with acupuncture and does this carry any risk, e.g. transmission of viral hepatitis?

QUESTIONS WHICH ARE ALSO RELEVANT TO OTHER COUNTRIES

1. What are the main forms of traditional medicine in current use and what is their relative importance?

2. Is traditional medicine used more or less equally by all sections of the population and by all age groups or is it more favoured by some than by others?

3. Who decides whether to use modern Western or traditional medicine, the patient or the doctor?

4. Is there any general policy or guidance on the use of traditional medicine?

5. For which types of condition is it considered suitable and for which is it contra-indicated?

6. What part does traditional medicine play in clinical practice - inpatient and outpatient?

7. Are Western and traditional forms of medicine used separately or in combination?
Annex 3

8. Which categories of health staff make some use of traditional medicine?

9. What advantages does traditional medicine offer over Western medicine?

10. Is it more effective in certain conditions, is it less costly, is it safer to use?

11. If it is less costly, in which respect - cost of medicaments, duration of treatment, training and level of staff, etc.?

12. What is the trend in the use of traditional medicine in the rural areas?

13. In comparison with Western medicine, is it becoming more, or less, popular?

14. How have the ideas of traditional practitioners on the nature and causation of disease evolved over recent years?

15. Do traditional ideas about diagnosis have any influence on modern medical management?

16. What is the government policy on the cultivation, sale and use of medicinal plants?

17. Are production and distribution under government control or left to private enterprise?

18. What proportion of the medicinal plants and traditional remedies used is imported and what proportion is produced locally?

19. Of the annual production, what is the total value, how much is for local use and how much for export?

20. What arrangements are made for quality control of medicinal plants in the crude state and of compound medicines prepared from them?

21. Are medicinal plants used, as such, by the health services?

22. How much of the health budget is allocated to traditional remedies and how much to Western medicines?

23. How many medicinal plants and other natural substances (animal or mineral) are in common use?

24. Which are the most commonly used medicinal plants and for which conditions are they indicated?

25. Are health staff given formal instruction in the recognition and use of medicinal plants, including their cultivation, collection and preparation?

26. How is such instruction given and what is produced in the way of illustrated practical guides to the recognition of medicinal plants?