Information Booklet on
WHO Supported Health Research

REGIONAL OFFICE FOR THE WESTERN PACIFIC
World Health Organization
MANILA
INFORMATION BOOKLET
ON
WHO SUPPORTED HEALTH RESEARCH

WHO Regional Office for the Western Pacific
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1. INTRODUCTION

One of the constitutional functions of the World Health Organization is "to promote and conduct research in the field of health". Until 1974, this was uniquely pursued by the Organization's specialized units in Geneva. In that year, a new policy to decentralize research was introduced with the result that the Organization's six geographical Regions became progressively involved in promoting biomedical and health services research.

This involvement has two quite specific characteristics, which were defined by decision of the 1949 World Health Assembly, namely that any WHO-supported research must be:

- conducted in existing institutions, and
- directly related to WHO programmes.

2. WHO PROGRAMMES FOR THE PERIOD OF THE SEVENTH GENERAL PROGRAMME OF WORK COVERING THE PERIOD, 1984-1989

The existing WHO Programmes are listed in Annex 1. Each has a Medium-Term Programme which describes why it exists, what it plans to do and broadly, how it will be done. Any decision by the Regional Office to support research activity will be guided by the degree to which the proposal accords with the objectives and targets of one or more of these Programmes, and also by the priorities for research identified by the Western Pacific Advisory Committee on Medical Research (WPACMR). They are listed in the tables (Annex 6).

Collectively, the Programmes are being implemented with the goal of achieving an acceptable level of health for all people in the Region by the year 2000.

3. REGIONAL RESEARCH PROMOTION AND DEVELOPMENT PROGRAMME

3.1 Problem definition

Biomedical, health systems and health behavioural research are considered to be major accelerators of the progress of all Member States towards Health for All by the Year 2000. It is noted with concern that the achievements of biomedical and medicosocial sciences have not been accompanied by a decrease of the gap between the developed and developing countries in generating and applying scientific knowledge relevant to health development and promotion; that most developing countries still lack the resources, manpower and infrastructure necessary for health research; and that in many developed countries also the efforts and resources devoted to health research are inadequate.
It is recognized that health research can only be effective if it is oriented towards the solution of problems related to the national health goals. In developing countries, one cannot afford to pursue research simply for the sake of research per se, but research must have defined goals and realistic chances of contributing to the solution of major health and health-related problems.

The setting of research priorities based on national health problems and the formulation of health research programmes in response to such health problem priorities, identified through the managerial process for national health development, require a single focal point for research administration such as a health research council (or its equivalent) at the national level. It is, therefore, necessary to pay due attention to the importance of national research management mechanisms in the formulation of health policies.

3.2 General objective of the Programme

To promote research related to health, namely, health systems, behavioural and biomedical research, and to coordinate the development of relevant scientific activities in this area.

3.3 Approaches for programme implementation

(1) To foster the establishment and further development of health research councils or similar bodies which are important means of relating national research priorities to the solution of major health problems.

(2) To stimulate and support countries to initiate "problem-solving oriented research" through the members of Western Pacific Advisory Committee (WPACMR) and collaboration in the development of research designs or provisions of modest financial support.

(3) To support research manpower development at all levels (scientific, technical and managerial), or to strengthen national institutions in order to increase their capacity for considering research in priority areas.

(4) To organize a network of national institutions as WHO Collaborating Centres for developing joint and multidisciplinary research projects in priority areas and research training.

(5) To develop the regional mechanisms for the distribution of scientific and technological information in order to facilitate the application of existing and emerging scientific knowledge.
4. MECHANISMS FOR PROMOTING RESEARCH PROGRAMME

4.1 Enquiry on the regional research programme

In seven countries in the Region, there are WHO Representative and Programme Coordinators' (WRCs) offices: in People's Republic of China, Fiji, Malaysia, Lao People's Democratic Republic, Papua New Guinea, Philippines, Republic of Korea, Singapore and Socialist Republic of Viet Nam and their addresses are given in Annex 3. Any scientist requesting guidance as to the collaboration with WHO in research activities is advised to contact either the local WHO Representative and Programme Coordinator or, where there is none, the Chief, Research Promotion and Development, World Health Organization, Regional Office for the Western Pacific Region, P.O. Box 2932, Manila, Philippines.


(1) Purpose of Grant

WHO research training grants are intended to enable research workers to spend a period of training in an approved institution to broaden their experience in research or research techniques.

This training must be relevant to research problems in the applicant's country and also to the research programme of WHO.

Grants are not awarded for attendance at meetings or to supplement grants received from other sources.

(2) Choice of scientists, institution and country of study

The office of the Research Promotion and Development of the WHO Regional Office will advise on these aspects, but the applicant (through his director) may make tentative and informal enquiries to possible host institutions preferably within the Region before the application is made.

(3) Eligibility

The applicant must be a staff member of a research institute, university, or other recognized national institution in his own country. He must be a national of a Member State or Associate Member of WHO, or a national of an area for whose international relations a WHO Member State is responsible. He must be in sufficiently good health for the work and travel involved.

Priority is given to nationals of developing countries.
(4) Application

Application should be made on form WHO 379 which may be obtained, on request, from the Office of Research Promotion and Development, World Health Organization Regional Office for the Western Pacific, P.O. Box 2932, Manila, Philippines.

(5) Grant period

The normal grant period is not more than one year, although the actual time estimated to complete the training is established by consultation between the WHO Regional Office and the supervisor.

(6) Financial provision

Basic financial provisions of a WHO Research Training Grant includes:

- return air travel to the country of study,
- a monthly living allowance,
- a book allowance, and
- special laboratory expenses, if required.


(1) Purpose of grant

These are also granted to individual research workers, but principally for more established or senior scientists to enable them to visit colleagues working in related fields in other countries for the purpose of discussing techniques and exchanging ideas which will facilitate further investigations on returning to their own countries.

They are not available for attendance at meetings or congresses or for lecture tours.

(2) Choice of places to be visited

The applicant should propose, on application, the name(s) of the scientist he proposes to visit and specify the research to which the visit pertains.

(3) Eligibility

The applicant should be in active research and, in principle, be on the staff of a university or research institute. Preference will usually be given to applications from candidates who are contributing to national and WHO priority research programmes.
(4) Application

Individuals should apply using form WHO 379 which may be obtained, on request, from the Office of Research Promotion and Development, World Health Organization, Regional Office for the Western Pacific, P.O. Box 2932, Manila, Philippines. Requests for forms should state the field of research in which the enquirer is interested.

(5) Grant period

The duration of a Visiting Scientist Grant is normally up to three months but this may, in some circumstances, be extended up to a limit of eleven months.

(6) Financial provisions

Financial provisions of a Visiting Scientist Grant include:
- return air travel according to an agreed itinerary,
- per diem allowance to cover room, board and incidental expenses.

4.4 WHO/WPRO Research Grants

Operating procedures for reviewing research grant proposals made to the WHO Regional Office for the Western Pacific and Funding

In the Regional Office, procedures for processing research proposals were established in 1977.

(1) Application

Research proposals are received by the Regional Office either directly from researchers or institutions or through governments and WHO Representative and Programme Coordinators (WRCs). This will depend on the country. Government clearance is required in certain cases.

(2) Acknowledgement

Receipt is acknowledged by the responsible officer.

(3) Review of research proposal

(a) Screening

The relevant technical unit or adviser examines the application, taking into consideration the relevance of the proposal to WHO technical programmes and the priority areas of health research identified by the WPACMR (see Annex 6) and the reasonableness of the budget for research. The appropriate Programme Director clears the proposal for further consideration. Unsuitable proposals are refused and do not undergo further processing.
(b) **External review**

A confidential letter with a photocopy of the research proposal is sent to external reviewers asking them to review the scientific interest of the project, the ability of the investigator, the adequacy and soundness of the planning and of the techniques to be employed, the reasonableness of the costs and to state whether, in their opinion, it merits WHO support. The referees should not at this stage be informed of any comments made on the research proposal by the internal reviewers.

(c) **Internal review**

One photocopy of the research proposal is sent to the relevant HQ technical unit requesting comments (within four weeks).

(d) **Ethical review**

Any research involving human subjects has to be dispatched to the Secretary of the Secretariat Committee on Research Involving Human Subjects (SCRIHS), WHO, Geneva, for ethical review.

(e) **Outcome**

If the advice of the external reviewers accords with that of the internal reviewers, the application is referred to the Regional Research Development Committee (RRDC).

(4) **Regional Research Development Committee**

The Regional Director, on the advice of this Committee, makes the ultimate decision.

(5) **Award of Grant**

The Regional Office uses the Technical Services Agreement (TSA) for this purpose. Firm payment arrangements will be made only after the TSA is signed by the parties concerned.

(6) **Monitoring of research project**

The principal investigator is requested to submit a technical progress report and a financial report four months before the expiry of the agreement. The financial statement may be subject to external audit.

The relevant technical unit which had examined the research proposals is responsible for reviewing the technical progress reports and financial reports.

The list of priority areas is subject to modification by the WPACMR at its annual session.
5. SPECIAL PROGRAMME FOR RESEARCH AND TRAINING IN TROPICAL DISEASES

The Special Programme for Research and Training in Tropical Diseases is a global Programme of international technical cooperation initiated by WHO and co-sponsored by the United Nations Development Programme and the World Bank. The Programme has two interdependent objectives. The first is to develop methods, specifically suited to the countries affected by tropical diseases, which will both protect their populations from infection and cure tropical diseases. The second and equally important objective is to strengthen biomedical research capabilities in tropical countries so that they can solve these and other health problems affecting them.

The tropical diseases selected for inclusion by the Special Programme are: Malaria, Schistosomiasis, Trypanosomiasis (African and the American (Chagas' Disease) forms), Filariasis (including Onchocerciasis), Leishmaniasis and Leprosy.

Since several major problems requiring research apply to most or all of the six diseases, the Special Programme includes components on epidemiology and operational research, vector control, socio-economic and biomedical research.

The Special Programme is financed largely through resources from outside of WHO's regular budget.

Research and Development

The research and development operations of the Special Programme focus upon the improvement and development of:

- drugs (chemotherapy and chemoprophylaxis);
- vaccines;
- new approaches to the control of disease vectors;
- simple, reliable, sensitive and inexpensive diagnostic tests; and
- an epidemiological and operational basis for the application of improved and new tools.

Scientific Working Groups

Each component of the Special Programme is developed under the guidance and with the participation of multidisciplinary groups of scientists organized into a number of Scientific Working Groups (SWGs) each with clearly defined research goals. The management of a Scientific Working Group's research plan and activities is the responsibility of those SWG members who form its Steering Committee.

An SWG comprises all the scientists who plan and/or carry out research on a specific aspect of the Programme. Special Programme research is goal-oriented and the applicant for research support should be aware of the lines of research in which proposals are being sought. If this information is not available to the applicant, it should be requested from the Director of the Special Programme.

.../
Director's Initiative Fund

The Director of the Special Programme has available the Director's Initiative Fund to be used for initiation or expansion of projects relevant to the Programme's objectives and requiring rapid action. Individual projects are funded up to amounts of US$15,000. Support from this fund is limited to one year, and continuation of support must come through the regular SWG mechanism.

Research Capability Strengthening

The Special Programme will assist institutions in tropical countries affected by one or more of the diseases to assume their appropriate role in research aimed at identifying, analyzing and solving local and regional health problems, focusing on the six diseases.

To this end the Special Programme will:

(a) strengthen research and training institutions to assist tropical countries in developing the infrastructure necessary to cope with problems related to disease control;

(b) support training of persons from tropical countries with the objective of developing scientists and other research personnel of the highest quality to help meet manpower needs;

(c) encourage and assist in the diffusion, interpretation and integration of new knowledge so as favourably to influence health policies and their implementation;

(d) contribute to the rapid transfer to the affected countries of the knowledge, technology and skills that are relevant to their health objectives and within the sphere of the Special Programme.

These activities will be guided by the Research Strengthening Group (RSG), comprising 15-18 members who serve in their personal capacities to represent the broad range of disciplines and experience for institution strengthening and training, with particular reference to tropical countries.

Existing institutions in tropical countries may be eligible for support. Further information may be requested from the Director of the Special Programme for Research and Training in Tropical Diseases, WHO, Geneva.

Small Grants Programme

A Small Grants Programme will complement the institution strengthening and training activities. These grants will assist promising young scientists in tropical countries engaged in or starting research relevant to the Special Programme objectives, but not associated with the Special Programme network or with the SWGs.
Small Grants up to US$15,000 annually will be given on the basis of a request submitted through the Director of the institution and will be administered by the institution. These grants will normally be limited to such purposes as the purchase of laboratory supplies, literature resources and the provision of limited laboratory assistance. Normally, no more than one such grant at any time will be awarded to a given department of an institution. Proposals should be for short duration (1-2 years).

Re-entry Grants

Re-entry Grants, planned to promote the application of new knowledge acquired during training abroad, are available for trainees returning to their home countries, even if they have been trained outside the Special Programme. These grants may be awarded for 1-2 years and for amounts up to US$20,000. They are intended for provision of items such as new laboratory equipment and supplies that may be needed for such purposes as setting up a technique or starting a new line of research.

Further information concerning particular aspects of research or training in the Programme may be requested from:

The Director
Special Programme for Research and Training in Tropical Diseases
World Health Organization
Avenue Appia
1211 Geneva 27
Switzerland

6. SPECIAL PROGRAMME OF RESEARCH, DEVELOPMENT AND RESEARCH TRAINING IN HUMAN REPRODUCTION

This programme developed in response to a series of World Health Assembly resolutions which reflected the increasing demands placed on the health sector to provide services for fertility regulation and the treatment and prevention of infertility. The Health Assembly pointed to the many gaps in knowledge and technology that hampered the provision of appropriate services and hence, research was initiated in this area through the Special Programme of Research, Development and Research Training in Human Reproduction. Further information concerning particular aspects of research or training in the Programme may be requested from:

The Director
Special Programme of Research, Development and Research Training in Human Reproduction
World Health Organization
1211 Geneva 27
Switzerland

.../
7. WHO DESIGNATED COLLABORATING CENTRES

By definition, a WHO collaborating centre forms part of an international collaborative network carrying out activities in support of the Organization's programme at all levels. In line with the present WHO policy and strategy of technical cooperation, a WHO collaborating centre must also participate in the strengthening of country resources, in terms of information, services, research and training, in support of national health development.

7.1 Functions of WHO collaborating centres

The functions of WHO collaborating centres, severally or collectively, include the following:

- collection, collation and dissemination of information;
- standardization of terminology and nomenclature, of technology, of diagnostic, therapeutic and prophylactic substances, and of methods and procedures;
- development and application of appropriate technology;
- provision of reference substances and other services;
- participation in collaborative research developed under the Organization's leadership, including the planning, conduct, monitoring and evaluation of research, as well as promotion of the application of the results of research;
- training, including research training; and
- the coordination of activities carried out by several institutions on a given subject.

7.2 Criteria for selection of institutions for designation by WHO

The criteria to be applied in selecting an institution for designation as a WHO collaborating centre are:

- the scientific and technical standing of the institution concerned at the national and international levels;
- the place the institution occupies in the country's health, scientific or educational structures;
- the quality of its scientific and technical leadership and the number and qualifications of its staff;

...
- its prospective stability in terms of personnel, activity and funding;
- the working relationship which it has developed with other institutions in the country, as well as at the intercountry, regional and global levels;
- its ability, capacity and readiness to contribute to WHO programme activities, whether in support of country programmes or by participating in international cooperative activities.

7.3 Procedure for designation

Designation is a final step in a series of events involving institutions which express a desire to collaborate with WHO. Coordination of these steps, within the Region, is the responsibility of the Office of Research Promotion and Development, World Health Organization, Regional Office for the Western Pacific, P.O. Box 2932, Manila, Philippines.

7.4 Financial support

Designation is not linked to the provision of financial support to the centre to undertake its specific function(s). However, grants may be made to any institution that is able to perform a specific task connected with WHO's programme but this has no relevance to the eligibility or ineligibility of that institution for designation.

7.5 Duration

Centres are designated for periods up to four years, renewable for another four years.
ANNEX 1

CLASSIFIED LIST OF PROGRAMMES
FOR THE PERIOD OF THE SEVENTH GENERAL PROGRAMME OF WORK, 1984-1989

A. DIRECTION, COORDINATION AND MANAGEMENT

1. Governing Bodies
   1.1 World Health Assembly
   1.2 Executive Board
   1.3 Regional Committees

2. WHO's General Programme Development and Management
   2.1 Executive Management
   2.2 Regional Director's Development Programme
   2.3 General Programme Development
   2.4 External Coordination for Health and Social Development

B. HEALTH SYSTEM INFRASTRUCTURE

3. Health System Development
   3.1 Health Situation and Trend Assessment
   3.2 Managerial Process for National Health Development
   3.3 Health Systems Research
   3.4 Health Legislation

4. Organization of Health Systems based on Primary Health Care

5. Health Manpower

6. Public Information and Education for Health

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1Includes Regional Director's office.

2Includes Director of Programme Management, the Managerial Process for WHO's Programme Development, WHO Information System and Staff Development and Training.

3Includes collaboration within the United Nations system, with other organizations and with multilateral and bilateral programmes, and emergency relief operations.
Annex 1

C. HEALTH SCIENCE AND TECHNOLOGY - HEALTH PROMOTION AND CARE

7. Research Promotion and Development

8. General Health Protection and Promotion
   8.1 Nutrition
   8.2 Oral Health
   8.3 Accident Prevention

9. Protection and Promotion of the Health of Specific Population Groups
   9.1 Maternal and Child Health, including Family Planning
   9.2 Human Reproduction Research
   9.3 Workers' Health
   9.4 Health of the Elderly

10. Protection and Promotion of Mental Health
    10.1 Psychosocial Factors in the Promotion of Health and Human Development
    10.2 Prevention and Control of Alcohol and Drug Abuse
    10.3 Prevention and Treatment of Mental and Neurological Disorders

11. Promotion of Environmental Health
    11.1 Community Water Supply and Sanitation
    11.2 Environmental Health in Rural and Urban Development and Housing
    11.3 Control of Environmental Health Hazards
    11.4 Food Safety

12. Diagnostic, Therapeutic and Rehabilitative Technology
    12.1 Clinical, Laboratory and Radiological Technology for Health Systems based on Primary Health Care
    12.2 Essential Drugs and Vaccines
    12.3 Drug and Vaccine Quality, Safety and Efficacy
    12.4 Traditional Medicine
    12.5 Rehabilitation

13. Disease Prevention and Control
    13.1 Immunization
    13.2 Disease Vector Control
    13.3 Malaria
13.4 Parasitic Diseases
13.5 Tropical Disease Research
13.6 Diarrhoeal Diseases
13.7 Acute Respiratory Infections
13.8 Tuberculosis
13.9 Leprosy
13.10 Zoonoses
13.11 Sexually Transmitted Diseases
13.12 Smallpox Eradication Surveillance
13.13 Other Communicable Disease Prevention and Control Activities
13.14 Blindness
13.15 Cancer
13.16 Cardiovascular Diseases
13.17 Other Noncommunicable Disease Prevention and Control Activities

D. PROGRAMME SUPPORT

14. Health Information Support

15. Support Services

15.1 Personnel
15.2 General Administration and Services
15.3 Budget and Finance
15.4 Equipment and Supplies for Member States

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1Health information support includes WHO's publications and documents and health literature services.
ANNEX 2

LIST OF ADDRESSES OF WHO REPRESENTATIVES AND PROGRAMME COORDINATORS

The WHO Representative and Programme Coordinator
Beijing
People's Republic of China

World Health Organization
United Nations Building
2 Dongqijie
Sanlitun, Beijing
People's Republic of China

The WHO Representative and Programme Coordinator
Kuala Lumpur
Malaysia

P.O. Box 12550
Kuala Lumpur
Malaysia

The WHO Representative and Programme Coordinator
Manila
Philippines

P.O. Box 2932
Manila 2801
Philippines

The WHO Representative and Programme Coordinator
Goroka, Port Moresby
Papua New Guinea

P.O. Box 646 Konedobu
Port Moresby
Papua New Guinea

The WHO Representative and Programme Coordinator
Seoul
Republic of Korea

Central P.O. Box 540
Seoul, Republic of Korea

The WHO Representative and Programme Coordinator
Singapore
Republic of Singapore

Newton P.O. Box 31
Singapore 9122
Republic of Singapore

The WHO Representative and Programme Coordinator
Suva
Fiji

P.O. Box 113
Suva, Fiji

The WHO Representative and Programme Coordinator
Vientiane
Lao People's Democratic Republic

P.O. Box 343
Vientiane
Lao People's Democratic Republic

The WHO Representative and Programme Coordinator
Hanoi
Socialist Republic of Viet Nam

P.O. Box 52
Hanoi
Socialist Republic of Viet Nam

1for the South Pacific.
ANNEX 3

COUNTRIES OR AREAS OF WESTERN PACIFIC REGION

American Samoa
Australia
Brunei
China
Cook Islands
Democratic Kampuchea
Fiji
French Polynesia
Guam
Hong Kong
Japan
Kiribati
Lao People's Democratic Republic
Macao
Malaysia
Nauru

New Caledonia
New Zealand
Niue
Papua New Guinea
Philippines
Republic of Korea
Samoa
Singapore
Solomon Islands
Tokelau Islands
Tonga
Trust Territory of the Pacific Islands
Tuvalu
Vanuatu
Viet Nam
Wallis and Futuna
WHO DESIGNATED COLLABORATING CENTRES IN THE WESTERN PACIFIC REGION

AUSTRALIA

The WHO Collaborating Centre for
Virus Reference and Research
Virus Laboratory
Fairfield Hospital
Fairfield
Victoria, 3078

The WHO Collaborating Centre on
Air Pollution Monitoring for the Western Pacific
Air Pollution Control Division
Queensland State Government
Brisbane, Queensland 4000

The WHO Collaborating Centre for Arbovirus
Reference and Research
Department of Virology
Queensland Institute of Medical Research
Brisbane, Queensland 4006

The WHO Collaborating Centre for Research
on Dental Caries and Periodontal Diseases
Institute of Dental Research
United Dental Hospital
University of Sydney
Sydney

The WHO Collaborating Centre for Malaria Research
First Malaria Research Unit of the Australian Army
Ingleburn
N.S.W., Australia 2174

The WHO Collaborating Centre for
Occupational Health
Division of Occupational Health and Radiation Control
Lidcombe, N.S.W.

The WHO Collaborating Centre for Venereal Diseases and Treponematoses Reference and Research
Venereal Diseases Reference Laboratory
Institute of Clinical Pathology and Medical Research
P.O. Box 60
Wentworthville
N.S.W. 2145
Annex 4

The WHO Collaborating Centre for the Histological Classification of Skin Tumours
Department of Pathology
Medical School
University of Western Australia
Perth

The WHO Collaborating Centre for Nuclear Medicine
Department of Nuclear Medicine
Prince of Wales Hospital
High and Avoca Streets
Randwick, N.S.W. 2031

The WHO Collaborating Centre for the Serology of Auto-immune Disorders for the Western Pacific
Clinical Research Unit
Walter and Eliza Hall Institute
of Medical Research
Royal Melbourne Hospital
Victoria 3050
Melbourne

The WHO Immunology Research and Training Centre for Advanced Studies
Walter and Eliza Hall Institute of Medical Research
Royal Melbourne Hospital
Melbourne

The WHO/FAO Collaborating Centre for Reference and Research on Leptospirosis
Laboratory of Microbiology and Pathology
Department of Health and Home Affairs
Brisbane, Queensland

The WHO Collaborating Centre for Comparative Studies on Animal Onchocerca Species
Department of Tropical Veterinary Medicine
James Cook University of North Queensland
Townsville, Queensland

The WHO Collaborating Centre for Food Contamination Monitoring
Food Administration
Australia Commonwealth
Department of Health
P.O. Box 100
Woden, A.C.T. 2606
The WHO Collaborating Centre for the Epidemiology of Diabetes Mellitus
Southern Memorial Hospital Inc.
260 Kooyong Road
P.O. Box 185, Caulfield South
Victoria 3162

The WHO Collaborating Centre for Echinococcosis/Hydatidosis Research
School of Veterinary Studies
Murdoch University
Murdoch, Western Australia

The WHO Collaborating Centre for Health Care of the Elderly
National Research Institute for Gerontology and Geriatric Medicine
Mount Royal Hospital
University of Melbourne
Parkville

The WHO Collaborating Centre for the Epidemiology of Mental Disorders
Social Psychiatry Research Unit
National Health and Medical Research Council
The Australian National University
Canberra

The WHO Collaborating Centre for Serology and Production and Quality Control of Vaccines
Commonwealth Serum Laboratories
Parkville

The WHO Collaborating Centre for Serology and Production and Quality Control of Vaccines
National Biological Standards Laboratory (NBSL)
Canberra

The WHO Collaborating Centre for Rehabilitation
Cumberland College of Health Sciences
Lidcombe

The WHO Collaborating Centre for the Epidemiology of Cardiovascular Diseases
Department of Community Medicine
Faculty of Medicine
University of Newcastle
Newcastle
Annex 4

CHINA

The WHO Collaborating Centre for Reference and Research on Enteroviruses
Institute of Medical Biology
Chinese Academy of Medical Sciences
Kunming

The WHO Collaborating Centre for Studies on Biology, Resistance to Pesticides and Control of Vectors of Public Health Importance
Shanghai Institute of Entomology
Academia Sinica
Chungkine Road (S.) 225
Shanghai

The WHO Collaborating Centre for Research and Training in the Field of Cardiovascular Diseases
Institute of Cardiovascular Diseases
Chinese Academy of Medical Sciences
Beijing

The WHO Collaborating Centre for Research and Training in the Field of Cardiovascular Diseases
Institute of Cardiovascular Diseases
Shanghai First Medical College
Feng Ling Road
Shanghai 200032

The WHO Collaborating Centre for Research and Training in the Field of Cardiovascular Diseases
Institute of Cardiovascular Diseases
Guangdong Province
Guangzhou

The WHO Collaborating Centre for Research on Cancer
Cancer Research Institute
Chungshan Medical College
Guangzhou

The WHO Collaborating Centre for Research on Cancer
Cancer Institute
Chinese Academy of Medical Sciences
Beijing

The WHO Collaborating Centre for Reference and Research on Viral Diseases
Institute of Virology
Chinese Academy of Medical Sciences
Beijing
Annex 4

The WHO Collaborating Centre for Malaria, Schistosomiasis and Filariasis
Institute of Parasitic Diseases
Chinese Academy of Medical Sciences
Shanghai

The WHO Collaborating Centre for Research in Immunogenetics
Institute of Immunology
Shanghai Second Medical College
Shanghai

The WHO Collaborating Centre for Lymphatic Filariasis
Institute of Parasitic Diseases
Jinjing, Shandong
People's Republic of China

The WHO Collaborating Centre for Research and Training in Immunology
Institute of Basic Medical Sciences
Chinese Academy of Medical Sciences
Beijing

The WHO Collaborating Centre for Research on Cancer
Shanghai Cancer Institute
Shanghai

The WHO Collaborating Centre for Drug Quality Assurance
National Institute for the Control of Pharmaceutical and Biological Products
Beijing

The WHO Collaborating Centre for Paragonimiasis, Clonorchiasis and Leishmaniasis
Beijing Institute of Tropical Medicine
Beijing

The WHO Collaborating Centre for Primary Health Care
Primary Health Care Centre
Jiading County
Shanghai

The WHO Collaborating Centre for Primary Health Care
Conghua Primary Health Care Centre
Guangdong Province
Guangzhou
Annex 4

The WHO Collaborating Centre for the
Primary Health Care
Primary Health Care Centre
Yexian, Yantai
Shandong Province

The WHO Collaborating Centre for
Classification of Diseases
Capital Hospital
Beijing

The WHO Collaborating Centre for FAO/WHO
Food and Animal Feed Contamination
Monitoring Programme
Institute of Health
Chinese Academy of Medical Sciences
29 Nan Wei Road
Beijing

The WHO Collaborating Centre for Reference
and Research in Neurosciences
Beijing Institute of Neurosurgery
Beijing

The WHO Collaborating Centre for Reference
and Research in Neurosciences
Huan-Shan Hospital
First Medical College
Shanghai

The WHO Collaborating Centre for
Research and Training in Preventive Dentistry
Stomatology Institute of Beijing Medical College
Xishiku Houku
Beijing

The WHO Collaborating Centre for
Occupational Health
Institute of Health
Chinese Academy of Medical Sciences
Beijing

The WHO Collaborating Centre for
Research and Training in Mental Health
Institute of Mental Health
Beijing Medical College
Beijing

The WHO Collaborating Centre for
Research and Training in Mental Health
Municipal Psychiatric Hospital of Shanghai
600 Wan Pin Nan Road
Shanghai
The WHO Collaborating Centre for Primary Health Care
Inner Mongolia
Horgin Zuoyi Zhong Qi

The WHO Collaborating Centre for Research and Training on Perinatal Care
Beijing Obstetrics and Gynaecology Hospital and Beijing Municipal Maternal Health Institute
Beijing

The WHO Collaborating Centre for Research and Training on Maternal and Infant Care
Shanghai First Maternal and Infant Health Institute
Shanghai

The WHO Collaborating Centre for Research in Human Reproduction
Shanghai Institute of Planned Parenthood Research
Shanghai

The WHO Collaborating Centre for Traditional Medicine
Acupuncture Research Laboratory
Shanghai First Medical College
Shanghai

The WHO Collaborating Centre for Traditional Medicine
Academy of Traditional Chinese Medicine
Beijing

The WHO Collaborating Centre for Traditional Medicine
Nanjing College of Traditional Chinese Medicine
Nanjing

The WHO Collaborating Centre for Traditional Medicine
Institute of Acupuncture and Moxibustion
Beijing

The WHO Collaborating Centre for Traditional Medicine
Shanghai College of Traditional Chinese Medicine
Shanghai

The WHO Collaborating Centre for Traditional Medicine
Institute of Chinese Materia Medica
Academy of Traditional Chinese Medicine
Beijing

The WHO Collaborating Centre for Research in Human Reproduction
National Research Institute for Family Planning
Beijing
Annex 4

The WHO Collaborating Centre for Reagent Production
Shanghai Medical Laboratory
3/120 Tan An Road
Shanghai

The WHO Collaborating Centre for Research and Training in Brucellosis and Leptospirosis
Institute of Epidemiology and Microbiology
China National Centre for Preventive Medicine
Shanghai

JAPAN

The WHO Collaborating Centre for Research and Reference Services for Immunological Biological Products
Second Department of Bacteriology
National Institute of Health
10-35, 2 chome, Kamiosaki
Shinogawa-ku
Tokyo 141

The WHO Collaborating Centre for Poxvirus Research
Division of Poxviruses
National Institute of Health
10-35, 2 chome, Kamiosaki
Shinogawa-ku
Tokyo 141

The WHO Collaborating Centre for Research on Functional Psychoses
Department of Neuropsychiatry
Nagasaki University School of Medicine
7-1 Sakamoto-machi
Nagasaki 852

The WHO Collaborating Centre for Standardization of Laboratory Procedures for the Diagnosis of Mycobacterial Diseases and for Bacteriological Research
Department of Tuberculosis
National Institute of Health
10-35, 2 Chome, Kamiosaki, Shinogawa-ku
Tokyo 141

The WHO Collaborating Centre for Arbovirus Reference and Research
Department of Virology and Rickettsiology
National Institute of Health
Tokyo 141
The WHO Collaborating Centre for Defined Laboratory Animals
Department of Veterinary Sciences
National Institute of Health
Tokyo 141

The WHO Collaborating Centre for Virus Reference and Research
Department of Enteroviruses
National Institute of Health
Tokyo 141

The WHO Collaborating Centre for the Prevention of Blindness
Department of Ophthalmology
Juntendo University
3-1-3 Hongo Bunkyo-ku
Tokyo 113

The WHO Collaborating Centre for Virus Reference and Research
Department of Virology and Rickettsiology
National Institute of Health
Tokyo 141

The WHO Collaborating Centre for Reference on Smoking and Health Epidemiology Division
National Cancer Centre Research Institute
Tsukiji, 5 chome Chuo-ku
Tokyo 104

The WHO Collaborating Centre for Reference and Research on Viral Hepatitis
The Tokyo Metropolitan Institute of Medical Science
3-18 Honkomagome
Bunkyo-ku, Tokyo 113
Japan

The WHO Collaborating Centre for Research and Training in Mental Health
National Institute of Mental Health
1-7-3 Koonodai, Ichikawa City
Chiba-ken, Japan

The WHO Collaborating Centre for Occupational Health
National Institute of Industrial Health
Ministry of Labour
2051 Kizuki Sumiyoshi-cho
Kawasaki, Kanagawa
Annex 4

The WHO Collaborating Centre for Radiation Effects on Humans
Radiation Effects Research Foundation (RERF)
5-2 Hijiyma Park, Hiroshima
Hiroshima 730

The WHO Collaborating Centre for Environmental Health Effects
National Institute for Environmental Studies
P.O. Yatabe
Ibaraki

The WHO Collaborating Centre on Air Pollution
Department of Community Environmental Sciences
Institute of Public Health
Tokyo

The WHO Collaborating Centre for Wastes Disposal for the Western Pacific Region
Japan Environmental Sanitation Centre
Kawasaki City

The FAO/WHO Collaborating Centre for Food Contamination Monitoring
National Institute of Hygienic Sciences
Ministry of Health and Welfare
2-203 Tanagawa Yoga machi
Setagaya-ku
Tokyo-ku

The WHO Regional Reference Centre for the Study of Psychotropic Drugs
Department of Psychiatry and Neurology
School of Medicine
Hokkaido University
North 14, West 5
Sapporo, Hokkaido

The WHO Collaborating Centre for the Evaluation of Methods of Diagnosis and Treatment of Stomach Cancer
National Cancer Centre
Tsukiji 5-1-1, Chuo-ko
Tokyo 104

The WHO Collaborating Centre for Research and Training in Vector Genetics of Mosquitos and other Arthropods of Health Importance
Department of Medical Zoology
School of Medicine
St. Marianna University
2095 Sugao, Takatsu-ku
Kawasaki
Annex 4

The WHO Collaborating Centre for Reference and Research on Viral Hepatitis
Nagasaki Chuo National Hospital
1001 Kubarago, Omura City
Nagasaki

The WHO Collaborating Centre for Reference and Research in Tuberculosis
Research Institute of Tuberculosis
Japan Anti-Tuberculosis Association
Tokyo

The WHO Collaborating Centre for Chemical Control and Laboratory Culture of Amphibious Snail Hosts of *Schistosoma japonicum*
Department of Medical Biology
University of Tsukuba
Tsukuba

The WHO Collaborating Centre for Diagnostic Imaging
Department of Radiology
Faculty of Medicine
University of Tokyo
Tokyo

The WHO Collaborating Centre for Research on Primary Prevention of Cardiovascular Diseases
Department of Pathology
Shimane Medical University
Izumo

The WHO Collaborating Centre for Research and Training in Diagnostic Electron Microscopy
Central Institute of Electron Microscopic Researches
Nippon Medical School
5-1-1, Sendagi, Bunkyo-ku
Tokyo

HONG KONG

The WHO Collaborating Centre for Rehabilitation
Hongkong Rehabaid Centre
Hin Cheung Road, Hung Hom
Kowloon
Hong Kong

MALAYSIA

The WHO Collaborating Centre for Research and Training in Drug Dependence
Drug Dependence Research Project
Universiti Sains Malaysia
Minden, Pulau Pinang
Malaysia
Annex 4

NEW ZEALAND

The WHO Collaborating Centre for
Screening and Clinical Trials of Drugs
Against Brugian Filariasis
Filariasis Research Division
Institute for Medical Research
Kuala Lumpur

The WHO Collaborating Centre for
Arbovirus Reference and Research
(Dengue and Dengue Haemorrhagic Fevers)
Department of Medical Microbiology
Faculty of Medicine
University of Malaya
Kuala Lumpur

The WHO Collaborating Centre for
Environmental Radioactivity
National Radiation Laboratory
Department of Health
P.O. Box 25099
Christchurch

The WHO Collaborating Centre for
Research and Training in Cardiovascular
Diseases
Epidemiology Unit
Wellington Hospital
Wellington

The FAO/WHO Collaborating Centre for
Food Contamination Monitoring
Food Section
Food and Nutrition Branch
Division of Public Health
Department of Health
Wellington

The WHO Collaborating Centre for Research on
Dental Caries and Periodontal Disease
Dental Research Unit
New Zealand Medical Research Council
P.O. Box 27007
Wellington

PAPUA NEW GUINEA

The WHO Collaborating Centre for Reference and
Research on Acute Respiratory Infections
PNG Institute of Medical Research
Goroka
PHILIPPINES

The WHO Collaborating Centre for Clinical Research on Human Reproduction
Reproductive Biology Centre
Department of Obstetrics and Gynaecology
College of Medicine
University of the Philippines
Manila

The WHO Collaborating Centre for Research and Training in Cardiovascular Diseases
Philippine Heart Center for Asia
Quezon City

REPUBLIC OF KOREA

The WHO Collaborating Centre for Research on Parasitic Diseases
Institute of Tropical Medicine
Yonsei University
P.O. Box 71
Seoul

The WHO Collaborating Centre for Research and Health Development
Korea Institute for Population and Health
115 Nokbun-Dong
Eunpyung-ku
Seoul

The WHO Collaborating Centre for Virus Reference and Research (Haemorrhagic Fever with Renal Syndrome)
Institute for Viral Diseases
Korea University Medical College
4 Myung-yun-dong 2 Ga
Chongno-ku
Seoul

The WHO Collaborating Institution for Occupational Health
Catholic Medical College
Catholic Industrial Medical Centre
Seoul

The WHO Collaborating Centre for Clinical Research in Human Reproduction
Institute of Reproductive Medicine and Population
College of Medicine
National University of Seoul
Seoul
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The WHO Collaborating Centre for Research on Helminthiasis
Institute of Endemic Diseases
Seoul National University
Seoul 110

The WHO Collaborating Centre for Research on Viral Hepatitis
Clinical Research Institute
Catholic Medical College
Seoul

The WHO Collaborating Centre for Hospital Administration
Institute of Hospital Services
Seoul National University Hospital
Seoul

SINGAPORE

The WHO Collaborating Centre for Venereal Diseases Serology and Bacteriology
Bacteriology Section
Department of Pathology
Outram Road General Hospital
Singapore

The WHO Collaborating Centre for Reference and Research on Streptococcal Infections
National Streptococcus Reference and Research Laboratory
Department of Pathology
Outram Road General Hospital
Singapore

The WHO Collaborating Centre for Clinical Research in Human Reproduction
Department of Obstetrics and Gynaecology
Kandang Kerbau Hospital for Women
Faculty of Medicine
University of Singapore
Singapore

The WHO Collaborating Centre for Occupational Health
Industrial Health Department
Ministry of Labour
Nos. 5 and 7 Halifax Road
Singapore
Annex 4

The WHO Collaborating Centre for Research and Training in Immunology  
Faculty of Medicine  
National University of Singapore  
Sepoy Lines  
Singapore 3

The WHO Regional Reference Centre for Secondary Standard Radiation Dosimetry  
Radiotherapy Department  
Outram Road General Hospital  
Singapore 3

The WHO Collaborating Centre for the Histological Classification of Upper Respiratory Tract Tumours  
Department of Pathology  
Faculty of Medicine  
National University of Singapore  
Singapore

The WHO Collaborating Centre for Virus Reference and Research  
Department of Microbiology  
Faculty of Medicine  
National University of Singapore  
Singapore

The WHO Collaborating Centre for Maternal and Child Health Research and Training in Human Genetics  
Department of Paediatrics  
National University of Singapore  
Singapore

The WHO Collaborating Centre for Maternal and Child Health/Family Planning Service Research and Service  
Department of Obstetrics and Gynaecology  
Kandang Kerbau Hospital for Women  
National University of Singapore  
Singapore
EXISTING WHO COLLABORATING CENTRE'S PROGRAMME AREAS

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<thead>
<tr>
<th>PROGRAMME CLASSIFICATION*</th>
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<tr>
<td>A. DIRECTION, COORDINATION AND MANAGEMENT</td>
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<td>Disease classification</td>
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<td>3.1 Health situation and trend assessment</td>
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<td>3.2 Managerial process for national health development</td>
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<td>4. Organization of health systems based on primary health care</td>
<td>Primary health care</td>
<td>China</td>
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*According to Classified List of Programmes for the period of the Seventh General Programme of Work, 1984-1989.
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<td>Jiading Primary Health Care Centre</td>
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<td>General health protection and promotion</td>
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<td>China</td>
<td>Horqin Zuoyi Zhong Qi</td>
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<td>Nutrition</td>
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<td>Zhe Li Mu Meng</td>
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<td>Inner Mongolia Autonomous Region</td>
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<td>Oral health</td>
<td>Dental caries and periodontal disease</td>
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<td>Preventive dentistry</td>
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<td>Dental caries and periodontal disease</td>
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<td>Maternal and child health research and training in human genetics</td>
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<td>Perinatal care</td>
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<td>Maternal and infant care</td>
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<td>Singapore</td>
<td>Department of Obstetrics and Gynaecology National University of Singapore</td>
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<td>Clinical research in human reproduction</td>
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<td>Shanghai Institute of Planned Parenthood Research</td>
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<td>National Research Institute for Family Planning Beijing</td>
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<td>Philippines</td>
<td>Department of Obstetrics and Gynaecology College of Medicine University of the Philippines</td>
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<td>Republic of Korea</td>
<td>Institute of Reproductive Medicine and Population College of Medicine Seoul National University</td>
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<td>Singapore</td>
<td>Department of Obstetrics and Gynaecology National University of Singapore</td>
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<td>PROGRAMME CLASSIFICATION</td>
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<td>9.3 Workers' health</td>
<td>Occupational health</td>
<td>Australia</td>
<td>Division of Occupational Health and Radiation Control, Lidcombe, New South Wales</td>
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<td></td>
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<td>China</td>
<td>Institute of Health, Chinese Academy of Medical Sciences, Beijing</td>
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<td>Japan</td>
<td>National Institute of Industrial Health, Ministry of Labour, Kawasaki</td>
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<td>Republic of Korea</td>
<td>Catholic Industrial Medical Centre, Catholic Medical College, Seoul</td>
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<td>Industrial Health Department, Ministry of Labour, Singapore</td>
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<td>9.4 Health of the elderly</td>
<td>Health care of the elderly</td>
<td>Australia</td>
<td>National Research Institute for Gerontology and Geriatric Medicine, Mount Royal Hospital, University of Melbourne</td>
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### Annex 5

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<th>PROGRAMME CLASSIFICATION</th>
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<tr>
<td>10. Protection and promotion of mental health</td>
<td>Epidemiology of mental disorders</td>
<td>Australia</td>
<td>Social Psychiatry Research Unit The National Health and Medical Research Council The Australian National University</td>
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<td>10.1 Psychosocial factors in the promotion of health and human development</td>
<td>Functional psychoses</td>
<td>Japan</td>
<td>Department of Neuropsychiatry Nagasaki University School of Medicine</td>
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<td>Research and training in mental health</td>
<td>China</td>
<td>Institute of Mental Health Beijing Medical College</td>
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<td>National Institute of Mental Health Ichikawa City</td>
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<td>10.2 Prevention and control of alcohol and drug abuse</td>
<td>Research and training in drug dependence</td>
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<td>10.3 Prevention and treatment of mental and neurological disorders</td>
<td>Psychotropic drugs</td>
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<td>Department of Psychiatry and Neurology Hokkaido University</td>
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<td>11. Promotion of environmental health</td>
<td>Research in neurosciences</td>
<td>China</td>
<td>Beijing Institute of Neurosurgery</td>
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<td>Hua-Shan Hospital First Medical College Shanghai</td>
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<td>11.1 Community water supply and sanitation</td>
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<td>11.2 Environmental health in rural and urban development and housing</td>
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<td>11.3 Control of environmental health hazards</td>
<td>Air pollution monitoring</td>
<td>Australia</td>
<td>Air Pollution Control Division Queensland State Government Brisbane</td>
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<td>Air pollution</td>
<td>Japan</td>
<td>Department of Community Environmental Sciences Institute of Public Health Tokyo</td>
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<td>Environmental radioactivity</td>
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<td>National Radiation Laboratory Department of Health Christchurch</td>
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<td>Environmental health effects</td>
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<td>National Institute for Environmental Studies Ibaraki-ken</td>
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<td>Waste disposal</td>
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<td>Food Administration Commonwealth Department of Health Woden, A.C.T.</td>
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<td>Food contamination monitoring</td>
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<td>Food and animal feed contamination monitoring</td>
<td>New Zealand</td>
<td>Food and Nutrition Branch Division of Public Health Department of Health Wellington</td>
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<td>China</td>
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<td>PROGRAMME CLASSIFICATION</td>
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<td><strong>12. Diagnostic, therapeutic and rehabilitative technology</strong></td>
<td><strong>12.1 Clinical, laboratory and radiological technology for health systems based on primary health care</strong></td>
<td>Secondary standard radiation dosimetry</td>
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<td>Nuclear medicine</td>
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<td>Reagent production</td>
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<td>Laboratory animals</td>
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### Annex 5

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<td>Serology of autoimmune disorders</td>
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<td>Research and training in immunology</td>
<td>China</td>
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<td>Immunogenetics</td>
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<td>12.3 Drug and vaccine quality, safety and efficacy</td>
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<td>Immunological biological products</td>
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<td>12.4 Traditional medicine</td>
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### Annex 5

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<td>Malaria, schistosomiasis and filariasis</td>
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<td>Department of Tropical Veterinary Medicine James Cook University of North Queensland Townsville</td>
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<td>Paragonimiasis, clonorchiasis and leishmaniasis</td>
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<td>Lymphatic filariasis</td>
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| 13.12 Smallpox eradication surveillance | Poxvirus research                                        | Japan                 | Division of Poxviruses
                                                |                                                                          |                       | National Institute of Health
                                                |                                                                          |                       | Tokyo                                              |
| 13.13 Other communicable disease prevention and control activities | Research on streptococcal infections                       | Singapore             | Department of Pathology
                                                |                                                                          |                       | Outram Road General Hospital
                                                |                                                                          |                       | Singapore                                              |
|                           | Arbovirus reference and research                           | Australia             | Department of Virology
                                                |                                                                          |                       | Queensland Institute of Medical Research
                                                |                                                                          |                       | Brisbane                                              |
|                           |                                                           | Japan                 | Department of Virology
                                                |                                                                          |                       | and Rickettsiology
                                                |                                                                          |                       | National Institute of Health
                                                |                                                                          |                       | Tokyo                                              |
|                           |                                                           | Malaysia              | Department of Microbiology
                                                |                                                                          |                       | University of Malaya
                                                |                                                                          |                       | Kuala Lumpur                                              |
|                           | Virus reference and research                               | Australia             | Virus Laboratory
                                                |                                                                          |                       | Fairfield Hospital
<pre><code>                                            |                                                                          |                       | Fairfield, Victoria                                      |
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<td>Haemorrhagic fever with renal syndrome</td>
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<td>Histological classification of skin tumours</td>
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<td>Evaluation of methods of diagnosis and treatment of stomach cancer</td>
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<td>Classification of upper respiratory tract tumours</td>
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<td>New Zealand</td>
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Annex 5
ANNEX 6

IDENTIFICATION AND PRIORITIZATION OF RESEARCHABLE PROBLEMS/ISSUES

A. Proposals from Sub-Group on Biomedical Research

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<tr>
<th>Research field</th>
<th>Research area</th>
<th>Researchable problems/Issues components</th>
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<tbody>
<tr>
<td>Communicable diseases</td>
<td>1. Tuberculosis</td>
<td>1.1 Operational research on case-finding and treatment (including short-term chemotherapy regimens) BMR, HSR</td>
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<td>1.2 BCG trials (including studies of extrapulmonary tuberculosis) BMR, HSR, HBR</td>
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<td>1.3 Development of better indicators for assessment of TB problem. BMR</td>
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<td>2. Leprosy</td>
<td>2.1 Epidemiology of Dapson-resistance chemotherapy of multi-bacillary leprosy. BMR, HSR, HBR</td>
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<td>2.2 Large-scale intervention studies. BMR, HSR, HBR</td>
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<td>2.3 Short-term therapy for non-lepromatous leprosy BMR, HSR</td>
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Legend:  
BMR - Biomedical Research  
HSR - Health Services Research  
HBR - Health Behavioural Research
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<th>Research field</th>
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<th>Researchable problems/Issues</th>
<th>Research components</th>
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<td>Communicable</td>
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<tr>
<td>diseases</td>
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<td>3. Malaria</td>
<td>2.4 Identification of high risk groups by immunological methods.</td>
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<td>3.1 Reorientation of malaria control service in context of PHC development.</td>
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<td>3.2 Community involvement in malarial control activities.</td>
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<td>3.3 Innovative training of malaria control workers and general workers in malaria control.</td>
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<td>4. Schistosomiasis</td>
<td>4.1 Chemotherapeutic trials using praziquantel and examoquine.</td>
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<td>4.2 Epidemiology including human behavioural aspects.</td>
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<td>4.3 Improvement of diagnostic techniques.</td>
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<td>5. Filariasis</td>
<td>5.1 Development of appropriate therapeutic regimes.</td>
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<td>Communicable diseases</td>
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<td>Effective control of Aedes polynesiensis larvae in crab holes.</td>
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<td>6.</td>
<td>Helminthiasis</td>
<td>6.1 Improvement of diagnostics and epidemiology of paragonimiasis and clonorchiasis.</td>
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<td>6.2 Chemotherapeutic trials for these two diseases.</td>
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<td>Dengue haemorrhagic fever</td>
<td>7.1 Application of rapid diagnosis to the development of early warning systems for effective vector control.</td>
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<td>7.2 Multi-centred epidemiological studies including surveillance.</td>
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<td>7.3 Virological studies to determine virulence markers and pathogenesis.</td>
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<td>7.4 Vaccine development.</td>
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<td>8. Haemorrhagic fever with renal syndrome</td>
<td>8.1 Investigation of the mode of transmission in experimental animals.</td>
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<td>8.2 Sero-epidemiological survey to indicate distribution of the problem.</td>
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<td>Viral hepatitis</td>
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<td>9.1 Laboratory based surveillance to define magnitude of problem in each country.</td>
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<td>9.2 Interruption of vertical transmission of HBV from mothers of newborn babies.</td>
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<td>9.3 Development of vaccines and immunoglobulin trials.</td>
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<td>9.4 Epidemiological study of non-A and non-ß hepatitis and their roles.</td>
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<td>Diarrhoeal diseases</td>
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<td>10.1 Development of appropriate system for delivering oral rehydration therapy.</td>
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<td>10.2 Study of epidemiology and nutritional, environmental and behavioural factors for effective intervention.</td>
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<td>10.3 Community involvement in CDD.</td>
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<td>10.4 Development of evaluation methods on impact of CDD programme.</td>
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<td>11. Acute respiratory infections (ARI)</td>
<td>11.1 Reduction of mortality by better case management.</td>
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<td>11.2 Evaluation of efficacy of pneumococcal vaccine.</td>
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<td>11.3 Study of the role of viruses in ARI.</td>
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<td>11.4 Study of the role of helminths in ARI.</td>
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<td>12. Sexually transmitted diseases</td>
<td>12.1 Monitor gonococcal susceptibility to antimicrobials and develop appropriate therapy against gonorrhoea.</td>
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<td>1.3 Studies on factors related to cause and prevention of CVD.</td>
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<td>1.4 Analysis of patterns of behaviour, attitudes and beliefs influencing the practice of regular exercise, smoking and dietary habits in different ethnic groups and social classes in the population.</td>
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<td>2.1 Action control programmes for diabetes including health education.</td>
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<td>2.2 Studies on behaviour, diet and lifestyle with respect to diabetes mellitus.</td>
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<td>2.3 Risk studies in diabetes including population subgroup analysis.</td>
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<td>2.4 Longitudinal study of clinical and pathological features of diabetes and complications.</td>
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<td>2.5 Studies of motivational factors affecting diabetes patients.</td>
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<td>2.6 Studies of perceptions and attitudes of health workers related to patient education.</td>
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<td>diseases</td>
<td></td>
<td>3.2 Study of etiopathogenesis of cancers having particular geographical distributions.</td>
<td>BMR</td>
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<td></td>
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<td>3.3 Education at PHC level</td>
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<td></td>
<td></td>
<td>3.4 Analysis of patterns of behaviour, attitude and beliefs that influence dietary habits among different ethnic groups.</td>
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<td>Research field</td>
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<td>Nutrition</td>
<td>1. Nutrition of young child</td>
<td>1.1 Protein energy malnutrition.</td>
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<td></td>
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<td>1.2 Infant feeding practices.</td>
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<td>1.3 Nutrition education.</td>
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<td></td>
<td>2. Specific deficiencies</td>
<td>2.1 Development of appropriate technology in particular areas.</td>
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<td></td>
<td>3. Nutrition of the mother</td>
<td>3.1 Assessment of nutritional status and feeding practices of pregnant and lactating mother.</td>
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<td></td>
<td></td>
<td>3.2 Nutrition-education.</td>
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<td>4. Food habits</td>
<td>4.1 Feeding at specific ages and times.</td>
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<td>4.2 Nutrition education.</td>
<td>HSR, HBR</td>
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### Research field

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<tr>
<th>Research area</th>
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<tbody>
<tr>
<td>MCH/Family planning</td>
<td>1. Risk approach&lt;br&gt;1.1 Distribution and incidence of low birth weight.</td>
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<td>1.2 Pregnancy wastage.</td>
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<td>1.3 Maternal mortality and morbidity</td>
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<td>1.4 Mortality and morbidity among newborn and infants.</td>
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<td>1.5 Impact of risk approach strategy on delivery of MCH/Family Planning referral system.</td>
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<td>1.6 Organization and appropriate technology in perinatal care</td>
<td>HSR</td>
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<tr>
<td></td>
<td>2. Psycho-social aspects of MCH/Family planning&lt;br&gt;2.1 Acceptability and continuity</td>
<td>HBR, HSR</td>
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<td></td>
<td>of fertility regulation methods in different socio-cultural settings.</td>
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<td>2.2 Utilization of MCH/FP services.</td>
<td>HBR, HSR</td>
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<tr>
<td>MCH/Family planning</td>
<td>3. Adolescent health</td>
<td>3.1 Specific requirements for adolescent health in relation to reproduction and family planning.</td>
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<td>3.2 Psychiatric and emotional problems.</td>
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<td>Environmental health</td>
<td>1. Water supply and sanitation</td>
<td>1.1 Design and testing of methods for evaluating environmental health strategies.</td>
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<td>1.2 Community participation in water supply and sanitation programmes in relation to diarrhoeal diseases.</td>
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<td>1.5 Appropriate technology development and evaluation.</td>
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<td>1.6 Development of waste disposal systems to avoid propagation of intestinal helminths.</td>
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<th>Research area</th>
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<tr>
<td>Environmental health</td>
<td>2. Fluorosis</td>
<td>2.1 Feasibility studies to reduce fluoride in areas at risk of skeletal fluorosis.</td>
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<td>Health care of the aged</td>
<td>1. Survey and epidemiological research</td>
<td>1.1 Country profiles to identify cohort differences in health status of elderly.</td>
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<td>1.2 Identify cohort differences in social status of elderly.</td>
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<td>Health and social services research</td>
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<td>2.1 Cost effectiveness of different health care policies.</td>
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<td>2.2 Prevention of severe disability.</td>
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<td>Senile dementia</td>
<td>3.1 Epidemiology</td>
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<td>BMR</td>
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<td>3.2 Pathogenesis</td>
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<td>BMR</td>
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<tr>
<td></td>
<td>3.3 Development of screening methods.</td>
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### B. Proposals from Sub-Group on Health Services Research

<table>
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<th>Research components</th>
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<tbody>
<tr>
<td>Health care financing</td>
<td>1. Allocation of funding</td>
<td>1.1 To determine present distribution of finance between different geographic service areas and review and identify ways of improving allocation of funds.</td>
<td>HSR, HBR</td>
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<tr>
<td></td>
<td></td>
<td>1.2 Investigate way of funding preventive and promotive activities.</td>
<td>HSR, BMR</td>
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<td></td>
<td>2. Cost containment</td>
<td>2.1 Find ways and means of reducing cost of health care.</td>
<td>HSR, BMR</td>
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<tr>
<td></td>
<td></td>
<td>2.2 Review and find efficient payment schemes.</td>
<td>HSR</td>
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<td></td>
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<td>2.3 Reduce health costs by improving referral system.</td>
<td>HSR, HBR</td>
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<tr>
<td></td>
<td>3. Alternative sources of funds</td>
<td>3.1 Assess the advantages of insurance schemes, government subsidy, polling of community resources, etc.</td>
<td>HSR, HBR</td>
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<tr>
<td>Research field and management</td>
<td>Research area</td>
<td>Researchable problems/Issues</td>
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<tr>
<td>1. Health care delivery system</td>
<td>1.1 Determine ways of integrating hospitals into the community health system.</td>
<td>HSR, BMR</td>
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<tr>
<td></td>
<td>1.2 Evaluate the specific local operations of the health delivery system.</td>
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<td>1.3 Assess the social and administrative feasibility.</td>
<td>HSR, HBR</td>
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<tr>
<td>2. Extent of coverage</td>
<td>2.1 Determine efficient ways of utilizing available specific services.</td>
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<td></td>
<td>2.2 Determine appropriate ratio of health manpower to population at the community level.</td>
<td>HSR, HBR</td>
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<tr>
<td>3. Accessibility and acceptability</td>
<td>3.1 Determine the best way to improve consumers accessibility in relation to distance, time and cost.</td>
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<td>Research field</td>
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<tr>
<td>Organization and management</td>
<td>4. Cost effectiveness</td>
<td>4.1 Measure the efficiency of the cost effectiveness of specific health activities.</td>
<td>HSR, HBR</td>
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<tr>
<td>5. Planning</td>
<td>5.1 Evaluate planning methodology of different levels.</td>
<td>HSR, HBR</td>
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<td></td>
<td>5.2 Determine extent of utilization of feedback on the continuous planning process.</td>
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<tr>
<td>6. Management information system</td>
<td>6.1 To establish procedures and mechanisms to improve health system performance.</td>
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<td></td>
<td>6.2 To determine information to be required at each level of administration.</td>
<td>HSR, HBR</td>
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<td>6.3 To identify measures/indicators of health system performance.</td>
<td>HSR, HBR</td>
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### Annex 6

<table>
<thead>
<tr>
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<th>Research area</th>
<th>Researchable problems/Issues</th>
<th>Research components</th>
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<tbody>
<tr>
<td>Legislation and policy making</td>
<td>1. Health and medical laws regulations</td>
<td>1.1 Review, recommend and revise existing laws to be consistent with HFA strategies and principles.</td>
<td>HSR, HBR</td>
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<td></td>
<td></td>
<td>1.2 Assess ways of improving health related legislation to facilitate expansion of health coverage.</td>
<td>HSR, HBR</td>
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<tr>
<td>Inter- and intrasectoral coordination</td>
<td>1. Health and medical laws regulations</td>
<td>1.1 To determine optional mix of curative, preventive, rehabilitative and promotive activities and services.</td>
<td>HSR, HBR</td>
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<tr>
<td></td>
<td></td>
<td>1.2 To determine percentage distribution of funding to each of above activities.</td>
<td>HSR, HBR</td>
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<tr>
<td>2. Public, private and voluntary agency coordination</td>
<td>2.1 To establish proper role of public, private and voluntary agencies.</td>
<td></td>
<td>HSR, HBR</td>
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<tr>
<td></td>
<td>2.2 To determine where public, private and voluntary agencies link into the total health system development plan.</td>
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<tr>
<td>Research field</td>
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<td>Researchable problems/Issues</td>
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<tr>
<td>Inter- and intrasectoral coordination</td>
<td>3. Coordination between health and health-related agencies (e.g. education, social welfare, agriculture, home affairs, finance, etc.)</td>
<td>3.1 Evaluation of the health structures at the different levels of administration (e.g. central, intermediate and local).</td>
<td>HSR, HBR</td>
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<tr>
<td></td>
<td></td>
<td>3.2 Find well coordinated model in all areas of health-related development programme.</td>
<td>HSR, HBR</td>
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<tr>
<td></td>
<td>4. Coordination between and among the different health care levels (e.g. central and local)</td>
<td>4.1 To review and examine decision making structures and mechanisms at various levels.</td>
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<td></td>
<td>4.2 Development of the proper mix of packaging of services at the community level.</td>
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<tr>
<td>Manpower</td>
<td>1. Utilization of existing manpower</td>
<td>1.1 To determine reallocation of functions of existing manpower based on their capabilities.</td>
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<tr>
<td></td>
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<td>1.2 To identify ways of upgrading existing manpower.</td>
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## Annex 6

<table>
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<tr>
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<th>Researchable problems/Issues</th>
<th>Research components</th>
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<tr>
<td>Manpower</td>
<td>2. Reorientation of existing training</td>
<td>2.1 To identify ways of incorporating the concept of community participation in training programmes.</td>
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<td></td>
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<td>2.2 To develop ways of strengthening the public health component of health undergraduate curricula.</td>
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<td></td>
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<td>2.3 To determine appropriate ways of training health graduates in managerial skills.</td>
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<td>2.4 To evaluate existing health training programmes for their relevance to PHC.</td>
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<td>2.5 To develop appropriate and continuing training programmes that would support health systems based on PHC.</td>
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<tr>
<td>Manpower</td>
<td>3. Training of new manpower</td>
<td>3.1 To identify manpower needs of the community and to specify roles and functions of new manpower.</td>
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<td>3.2 To develop the competency based curricula for each new manpower programme.</td>
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<td>4. Educational technology</td>
<td>4.1 To develop technology including resource materials for the above competency based curricula for manpower development.</td>
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<td>4.2 To determine the type and duration of both formal and informal training in the context of continuing health training.</td>
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<td>5. Distribution of manpower</td>
<td>5.1 To determine ways of overcoming barriers to distribute manpower between geographic areas.</td>
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<td>Research field</td>
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<tr>
<td>Manpower</td>
<td></td>
<td>5.2 To establish norms/guidelines for staffing patterns to achieve a balance of manpower between specialties, health professionals and between supervisors and supervisees.</td>
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<td>5.2 To establish norms/guidelines for staffing patterns to achieve a balance of manpower between specialties, health professionals and between supervisors and supervisees.</td>
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<tr>
<td>Design of health care delivery</td>
<td>1. Primary health care</td>
<td>1.1 To identify ways for determining priority problems in the community.</td>
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<td>1.1 To identify ways for determining priority problems in the community.</td>
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<td>1.2 To develop appropriate procedures for integrated delivery of services at the community level.</td>
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<td>1.3 To develop appropriate procedures and mechanisms for efficient referral and follow-up system.</td>
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<tr>
<td>Design of health care delivery</td>
<td>2. Secondary health care</td>
<td>2.1 To develop appropriate ways for supporting primary health services in terms of: - training - services delivery - research for priority problems in the community.</td>
<td>HSR, HBR</td>
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<td></td>
<td>3. Emerging problems</td>
<td>3.1 To develop technology and the measures to resolve emerging priority problems as e.g. in rehabilitation cancer, etc.</td>
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<td>Community participation</td>
<td>1. Decision making in:</td>
<td>1.1 Problem prioritization</td>
<td>1.1 To identify what is meant by community participation</td>
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<td></td>
<td>1.2 Allocation of resources</td>
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<td>1.2 To determine ways of operationalizing the concept of community participation.</td>
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<td>2. Service delivery</td>
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<td>To determine the types, nature and degree of community involvement decision-making, resource support and delivery of services.</td>
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Annex 6

IDENTIFICATION AND PRIORITIZATION OF RESEARCHABLE PROBLEMS/ISSUES

Examples of researchable problems in the behavioural area

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<tbody>
<tr>
<td>Preventive health behaviour</td>
<td>1. Heart disease prevention</td>
<td>1.1 Analysis of patterns of behaviour, attitudes, and beliefs influencing the practice of regular exercise, smoking, and dietary habits in different ethnic groups and social classes in the population.</td>
<td>HBR, BMR</td>
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<td>Communicable diseases</td>
<td>1. Leprosy</td>
<td>1.1 Epidemiology and transmission of leprosy.</td>
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<td>1.2 Perception, beliefs and response to leprosy as diseases.</td>
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<td></td>
<td></td>
<td>1.3 Appropriateness of intervention measures.</td>
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<td>1.4 Self-referral and case-finding.</td>
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<td>1.5 Case holding.</td>
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</table>
Within the field of the elderly, there is a real need for development of screening methods for identifying probable cases of depressive illness and with early dementia. These instruments would be usable in the PHC setting without special training. They would take the form of short questionnaires to be administered by interview. These questionnaires would have to be made up of items which are congruent with the culture and educational level of the older person. The ascertainment of previously unrecognized depressive illness or dementia carries substantial importance for patient care and family involvement.

<table>
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<th>Research components</th>
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<tbody>
<tr>
<td>Health care of the elderly</td>
<td>1. Mental disorders</td>
<td>1.1 Screening methods for depressive illness and dementia</td>
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### Research area: Chronic diseases

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<tr>
<td></td>
<td>1. Diabetes mellitus</td>
<td>1.1 Lifestyle patterns of behavioural attitudes related to diabetes.</td>
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<td>1.2 Motivational factors of the patients.</td>
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<td>1.3 Methods of patient education.</td>
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<td>1.4 Perceptions and attitudes of health workers related to patient education.</td>
<td>HBR</td>
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Among other things, limited energy-intake with balanced diet and habitual physical exercise are fundamentally important for prevention and treatment of diabetes, and these are highly related to the lifestyle of the patient. Without understanding the lifestyle of the patients, based upon behavioural scientific studies, no education of the patients can be planned and carried out.
<table>
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<th>Research components</th>
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<tbody>
<tr>
<td>Disease prevention and control</td>
<td>1. Prevention and treatment of mental and neurological disorders.</td>
<td>1.1 Epidemiology of mental and neurological disorders.</td>
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<td></td>
<td></td>
<td>1.2 Outcome of mental disease in different countries.</td>
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<td>2. Prevention and treatment of mental problem</td>
<td>1.3 Operation of services for the mentally and neurologically ill.</td>
<td>HSR, HBR</td>
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<tr>
<td></td>
<td></td>
<td>1.4 Effectiveness of traditional methods for the treatment of mentally ill.</td>
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<tr>
<td></td>
<td></td>
<td>1.5 Standardization of methods for the assessment of and reporting about mental neurological problems.</td>
<td>HBR, HSR, BMR</td>
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<tr>
<td></td>
<td></td>
<td>1.6 Extension of mental health care to peripheral health services.</td>
<td>HSR</td>
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<tr>
<td>Appropriate technology for health problems</td>
<td>1. Prevention and control of drug and alcohol problems.</td>
<td>1.1 Operation of services for the treatment and rehabilitation of drug and alcohol dependence.</td>
<td>HSR</td>
</tr>
</tbody>
</table>
### Annex 6

<table>
<thead>
<tr>
<th>Research field</th>
<th>Research area</th>
<th>Researchable problems/Issues</th>
<th>Research components</th>
</tr>
</thead>
</table>
| Health problem prevention and control | 1. Road accident prevention and injury control | 1.1 Community attitudes to road accidents -  
(a) favourable view of risk taking  
(b) acceptance of accidents as "normal"  
(c) fatalistic attitude "act of God"  
(d) awareness of problem and of possibility for change | HBR |
| | | 1.2 Perception of risk of injury/death/disability to self and/or other  
(a) potential severity of injury | HBR |
<p>| | | 1.2 Evaluation of strategies for the prevention of alcohol and drug abuse (e.g. price control, licensing laws) | HSR, HBR |
| | | 1.3 Predictions of high risk for alcohol and drug abuse. | HSR, HBR |</p>
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<tr>
<td></td>
<td></td>
<td>(b) probability of occurrence</td>
<td>HBR</td>
</tr>
<tr>
<td>1.3 Identify risk related behaviour -</td>
<td></td>
<td>(a) alcohol abuse and driving</td>
<td>BMR</td>
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<tr>
<td></td>
<td></td>
<td>(b) failure to supply and use seat belts</td>
<td>HBR</td>
</tr>
<tr>
<td>1.4 Modification of risk related behaviours</td>
<td></td>
<td>eg: (a) alcohol abuse and driving</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>(i) identify, treat and rehabilitate alcoholics</td>
<td>HBR, HSR</td>
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<tr>
<td></td>
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<td>(ii) intervention by education and legislation to change personal and community attitudes and hence behaviour and/or direct control by enforcement of legislation.</td>
<td>HBR</td>
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<td></td>
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<td>(b) failure to supply and use seat belts.</td>
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<tr>
<td></td>
<td></td>
<td>(i) belts not available:</td>
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<tr>
<td></td>
<td></td>
<td>- change community (government) behaviour to make belts available.</td>
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<tr>
<td></td>
<td></td>
<td>(ii) belts available, use not mandatory</td>
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<tr>
<td></td>
<td></td>
<td>- change community (government) behaviour to require belt use</td>
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<tr>
<td></td>
<td></td>
<td>- change personal behaviour to increase belt use.</td>
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<tr>
<td></td>
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<td>(iii) belts available, use mandatory:</td>
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<tr>
<td></td>
<td></td>
<td>- enforce legislation</td>
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<tr>
<td></td>
<td></td>
<td>- change personal behaviour by education to increase compliance with legislation.</td>
</tr>
</tbody>
</table>

Research components: HBR
Research field | Research area | Researchable problems/Issues | Research components
---|---|---|---
1.5 Modification of "environment" to change behaviour:

eg: (a) alcohol abuse and driving
   (i) fit cars with ignition interlock that cannot be operated by intoxicated drivers.
   (b) failure to supply to use seat belts.
   (i) fit cars with "passive" restraints:
   eg: - automatic seat belts
       - airbag restraint system

1.6 Modification of "environment" to minimize the injurious consequences of risk-taking behaviour (relevant to both examples (a) and (b)).

(i) change attitude of government and highway engineers to ensure the provision of safe roadsides (guard rails, etc.)

Annex 6

BMR
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<td></td>
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<td>1.7 Modification of provision of emergency care and treatment to minimize the severity of the consequences of being injured (relevant to both examples (a) and (b))</td>
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<td></td>
<td></td>
<td>(i) change community/government awareness of the need for adequate emergency care, etc.</td>
<td>HSR</td>
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<tr>
<td></td>
<td></td>
<td>(ii) change personal and community awareness of the possibility and need for effective rehabilitation services.</td>
<td>HSR</td>
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