WORLD HEALTH ORGANIZATION

ORGANISATION MONDIALE DE LA SANTÉ

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Agenda item 6

RESEARCH MANPOWER SITUATION IN THE EM REGION

The paucity of medical research workers and the absence of suitable career opportunities for them, are major constraints in the development and strengthening of national capabilities for medical research in countries of this Region.

A preliminary situation analysis of the research manpower was undertaken in a few countries of the Region. In the countries studied, various incentives were in existence for research workers, and career opportunities do exist, specially in Universities. However, there were no comprehensive plans for developing research manpower.

Some suggestions for improving the existing situation have been proposed.

The EM/ACMR, at one of its earlier meetings, being concerned with the research manpower situation in the Region, recommended that a paper be prepared for discussion and suggestions as to how it could be improved.

The subject of research manpower and provision for an adequate career structure for research workers in developing countries has assumed considerable importance during the recent past on account of the efforts being made by WHO, and through bilateral agreement in some countries, to develop and strengthen national capabilities for research. It is obvious that these efforts will, at best, have only a temporary beneficial effect, unless the countries themselves take steps to provide medical research workers with some assurance of sustained career opportunities.

This matter was brought to the attention of the Member States at the Meeting of the Sub-Committee A, 29th Session of the Regional Committee for the EM Region, held in October 1979. The Sub-Committee in its resolution EM/RC29A/R.6, amongst other things, urged Member States to ensure that suitable manpower is retained in countries through the creation of a career structure for scientists engaged in research.

Recently, the Global ACMR has created a Sub-Committee to deal with Research Career Structure. It will be meeting in September this year, to review material collected through visits of consultants to selected countries in the different WHO Regions. In the EM Region one of the consultants visited Egypt and Sudan during the month of June 1980.

A preliminary situation analysis of the research manpower situation in some countries of the Region was carried out early this year. A questionnaire (Annex I) was prepared and sent to 8 nationals in the Region, who were occupying senior positions in their countries' health and/or medical research administration. To date 3 completed questionnaires have been received in the Regional Office. Some of the salient points from the data collected are summarized in Table I (Annex II).

On the basis of information received through these questionnaires and that obtained by visits of WHO personnel to countries, the following appear to be some of the constraints to the development of manpower in medical research and of a suitable career structure for research workers in the countries of the Region:

i) Lack of a well-defined policy and plan for establishing medical research as an integral part of the national health care system.

ii) The above has led to an inadequate or poorly developed research infrastructure in most countries of the Region.

iii) Effective manpower planning, either for health service personnel or for scientific manpower, has not been seriously undertaken so far.

iv) A full-time career in research is not sufficiently attractive, primarily due to the enormous earning differential between full-time employment and private practice. Those who do take up research are compelled to carry on other remunerative activities in order to supplement their income.

Due to prevailing national priorities, the development (including planning, production and management) of research manpower and establishment of suitable career opportunities for research workers in countries of the Region, will probably not receive due attention within the context of national plans for the development of health personnel. Therefore, it is suggested that it should be viewed as being an integral part of a well-formulated national plan for promotion and development of medical research, and like any other plan, this will be subject to modification from time to time in view of the experience gained and the changing resource position.

The research effort required to support the development of comprehensive health services, and to prevent and control commonly prevailing diseases, should be well-defined as an initial step. Subsequently, after taking stock of the quality and quantity of human resources already available in the country, a phased programme of development of manpower should be drawn up and implemented.

Implicit in these steps is the creation of the required number of posts for

medical research workers in research, teaching or service institutions, depending upon the infrastructure being developed in accordance to country's needs.

While creating these posts, provision will have to be made to establish a formal career line, so that opportunities for advancement are available to capable researchers.

Some research posts, by the very nature of the research involved, will be time-limited. It is difficult to suggest the proportion of research posts in a given country which may be financed by "soft money" including monies from external funding agencies.

It is sometimes claimed that to ensure productivity, tenure appointments in research should be limited. The reverse may also hold true. In other words, on appointment to a tenured post, a research worker may feel secure and be more productive. Alternatively tenure itself may lead to low productivity.

The distribution of tenured and other posts, according to the various bio-medical disciplines, really depends upon the priorities established by the countries for medical research (which should be in accordance with the health problems).

A whole range of opinion exists on the issue of incentives for medical research workers, even within a single country, extending from payment of 100% salary supplements and/or other perquisites to no incentives at all. It is suggested that payment of incentives should be viewed in the context of existing national practices and that WHO should not make any recommendation as regards the desirability or the scale of incentives, except to possibly suggest to the national authorities that if a system of incentives exists for public servants, it should be extended to include medical research workers.

The EM/ACMR may wish to consider the following steps/actions for improvement and further development of research manpower in the EM Region:

1. The Regional Office should draw the attention of the relevant authorities in countries (Ministries of Health, Higher Education, National Research Councils) to the need to establish a pool of research scientists and to provide a suitable career structure for them.

2. WHO inputs for institutional strengthening for research in countries

should be, as far as possible, linked with creation of posts in suitable grades for research workers.

3. National research programming exercises should be promoted. Planning for the development of research manpower will be an important element of these programming exercises.

4. Information on various measures adopted (including legislation) in different countries of the world for improving the conditions of service of full-time medical research workers, can be collected and disseminated to Ministries of Health and Education and Research Institutions and Organizations in the Region.

5. In countries where national research organizations have yet to be established or where human and financial resources are scarce, an attempt can be made to establish a nucleus of research workers, by means such as creating tenured research posts in Universities and Health Institutions to carry out commissioned research, establishment of research units/institutes with full-time staff, grants of long-term research fellowships or career development awards to carefully selected young research workers.

6. Recognising the unlikelihood of the development of a cadre of full-time medical research workers, in the near future, in most of the countries of the Region, it is proposed that approaches for involving existing health personnel, in both teaching and service positions, in medical research activities, be developed and implemented in the countries.

One of such approaches is holding of broad Research Methodology Courses (with emphasis on epidemiology, statistics, evaluation of various health-related interventions), and subsequently following such Courses up by implementation of small, time-limited research projects by participants in these Courses.

ANNEX I

WORLD HEALTH ORGANIZATION
REGIONAL OFFICE FOR THE EASTERN
MEDITERRANEAN
Alexandria, Egypt

PRELIMINARY SITUATION ANALYSIS OF RESEARCH MANPOWER AND CAREER STRUCTURE OPPORTUNITIES FOR MEDICAL RESEARCH WORKERS IN EM REGION

Name of country:.. ....

1. Organizations, Institutions and Departments involved in sponsoring and/or conducting medical research and training research workers in biomedical sciences

Name and address of Organization/ Institution/Department	Year established	Sponsors research	Conducts research	Provides training to research workers

2. Please fill tables a, b, c, d and e for each of the Institutions listed under 1.
(use separate pages 2 and 3 for each Institution. 10 extra copies of each of these pages are enclosed.)

Name and address of Institution: _____

_____

a.) Number of staff of the following categories in the Institution at present, according to the proportion of time spent in research and/or training research workers

Category of staff	The number of staff and proportion of their time spent in research/research training			
	25%	50%	100%	Total
- Technicians				
- Science graduates				
- Science graduates with post-graduate qualifications				
- Medical graduates				
- Medical graduates with post-graduate qualifications				

b.) Total number of established posts for research workers in the Institution in the years 1971, 1975, 1979

Category	1971	1975	1979
- Technicians			
- Science graduates			
- Science graduates with postgraduate qualifications			
- Medical graduates			
- Medical graduates with postgraduate qualifications			

c.) Total number of biomedical research workers in the Institution, belonging to the following categories, who were trained during the years 1971, 1975, 1979, either within the country (including in-service training) or abroad

Category	1971	1975	1979
- Technicians			
- Science graduates			
- Science graduates with post-graduate qualifications			
- Medical graduates			
- Medical graduates with post-graduate qualifications			

d.) Funds (equivalent in US Dollars) available to the Institution for medical research (including salaries and supplies)

in 1971 US $ .. ..

in 1975 " .....

in 1979 " .....

e.) Number of scientific papers published by biomedical research workers in the Institution, during the last 5 years

in 1975 .....

in 1976 .....

in 1977 .....

in 1978 ....

in 1979 .. ..

3. The numbers, if available, of biomedical researchers, according to the following categories, who have emigrated during the last 5 years, and of those who have returned
(If the data refer to different periods, please specify.)

Category	Emigrated	Returned
- Technicians		
- Science graduates		
- Science graduates with postgraduate qualifications		
- Medical graduates		
- Medical graduates with postgraduate qualifications		

4. Is there a national policy or plan for developing research manpower in the medical field?

Yes ☐ No ☐

If "yes", give appropriate details, also indicating number of research workers to be trained over a similar period in Agricultural (including Veterinary) Science and Industrial Science

9. Total number of the following categories of graduates produced in the country in the years given as under

Category of graduates	1971	1975	1979
- Technicians			
- Science graduates (Biological Sciences)			
- Science graduates with postgraduate qualifications			
- Medical graduates			
- Medical graduates with postgrduate qualifications			

10. Does a career structure exist for biomedical research workers?

Yes ☐ No ☐

If "yes", please give details for each category.

5. Total fundings in US Dollars for Medical, Agricultural (including Veterinary) and Industrial research during the following years

Type of research	1971	1975	1979
- Medical			
- Agricultural			
- Industrial			

6 Total annual salaries (including allowances) equivalent in US Dollars for each of the following categories of research workers

Category of research worker	Minimum annual salary	Maximum annual salary
- Technicians		
- Science graduates		
- Science graduates with postgraduate qualifications		
- Medical graduates		
- Medical graduates with postgraduate qualifications		

7. Give the annual per capita income (in US Dollars) of your country. $ .....

8. Are any incentives, financial or otherwise, being provided to medical research workers?

Yes ☐ No ☐

If "yes", please give details.

If "no", then considering the financial implications, what steps, in your opinion, can be taken to establish a competitive career structure for medical research workers?

11. What, in your opinion, are the desirable numbers (minimum and maximum) of career posts for the following categories of research workers for undertaking the required research on the pressing health problems, during the next 5 years?

Category	Minimum	Maximum
- Technicians		
- Science graduates		
- Science graduates with postgraduate qualifications		
- Medical graduates		
- Medical graduates with postgraduate qualifications		
- Others (e.g. social scientists)		

Are these estimates ad hoc? Yes ☐ No ☐

If "no", please give the basis used for these projections.

12. Do you think that the planning for career structure in biomedical research should be handled separately, OR as part of an overall plan for development of research manpower (irrespective of field of research)?
Give your reasons for selecting either of the alternatives.

13. Any comments that you may wish to offer regarding the planning, production and management of biomedical research workers, with respect to your country:

14. Kindly list agencies and persons whom you have visited to collect information for filling in this form:

15. List resource documents consulted:

Date:.....

.....
Signature

ANNEX II

Some salient points regarding Research Manpower situation in three countries of the EM Region

Country	No. of Institutes conducting and training medical research workers	No. of staff of different categories engaged in full-time research				Incentives to be provided to medical research workers	Existence of a National Policy and/or Plan for developing research manpower	Existence of a Career Structure for medical research workers
		Science graduates	Science grad. with postgrad. degree	Medical grad.	Medical grad. with postgrad. degree			
Egypt	44 including Faculties of Medicine (8), Pharmacy (6), Dentistry (5) in the 8 Universities	277	171	361	248	30% extra pay for research workers and research supervisors get up to 50% of their salaries for supervising candidates for Master and Ph.D. degrees	There is no comprehensive National Plan	Yes, both in Universities and Research Institutions. Promotion from one grade to another is subject to acquisition of postgraduate qualifications and experience
Libya	3	At the moment there is nobody engaged in full-time research and there are no posts established separately for research				-Extra pay is allowed for carrying out or participating in research -Promotions are based, among other things, on publications -Expenses for presenting papers at Conferences are fully covered	Plans for developing research manpower exist and a very high number of research workers are expected to be trained in the next 5 years	There are wide opportunities for Libyans to join as research workers, and for higher training abroad and for promotions on acquiring postgraduate qualifications
Syria	3	14	1	1	6	7 cash prizes are awarded every year to research workers by the Supreme Council of Science and the Syndicate of Syrian Physicians	The next Five Year Plan (1981-85) aims at doubling the number of medical research workers	Research workers are subject to periodic promotions. In a new Personnel Law under consideration exceptional promotions and remunerations will be given to those who distinguish themselves in scientific research

Country	No. of Institutes conducting and training medical research workers	No. of staff of different categories engaged in full-time research				Incentives to be provided to medical research workers	Existence of a National Policy and/or Plan for developing research manpower	Existence of a Career Structure for medical research workers
		Science graduates	Science grad. with postgrad. degree	Medical grad.	Medical grad. with postgrad. degree			
Sudan	3	6	6	3	9	No incentives are being provided to medical research workers	There is no national policy or plan for developing research manpower	The four categories given in column 3, start as assistant researchers and are then promoted to researchers, senior researchers, assistant research professors and research professors according to length of service and performance