RESEARCH ON HEALTH MANPOWER DEVELOPMENT AS AN ELEMENT OF RESEARCH ON HEALTH SERVICES

... The attached document is an amalgamation of the opinions and suggested approaches of the WHO staff concerned with health manpower development, both at WHO Headquarters and in the Regional Offices.

Presented to the Group as a background paper, it may be useful in the consideration of ways to carry out the project proposals for research in health services and manpower development.

DRAFT FOR DISCUSSION PURPOSES ONLY

HEALTH MANPOWER DEVELOPMENT RESEARCH AS ONE ELEMENT OF HEALTH SERVICE RESEARCH

An outline of HMD research as part of the overall programme to strengthen health services manpower development

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HEALTH MANPOWER DEVELOPMENT RESEARCH AS ONE ELEMENT OF HEALTH SERVICE RESEARCH

1. Introduction

1.1 In response to resolution WHA30.4 requesting the Director-General to "further elaborate the WHO long-term programme in the field of development and coordination of biomedical and health services research", and of the ACMR urging expansion of research in HMD as an integral element of the health services research effort, this document has been prepared to describe more fully the potential content of HMD research and to outline approaches which might be used in its implementation.

1.2 The principles and aims of the research are those which guide the Organization in its programme of health manpower development. These are set out in the World Health Assembly document A29/15 and are oriented towards the attainment of two objectives of the sixth general programme of work, namely.

> "To promote the development of appropriate health personnel, to meet the needs of entire populations" and
>
> "To promote the development and application of relevant processes for basic and continuing education".

Just as all other activities, research will be undertaken on the basis of the expressed wishes of Member States for such research on problems which they have identified.

1.3 Already, considerably effort has been expanded by the Organization in promoting and implementing research as an integral part of its programme activities (A brief review of these activities is attached as Annex I. A listing of present activities will be compiled and submitted at a later stage)

However, it is recognized that there is an urgent need for a much greater effort not only because of the many unanswered problems to which solutions need to be found, but also because it is recognized that without new solutions to the health manpower development problems in Member States there can be no real improvements in health care. Further, an active involvement in a process of planning and implementing research is itself an important stimulus for change, an adaptation to new requirements and conditions. Moreover, an engagement in research activities increases the research capabilities of Member States in areas where at present there is a dearth of adequately trained research workers.

1.4 The development of a global medium-term programme for the health manpower development programme further strengthens both the necessity and the appropriateness of developing an organization-wide research programme at the present time. The research programme is necessarily an integral part of the planned activities directed towards identified targets, since research activities form both an integral part and an extension of all developmental activities.

2. Health services and HMD research

2.1 Research in the field of health manpower development is an integral part of health services research, since the very essence of health manpower is to provide services needed for health care Research hence is both oriented towards and indeed justified by the contribution it can make to improve health service systems.

2.2 Given that improvement in health care provides the justification, and health service research the broad classificatory framework, HMD research is concerned with a specific set of problems and utilizes particular methodologies. Hence, it is an entity which itself forms part of a system.

Just as biomedical research is a term too broad and comprehensive to be dealt with in a simplistic fashion and must instead be broken down into component parts before it can be conducted in a meaningful way, so too is it essential to identify the components of health service research Each component part can then be studied, given that finally there is effective integration of findings, leading to a comprehensive understanding of what contributes to the strength of, or inadvertently weakens, the health services system

2 3 Health services research is likely to include at the very least the systematic study of four major elements

1) The health care system
   - health care needs
   - organization for delivery of care
   - management of health care organizations
   - costs of basic care and of increments beyond the base
   - cost efficiency
   - cost effectiveness
   - quality of care delivered
   - preparation of consumers for their role in the system
   - etc

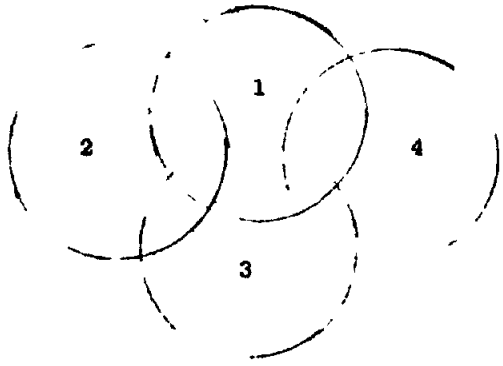
2) Health manpower development
   - manpower planning to meet health care system needs
   - manpower mix and distribution
   - determination of manpower competence
   - planning, organization, implementation and evaluation of basic and continuing educational programmes for health workers
   - teamwork
   - manpower management (incentives, career schemes, etc)
   - etc.

3) Organizational factors
   - characteristics of health service and health professions education institutions
   - characteristics of professional health worker organizations or unions (e.g orientation, values, etc)
   - community development systems
   - etc.

4) Social/cultural, demographic factors

- resources available for health care
- community aspirations, behaviours and values (e.g. health care vs other desirable things)
- political philosophy as it influences health services
- demographic features (e.g. age, distribution, climatic conditions)
- etc.

Such a categorization is not intended to imply that these components represent independent ends, but rather that their interlocking and overlapping elements convey the essential nature of health services research.



3 Characteristics of HMD research

3.1 Research, as the systematic enquiry to discover answers to problems, is essentially the same in the area of HMD as in biomedical fields. However, there are some aspects, and specifically the methodology used, which to some extent distinguish HMD research from biomedical research.

3.2 Most importantly, HMD and for that matter health service research generally is, or should be, rooted in problems found in the field and articulated, at least initially, by those who experience them. Hence the identification of objectives of research is or should emerge as an outcome of activities or programmes for which alternative solutions are required

3.3 Not only is the identification of the problems for which research is required essentially the responsibility of those who experience them, but the research itself by being action-oriented needs to involve all concerned in the research in its planning and implementation.

3 4 Because of the way the problems are identified, its action orientation, and because of the complex interrelationships that are such a feature of HMD research problems, it is also true that the rigidly controlled, statistically oriented hypothesis testing which often characterizes biomedical research may be far less prominent in research which addresses questions of health manpower

development Here other research designs are equally important, and equally worthy even though they may seem "soft" to a biophysicist or molecular biologist who is accustomed to using measurement instruments of exquisite precision, and to assuring experimental conditions in which only one variable at a time is manipulated Thus in addition to the classical techniques of scientific research, experimental or quasi-experimental designs, there are other methods by which useful research can be carried out For instance, the "case study method", an in-depth analysis of a programme in action is now recognized as a powerful means to gain understanding of a programme as a whole, including its rationale and evolution, activities, accomplishments and difficulties.

Systematic description and evaluations employing rigorous procedures are not only appropriate to the problems of HMD, but can meet the criteria of scientific enquiry

3 5 The difference between biomedical research and research in the area of HMD (or health services research as a whole, for that matter) is hence perhaps more apparent than real, given that acceptable levels of scientific enquiry pertain

4 Examples of research problems

4 1 Problems for which research is required must be identified by Member States, arising out of the activities engaged in or planned to achieve improved health care

The following research problems are hence examples only of problems which have already been identified as requiring solutions They derive from the planned activities set out in the medium-term programme of the Organization which itself was developed on the basis of identified needs of Member States

By listing these examples it is intended to indicate the type of problem for which solutions are needed and which are amenable to research

4.2 The examples are grouped according to the targets of the global HMD medium-term programme which in turn have been derived from the Sixth General Programme of Work of the Organization Although each project has been identified under a single heading, it will be evident that many might fall under several, but for convenience each has been noted only once

(Note - Annex II provides some samples of more detailed outlines of some of these research problems)

Programme area Manpower planning and management to meet health service requirements (including the promotion of mechanisms for integrating health service and manpower development)

Target 1: The assurance of effective coordination between educational and service agencies engaged in health activities

Research problem 1.1 What political, organization and behavioural factors facilitate and impede communication and collaboration among groups with related or overlapping responsibilities for health manpower development and health service delivery (e.g. Ministries of Health and Education, academic and practitioner groups, specialists and generalists, physicians and nurses, etc.)?

Research problem 1 2 What professional and technical competence is required for optimal administration and management of health professions educational institutions and health care services, what practical methods are available or should be developed to assure that Vice-Chancellors, Deans, department heads, national or regional or local health service system directors, hospital directors, and health team leaders acquire this competence?

Research problem 1.3 What organizational and administrative mechanisms are required and what particular skills and attitudes among leaders must be acquired or refined in order to assure greater technical cooperation among developing countries?

Target 2· The assurance of adequate health manpower planning capability and the development of manpower plans which will lead to a more balanced distribution of manpower.

Research problem 2.1 For a defined population what is the optimal mix of health workers (e.g primary health care workers, middle level health workers, medical doctors, dentists, etc.) to provide a specified level of primary health care?

Research problem 2.2 How can current and future manpower requirements, i.e. types, numbers, level of preparation, be assessed?

Research problem 2 3 What mechanisms are effective in stimulating health personnel to work in rural areas? What educational programmes or processes (basic or continuing) facilitate health personnel practising in rural areas?

Target 3· Development of mechanisms for coordination of health services and manpower development.

Research problem 3.1 What management functions optimize coordination between health services and manpower development?

Target 4 Establishment of operational career development programmes and effective incentive schemes with supportive systems of continuing education and improvement in career mobility

Research problem 4.1 How effective are different incentive schemes?

Target 5 Implementation of measures to control migration of health professionals with resultant reduction in undesirable migration

Research problem 5.1 What forces influence the distribution of health manpower within a country and migration between countries, and how might such forces be altered to achieve more favourable patterns?

Programme area Promotion of training for all categories of health staff (including the promotion of health teams for primary care, and continuing education)

Target 1 Development of teams to deliver health care, with special regard to primary care, characterized by greater health service responsiveness to community needs, significantly improved coverage, and existence of operational referral and supervisory systems

Research problem 1.1 What kinds of teams now operate in the delivery of health care, what are the functional and authority relationships among team members, and what factors were responsible for the establishment and the effective (or ineffective) function of the teams?

Research problem 1.2 What skills and attitudes are required for effective health care teamwork, how might they be developed in potential team members through planned educational programmes?

Target 2 Develop for existing and/or new categories of health workers basic and continuing education programmes to satisfy the qualitative and quantitative needs.

Research problem 2 1 What alternatives in the preparation, cost, and utilization of several categories of health workers can be identified in reference to the delivery of a specified level of care for the major health problems of a nation?

Research problem 2 2 What is the current method of organization, support, planning, and implementation of continuing education programmes for health personnel in a sample of countries (developed and developing) representing different social/political systems, and what is the evidence that such programmes influence the quality or nature of health care?

Research problem 2 3 What modifications in role are required, and what new skills may be needed in order to expand the present supervisory function from that of policing the work of lower level personnel to that of helping those personnel upgrade their performance and career opportunities?

Research problem 2 4 What are the quantitative and qualitative requirements for basic and clinical biomedical research workers in order to maintain an effective/efficient health professions education/health service delivery system in developing nations, and what are the optimal methods to assure achievement of research competence among trainees as well as opportunities for them to use the competence they have acquired?

Target 3 Develop task and community-oriented educational programmes for health workers, especially those involved in primary health care delivery, in an increased number of educational institutions

Research problem 3 1 What is the present status of community-oriented, problem-based, interprofessional educational programmes, what factors facilitate or impede the development and implementation of such programmes, and what is the outcome of such education in terms of the professional careers followed by the graduates?

Research problem 3 2 What specific elements of competence must be exhibited by primary health care workers, how is this competence currently being assessed, what additional instruments must be developed to complete the assessment, and using such a battery in suitably varied settings, to what extent is that competence achieved in conventionally organized academic programmes and through experiential learning either in formal programmes or through apprenticeship systems?

Research problem 3 3 What are the distinctive features of effective and efficient institutions for education of health personnel and health care delivery, and how may such institution building or strengthening best be accomplished?

Programme area Educational development and support (including educational planning, teaching/learning methods and materials, teacher training, and evaluation)

Target 1 Increase the number of full-time teaching staff with competence in the application of a systematic approach to educational planning, methodology, and evaluation

Research problem 1.1 What is the impact of teacher training programmes that have been initiated during the last decade, e g Regional Teacher Training Centre programmes and short-term workshops in regions where no RTTC has been established?

Research problem 1.2 What principles of education (learning, teaching, evaluation, administration) have general applicability, which may be used with necessary adaptations dictated by cultural factors, and what techniques may be required by the unique characteristics of specific cultural groups?

Research problem 1.3 What alterations in current evaluation systems or modification of current evaluation practices are required to improve feedback on performance to health professions' students, teachers, practitioners and programme administrators?

Research problem 1 4 What improvements are possible in the selection of students for health professions education in order to assure the most appropriate non-academic as well as academic qualifications, to encourage greater career mobility, and to avoid excessive waste of human talent and resources?

Target 2 Increase the number of training programmes for health personnel with sufficient relevant learning materials and evaluation instruments, and effective methodology for their application including student-oriented learning systems, efficient communication channels, and feedback on effectiveness and relevance

Research problem 2 1 What are the present availability and utilization of print and non-print educational materials in schools of health personnel in developing countries, what are the basic requirements for such materials and how can such requirements be fulfilled when they are not currently met?

Research problem 2 2 What is the pattern of utilization, and what is the evidence of impact of the materials that have been published and disseminated by WHO (e.g. Educational Guide, Workshop Planning Guide, Birth Attendant Guide, Medical Assistant Guide, WHO/Educs., etc)?

Research problem 2 3 What mechanisms might be developed to assure greater involvement of the recipients of health services in identifying the needs for, and providing feedback on the effectiveness of, educational programmes which produce the providers of health services?

Target 3 Assure access of governments, administrators, and teachers, to an HMD information system that will provide appropriate data to assist them in decision-making in the field of health manpower development

Research problem 3 1 What are effective means of disseminating information?

5. The selection of a research programme

5.1 The basic principle which must guide the determination of what problems should be investigated is that a need for the study has been identified by the persons who experience the problem It follows that the development of an HMD research programme, and for that matter health services research, must be based on problems identified and articulated by Member States themselves.

5.2 Once problems have been identified, (a sample of these has been presented above), it will be necessary to allocate priorities. In identifying the research that should be promoted the following criteria, as presented in the Director-General's report on the development and coordination of biomedical and health services research to the Thirtieth World Health Assembly (document A30/9), apply -

"1) the magnitude of the problem, especially in the developing countries,

2) the suitability of the problem for international collaborative research,

3) the priority of the problem as perceived by the countries themselves,

4) the relevance of successful research to the socioeconomic development of the countries,

5) the probability of finding solutions and the feasibility of applying them nationally,

6) the availability of manpower, facilities and funds to carry out the research,

7) the participation of the scientists and institutions of the countries concerned,

8) the level of national and international research being carried out on the problem,

9) the potential usefulness of the results of the research for the solution of other problems."

5.3 In addition, in relation to HMD research particularly, it is important that the proposed research should

- form an integral part of the development activities engaged in to ensure effective and efficient health services manpower development at country level;
- indicate that the dissemination, adaptation and application of results obtained form part of the research design,
- meet acceptable standards of research design, scientific enquiry, and hence permit confidence in the results attained.

5 4 The selection of research problems should further take account of the potential the research project has for increasing the self-reliance of countries on trained research manpower, since the implementation of a research project can be used to train research workers

5 5 Research which promotes cooperation between countries, the development of joint solutions to common problems, would provide additional rationale for the selection of that problem relative to others

5 6 Most importantly, it is again stressed that the objectives of the research must be derived from identified needs, particularly of developing countries, which have a high degree of social relevance for Member States, and are hence directed towards defined health goals, contribute directly and significantly to the improvement of the health status of the population, and use a methodology that can be applied now and at a cost which countries can afford

6 Proposed actions

To further the planning and implementation of a WHO/HMD research programme within the overall context of the health service research programme, the following actions are proposed

1) an elaboration of the draft document as a collaborative action of staff in regional offices, Member States, and headquarters,

2) the collection of information on ongoing WHO-sponsored and national HMD research activities related to the targets as specified in the medium term programme and the present document,

3) the preparation of a final proposal by a consultation to be held 1-3 February 1978,

4) the presentation of this proposal to regional ACMRs and the ACMR,

5) the ranking of research problems in a priority order, as a collaborative endeavour between national governments and WHO staff,

6) development of detailed research proposals for selected problems,

7) consultation with donor agencies to seek extra-budgetary support,

8) implementation of research projects,

9) regular revision of research progress, activities and results and making adjustments as needed

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ANNEX I

The following is a brief review of some research activities carried out in recent years. It is emphasized that only examples are presented, hence it is not to be viewed as an account of the global HMD research effort.

In pursuance of resolution WHA24.59, and with a view to better adapting health personnel training programmes to local conditions, the Organization has developed a new approach which integrates health manpower development with health services development (HSMD). Investigation in this field has been carried out more specially in Israel, where the Centre for Health Sciences of Ben-Gurion University of the Negev, at Beersheva, is acting as "WHO Collaborating Centre for Integrated Services and Health Manpower Development" By means of a) joining all health care services in the region into one integrated system, and b) merging this system with medical education, the Centre for Health Sciences is attempting to produce a type of physician both familiar with the system's needs and motivated to serve the people and community (instead of being disease- and hospital-oriented)

A study was recently initiated on career development in the health professions, which embraces the various possibilities for career mobility, including recurrent education and training.

The Center for Educational Development, University of Illinois College of Medicine, Chicago, USA, which operated during four years also as WHO Inter-regional Teacher Training Centre, became as of 1969 WHO Collaborating Centre for Postgraduate Education. It is carrying out studies related more especially to teacher training

The WHO Collaborating Centre for Postgraduate Education at the Central Institute for Advanced Medical Studies, Moscow, is carrying out a comparative study of continuing education for physicians, as well as a study on modern tendencies in the development of postgraduate medical education in the world.

The Department of Medical Education, Pahlavi University Medical Faculty, in Shiraz, Iran, which is operating as WHO Regional Teacher Training Centre, recently became also WHO Collaborating Centre for Research into the Health Manpower Process. In this latter capacity it is undertaking a study with a view to evaluating the impact effectiveness of teacher training activities. The results of this study will be useful to teacher training centres in the other WHO regions.

The "brain drain" or outflow of trained health manpower from some developing countries - which can least afford to lose such manpower - to a few highly industrialized developed ones constitutes a major problem requiring investigation. In response to Assembly resolutions WHA24.59 and WHA25 42, WHO undertook a multi-national study of the international migration of physicians and nurses. The outcome of this study should, in the first instance, enable the Organization to assist countries, on their request, in selecting and applying strategies for dealing with the problems either causing or resulting from undesirable international migration of health manpower, the next step would be the development of realistic health manpower policies and plans to cope with this phenomenon.

ANNEX I

A study was begun in 1969 in Brazil, Egypt and Hungary, which resulted in an analysis of the tasks of each member of the rural health team with a view to redefining their roles and to adapting their training to the population's health needs, as well as to the health services of the country.

In 1974 a design was developed for the evaluation of nursing education programmes, it has since been field-tested prior to publication.

With a view to developing new teaching methods in midwifery, a study was initiated on the use of modular approach for the development of midwifery curricula

For several years now WHO has conducted activities in applied research as a support to programmes in educational methodology and communication. In line with the Organization's policy, this research has been extended to embrace health and related technologies for application in primary health care The following are examples taken from a large number of activities carried out in this field one such programme is exploring at country level the methods of conveying educational messages to illiterate village health workers, in the absence of formal teachers, in association with the London School of Printing, WHO is seeking new methods of developing latent reproduction with long shelf-life, to allow the simple and inexpensive duplication of simulated problems in developing country situations (the WHO Collaborating Centre for Individual Learning Materials in Medical Education, London, is assisting by monitoring this project), yet another activity is the development of computer applications of charts directly appropriate to local epidemiological situations, for use by all levels of auxiliary health workers.

The WHO Collaborating Centre for the Evaluation of Health Personnel Performance, at the Institut für Ausbildungs- und Examensforschung of the Medical Faculty, University of Berne, is carrying out studies on student performance tests

The Unit of Medical Education, Chulalongkorn University, Bangkok, and the Department of Community Medicine, Pahlavi University School of Medicine, Shiraz, are engaged in developing instruments for assessing the competence of primary health care workers

Guidelines for programme evaluation have been prepared and field-tested.

ANNEX II

ILLUSTRATIVE HMD RESEARCH

The following are some examples of more detailed outlines of research proposals.

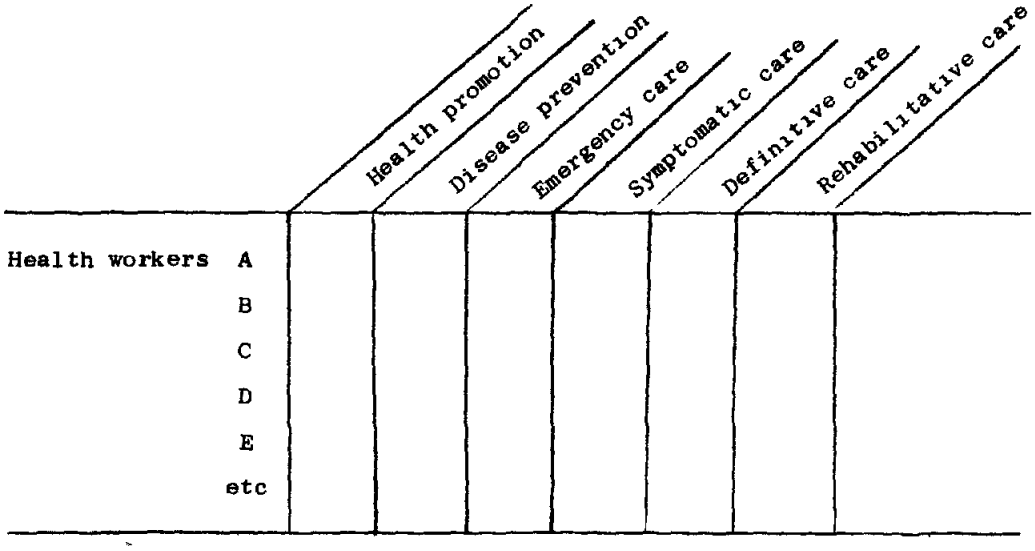
Problem What alternatives presently exist in the preparation, cost and utilization of several categories of health workers in dealing with major health problems?

Study Description of levels of functions to be carried out in order to meet the health needs and demands of a well-defined group of population, determination of the level of competence needed to fulfil these functions, identification of costs to achieve this competence and to perform these tasks, delineation of forces that influence the determination of which workers are used and under what circumstances to carry out those functions, definition of alternatives of team (mix) of health personnel with attached cost/efficiency and cost/effectiveness.

Approach The sequential steps in carrying out such a study might follow this pattern.

1. Identify detailed tasks to be performed to meet health needs.

2. Determine minimum competence required to carry out these tasks with variable "autonomy" Develop a matrix of competencies and functions which might take the following form



3. Complete such a matrix from analysis of present education and present function, indicating the level of qualification (e g one fully qualified, two partially qualified, three not qualified) for each category of health worker in dealing with each of 20 major health problems (e.g. nutrition, accidents and injuries, pregnancy and delivery, diarrhoeal disease, contagious disease, dental caries, periodontal disease, malignant disease, cardiovascular disease, etc).

ANNEX II

4 Determine level of competence at which such tasks are carried out by those who are judged to be qualified This will probably require the development of new assessment methods, but will at least demand explicit statement of the criteria upon which judgements are to be based, and an outline of the means by which performance data (in real or simulated situations) will be gathered

5 Determine the cost of training and reimbursing different levels of health workers who are qualified and competent to perform comparable functions (e.g. nurse midwife and physician for normal delivery, village health worker and sanitary engineer for prevention of diarrhoeal diseases)

6 Identify forces which impede and facilitate acceptance of those with less prestigious credentials who are nonetheless qualified to perform specific tasks at an acceptable level of competence (e.g dental assistant rather than dentist in caries prevention, auxiliary rather than professional nurse in symptomatic care of contagious disease)

7 Identify forces which impede and facilitate preventive, diagnostic, therapeutic and rehabilitative tasks in a region or nation

Suggested responsibility Since the most important issues may show some variation from place to place, and since the purpose of the research is to provide relevant data where action is to occur, local and national authorities must play a prominent role in any such study But since comparative data may illuminate the questions to be dealt with at individual sites, and in the face of limited professional resources for developmental tasks, and the inescapable economy of scale in such research, it is also important to assure regional and interregional cooperation and collaboration. It is with these two goals in mind that the specific suggestions which follow are made

		Local	National	Regional	Interregional
1	Identification of health manpower categories and major health problems	X	X	X	X
2	Analysis of present education and function	X	X		
3	Competence level				
	Development of instruments		X	X	X
	Assembly of data	X	X		
	Analysis of data	X	X	X	X
4	Training costs	X	X		
	Reimbursement costs	X	X		
5	Forces/Acceptance				
	Methodology	X	X	X	X
	Assembly of data	X	X		
	Analysis of data	X	X	X	X
6.	Forces/Distribution				
	Methodology	X	X	X	X
	Assembly of data	X	X		
	Analysis of data	X	X	X	X

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ANNEX II

Problem. What is the present status of community-oriented, problem-based, interprofessional education programmes, what factors facilitate or impede the development and implementation of such programmes, what is the outcome of such education in terms of the professional careers followed by the graduates

Study Identification of a group of institutions which espouse such objectives, determination of the extent to which programme implementation matches intent, identification of organizational and cultural and personnel and fiscal forces that have facilitated or impeded progress toward such objectives, determination of which materials and methods of instruction might be shared among institutions with these common goals, and systematic examination of the outcome of such programmes.

Approach

1. Determine the criteria which will allow identification of institutions committed to the general objectives noted

2 Select a suitably varied sample (in terms of such things as geographic location, size, whether new or old, whether urban or rural, whether in developed or developing country, etc.) of institutions for detailed study

3. Convene a meeting of representatives from the institutions selected to review the study purpose and to participate in developing a protocol that must include the observations to be made in the course of institutional site visits by neutral observers (e.g relationships between health service authorities and educational programme leaders, interprofessional input into programme planning and implementation, nature of community resources used in the educational programme and intensity of that use, background of faculty and nature of their professional work, organizational principles around which the curriculum is built, extent of institutional involvement in primary health care programmes, nature of education for teamwork and team models to which students are exposed, extent of research into health services and use of such data in organizing educational programmes, nature of student evaluation, etc.).

4. Site visits of one week by one of a constant pair of investigators (to assure a high level of inter-observer reliability), and one representative of another institution in the study sample (to foster both commitment and credibility).

5. Prepare a preliminary study report of the findings, with particular attention given to identification of common impediments and supporting features as well as instructional devices that could be shared among institutions committed to this educational programme orientation.

ANNEX II

6 Convene a meeting of participating institutions and an equal number which had not been included in the study to review the findings and to extract from them general principles as well as specific suggestions that might provide useful guidelines for other schools which might want to develop such programmes

7 Identify a cohort of students in each of several participating institutions and follow their professional development in order to determine the extent to which the educational programme has influenced career choice and the nature of their professional work

Suggested responsibility

	Institutional Representatives	Regional staff	Interregional staff and consultants
1		X	X
2		X	X
3	X		X
4	X		X
5	X	X	X
6			X
7	X		X

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Problem What skills and attitudes are required for effective health care teamwork, how might they be developed in potential team members through planned educational programmes?

Study Elucidation of the dynamics of effective teamwork, identification of particularly relevant components for primary health care teams, as well as the supporting structure required to assure individual commitment to teamwork, and the alternatives available for achieving these functional objectives through education

Approach

1 Systematic review and summary of relevant literature.

2 Observational analysis of representative health care teams to determine the extent to which the key principles of effective teamwork are presently incorporated in what they do

3 Where discrepancies between principle and practice are identified determine why such a gap exists (e.g. ignorance of the principles, lack of skill in the application of principles well known to participants, administrative obstacles, cultural impediments, absence of rewards for effective team function, etc)

4 Formulation of guidelines to kep content and process items useful for a) initial training of health workers in the skills of effective teamwork, and b) correction of the kinds of functional problems identified in the studies of selected teams.

Suggested responsibility

	Local	Regional	Interregional (experts)
1			X
2	X		X
3.	X		X
4.	X	X	X

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Problem What are the present availability and utilization of print and non-print educational materials in schools of health personnel and educational programmes in developing countries, what are the basic requirements for such materials and how can such requirements be fulfilled when they are not currently met

Approach·

1 Identify the number and size of institutions for training different categories of health workers in a country, the number of students in each category, and future projections of student numbers.

2 For a representative sample of these institutions, analyze in detail the programme and course objectives, duration and type of instruction (including the language used), and the nature of evaluation procedures employed

3 Determine the entrance qualifications of students (particularly in terms of language skills)

4. Document the nature and availability of learning materials recommended and/or provided for students, determining whether these must be personally acquired or are merely available in the library, noting the present cost of such materials to institutions or individual learners

5 Identify the degree of match between educational objectives and learning materials, as well as that between the language skills of students and those required to use such materials effectively.

6. Determine the match between cost of what is required and individual or institutional resources available to meet those costs.

ANNEX II

7 Where discrepancies are identified in (5) and (6), determine what is required (creation, translation, improved production or distribution) to correct the gap, and what costs would be involved in doing so

Suggested responsibility

	Local group	National group	Consultants
1	X	X	
2	X		X
3	X	X	
4	X	X	X
5.	X		X
6	X		X
7			X

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Problem What is the impact of teacher training programmes that have been initiated during the last decade?

Study The evaluation of Regional Teacher Training Centres, the local and regional expectations of what they were to do, the resources required and provided to allow them to do these things, the work they have done, and their perceived or documented impact upon the constituency they were to serve.

Approach

1 Review the circumstances which led to establishment of the worldwide programme and its objectives, as well as the forces which led to the creation of each regional centre.

2 Analyze the institutional, national and regional support systems (physical, philosophical, organizational and fiscal) for each centre, the impediments encountered in attempting to implement the programme and the ways in which those impediments were dealt with

3 Document the local, national and regional educational research and development, as well as teacher training, activities, which have been carried out by the centre

4 Identify individuals or institutions (e g health personnel educational health service delivery, Ministries of Health and Education, professional organizations, etc.) upon which these activities are believed to have had some effect

5 Through sampling site visits to institutions and interviews of individuals carry out an independent assessment of the nature of this impact

6 Summarize the findings, noting similarities and differences among the centres, common impediments or supporting forces, assessing impact, and synthesize a set of guidelines which might be useful to other institutions or organizations which undertake the establishment of teacher training programmes

Suggested responsibility

	Local	Regional	Interregional
1.		X	X
2	X	X	X
3	X		
4.	X	X	X
5.			X
6	X	X	X