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WHO/FIGO PRE-CONGRESS WORKSHOP ON ISSUES AND APPLICATION OF HEALTH SERVICES RESEARCH (HSR) IN OBSTETRICS AND GYNAECOLOGY

Berlin (West): 10-11 September 1985

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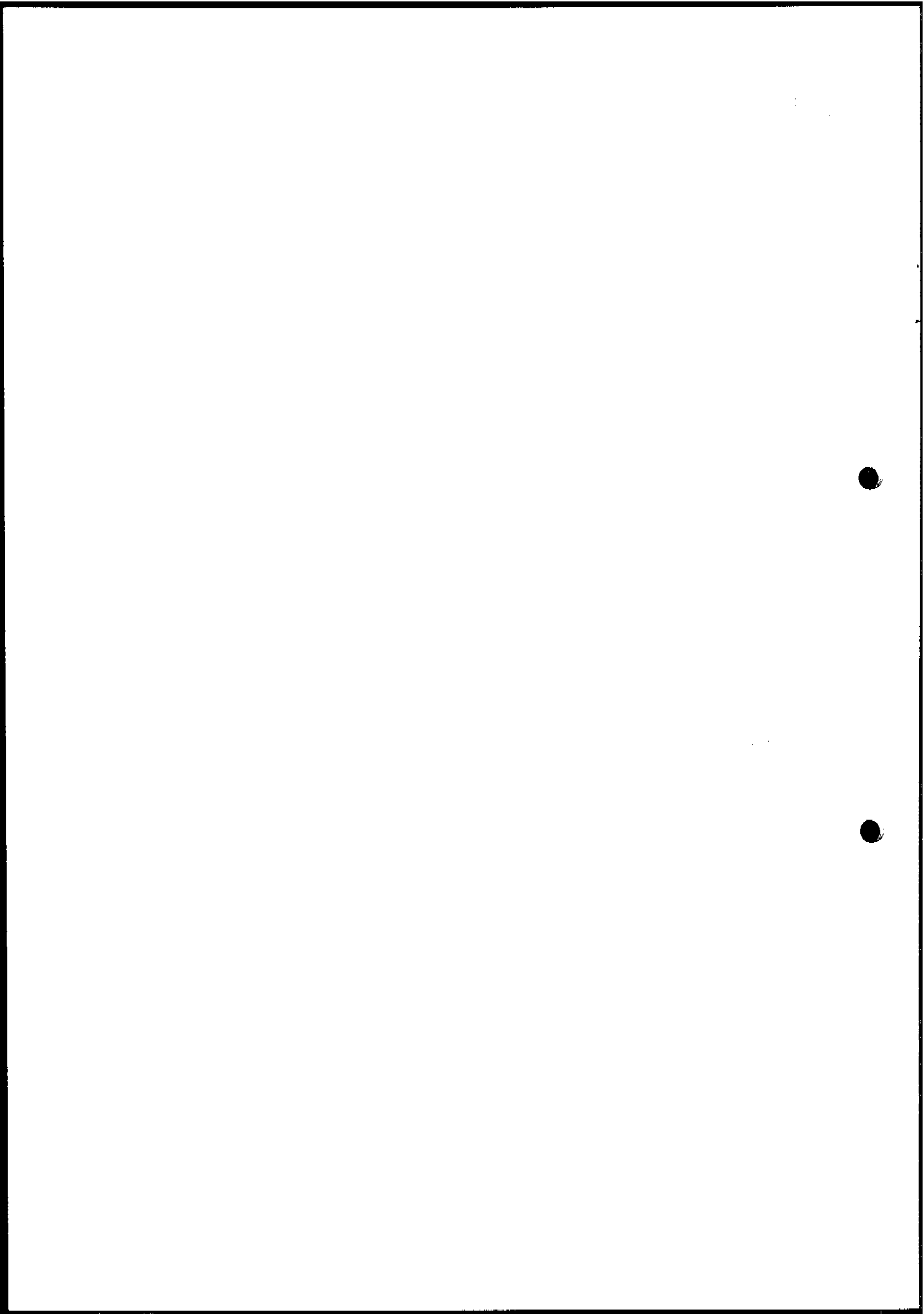

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1. INTRODUCTION

Great progress has been made in the improvement of the health of mothers and children in the last decade. However, this progress has not been even: inequities persist between the developed and developing countries and even among regions and local groups within countries, both developed and developing. There are unacceptably wide differences in the levels of maternal and perinatal mortality and morbidity and inequality in the accessibility to and quality of maternal and child care, inlcuding family planning.

Biomedical research has led to an understanding of the causes and circumstances of many of the health problems of women and children, particularly those related to pregnancy, delivery and perinatal mortality and morbidity.

It has become increasingly clear that biomedical research alone does not have sufficient impact on the range and levels of diseases, disorders and disabilities associated with pregnancy, delivery and perinatal care. The gap between knowledge and the application of that knowledge is widening. There are many constraints on the application of available knowledge: foremost among them are inadequacies within the health system; insufficient and even decreasing financial resources; limited and grossly inequitable distribution of human resources bearing no relationship to needs and priorities; and, too often, lack of technical skills in the planning, management and organization of services. Constraints also exist not only in the physical inaccessibility of services but often also in their social acceptability, reflected in the "failure to use what is available".

It is obvious then, that health planners and service providers frequently fail to understand the perceptions and outlook of communities, and sub-groups within communities, towards both "outside knowledge" as well as indigenous practices related to maternal and child health care and health care in general.

Recognizing and accepting the challenge posed by such problems, the joint WHO/FIGO Workshop on Family Planning in Primary Health Care (PHC), held in San Francisco on 13 and 14 September 1982, recommended that:

> "FIGO and its national affiliates take an active role, in collaboration with WHO and other agencies and organizations, to familiarize obstetrician-gynaecologists with:
>
> - the goal of Health for All by the Year 2000;
> - The concepts of the primary health care approach by which this goal is to be attained; and,
> - the role of the profession in support of Primary Health Care (PHC)".

It was further recommended that:

> "Since health services research is an important tool in adapting the MCH/FP elements of PHC to different and specific national circumstances:
>
> - obstetrician-gynaecologists and other health workers be familiar with the potential contributions and methods of health services research;
> - training for such research be available and encouraged as part both of the regular health training curriculum and in service training; and
> - such research for MCH/FP in PHC be encouraged and facilitated in rural areas as well as among the populations in the urban slum and squatter settlements."

Participants in this Workshop noted that:

> "The research approaches in the broad area of PHC are somewhat different from the clinical and laboratory research efforts most commonly used by the Ob/Gyn academic community. This research, called Health Services Research (HSR) by WHO, encompasses the skills and techniques of epidemiology, anthropology, sociology and management sciences. To be effective, applied research in these areas must be carried out with inter-disciplinary cooperation and collaboration between the clinicians and individuals with training and expertise in these disciplines."

Among the several joint activities undertaken by the WHO/FIGO Task Force on Maternal and Child Health in PHC, was the organization of the WHO/FIGO Pre-Congress Workshop on Issues and Applications of Health Systems Research (HSR) in Obstetrics and Gynaecology in Berlin (West) on 10-11 September 1985. This activity was a direct follow-up to the San Francisco Workshop and an expression of the common objectives of bettering and ensuring the well-being of women and children through a primary health care strategy.

The objectives of the Workshop were:

- to recommend specific research issues in MCH/FP, which would lead to more community oriented obstetric care; and

- to recommend specific ways in which health systems research can be introduced into the under and post-graduate training of health workers in obstetric care.

The participants came from 17 countries, both developed and developing, representing the six regions of WHO. They all had a wide range and richness of experience relevant to HSR. The workshop therefore, was not intended to impart knowledge and information, but to share and synthesize the different experiences. This pool of knowledge and experience could subsequently be utilized by both WHO and FIGO as a guide in the adaptation and adoption of appropriate approaches and technologies for maternal and child health, including family planning, through the application of HSR.

On examining the issues and applications of HSR in the areas of maternal and child health and family planning, particular attention was drawn to the following characteristics and requirements for HSR:

- since HSR as a methodology and approach is directed at the process of adaptation and adoption of health technologies and the organization of health care to changing social circumstances and health situations of communities, it is, by definition, a continuous process. For example, the risk approach will take a different form and focus in different settings while intervention strategies will be modified in response to changing factors.

- health systems research is multidisciplinary and draws on the methodologies of a wide range of health, social and measurement sciences.

- health system research is never an end to itself but is a means for effecting change not only within the health sector but also in other sectors affecting health, and therefore requires the involvement and participation of policy/decision makers, all levels of health care providers and most importantly, the community itself.

- although explicit MCH/FP issues, problems and solutions are often specific to a particular setting, the processes, approaches and methodologies of HSR are common across such settings.

2. Health Systems Research for more community-oriented obstetric care

2.1 Components of Community oriented Care

Community oriented obstetric (MCH/FP) care must have or take into account four components:

- information for problem definition
- community perception, in terms of knowledge, attitudes and practices of maternal and child health and health care
- a clear understanding by health providers, of the capacity of the health system and the needs and perceptions of the community, with an underlying commitment to reconcile that system to the expressed needs and perceptions.
- socially and technically attainable options and alternatives both within and outside the health sector that can improve the health status of women and children.

The end objective of HSR is not only a particular intervention strategy. HSR can be applied to the entire process of health care in order to obtain a community oriented approach, at different levels: information, community perceptions, and a realistic understanding of the capabilities of the health system.

Information systems within health care are often established with a confusing mix of objectives related to case management, planning, management and evaluation. Thus the rationale for information collection is often neither clear nor apparent to those compiling it, and consequently, the quality of that information suffers. Information must be defined in terms of what is required:

- to define the problem for policy makers
- to facilitate provision of care
- to facilitate support and supervision of services

Thus, the kind of information, its form and source, the manner and by whom it will be used will vary. In all circumstances the collection of data should be rationalized and justified, not on the basis of authority, but on the basis of the functions to which such information is to be applied.

Social distance between the community and health care providers remains a major obstacle in the effective application of health technologies. In order to understand community attitudes, health care workers must initiate a dialogue with the community. In addition, these service providers need to grasp the nature, and dynamics of organisation and technologies within the health system and how these elements are or are not meeting the health needs of mothers and children.

The nature and dynamics of communities are constantly changing. Concepts and technologies of care have evolved in traditional societies through empirical experience. Some of these concepts, as we now know, are correct, (e.g. sitting or squatting position in delivery); and some are not only incorrect but harmful (e.g. certain food restrictions during pregnancy, applying ash and cow dung to the umbilical cord). In order to get communities to accept and adopt appropriate technolgies and practices in maternal and child health care, it is essential that the accumulation of such knowledge be the subject of health systems research.

Based on the three levels of information mentioned above, strategies for health service intervention studies can be identified. As mentioned earlier, although priority issues and solutions are culture/community specific, the approach and process of health system research is common to all settings. Available methodologies can be adapted and applied to different service and problem levels.

2.2 Conducting HSR

In order to effectively contribute to improvements in MCH and FP, health systems research must go beyond the traditional confines of academic and research institutions where far too much emphasis has been laid on precision. HSR has to be based in the practical reality of the health system where problems and issues are confronted. Studies involving survey methods and defined statistical characteristics are not the only valid approach. The shift from strict academic-based research studies to HSR as a process for stimulating a systematic enquiry need not compromise the scientific rigour of that enquiry. For such research to be valid, what must be ensured is that the degree of precision in the research study corresponds to the range of options available in that particular community/area.

In order to promote HSR and accommodate the community and/or PHC worker or first level supervisor it might be necessary to be less exact in the adaptation and simplification of methodologies. However this presents no risk unless the range of options for action is particularly narrow. The analytic techniques and limitations of the methods have to be understood, and the methods suitably applied to relevant problems. There are a variety of HSR methodologies encompassing qualitative and quantitative techniques that can be applied so as to retain reasonable reliability and validity.

As an example, if conducting a study to determine why pregnant women do not use an available health facility, a large, structured community-based questionnaire may not provide the necessary information. A combination of research methodologies might prove far more useful: the Delphi technique among service providers, focussed group discussion techniques among potential and actual users of health facilities, and observational studies on how these facilities function and provide care to the population. In a focussed group discussion, a sensitive and supportive discussion leader could draw out people to give important and extensive information on the quality of care. Differences of perception between health workers and the community regarding their needs would also emerge. Other disciplines such as the social services, management, and marketing can make a positive contribution to traditional community-based health research methods.

2.3 Criteria for identification of issues and priorities in HSR

While health systems research derives from specific problems, health situations and social circumstances, several criteria can assist in the identification of issues and priorities and appropriate approaches.

2.3.1 HSR in MCH/FP should be:

(a) closely related to the priorities of PHC and PHC workers;

(b) concerned with both the formal and informal health care systems;

(c) community-based in terms of problems and data; of resources, particularly social; and in terms of community priorities;

(d) multidisciplinary, preventive in approach, innovative to the extent of risking experimentation;

(e) constantly aware of the cultural specificity of communities, while always seeking general factors;

(f) always conscious of the massive "background" effects of politics, poverty, culture and religion as determinants of health;

(g) attentive to the results and implementation of research findings.

2.3.2 For the selection of research issues at the global level, criteria would include:

(a) identified gaps in knowledge that block programme delivery;

(b) research be suitable for collaborative effort;

(c) research will support the growth of expertise;

(d) the project will foster collaboration between research personnel and programme implementers.

2.3.3 Health Systems Research itself should have the following characteristics:

(a) flexible and simple research designs that maintain scientific integrity;

(b) possibility to modify design during the course of the study, if necessary;

(c) short-term, with rapid feedback of results for those responsible for programme implementation;

(d) local analysis of results with the involvement of both reseachers and those that will use the results;

(e) relevant and timely to the level of political support within the community/country.

2.4 Examples of Health Services Research

Priority issues in health systems research can be identified in three basic steps: definition of problems, community perceptions and a realistic appraisal of the available health care. In most cases, the problems are identified/defined by decision makers who are concerned with the indicators of health and health care. Thus the decision to initiate HSR in a given community may originate from a number of specific situations, for example, high levels of maternal and perinatal mortality, specific causes of mortality, wide geographic and/or social variations in patterns of mortality etc.

The leading causes of maternal mortality ususally include: prolonged or obstructed labour, haemorrhage, puerperal sepsis, hypertensive disease of pregnancy and eclampsia and illegally induced abortion. In all of these variations there exist at least some appropriate technolgies that can deal with some portion of the problem. Relevant HSR should therefore, wherever possible

be undertaken in order to evaluate alternatives for adapting these technologies in a given context. As, for example:

Problem	HSR issues
- obstructed or prolonged labour	Application of the risk approach for referral of predictable cases. Transfer of assisted delivery skills, including Ceaserean Section, to the community health worker (eg. midwives trained to do C/S). Family Planning when obstruction is related to pregnancy in immature adolescent girls. Labour monitoring system coupled with community supported transportation;
- Haemorrhage	Oxytocic drug use by lower level health workers in the third stage of labour;
- Puerperal Sepsis	Non-physician check list for antibiotic use;
- Hypertensive Diseases of Pregnancy	Rest and social support/community and family education;
- Illegal abortion	Family planning;

Although family planning as an health system invervention for HSR. is explicitly mentioned above in only two circumstances, it is equally relevant to the problems of haemorrhage and HDP. Both of these problems are related, in part, to the fertility characteristics of women.

Most often, research, both biomedical and health systems, originates in academic institutions where the tradition of research and inquiry are encouraged and technically and financially sustained. More often than not, the research perspective is related to specific technologies or processes to better manage the care of individuals and groups, with the epidemiologist joining those concerned with social obstetrics. The concept of the patient at high risk of morbidity or mortality has evolved into the risk approach. This approach involves referral of risk cases to the appropriate point in the system where skills and facilities for clinical management are available. In addition, this approach, with the focus on attributable risk, makes it into a tool of social policy for the decision maker.

Some of the major HSR. issues that have been identified from the perspective of different MCH/FP programmes are:

- the need to adapt health services to the community's perception of need and care

- the continued need for revising and re-evaluating risk strategies as conditions and circumstances change;

- the need to have operationally oriented information systems that relate to case management and supervisory needs;
- breast-feeding and the effects of health care practices;
- the effect of position in labour on the health of mother and infant.

What is most often lacking, both in the provision of services as well as in the development of health systems research, are suitable methods for eliciting communities' perceptions and their involvement in maternal and child health and health care in general. As mentioned earlier, a range of methods, involving such techniques as focussed group discussions, concensus methods including the Delphi technique, observational techniques, content analysis etc. are available for adaptation to health system research.

3. Health Systems Research in the Curricula of Health Workers

3.1 Institutional changes

3.1.1 Introduction

It is axiomatic that, to influence the behaviour of health workers towards a scientifically questioning, problem solving, locally oriented approach, their training must change: for training to change, the institutional "power base" must accept the new ideas and introduce them into teaching. This institutional change is very difficult. It is particularly difficult in medical schools where, traditionally, what is taught is biomedical research and not research into how well health care is provided.

3.1.2 Impediments

There are a number of barriers to institutional change: tradition, a search after "excellence", the status system among clinical disciplines (which puts health care lower than biomedical advances), and a number of other vested and personal interests which militate against change. All of these obstacles will vary depending on cultural, specific and socio political systems and the level (CHW, paramedic, nurse, doctor etc.) of health worker being trained. There is evidence that the most reistant are undergraduate medical schools, while those most willing and open to change are institutions in the developing world training non-physician health workers.

Among the many negative influences, the following examples should be mentioned: First, those acting upon key personnel such as Deans, Vice Chancellors, Principals, Heads of Departments, etc. There are:

- Peer Group pressures
- Notions of excellence based solely in curative care
- Political and social pressures that tend to ignore the community
- Fear of any action which threatens the autonomy of the clinician
- Personal experiences, rewards and incentives
- Personal dedication, the medical ethic.

Next, those acting upon institutional policies from outside:

- Government policies

- Legislation
- Party policies
- Policies of registration bodies
- Patient and Community pressure groups
- Funding bodies and Foundations
- International health policies
- The diffusion of ideas from new instituions ("fashion")
- The policies of scientific/medical journals and the media

3.1.3 Bringing about change

A review of successful institutional changes suggests that a number of interacting influences are necessary: it is not only an absence of impediments, though that is important. In order to radically influence the climate of opinion among the various groups that determine health curricula in training institutions, which allow the development of new or revised curricula and the introduction of new ideas, concerted action is necessary at many levels. The issue is complex and should itself be the subject of formal study.

Recommendation: The processes of change in training institutions be a formal subject of study and that particular attention be paid to training needed to promote community orientation and, skills in systematic enquiry.

3.2 Who is to learn about HSR?

The ability to conduct systematic enquiry appropriate to the level of responsibility is potentially beneficial for health care providers at all levels. Not only may the enquiry provide information of practical use but the actual process may also catalyse other changes by improving morale and self-esteem.

Even simple HSR, can encourage the development of concerned and active pressure groups that can provide the stimulus for change within communities.

Recommendation: Since HSR is of potential benefit at every level of MCH/FP Care, all categories of health workers should be taught how to initiate health services research.

3.3 What shall be taught?

Health systems research is closely linked to the health care responsibilities of an individual. Therefore, the level of responsibility indicates the skills required. A table showing the possible spectrum of appropriate health system research is appended.

It cannot be emphasized enough that the main aim of HSR is the development of an enquiring, more questionining approach to MCH. This holds true for all levels of health care providers. Specifically, at village or community level, knowledge of simple survey techniques would allow an informed audit of duties. At a supervisory level, more formal training in problem identification and simple data collection would encourage a systematic approach to problem solving. The training of specialist obstetricians, would need the incorporation of more detailed knowledge of research methods in addition to the development of facilities to appraise research reports critically. Finally, a core group of specialists in HSR

should be available, both to conduct more sophisticated HSR and to provide the necessary support and service to health care workers.

Recommendation: Levels of HSR skills complimentary to routine responsibilities should be developed at all levels of MCH/FP care.

3.4 How should it be taught?

Methods to teach some of the basic skills of HSR will naturally differ depending on the level of personnel. All methodologies should however, use the "problem oriented" approach and through this approach seek not only to impart knowledge but to change attitudes and behaviour. Didactic methods should be avoided.

Four features of teaching/learning methods are likely to be of special value. These are:

a) The teaching will seek a maximum of personal involvement from the student. It will, therefore, involve him/her in responsibility for individuals or families and will capitalize on the excitement associated with the successful "research" project;

b) The teaching will exploit the reinforcement of learning which comes with "doing" i.e. with active participation;

c) The teaching will maximize the principle of a positive or negative response to success or failure;

d) The teaching will profit from and reinforce the "role model" effect in that the teacher will be proficient in both community orientation and HSR.

Some examples of how the above-mentioned ideas can be applied to teaching methods are:

a) The community health or village project will bring student, teacher and community together in a mutually beneficial research project resulting in either implementation of services or improvements in the existing facility;

b) The individual "research" project in which the student investigates (and is later examined upon) a real life community problem as if it were a fully supported HSR programme;

c) The community or population "laboratory" in which the institution assumes responsibility for the care of a defined population - the students being responsible for the relevant research and monitoring;

d) The secondment of students and others to work in different cultures and/or environments as a means to better their understanding and acceptance of socio cultural differences;

e) The use of self-teaching machines and texts, especially new programmes designed for the micro computer.

Recommendation: The planning of curricula should exploit as many of the currently accepted teaching methods that are relevant.

THE SPECTRUM OF APPROPRIATE HEALTH SYSTEMS RESEARCH

MANAGEMENT LEVEL INVOLVED	RESEARCH SKILLS INVOLVED	METHODS USED	WITH WHAT ENDS IN VIEW?	WITH WHAT TECHNOLOGY?	PROBLEM EXAMPLES	PROPORTION O ALL ENQUIRY ONTO HEALTH CARE (IDEAL)	TRAINING NEEDS	TRAINING METHODS PROPOSED
TOP	Very high powered teams of skilled H.S.R. workers. Results very precise & robust.	All including those of system modelling & the behavioral scientists. Full statistical control.	Policy formation. Programme effectiveness. Efficiency of resourse use. Evaluation. Experimental testing of hypotheses. Attitudes, beliefs, etc.	Full computer & mathematical coverage & access to data of all kinds	Integrity & use of referral chain. Evaluation of differing patterns of care. Effectiveness & efficiency of resource use. Effects of intersectoral policy change.	Perhaps 10%	Need considerable. Research workers in this category should be enough to train others. +	University and other comparable courses. In service.
INTERMEDIATE	Fully trained research teams led by fulltime research workers. Statistical coverage adequate.	Most evaluation-innovation methods, case-controlled experiments. Some statistical control.	More routine. As above but local focus on supervisory effectiveness & efficiency. Patterns of regional services & problem solving.	Access to necessary data & programmes. Modest statistical coverage & tests.	Local & regional data use. Drug & cold chain supply problems. Vaccination coverage & evaluation of changes in health education. Effectiveness of risk scoring & referral. Surveys of use of services with hypothesis testing.	Reduce to perhaps 30%	Need considerable. As above, should be training those below. ++	Courses & workshops. In service, self-teaching using micro computers & teaching texts. Group projects.
SUPERVISORY INCLUDING MEDICAL AND NURSING	Minimally trained health workers. Some occasional skilled assistance from intermediate and top level researchers.	Population surveys with representative samples. Use but do not understand necessary tests, etc. Protocols + instruments provided.	Extension of supervision & problem solving at local level.	Protocol kits, precoded software packs, questionnaires, etc.	Improvement in risk scoring by 2 methods. Impediments to vaccination coverage. Transport & supply. Use of clinics & referral. Improvement in quality of village data. Attitudes of village health workers. Evaluation of training of TBA's.	Expand to perhaps 50% (should be much more)	Modestly trained personnel needed here more than anywhere else. Aim is systematic enquiry ability. +++	Workshops. In service & supervised own studies. Self teaching using microcomputers & teaching texts. Protocol kits. Questionnaires, etc. Group projects.
VILLAGE HEALTH PERSONNEL COMMUNITY GROUPS	Up to simple survey techniques. Occasional supervision by minimally trained personnel. The inquisitive mind applied to local problems.	The simple objective systematic survey & descriptive studies. Simple hypothesis production. Anecdotal reports.	Solution of local day.to.day problems of health care provision at village level. Promoting a preventive orientation.	Very simple sampling frames & step by step instruction kits.	Identification of "causes" of low coverage & use of sub centres. Health education & risk causes of transport failure. Fashions in service use. Distribution & removal of environmental hazards. Training needs of V.H.W.'s.	Expand to perhaps 10% (should be much more)	Training not so much in HSR but in rational thinking. Applying the inquisitive mind. Need great. +++	Supervised own studies reinforced by workshops & some in service experience. Provision of protocol kits. Questionnaires, etc. Group projects.

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