

Strategy Proposal for
National Institute of Health Sciences
Development
USAID/Colombo

**Resources for
Child Health
Project**

REACH



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**STRATEGY PROPOSAL FOR
NATIONAL INSTITUTE OF HEALTH SCIENCES DEVELOPMENT**

USAID/Colombo

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ACRONYMS

AMP - Assistant Medical Practitioner

DGHS - Director General of Health Services

DDG (PHS, PL, Admin) - Deputy Director General of (Public Health Services Planning, Administration)

DHO - District Health Officer

EPI - Expanded Programme of Immunization

FHB - Family Health Bureau

HEO - Health Education Officer

IDRC - International Development Research Council

MCH - Maternal and Child Health

MO - Medical Officer

MOH - Ministry of Health

MOH - Medical Officer of Health

MO (MC) - Medical Officer of Maternal Child Health

MPH - Master of Public Health

NIHS - National Institute of Health

NHSCP - National Household Survey Capability Programme

PHC - Primary Health Care

PHI - Public Health Inspector

PHM - Public Health Midwife

PHN - Public Health Nurse

RDHS - Regional Director of Health Services

SLIDA - Sri Lanka Institute of Development Administration

UNDP - United Nations Development Programme

UNICEF - United Nations International Children's Emergency Fund

USAID - United States Agency for International Development

WHO - World Health Organization

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Short-term review missions of the type undertaken by this USAID team, are invariably very demanding on many people's time. We are most appreciative of the often unrecognized efforts of the USAID office, both here and in Washington, to make this mission run smoothly. May we thank in particular, Ms. Paula Bryan in Sri Lanka and Mr. Paul Hartenberger in Washington.

Dr. Cooray, Director of NIHS, has been indefatigable in arranging visits and accompanying us on many interviews. He and his staff have made enormous efforts to allow us to look "under any stone" we though relevant to our mission.

The cooperation of senior management, faculty, staff, students, directors of hospitals, clinics field stations and the community of NIHS has been special, unique and warm. The genuine concern and cooperation of all at NIHS deserves special mention.

Dr. Malinga Fernando, Secretary for Health, despite his very demanding schedule, has been ever willing to see us and provide us with important insights. We have appreciated this very much, as indeed we have the very frank and open discussions we have had with other officers of the Ministry of Health. His Excellency, the Minister of Health, Dr. Attapattu, was also gracious enough to fit us into his busy program of activities and we benefited considerably from our discussion with him.

Finally, may we thank the Vice-Chancellor of Colombo University and the faculty of Peradeniya and Colombo Universities for seeing us at such short notice and also the international agencies UNDP, UNICEF and WHO for their continued support during our stay in Sri Lanka. Our report for whatever merit it has, was immeasurably enriched by the contributions of all those we have met.

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EXECUTIVE SUMMARY

A. BACKGROUND AND FINDINGS

The purpose of this review is to assist the Ministry of Health (MOH) in the delineation of strategy(ies) for the development of the National Institute of Health Sciences (NIHS).

The review team, provided by USAID, at the request of the Ministry of Health (MOH), undertook its assignment over the period of 17 June to 19 July, 1986. The team consisted of three members, trained in medicine, anthropology and operational research with experience in community medicine, organization development, planning and research. The team used a variety of approaches to reach its conclusions, but relied most heavily on field observations, interviews, and discussion.

Assessment of the current situation of the NIHS should be examined in the context of its perceived purpose within the MOH. Three purposes are identified: 1) basic training for certain cadres of allied health staff, 2) management training and development for middle level staff, and 3) in the future, manpower policy development. At this time, the majority of NIHS activity is focused on basic training, although some initiatives have been started in middle management training.

NIHS is not yet working to full capacity. Facility construction is behind schedule, but expected to be completed late this year. Teaching staff are not sufficient in quantity and skills for the tasks required and there are coordination problems with the MOH that lead to heavy and uncertain surges in workload. Morale is not high, but is rising under the new director with staff beginning to show interest in his changes in the direction and approach to training.

Coordination problems within MOH, including staff training, deployment and development appear considerable and are contributing to dissatisfaction within the MOH. The training coordination role assigned to the NIHS Director is probably unworkable, given the demands of managing the Institute and maintaining a physical presence in Kalutara. This role needs to be redefined.

NIHS represents an unusual if not unique array of training, research and service-based learning opportunities. Donors recognize the potential of this institute, but exhibit a cautious attitude toward support. This view is based largely on concerns with the MOH's ability to absorb and coordinate donor support.

The MOH is committed to the concept of decentralization and has already undertaken a number of actions toward decentralization. The pressure for improved performance, better management and political change is likely to accelerate this movement.

There is still a large gap in the Ministry between actual management practice as enshrined in existing attitudes and processes, and the

identification requirements for performance based modern management systems. To some extent, this is due to political action outside the control of the Ministry. However, there is still a need for the MOH to give stronger signals to its staff, through its actions, of its commitment to change and overcome residual staff cynicism.

There is a strong feeling among many of the staff and faculty that the NIHS is special. The team feels this too, although they see the situation as delicately balanced. Themes for the development of the institute are expounded in the body of the text of this report, but the process will require decisive movements by the MOH itself if these developments are to be realized in the near future.

B. RECOMMENDATIONS

1. Management Development - NIHS and MOH

NIHS can play a key role in management training and in the management development process in the MOH. It is probably in this area, that the growth of NIHS is most important. For the outcome to be effective, the training must be closely linked with the realities and level of commitment of the MOH.

Management development is not a single training and learning event. NIHS will need to be positioned to engage closely and continuously with management and institutional development both at the central level and with the field units. This will require some change in the organizational linkages between the NIHS and other Ministry units, including the regional offices. The current location in the division of public health may no longer be the most appropriate location.

The most immediate outcomes for which MOH management development should be directed are in creating environments in which staff are motivated and enabled to be more effective. At the moment, the levels of disincentives for these outcomes are still very high, such that NIHS is presently unable to contribute significantly through its management training and research. The Ministry itself must more actively address some of these problem areas. (These disincentives include controls in selecting, training, deploying, utilizing and rewarding staff and anomalies in career and pay structure.) Clearly, the Ministry must establish priorities. It is likely that it will need to create a special Health Manpower Development Unit with links to NIHS to hold together the various initiatives that are possible.

2. NIHS Internal Development

To fully participate in the management development, NIHS will need to engage in active problem solving activities with health service managers. At the moment, limited skills exist in NIHS to do this. The NIHS will need to develop these skills, but should restrict its research to health services research. Most importantly the Institute should commit itself to a concentration on problem solving "action research."

3. Linkages to Outside Organizations

There is a critical shortage of management specialists in the MOH and a more extreme deficit in the NIHS. In the short-term, the NIHS will need to look outside for help from other institutions. Both SLIDA and the University of Colombo have indicated a willingness to cooperate with NIHS. To encourage a close working relationship with the University, some form of affiliation is recommended, for which there are precedents. Within the context of this affiliation, NIHS would remain under the umbrella of the MOH.

4. Career Potential Development

Eventually, both the NIHS and the MOH must incorporate management specialists into their organizations (see section IV for details). At the moment, the lack of career opportunities make the MOH unappealing to potential staff of this kind. The potential for careers for professional non-medical staff exists in planning, NIHS regional posts and information. The Ministry, in reviewing its career structures, should take appropriate steps to create the necessary opportunities in its post specifications.

Management development will generate a need to expand post-basic training and provide enhanced continuing education. This creates additional tasks for NIHS and the Ministry - such as a need to introduce computerized personnel information systems at the center and the regions in order to better track staff training and development, and a need to incorporate more decentralized training sites into the NIHS network to facilitate the training. NIHS will need to strengthen its audio-visual materials department and begin to develop its trainers capability to support such an expansion.

5. Curriculum Assessment

While there is a need for the NIHS to grow in its research and management training capabilities, it also needs further efforts to consolidate existing programs. Staff and facility resources are overstretched and as a result, most courses, while inter-disciplinary in nature, have not undergone recent review of content and teaching methods. In some areas, excessive dependence on classroom instruction to the exclusion of community based experiential learning is apparent.

Clinical training of Assistant Medical Practitioners (AMPs) is weak and class sizes are excessive. Marginally equipped clinical facilities, and inadequate numbers of patients with illnesses representative of the cases in their future geographic assignments are of concern. Likewise, the shortage of full-time clinical instructors is an important issue, as this leads to failure to adequately utilize and supervise AMPs in field sites.

It is apparent that the linkage between Public Health Midwife (PHM) Part I and Part II needs strengthening. Similarly, classroom training needs to be streamlined, and a midwifery internship should be established with refresher training developed for field areas with high home deliveries. A trend toward better linkage between de-centralized Part II PHM training centers and the Regional Directors of Health Services (RDHS) is growing.

The scope of work of the Public Health Investigator (PHI) needs review in relation to the changing ecological and occupational characteristics of the country. A need for linkage between multi-sectoral development efforts having an impact on health on the local level also warrants attention.

The concept of Primary Health Care (PHC) teamwork needs strengthening. Likewise, supervision should be transformed from an administrative, punitive function to a management, problem solving and objective setting process.

6. Donor Relations

There is a need for continuing donor technical and material support to NIHS to ease the immediate burdens on the overstretched specialized resources of the MOH. Donors should be encouraged to support a particular area of NIHS activities. Most importantly, sustained donor relationships with particular external organizations or individuals should be cultivated.

7. MOH Review

Because the implications of the recommendations in this report extend widely into the Ministry, the team would strongly recommend a high level review of the recommendations under the chairmanship of the Minister or the Secretary. NIHS will urgently need guidelines for the development options it should follow.

I. SCOPE OF WORK

A. BACKGROUND

The Government of Sri Lanka has a maintained commitment to improve the health of its people. Over the past years, though a steady effort to improve the quality of its health manpower along with its health delivery system, it has made major strides in improving overall health status. Life expectancy increased; infant mortality decreased; population growth slowed and the incidence of many infectious diseases declined.

Pollack, in her analysis of morbidity and mortality in Sri Lanka writes:

"... Sri Lanka (pattern of morbidity and mortality) appears to be a mix of that seen in developed and developing countries. There is low infant mortality and a high life expectancy (37.9 deaths per 1,000 live births and 67.8 years in 1979) and, diseases of the circulatory system are the leading cause of death."

Among the policy areas emphasised by the Government and implemented through its Ministry of Health has been the special effort to improve rural health care services by the development of a Primary health Care System. A key ingredient to the Primary Health Care effort has been the charge given to the National Institute of Health Services (NIHS) located at Kalutara to assume responsibility for training allied health manpower required to implement the Primary Care Initiative.

There is an active and varied teaching program and clinical load carried by the faculty and staff of NIHS. Completion of construction of the main facilities at Kalutara is anticipated for November 1986. However, despite this progress, Dr. S.C.A. Fernando has recently acknowledged in a Health Manpower Analysis that larger problems exist:

"Shortages in key personnel will continue for years to come. However, as regards some categories...the intake of trainees has almost doubled to counteract this situation., But this approach has let to severe strains being placed on training institutions."

B. REQUEST FOR TECHNICAL ASSISTANCE

Upon the near completion of the new facilities, at the request of the Director of the National Institute of Health Science, Dr. N.T. Cooray, USAID was asked by the Government of Sri Lanka's Ministry of Health to provide a technical assistance group to help NIHS to prepare recommendations and strategic planning options for its future.

Several previous consultants as well as internal documentation within the Sri Lankan professional literature have suggested new roles and needs which the National Institute could fill. These have included not only new training roles for unmet health manpower needs, but also training management responsibilities, research functions, expanded service effort in the control of infectious diseases and nutritional deficiencies as well as improved training in planning, logistics and management particularly at mid-level where program are implemented and directed.

C. ISSUE CONCERNS AND PROJECT VARIABLES

A wide range of issues were proposed for consideration in preparing the strategic planning options. The components included:

- a. Developing a consensus on the future role of NIHS
- b. Assessing the adequacy of current programs
- c. Reviewing the mechanics for educational evaluation
- d. Reviewing existing manpower
- e. Analyzing financial inputs
- f. Exploring external linkage both academic and research
- g. Surveying to the greatest extent possible faculty, staff, senior administrative students, graduates, senior officials of universities, governmental ministries, post graduate institutes, planning units, private sector interests.
- h. Utilizing to the extent possible senior members of the NIHS as collaborators in plan development.
- i. Reviewing national manpower plans, assessing current and potential research focus, assessing new curricula areas.
- j. Identification of problems from all perspectives.
- k. Micro-environmental analysis
- l. Situation analysis
- m. Clarifying relationships between MOH and NIHS
- n. Clarifying reporting and authority relationships
- o. Reviewing determinants of health manpower policy
- q. Assessing continuing role of other external agencies - UNDP, WHO, UNICEF.
- r. Assessing research capability of educational institutions.

D. TERMS OF REFERENCE

The terms of reference and various inputs into the development of the strategic plan were received, clarified and modified, both at the team's pre-departure planning conference and with the USAID, Sri Lanka, program officer.

After careful discussions with the Director of NIHS and the USAID Mission Officer, a key agreement on the approach to the team's scope of work was the mutual acceptance by all parties that an interactive and participatory

process of plan development, review and consensus was essential. To this end, the contribution of the Director of NIHS, of approximately 50% of his time, and between 50% and 75% time and effort by the deputy directors, with significant involvement with the Ministry of Health and the Ministry of Higher Education was critical. Second, that active and continuous attempts should be made by the consultants to obtain maximum input from the key staff and faculty as necessary to ensure commitment and continuation of the initiative launched.

E. SCOPE OF WORK - A Strategic Plan

The deliverable component of this mission is a series of proposals for strategic activities and options. The plan's components have had maximum input in their development by those who will be responsible for the National Institute's future. It is both a culmination and a beginning for a series of deliberations within the Ministry of Health to develop priorities and commitment that will permit the National Institute to fulfill its mission and purpose in the service of the people of Sri Lanka. The details of the Scope of Work are listed in Appendix D, volume II.

II. INTERVAL HISTORY

A. ORGANIZATION

In 1979, the existing Institute of Hygiene at Kalutara was redesignated as the National Institute of Health Sciences (NIHS), a decentralized training unit directly responsible to the Ministry of Health. The Institute, in addition to a training function, had previously been responsible for managing certain elements of the Kalutara Health Unit, an area of 52 square miles with a population of 220,000. This area was divided into 16 ranges, each with a Public Health Inspector (PHI) and a Public Health Nurse (PHN). In addition, there were 39 Public Health Midwife (PHM) Centres.

As part of the change process at the Institute, all health care institutions in the Kalutara Health Area were brought under the unified management of the NIHS. These included a 600-bed provincial hospital, a 48-bed and central dispensaries. The NIHS was thus provided with field practice and demonstration areas which possessed all the ingredients required to promote the integration of curative and preventive care through a referral network.

B. NIHS MISSION STATEMENT EVOLUTION

In line with these changes, a new statement of mission for the NIHS was determined as follows:

1. To address itself to all aspects of health manpower development in Sri Lanka, (e.g. planning, production and management) and to advise the Ministry of Health on its policy relating to health manpower development.
2. To coordinate health manpower development activities in Sri Lanka between education and health agencies.
3. To initiate and undertake training programs for the members of primary health care teams with a view to ensuring a multi-disciplinary team

approach to training.

4. To initiate and undertake continuing education programs for the members of the health team.
5. To conduct research and other studies as related to the health services and manpower development.

C. NEW NEEDS AT THE INSTITUTE

To accomplish this mission, the NIHS needed:

- a. substantial expansion of physical facilities;
- b. fellowships for advanced training of some faculty members;
- c. furnishings, equipment and instructional aids; and
- d. technical assistance in organization, administration and curricula development.

It also required additional faculty and supporting staff to cope with the expected increase in work-load. Various donor agencies assisted with these development needs. These were USAID, UNICEF, WHO and UNDP. The completion of the physical structures and facilities of the Institute, although delayed are now anticipated by the end of 1986. When complete, the Institute will provide a handsome self-contained array of facilities and buildings arranged in a "University Campus" configuration.

D. PRIOR EVALUATIONS AND RECOMMENDATIONS

By November 1983, three evaluations of NIHS progress toward its development objectives had been completed. This current review also will concern itself in part with evaluating progress, but only for the purpose of establishing a proper foundation for exploring future strategy. The 1983 evaluation supported by USAID funding made five principal recommendations: three directed towards improving training; one about training management and one concerning research.

E. INTERVAL ASSESSMENT - 1983 to 1986

Some progress appears to have been made in improving the quality and purposefulness of the training. However, it seems that the resources of the NIHS, at this point, are not sufficient to cope with the training load and other demands, and at the same time, to make the kind of significant shifts in research functions called for in the 1983 evaluation. NIHS has made considerable effort to improve the overall management of its training program.

However, the Institute remains only a link in the chain of the training process, which suffers disruptions through crises arising in other areas of the MOH. Later in this document, we look to see what can be done to reduce the prospect of continued crisis management in training. Finally, the first steps in developing a research capability have been undertaken. The outcome has been a widening of experience in the NIHS in research and a

clearer understanding of what is needed to make research an integral part of NIHS activities. A summary of changes since the NIHS mid-project recommendations follows:

Collegiate atmosphere	Significant progress
Goal and objective setting	Some progress
Tutorial for students	Some progress
Students evaluations	Significant progress
Training calendar	Accomplished
Course compatibility with job	Needs evaluation
Curriculum review mechanism	Under review
MOH research priorities	Delayed
Practice zone data base	Common pre-natal record system
Redefined goals for AMPs	Some progress
Research manpower issues	Initiation of scope of work
Health manpower	Under consideration
Supplemental funds for research	Insignificant
Faculty research time	Insignificant
Refresher courses	Initiated on rotating basis, needs evaluation
Reward systems for teaching	Under discussion
Additional field practice sites	Under consideration
Coordination of field workers	Limited
Consultant on Educational Methods	Initiating link to WHO supported center at University of Peradeniya
Facilities construction	Estimate completion 10/86
Maintenance funding	Low priority

The NIHS under its new Director has clearly made purposeful steps in bringing the opportunities represented by the Institute towards a practical reality. It perhaps should be emphasised that NIHS with its combination of training facilities, field teaching laboratory and area health service responsibilities provides an unusual, if not unique, configuration of curative, preventative, community outreach and primary care education/training opportunities. If the Institute's potential is to become a reality, and the NIHS provides the kind of development support the MOH will most certainly need in improving its overall performance, the NIHS itself will require strengthening of its own development network, supporting structures and linkages. At the moment they clearly lack sufficient resources to carry out all of the tasks expected of them.

F. CURRENT SITUATION - OVERVIEW

In broad strategic terms, the further development of NIHS must focus on two parallel themes:

- 1) Strengthening of the basic community oriented structure now in place must continue and improve. Curricula enhancement, faculty improvement, expanded resources, ancillary support facilities, new curricula offerings for example in management, strengthening of the research emphasis, equipping the facilities, coordinating and further collaborating between educational institutes of NIHS, hospital based services and community based field services, all must continue.
- 2) The more profound issues facing NIHS relate not to the daily operational issues, but to the future relationships of NIHS to the MOH,

to universities, and to other new organizational arrangements that may evolve in the country. Will the NIHS remain a service unit committed to training only PHC workers to meet the MOH need? Will it evolve to a more sophisticated education institute with certificate granting authority? Will it serve as a national resource, not just for allied health training, and will it meet future needs for specialized research into health services administration and management issues? Will it develop a faculty that possesses sufficient excellence to serve the government of Sri Lanka in developing health policy alternatives with the fiscal, economic, legal and cultural understanding necessary for critical debate and review? How will NIHS maintain an organization autonomy so that it can respond with integrity to complex issues of the future that will include cost containment, resource allocation, manpower redistribution and management change?

The current review team has directed its attention toward both of these sets of issues.

III. MACRO ENVIRONMENT

A. DEFINITIONS AND FRAMEWORK

The development of the NIHS cannot take place in isolation. The key to the changes that can take place stems in part from internal pressures but is largely influenced by the changing environment in which the institution resides. In the case of the NIHS, its purpose is to serve the MOH. The terms of its mission (see section II - interval history) direct it to providing basic professional training for certain cadres of paramedical staff and, to take the initiative in middle management training.

It is perhaps true to say that while NIHS does carry a significant basic training load, it has not, to date, made any serious in-roads on middle management development (although it has mounted some middle management short term courses - usually 1 to 6 weeks). To some extent the fulfillment of the management development/training role will come through a strengthening of the NIHS itself but perhaps more importantly from clearer signals regarding the MOH's desire to improve its performance through better management.

The word "management" has a multiplicity of meanings. In this context, with a very high percentage of recurrent budget tied up in paying staff, the focus is on improving the performance/effectiveness of staff in the MOH. In other words the term implies creating an environment in which staff at all levels are committed to trying harder and achieving more than they did before. The creation of this environment will require massive shifts away from current management practice but still following along the MOH's current path of decentralization.

It is becoming increasingly apparent, in many countries, in many different health situations and political milieu that irrespective of other considerations, improvement of MOH performance and impact requires movement away from the traditional regulatory "administration process" toward one of management with a problem solving orientation. With this notion comes necessarily the concepts of:

- Decentralization of authority,
- Institutional objective setting through discussion and not instruction,
- Individual goals and performance assessment,
- Freedom to manipulate resources at all levels of the health system to achieve objectives.

It is the consultants' belief that the MOH in Sri Lanka must embrace these concepts sooner or later and the NIHS will have a major role to perform in "enabling" this management orientation to become a reality.

B. PREREQUISITES FOR MANAGEMENT DEVELOPMENT

There are a number of immediate prerequisites that the MOH will need to address if the management task is to begin to take shape. The most immediate issues would seem to be:

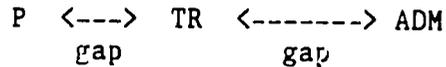
1. Coordination between manpower planning/training and administration
2. Location of the manpower coordination function
3. Position of the NIHS in the MOH organization structure
4. Role of the NIHS director in organizing para-medical training and middle management training/development
5. The problem of manpower information and where to place the information unit
6. The need for non-medical technical specialists in the MOH and NIHS
7. Opportunities for providing a career structure within the MOHG for non-medical professional staff
8. NIHS relationship with other units of the MOH and in particular with the regions
9. Networking with external organizations both within the country and outside.

C. COORDINATION ISSUES

The issue of coordination is perhaps the most dominant of all the issues that have emerged during the team's interviews with staff in the MOH, and just as importantly, with donor organizations. There appears to be some disquiet among donor organizations about breakdowns in MOH coordination which makes them cautious in their willingness to support new initiatives in the Ministry. Taking the NIHS perspective, the coordination issue is centered around problems of improving the link between:

- manpower planning
- manpower training
- manpower management

Despite the existence of coordinating committees there is evidence of coordination and communication gaps between these three elements. Pictorially, they might appear as:



The outcome is a reduced efficiency in:

- managing the training
- ensuring the right people get the training
- matching training to needs

D. HEALTH MANPOWER DEVELOPMENT UNIT

It is perhaps appropriate at this point to again emphasize that these criticisms are not simply concerned with an endless search for perfection. Sri Lanka in comparison with many other countries maintains a highly trained work force. The issue for Sri Lanka as elsewhere is how to streamline its operations to ensure a maximum return on its invested resources.

The problems posed by coordinating and managing basic professional training are considerable. However, these become less significant if the Ministry attempts to capitalize on the actions it has already taken to strengthen the capacity and commitment for decentralized management. In terms of training, it will require primarily NIHS to be able to respond to demands from central MOH as well as those emanating from the regional directors. Furthermore if this training is to lead to significant changes in individual or organization performance, it must be linked to an orderly and systematic management of every aspect of the working lives of MOH staff. In other words, a HEALTH MANPOWER DEVELOPMENT (HMD) Unit in the MOH is essential for coordination between planning, training, deployment and utilization of manpower. It is patently impossible for the NIHS director to take on this role and manage the institute concurrently.

If a HMD unit was created, its location in the Ministry would need to be established either in the direction of the existing planning unit or towards the existing administration unit. It is likely that the HMD unit would have a mixture of analytic/technical functions and executive functions with the emphasis perhaps on the former. For this reason, and because of the prospects of the creation of a management development unit (MDU) with related analytic/technical functions, it is perhaps desirable to tie the HMD unit to planning. But even with this, other links will be necessary, most notably with the administrative arm of the ministry. However, possibilities for creating this bridge are explored, we need first to examine the location of the NIHS in the MOH organizational structure will be examined.

E. NIHS AND MOH - ORGANIZATIONAL RELATIONSHIP

Currently the NIHS is located in the division under the Deputy Director General Public Health Services (DDGPHS). Its location may well have been determined from its early role as a training unit concerned exclusively

with primary health care. While there may be certain advantages to its location in the public health division, it is perhaps worth exploring where NIHS can be more advantageously placed in the light of its current and developing characteristics, specifically:

- The NIHS is and will be concerned with training and research over a broad range of primary and secondary care and preventative & curative care activities.
- The NIHS is a training institution providing health services and not a health service institution providing training.

The authors of this report believe that the changing role of NIHS together with the relationship with regional offices, Part II PHM training centers, and universities proposed later in this section point to NIHS being relocated in reasonably close relation with the proposed HMD unit in the Ministry of Health.

The role of the director in organizing allied health staff training and middle management training and development is tied to the positioning of the NIHS. Earlier we suggested that demands on the director to be in Kalutara made it unrealistic for the same individual to take on the responsibility for coordinating all allied health staff and middle management training. We suggest instead that the director have a close link to the proposed HMD unit and at the same time form stronger formal links with the peripheral units of the MOH. Post basic and continuing education will require these links if NIHS is to maintain a continuing and effective contribution to management development.

1. NIHS/MOH decentralized teaching role

NIHS currently shares some of its teaching responsibilities with the Health Education Bureau (HEB), Family Health Bureau (FHB) and Epidemiology Unit. These ties should be continued. In addition, the institute maintains links with part II PHM training centers. The nature of the work load that management training will impose on NIHS is such that the institute will need to operate in part through decentralized training sites with the Kalutara Faculty. In time NIHS will be taking on more of a training of trainers role. To facilitate this, we suggest that perhaps four or five Part II PHM training centers be considered as NIHS extension sites. Kurunegala training center springs readily to mind in this respect.

Effective use of these sites, in our view, will require that they come under the administrative and technical control of NIHS. In the short term, this may have to proceed with joint arrangements with appropriate regional directors. In the longer term, with accelerating decentralization and the potential of provincialization, a more complete NIHS control may be possible and desirable.

2. NIHS/MOH regional directors relationship

The relationship with the regional directorates should also, in our view, be the subject of review. The essence of the recommendations on the internal development of NIHS (see section IV) calls for a much

closer working relationship (teaching and research) than currently exists. The existing link of regional directors (RDHS) to the director general (DG) of course needs to be maintained. But we suggest that, in addition, another link be forged with NIHS which would enable NIHS to operate as the training and development agency for the regional directorates. NIHS would channel resource demands for training and research to the HMD unit.

3. Restructuring of NIHS reporting relationship

The considerations offered up in the preceding paragraphs suggest that serious consideration needs to be given to repositioning of the NIHS in the organizational structure of the MOH. Furthermore, these changes need to be linked to changes elsewhere in the Ministry to strengthen coordination of manpower management and development.

These changes may also implicate a reassessment of the way regional budgets are constituted to permit direct engagement between RDHS and NIHS. While this may create some administrative difficulty, it is surely a proper movement in the decentralization/management development process.

A possible reorganization of the existing structure of the Ministry is shown in the diagram on the following page. It is recognized that much more thought needs to be directed to this issue. Indeed, it may be conjectured that in the light of decentralization the classic structure of the Ministry may need to be altered from its current technical orientation to one of area management supported by one or two specialist divisions.

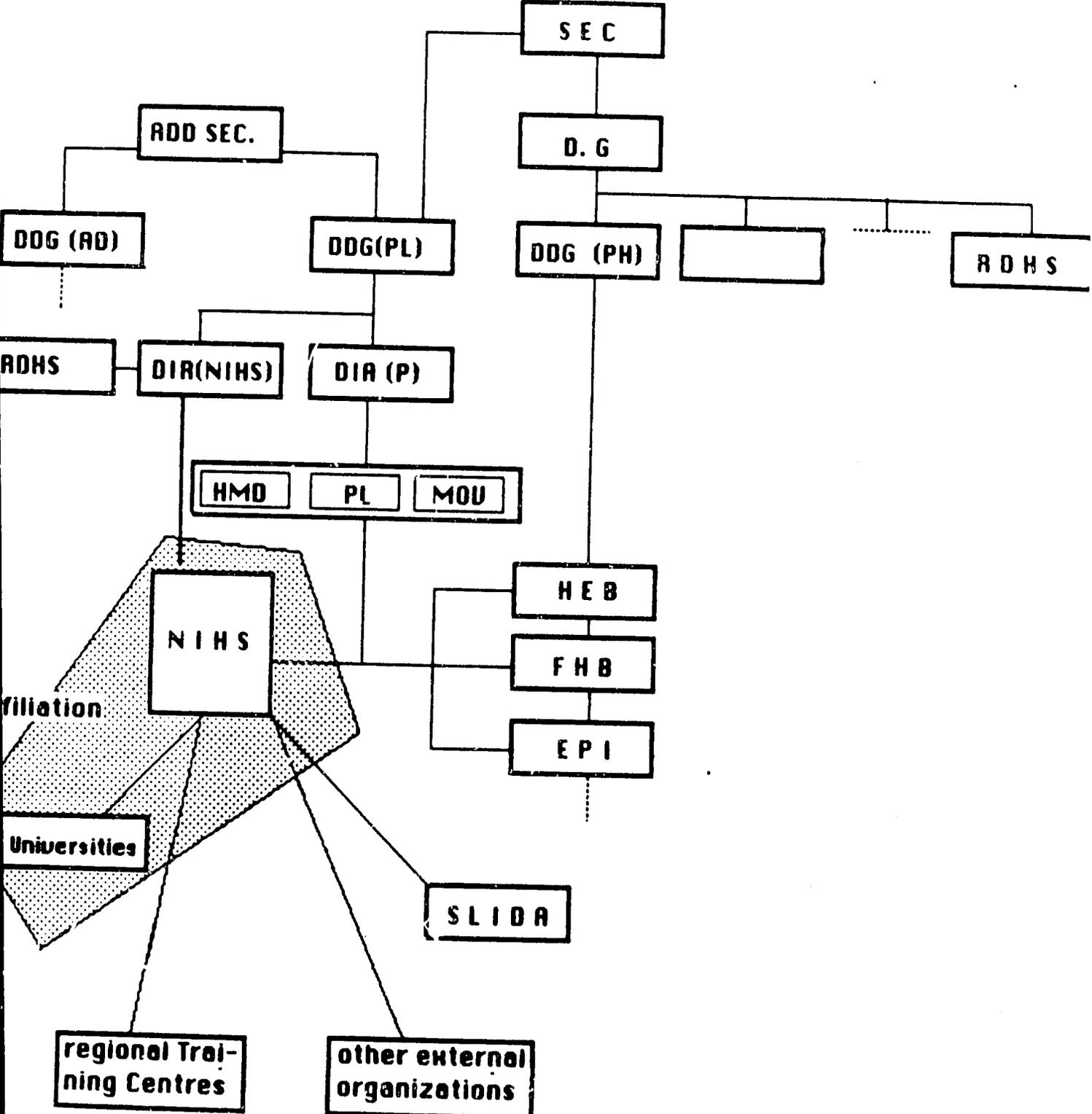
F. MOH/NIHS MANAGEMENT SPECIALIST RESOURCES

The NIHS at this time, is not adequately equipped to undertake action research or management training/development (see section IV for details). These deficiencies can be overcome, but certainly in the short term and possibly over the longer term, it will be desirable to draw on experiences and expertise from outside the NIHS. It perhaps needs to be emphasised that management like medicine is not a single dimensioned topic, and that successful engagement with management development must involve many different management disciplines, such as: behavioural sciences, psychology, operational research, systems analysis, and financial management. In the short term these must come from outside; in the longer term these skills should reside in the MOH itself. However this will only occur if a viable career structure is introduced for professional grade staff of this type.

The most obvious sources of the necessary expertise lies in the universities or at the Sri Lanka Institute of Development Administration (SLIDA). In the case of SLIDA, orientation appears more towards the mechanics of administrative process. NIHS may wish to draw on SLIDA administrative process. The connection to the universities can potentially provide a much wider range of expertise and stimulus for NIHS. Provisional discussions with the universities have indicated a certain willingness to engage with NIHS in both the teaching and research fronts.

Many forms of linkage with the universities are possible but the type of

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support needed is more than a series of ad hoc requests from one institution to another. There must be substantive involvement which suggests that it would be in the interests of both NIHS and the Universities to engage in a form of affiliation. But the NIHS should remain firmly under the umbrella of the MOH. Other spin-off benefits may be expected to arise from such affiliation, not the least of which are enhanced networking opportunities with relevant institutions outside of Sri Lanka.

G. PERSONNEL MANAGEMENT - CAREER ANALYSIS

The movements so far proposed towards better management and improved MOH performance have been focused on improving the organizational framework and assuring that the basic control mechanisms are in place. A further dimension to this, with organizational implications, is the need for up-to-date and accurate information on the status of staff in the MOH. Advances in micro computer hardware and software make this a feasible development with both the center and regions maintaining linked computerized records. Other units such as planning and training will need to be able to access the information - which reinforces the need for closer links between planning, training and administration.

The regions will have an important role in maintaining the validity of the data. NIHS may well, at a very early stage, need to establish a computer training capability in order to train regional staff to support the computerization process. Typically, a basic system with thirty pieces of data on each staff member may take 1 to 2 years to be fully installed.

The developments proposed here and elsewhere in the report all point to inducting a new breed of professional non-medical personnel into the MOH. At the moment, the career opportunities are so limited in the MOH that it is unlikely that the MOH can attract such people. Nevertheless, a potential for satisfactory career opportunities does exist if the MOH is willing to create them. The most obvious place for the creation of suitable posts would be within the NIHS itself. The planning unit, the proposed HMD and MDU units, the more senior planning posts in the division and the proposed computerized information unit are likely examples. Undoubtedly, other opportunities exist. The team resisted delving too deeply into the issue of careers because of the various pieces of evidence that suggest that career structures in the Ministry need major revamping and should not be tampered with on a piecemeal basis. Some indicators are:

- Staff with advanced training on the same pay scales as those without,
- Career blocks existing for many cadres of staff
- Unbalanced age distributions in senior staff posts

The brief for this team does not provide for the team to be involved in substantive career investigations. However, it does seem necessary to reaffirm that the management development process is not some academic methodology, but rather a dynamic process in which the creation and maintenance of equitable career opportunities is an important component.

IV. MICRO ENVIRONMENT

A. INTER-ORGANIZATIONAL RELATIONSHIP

The previous section on the external environment of NIHS explored the role NIHS must fulfill to support the MOH as it moves to meet new challenges and pressures to discharge its health mandate. The core of the argument presented was that NIHS must pivotally engage with the process of decentralized management development within the MOH. This requirement is something more than offering a series of management courses which may or may not relate to the practical realities of mobilizing the resources of the MOH. It is a long term interlinking of new skills development at NIHS with development and problem solving in the field. This requires not only changes in the way the MOH as a whole operates, but also changes in the way individuals within MOH work and behave. These changes require fundamentally different concepts in learning and doing which must be incorporated within the teaching and operational modalities of NIHS.

B. INTERNAL ENVIRONMENT OF NIHS - COMMITMENTS

In 1984, NIHS came under new leadership entering into a period of transition wherein the organizational infrastructure of the institute changed. Six commitments under the new leadership may be highlighted as indicative of NIHS future development.

1. The structure of training in the institute has been transformed from a single cadre teaching structure (wherein, for example, PHIs are trained only by PHI tutors) - to a multi-disciplinary structure wherein teaching units are composed of a mix of trainers having medical, environmental health, and nursing backgrounds in addition to specialized training like management or health education.
2. In accord with an emphasis on multi-disciplinary training, has come an effort to foster inter-cadre cooperation through team training. An example is the team training programs initiated by the NIHS Planning and Management Training Unit, as in-service training for PHIs and PHNs.
3. A movement has been initiated within NIHS to increase faculty involvement in institute decision making. The Director has attempted to more fully engage his Deputy Directors of Training, Field Service and Curative Services in Administrative and Managerial Roles. This reflects the Director's desire to apply managerial principles within his own house. Increased communication within the institute has been realized by monthly faculty meetings where issues relating to institute development are routinely discussed.
4. There has been a move by NIHS to improve communication with other training centers involved in health manpower training. For example, NIHS has called together on two occasions the training staff of Part II PHM Training Centers to discuss curriculum and training needs. This is a first step towards coordinating the activities at these centers, which opens the way to future efforts such as learner assessment and course revision.
5. There has been increased interest within NIHS to evaluate training courses both inside the classroom and in the field. A student

evaluation of the PHI and AMP training programs has recently been undertaken, and the mid-level management course given by NIHS has been upgraded on the basis of concurrent evaluation.

6. There has been a sustained and invigorated effort by NIHS to upgrade the training of health care workers by a combination of long and short term training courses. This is particularly evident in the management field. This has opened the easy to decentralized in-service training possibilities.

C. DEVELOPMENTAL NEEDS

Drawing upon the above commitments and discussions with the Director of NIHS, 5 central needs were identified as essential for the future development of NIHS.

1. A need to foster management as a key element in NIHS training - a need to upgrade existing management training at all levels.
2. A need to make training, curriculum development and the production of teaching materials field responsive and grounded in reality.
3. A need to establish a problem solving orientation among NIHS faculty staff.
4. A need to decentralize training at NIHS and to engage in the business of training of trainers to meet the country's in-service training needs.
5. A need to promote inter-disciplinary training and an inter-disciplinary approach to learning within the NIHS.

D. EVOLUTIONARY PATTERN - From a Reactive Health Training Institute to a Responsive Health Training and Management Institute

The internal development of any training institute depends both upon its ability to plan training according to its manpower capacity and its ability to schedule training and relevant research activities according to its teaching objectives. At present, NIHS functions largely as a "reactive" training center for cadre of PHIs and PHMs. Only in the case of AMP training is NIHS able to adhere to a stable training calendar. NIHS's staff members have little idea of when and how many PHI and PHM trainees they will be asked to accommodate. This is one of the reasons a strong stand has been made in this document for the creation of a HMD unit in the MOH.

Attention here may be drawn to the impact of "reactive" training on NIHS. Teaching staff find themselves fluctuating between a "high stress", over worked training situation and interim periods of waiting between training courses, which vary in duration. High stress training situations leave NIHS staff little time to engage in improving teaching activities and evaluation procedures necessary for learner analysis. Trainers who have received advanced training feel frustrated because they cannot engage in more innovative forms of teaching. For example, the possibility of training PHIs/PHNs in teamwork cannot be implemented due to lack of coordination between the training schedules of these two cadres.

Moreover, it is during times of high stress training that the new NIHS teaching infrastructure seems to weaken and revert to its undesirable earlier form. An example may be cited illustrating the impact of high stress training. At present, two batches of PHI students are being trained concurrently at NIHS. The batches are staggered by only a two to three month period. The NIHS faculty reported that a six month gap was needed between batches of students to enable the appropriate planning of training activities. Adjusting to this high stress training burden has necessitated the senior PHI tutor, now working in the health education unit, to function as a PHI batch coordinator in addition to his primary teaching responsibilities. This trainer, who in the meantime had initiated a school health research project, presently feels overburdened. He is unable to carry out all his training duties and engage in the kind of health education research for which he received MPH training. He is frustrated.

Typically, this kind of situation leads to a declining morale. If NIHS is to function as more than an indifferent volume producer of PHC health field staff, it need not only to acquire adequate numbers of training staff, but be also afforded the opportunity and resources to expand its expertise to meet the health service management needs of the country. Rhetoric about PHC and health for all by the year 2000 is not enough to invigorate NIHS staff. Staff interviewed had a number of laudatory ideas about how to improve training through field evaluations, research, etc. However, they showed little impetus to engage in these activities given their current work load and lack of support/resources.

Slack periods of time were identified between training courses where these activities could be initiated. However, the morale of staff seems to be so weakened during high stress training periods, that slack times are not used optimally. If incentives were provided to engage in such activities, if resources for such activities were made available and were these activities better coordinated, then slack time periods might be rendered constructive.

In sum, the "reactive" training reality of NIHS has had a negative effect on the morale of NIHS staff. This is not to say that staff do not have hope for a different kind of future. We found throughout our interviews a growing sense of commitment and hope for the future of NIHS. In the words of one faculty member:

"Something can come of this place. It is not just the new buildings coming up, there is a feeling things will change with the new leadership. We have been through alot. While a few faculty members are simply waiting to retire, most are committed to seeing this place develop. You (the consultants) have come at the right time, this is a time of new possibilities and guidance is welcome."

E. FROM SINGLE CADRE TRAINING TO MULTI-DISCIPLINARY TRAINING AND FACULTY DEVELOPMENT

The present NIHS Director's move to reorganize training at the institute was a bold step which challenged the identity and vested interests of many of the institute teaching staff. Needless to say, it was a move initially challenged by a number of staff. Interviews (appendix B) with over 20 faculty members revealed that at present the large majority of the NIHS

staff accept and support the new multi-disciplinary teaching unit system introduced. In the words of one tutor:

"It was a new thing which made us uncomfortable at first. It was not the way we were trained, but now we see that it is necessary for our future development...many things must change, even the type of work the different cadres are doing...this requires fresh thinking, the Director is asking for that, the system must be adjusted, most of us accept that now."

While there is wide scale verbal support for a multi-disciplinary approach to teaching, there is still some distance to go before this is realized. Medical officers, PHIs and PHNs still interacted as separate cadres in many instances. This was clearly seen among PHIs who tended to seek leadership from cadre seniors, rather than from their unit heads. In the words of one informant:

"They are following the old system still, even though they are spread in different units...see how they all flock into the senior PHI's office to seek advice and clarification."

Some groups of student trainees also tend to isolate themselves from the trainers of other cadres. This was evident in the attitude of AMP students to PHI tutors in environmental health. Due to this "status problem", the heads of teaching units, themselves medical officers, tend to provide AMP teaching. In cases like that of environmental health, this is problematic where the unit head has little practical experience in this field. Moreover, if AMPs are expected to play a significant preventive health role and to serve as PHC team supervisors in the future, greater exposure to and recognition of the skills of members of other professional groups is necessary.

While a move has been made to create multi-disciplinary teaching units, this effort has been limited to a reallocation of existing health manpower with as yet no effort to incorporate professionals from outside the health field. This limitation was pointed out by several different faculty members. Permanent faculty positions for people outside the health field are clearly needed. For example, the faculty of the Planning and Management Training Unit noted that the statistician presently attached to their unit is actually an officer of the Census Bureau and therefore open to transfer at any time. Indeed, they recalled that the last statistician they received lasted only six months, the amount of time necessary to familiarize him with the institute, medical terminology and his duties. The training unit head pointed out that a request was being made by Regional Directors of Health to train administrative clerks in health protocol. At present clerks at the RDHS level have only general administration, not health administration backgrounds. It was pointed out that the history underlying the current request revealed the very nature of the problem of attaching non-health professionals to the NIHS with no career development scheme in place.

Two years back, senior clerks had been offered the choice of remaining in the health service or opting to join other departments. As there was no career development prospects in the health department most senior clerks left the service.

At present, there is nobody at NIHS who feels they are capable of teaching a course for health clerk administration. What is clearly needed is an experienced senior clerk tutor. The Head of the Planning and Management unit stated that not only would such a person be useful for clerk training programs, but also general training. AMP students and mid-level management staff would benefit from being taught the administration procedures and protocols.

Incorporating non-health faculty is essential if NIHS is to become a multi-disciplinary training center engaged in health service research and health management development. Other examples may be cited illustrating why NIHS must secure a faculty career development plan for non-medical staff from MOH. An essential staffing need identified by the environmental health training unit is for a sanitary engineer position. At present, training capacity for this area of expertise is deemed deficient and is carried out by a guest lecturer who is able to afford the unit only limited time. Like the other positions mentioned, recruitment of a sanitary engineer needs special approval from MOH. Similarly, creation of an Educational Science Center and Research Resource Center (to be discussed) may well require positions for key personnel such as a social scientist, operations researcher, computer programmer, and a curriculum development specialist.

The last issue which may be addressed with respect to multi-disciplinary training, concerns unit compartmentalization. Ways and means of engaging training units in multi-unit projects must be explored if individual training units are not to become isolated and inward looking "academic departments". Indeed, the present of NIHS resembles that of a "school of public health". In accord with the management perspective argued for in this document, NIHS may want to consider moving toward a more function oriented and less field oriented structure in future. It is recognized that this is not feasible at present, in as much as NIHS is going through a consolidation period following major restructuring. At this point in time, research might serve to foster integration between the training units.

In the model on page 87, we propose a decentralization scheme within NIHS, should the research manpower NIHS has requested from the pending ICDC research grant be funded. Presently, we would point out that if research resource staff were distributed throughout NIHS it would serve to develop all units in NIHS and foster inter-unit/inter-disciplinary training and research activity.

F. EVOLUTION TOWARD MANAGEMENT - Management as a Key Element in NIHS Interval Development and a Central Focus of NIHS Training

The magnitude of change involved in transforming NIHS from a training institute run more in line with modern management principles should not be underestimated. The NIHS director has made significant strides toward "managing" his faculty through a rational division of labor within the institute and an attempt to develop deputy directors as problem solvers within their own realms. NIHS is still in a transition period. Whereas some progress has been made toward orienting faculty to take up problems with appropriate deputy directors, the Director still finds that by-passing occurs as faculty often try to approach him directly with problems.

The Director has maintained a firm commitment to triage these problems to appropriate "managers" and decentralize decision making within NIHS. At the unit level, he has attempted to relieve training staff of the chore of administrative task handling by allocating more of this work to clerical staff. This has not been followed with much resolve. Faculty interviewed viewed giving up administrative tasks involved with teaching as a loss of status. In the words of one faculty member:

"Teaching staff like to keep these duties and not defer them. If we give these duties to clerks, then students will come to think they are more important than us!"

This statement clearly illustrates the complexities and magnitude of the director's tasks in transforming NIHS in accord with internally consistent management principles.

A chief concern in establishing a "management environment" is staff motivation. One cannot strive to increase productivity or to maximize resources unless motivation and work incentives are considered. There are few incentives for excellence identified outside of self motivation and the prospect of a foreign fellowship. Research seemed to loom in the minds of some faculty as a possible means of achieving recognition or attaining a regional consultancy.

When potentially more immediate incentive possibilities were discussed, a number of ideas emerged from the faculty. A key idea which appears easy to implement is concurrent evaluation of faculty teaching and research by the NIHS Director. Five faculty members noted that inclusion of such an evaluation into their permanent file would be useful for future job opportunities, fellowships, etc. A second related suggestion was for certificates of merit to be awarded by the DGHS or Secretary of Health, as both a means of social and professional recognition.

Field staff in the NIHS Field Service Area who were interviewed also felt that a lack of incentives existed for motivating field staff toward the kind of commitment which is a good role model for trainers. While it is true that field staff in the NIHS field area have greater opportunities open to them for regional fellowships, informants felt they were not clearly recognized for their training activities within their own country. Indeed, the NIHS field practice area is treated like any other RDHS service area, with field staff receiving no additional resources professional recognition for their additional training duties. Discussions with field staff produced several ideas for incentives which might enhance staff motivation. These included merit evaluation based on performance. This would entail the setting and reviewing of work objectives - an idea certainly in line with modern management principles. Merit Certificates were mentioned with the provision that they carry weight for training course selections and transfer preferences in addition to providing social recognition. Another incentive which the field staff positively responded to was the idea that exemplary role model staff be given the opportunity to act as resources for the resources Education Science Center. They could assist in the production of training materials and be acknowledged by name. An allowance for training activities and a cost of living allowance for field staff residing in the Kalutara region were also mentioned - because Kaplutara is an expensive area in which to find housing.

An incentive for excellence considered by the consultant team was for the NIHS Service Area to be staffed only by PHC field workers receiving positive field assessments by "management oriented" supervisory staff. The idea of creating prestigious "end stations" contingent upon concurrent field assessments was suggested by the NIHS Deputy Director of Field Services. A variation on such a scheme might allow NIHS to voluntarily keep a certain ratio of exemplary role model staff engage in the development of younger committed staff as role models and have the option of removing poor staff who were undermining the training process. The latter option is important to keep open in a field practice training area. This became clear from interviews with Part II PHM trainers, who complained that in some areas less than half of their field staff could be utilized as role models.

An important management role at field staff level is field supervision. The question may be raised: "what kind of supervision are field staff presently receiving and what kind of an attitude toward supervision is being passed on to trainees?" In interviews with numerous PHMs, it became clear that most were dissatisfied with the form of supervision they were presently receiving from their PHN supervisors. This form of supervision often followed the administrative model and constituted a "check up" or "police" function of reviewing registers and reports. PHMs complained that little constructive criticism was provided to them in the field by the PHN whose time seemed to be absorbed by clinic organization and immunization duties. A management form of supervision wherein PHN functioned as problem centered field service managers was called for by PHMs. Following a Management model, the PHN would assist the PHM in review of the characteristics of their field area and help set individual objectives.

What kind of management training is now being conducted at NIHS, and how adequate is this training to meet NIHS's health management development mission? NIHS presently conducts management training as a part of all basic training courses and as in-service training for mid-level managers, including Medical Officers of Health and District Health Officers (DHO). One of the chief problems the Planning and Management Training Unit faces is a poor sense of what are the management needs of the different cadres it trains. The training unit head stressed the necessity of a thorough review of management needs in keeping with the scope of work of each cadre. This is problematic, because the scope of work of the cadre is itself being reconsidered. For example, AMPs presently receive very minimal management training, yet there has been some indication that AMP may be involved in field staff supervision in the new decentralized health scheme. The role of the PHI presently involves only individual unit level management, but may well be expanded to give new emphasis team training.

"At present, we have a doubt as to how much and what kind of training to give the AMP and PHI who have no formal supervisory function, and whose scope of work may soon come under review. We badly need a curriculum review, based on management needs."

With respect to mid-level management training, the Planning and Management Training Unit conducts MOH orientation courses and mid-level management training courses. Medical Officers of Health are trained in management for six weeks soon after taking their posts and are subsequently sent in for a ten day refresher course with other mid-level health managers (appendix K).

These courses have been steadily improving. A new request from the Ministry of Health has however frankly perplexed the training unit. The training unit has been asked to train DHOs, a position created under the new decentralized health scheme (appendix H). A DHO is perceived to act somewhat like a mini RDHS and be jointly responsible for what is now a Medical Officer's and Medical Officer of Health's functions. The DHO's position is new and no formal duty list has yet been produced- so there is not much on which the training unit can base a specific management course. Presently, the training unit gives DHO the same training as MOH, but they feel this may not be satisfactory.

"Overnight, they told us we were to train DHOs for these positions. DHOs were recruited who have worked for only one year with no training in public health, yet they are in charge of a 60,000 population MOs, AMPs and field clinics. How can we give a proper management training, when we do not have a clear idea of their work or an opportunity to observe how the scheme is functioning? we are not sure if they should be trained differently or the same as MOHs, but we give MOH training."

All of the present staff of the Planning and Management Training Unit have impressive field and hospital backgrounds, but all been in the unit for less than one year. The Medical Officer who heads the unit is an energetic MD with both an MOH and MO background. He has had two short courses in mid-level management, the six week mid-level management course at NIHS and a six week management workshop course conducted by Management Sciences for Health in Sri Lanka. He has no teacher training experience, although he is asked to give instruction in this subject. His staff consist of one PHI tutor and one PHN tutor. The PHI tutor has undergone the NIHS six week mid-level management training course and has received no teacher training. The PHN in the unit has broader training, having a nurse education diploma, and a diploma in public health management from the University of Connecticut, in addition to NIHS mid-level management training. The unit is clearly understaffed and undertrained for their key position in developing NIHS's health service management mission.

The unit is highly committed however, and felt to be a good foundation upon which to build. The consultant team feels that it is this training unit which needs to be give priority in terms of staff development and manpower allocation. It is this focal training units and backed up by a Research Resource Centre and Education Science Center which will lead NIHS into the future.

A last note may be made about management training at NIHS. This is in regard to training materials. At present, sections of the WHO Training Manual "On Being In Charge" (WHO 1984) are being used as text for various management courses. While faculty adapt the training material in the classroom to suit their needs, there is a need to produce a management guide/text which is specific to the Sri Lankan Health Service context.

G. EVOLUTION TOWARD PROBLEM RESOLUTION - Fostering a Problem Solving Orientation at NIHS - Need for Health Services Research

"PHI, PHM and AMPs are primarily skill oriented. They need to have a more problem solving orientation. This was the reasoning behind multi-disciplinary training and the teaching units, instead of single cadre training cells - to reduce compartmentalization and get these people to think beyond 'work as usual'."

If NIHS is to engage in the business of health management, then it is essential that a problem solving posture be adopted by the NIHS faculty. Moreover, this problem solving perspective must be seen as part and parcel of a management process, culminating in the creation and implementation of action plans. Upon review of the NIHS faculty's present efforts at research, the team found examples of commendable basic and applied research efforts. Patently missing however, were examples of problem solving action research. Indeed, the team found that while the faculty maintained considerable interest in developing research capabilities, there was neither a consensus about the kind of research to be carried out at NIHS nor a sense of research priority. While the NIHS faculty had been exposed to research workshops, such as that provided by Dr. Fisik of the WHO, they appeared to have little sense of what health service research constituted. Nor did they understand the differences between evaluation, applied research and action research. These differences were clarified during a brief research workshop conducted by the consultant team (appendix I), during which time a few health service research themes suggested by faculty members were transformed into problem statements suitable for action research.

During the workshop, the consultant team introduced the idea that NIHS should limit its scope of research to health service action research befitting the health management mission. The faculty was requested during working group sessions to discuss this proposal. It was largely endorsed. Faculty members suggested that in order for research to be fostered within NIHS, a position of "research coordinator" needed to be created and a research resource center developed to assist individual training units structure and process HSR research. Faculty were clear that this research centre should not become an autonomous body, but rather exist as a support body for the training units and the envisioned education science centre.

Faculty recognized that the thrust of research needed to take some direction within NIHS and not be subject to the ad hoc whims of faculty members. For this reason, a research working group was envisioned to screen research proposals. The faculty wondered whether some mechanism could be created, placing at the working group's disposal a yearly budget enabling them to give support to small HSR action proposals addressing current operational problems.

A need for a long term consultant to assist staff develop Health Services Research (HSR) skills was voiced by faculty. They envisioned this consultant training faculty in HSR through the practical exercise of action research; moreover, they envision the consultant helping develop research facilitators who might in turn mobilize HSR research teams at the RDHS level should NIHS develop closer working relationships with these regions. (See pages 86 and 87 for a set of models illustrating how HSR might be

coordinated within NIHS and how NIHS might engage RDHS in HSR).

Changing the orientation of the NIHS faculty toward training is one of the key reasons for involving them in HSR research. In order for the PHC concept to become community based, a movement must take place away from the present "reactive" form of work by field staff - to work characterized by ongoing problem identification, objective setting and self assessment. The fact that these processes do not exist at present as was clear through interviews with field staff. It is argued that involving NIHS faculty in HSR as a first stage in the management process will serve to transform their orientation toward training in line with the management mission of NIHS. It is argued that through the practical exercises of HSR, and not singularly through the conducting of management workshops, that this transformation will occur. This behavioural transformation, it is argued, will influence the way trainers approach both classroom teaching and field supervision. Problem solving will emerge as a key training theme and method.

H. EVOLUTION TO RESPONSIVE EDUCATION - Field Responsive Training and Teaching Material Production

Curriculum development and planning is one of NIHS's primary roles. The staff at NIHS is well aware of the need to develop training programs which are more field responsive. Interviews with field trainers revealed that NIHS is working against a reputation of producing certain cadres of staff without adequate field training. A chief example cited was the PHI training program. At present, PHI trainees spend the majority of their time in the classroom. They do not undergo a field internship as the PHM trainees do. These trainees spend three days a week working with experienced PHMs in the field during their Part II training.

There has been a suggestion put forward by the faculty of NIHS that PHI training be extended from one year to 18 months (a WHO consultant suggestion in 1979). The grounds for this extension have been that additional technical skills need be taught to PHIs. The issue of PHI training and PHI role identity is taken up in section 6.11. At present, it may be emphasised that regardless of whether or not the PHI course is lengthened, it need be made more field oriented. A field internship is clearly necessary.

Field internships should demonstrate the purpose of skills learned by students in the classroom. Toward this end, field internships need to be developed in accord with clear learning objectives. To what extent does this exist? At present, although primary and secondary tasks have been identified for PHMs, field training is not carried out around objective setting or problem identified. It rather appears to be ad hoc and based on a "fairly mechanical performance of duties culminating in a rather thoughtless filling out of registers".

This raises the issue of what kind of role models are available for PHMs and PHIs (should an internship for them be introduced). When asked about the quality and role model potential of field staff, MOH and PHN/PHI tutors gave us the impression that there was wide variability in the quality and potential of staff per region. In one region, trainers at a Part II Midwifery Training Centre judged only three out of fourteen PHMs to be adequate role models for the training of students. At another centre,

three quarters of PHM staff were judged competent. Considerable variability was likewise cited in different MOH areas of the NIHS health service field area. The head of the Family Health(MCH) Training Unit stated that out of the 60 midwives in the NIHS field practice area, she could only use 20 for training with any level of confidence. In her words:

"It is not a question of old guard PHMs and newly trained PHMs, it is rather a question of motivation and interest in work. Only those with commitment may be developed for training others."

It is obvious that if the NIHS field area is going to be used as a training practicer area, it must be recognized as different from other service areas in Sri Lanka. Some provision, for instance, must be made to recruit, develop and defer from involuntary transfer, good role model health staff. It is important that these staff be recognized as filling a training function. The same staff development provisions should apply to other field training areas presently existing and invisioned (e.g. Part II Midwifery Centre, Regional In-service Training Centre Areas, etc.). A number of recommendations in the regard will be introduced in section seven.

It is recognized by NIHS staff that there must be a much closer coordination between classroom and field training. A major self criticism by staff was that learner analysis and post training follow-up in the field did not play enough of a part in curriculum revision. To date, such activities have not been well developed within NIHS largely because of time constraints and training load pressures. In the words of the head of the Family Health Training Unit:

"Our training unit is very anxious to follow-up our Part II PHM training and to encourage dialogue between the staff of Training Centres. The obstacle is our work load. We want to follow-up on our training, but because of our work load, we get only the rare visit which is on an ad hoc basis and not scheduled. This is not correct, we know these visits must be regularized. We need more staff to handle the student load we receive and additionally, help from some sort of education/training monitoring unit to help schedule monitoring activities."

The monitoring of field training programs, learner analysis and related health service research requires the existence of an Educational Science Centre within NIHS designed to take up this task. We suggest that such a centre include separate sections devoted to field training/monitoring (learner analysis, HSR) and teaching/material production (curriculum development and teacher training). Such a centre (Appendix W) could assist each training unit within NIHS to become more field responsive and learner aware in the formulation of curriculum as well as in the setting of teaching objectives.

An example may be cited illustrating how learner analysis could make a difference in curriculum development. During our interviews, it was noted that PHM trained in midwifery for one year at nursing schools often lost what little confidence they gained during their training by the time they

entered the field. According to the existing training schedule midwives receive one year of midwifery training and are then sent to a Part II Centre for six months of community health training. There are eight permanent and three temporary Part II Centers. NIHS has one center and is responsible for the development of training at the others. PHMs are supposed to have participated in 20 deliveries by the time they finish. Their experience was substantially less than this. PHMs after this type of training often avoid deliveries if they can.

In the NIHS field area, a scheme was initiated to bring in PHM from the field for two day rotating periods in order to backstop hospital staff as well as to upgrade PHM skills. Field midwives were often found to request leave when asked to go for hospital duty, or else they ended up doing only menial tasks, being treated as second rate workers. A brief learner assessment of this problem conducted by the consultants and NIHS faculty led to the suggestion that PHM trainees be given a two to three month internship in midwifery at appropriate district or peripheral hospitals in the last months of their Part I training. A solution option to the problem would entail streamlining Part I PHM training. Discussions with PHM indicated that there was considerable overlap in much of the course work given during Part I and Part II training, and that streamlining was possible. Moreover, it was noted that in as much as students were not tested for non-midwifery subjects taught during Part I, they were not treated very seriously by students prior to community health training.

This case is cited because it illustrates the kind of learner assessment an envisioned Education Science Centre could conduct (in greater detail) in conjunction with NIHS training units, in this case, the Family Health (MCH) Training Unit. This team of trainers could be employed to specify how Part I and Part II PHM training could be better co-ordinated and made more field responsive. Overlap training areas could be identified enabling a case to be made for streamlined Part I class training followed by a midwifery internship. NIHS could play an important role in facilitating a meeting between Part I and Part II Training Centres to discuss such curriculum changes. Moreover, field monitoring by a combination of Education Science Centre and Family Health Training Unit staff could provide the basis for field responsive refresher courses tailored to suit the needs of PHM in field areas where the number of home deliveries is significant.

In similar fashion, these staff could be instrumental in conducting a "follow up" learner analysis of the field activities of PHM field staff involved in community health work. Several field trainers interviewed noted that there was a need to look into how PHMs go about the job of carrying out the 17 functions and 41 tasks assigned to them. While their job functions have been divided up on paper into primary and secondary functions, trainers have little idea as to the actual priority given to these functions by PHM in the field, how long they take, or how they are scheduled. Learner analysis and HSR research could play an important role in making Part II PHM training more reality based.

A last point may be raised with respect to field relevant training. At present, NIHS has developed little in the way of training guides for PHMs or PHIs in regional languages. When a PHM is placed in the field, she carries little with her other than her class notes. The need for developing Sinhala (and Tamil) teaching materials is of high priority and must be addressed. At present, NIHS does not have curriculum development

or educational materials production staff members on the faculty. This is another reason for developing an Education Science Centre within NIHS. The mandate for such a centre should be the creation of practical, reality based teaching materials which draw upon case studies from the Sri Lankan context.

What is not needed is a centre which simply translates training texts available in English.

To ensure that materials are relevant to the Sri Lankan context, processes need be set in motion at NIHS to bring exemplary field staff and regional trainers to NIHS to participate in teaching material production. At present, such processes do not occur and NIHS is losing an opportunity to learn from experienced field staff, as well as for tailoring training in specific skill areas fitting regional health service problems.

The creation of a training/monitoring (learner analysis, HSR) division of the Education Service Centre would also ensure the field material be brought into the centre for the production of teaching materials. The health education as well as the MCH training units could play key roles in helping the Education Science Centre staff develop training materials for PHM programmes. Likewise, the environmental health, health education and epidemiology training units could play key roles in developing training materials for PHIs.

At present, the Planning and Management training unit is making the greatest strides in developing field responsive training. Mid-level management courses taught on an in-service basis have been followed up and evaluated leading to an upgrading of course material. Participants are asked to develop and attempt to implement an action plan based on their field service realities. This kind of field responsive problem solving activities need be encouraged and further developed with NIHS. It is through engaging in the experience of such activities that training units will become field responsive.

I. EVOLUTION TOWARD DECENTRALIZED TRAINING

In keeping with the government's policy to move toward de-centralization in the health sector and in keeping with the health service management and training needs of the country, NIHS has explored the possibility of decentralized in-service training. A first step toward the latter is the development of a well organized management training programme responsive to regional needs and capable of training trainers as well as offering the latter back-up and support. The Planning and Management Training Unit has been taking steps to develop such a de-centralized mid-level management training programme. (See models on pages 85 and 89).

NIHS has conducted a mid-level management training course for four years beginning in 1981. The Planning and Management Training Unit feels confident that it is now ready to embark on a de-centralized training scheme wherein regional trainers may be developed to meet the enormous need for management training throughout the country. This need is ongoing due both to staff transfers and new staff entering, as well as the need for continuing training in an open ended management development process.

Training, it is proposed, may be facilitated by the creation of regional

in-service training centres in four different locations as presently conceived by NIHS. These regional training centres, may be created out of upgraded Part II Midwifery Training Centres. The consultant team supports the idea of regional centres in principle, and sought the opinion of potential training staff for these centres. Two of the envisioned regional centre sites were visited by team members. One at Galle, seemed to have little to offer as a regional centre in its present state. The training facility is in the Fort area and it is far from the field. This has made PHM training problematic and the trainers at this location frankly felt overwhelmed at the prospect of developing a regional centre at this site. The other centre at Kurunegala, seemed ideally suited to be developed as a regional training centre. The physical facility could easily be upgraded and is well placed.

The senior MOH of the area was interviewed as to the prospects of this PHM Part II Centre becoming a trial regional in-service training centre. The MOH, an experienced PHM trainer with advanced teacher training, agreed with the need for such a centre. He pointed out that a training director's post would need to be created and an additional MOH assigned to the area affording the training director adequate time to manage in-service training. The MOH pointed out that he is called for numerous duties during times when he is involved in PPHM training and staff supervision. The MO (MCH) of the region voiced the opinion of several field trainers in suggesting that such a centre should also engage in yearly PHM refresher training courses lasting two to three days' duration.

Another form of training which may be de-centralized and carried out at regional centres is team training. The Planning and Management training unit has experimented with two team training courses for PHIs and PHMs as an alternative to the present system of providing refresher courses to these staff every seven years. The consultants interviewed PHIs and PHMs who had attended both kinds of training exercises. It was found that the pre-existing refresher courses were often loosely structured training exercises which were enjoyed as a work break, but not deemed particularly useful. Team training courses, on the other hand, were considered very useful by all staff interviewed. Field staff and community members alike pointed out that where PHIs and PHMs worked closely together, health care provision and community participation in health activities increased. Staff who had undergone team training were clearly able to specify what they had learned and were quick to note how knowledge of each others' tasks afforded closer working relationships.

"Now we have better knowledge of what a PHI does and can do. We see areas where we can work together which we did not think of before like in the area of bowel disease control and dehydration treatment. Before, we each did our own work. If something came up which was not our duty, like giving advice about where to build a latrine, we simply said that it is not our job. Now we know that a PHI knows such things and we are not shy to ask him either. The community accepts us better when we are seen as a team, not separate workers coming and going."

In order for team training to be introduced as in-service training to the large number of PHC staff who will benefit from it, training will have to

be de-centralized. In this regard, it would seem prudent to develop Kurunegala as a team training centre, using the present MOH as an initial de-centralized "team trainer".

One more aspect of de-centralized may be discussed - the de-centralization of Health Service Research. This is an important step in a de-centralized management process. One of the possibilities considered by the consultants was for NIHS to play a facilitative role in the de-centralization of Health Service Research. This role accords with NIHS' present role in providing mid-level management. PHN, MO (MCH), and HEO were interviewed about the usefulness of their training. All stated that the training they received was useful, but most noted that they were not in a position to utilize this training to the extent their trainers might have hoped.

One set of recommendations proposed by the consultant team was that NIHS Health Service Research facilitator mobilize an HSR team at the RDHS level. The regional team's mission would be to identify priority HSR problems, conduct action research and propose solution options to the RDHS who would then implement action plans. What was envisioned here was "client driven" HSR research facilitated by NIHS which would act as a HSR technical resource. (See appendix S).

The consultants interviewed four RDHS about the proposed regional HSR team concept and NIHS potential role as facilitators the process of HSR in the regions. In all cases, they met with an enthusiastic response by the RDHS and those staff who would be involved in the HSR team exercise.

It may be reiterated that NIHS's role in de-centralizing HSR research is seen as following from its health service management mission. NIHS training would benefit from such an endeavour through an increased appreciation of regional health service problems, increased experience in the facilitation/problem solving process and wider contact with an extended network of field staff.

J. CURRICULUM ASSESSMENT

1. PUBLIC HEALTH NURSE (PHN)

The one year post basic PHN training course has not been conducted at NIHS for two years. It is the team's suggestion that this is an excellent time to review the curricula of PHN training in relation to a team management principles and an analysis of present supervisory functions. It is suggested that this review be based on a time utilization study of how PHN presently spend their time in the field. Interviews suggested that a majority of PHN time is spent arranging and functioning in clinics. A secondary function (in terms of time allocation) seems to be PHM supervision largely through record reviews. In keeping with the PHC management mission of NIHS, this situation needs to be reviewed. Post basic PHN training needs emphasis through HSR and management exercise classes - skills enabling PHN to become a problem identification-objective setting resource for PHM.

2. PUBLIC HEALTH MIDWIFE (PHM)

PHM training is certainly in need of review. In keeping with the remarks already addressed to PHM training in section 8.0, it is proposed that curriculum revision be undertaken with a goal to:

- 1) Better co-ordinate Part I/Part II training
- 2) Streamline Part I training, providing a two to three month period for a midwifery internship
- 3) Develop field practice objectives which better accord with Part II classroom lectures
- 4) Develop in Part II training, individual objective setting skills through field area analysis
- 5) Provide an opportunity during Part II training to develop a better understanding of PHI functions by spending two weeks going to the field with PHI - an initial exercise toward teamwork building

3. PUBLIC HEALTH INSPECTORS (PHI)

The PHI curriculum was revised in 1979 by a WHO team and five suggestions for change were made, not least of which was an extension of the course from its present one year duration to an 18 month duration. This suggestion has not been implemented, although supported by NIHS faculty. The consultant team suggests that the very role and scope of work of the PHI be reviewed again. There is presently an identity crisis brewing for the PHI, as staff of the Housing Board and Water & Drainage Board encroach upon some of the PHI's long established role functions. It is suggested that the PHI programme be reviewed in relation to a broader multi-sectoral management role as well as a role in ecological systems analysis. These roles would require environmental health and occupational health skills, but involved the PHI more as a "problem solving facilitator" than merely an "inspector". These recommendations are made on the basis of several interviews with successful PHIs. These individuals were asked to list the reasons underlying their success with the community. In all interviews, multi-sectoral linkage links emerged high on informants' lists. It is suggested here that team training for PHI to be extended beyond work with PHM to include liaison work on health related topics with agricultural extension workers, rural development officers, etc. It is also suggested that PHI be provided additional practical technical skill training, like that of pumps maintenance.

Finally, and most importantly, the consultants suggest that PHI training need be more field based and not be limited to a two week rural and a two week urban field experience. The consultants applaud the Deputy Director Training's recent efforts to institute one day a week field training for PHI. We question however, whether this should not be two days a week. The curriculum of PHI training should perhaps undergo a thorough review and modification.

4. ASSISTANT MEDICAL PRACTITIONER (AMP) PROGRAM

NIHS currently utilizes the AMP curriculum of the University of Colombo. The basic course document was reviewed. In addition, Phase II basic Sciences, Community Health, Field Work Requirements, Basic Surgery, Obstetrics, Medicine, Gynaecology, Science and special units on Pathology, Parasitology, Community Medicine, Environmental Sanitation were reviewed.

Discussions with the principal faculty and course directors for the AMP programme at NIHS and Peradeniya were held. Clinical sites at Kalutara Hospital were visited, including wards diagnostic services and out-patient department. Three field stations were visited where AMPs are assigned and two AMPs were interviewed directly while working at their assignments (one at Kalutara OPD and one at Dharga Town.) Clinic rounds were made. Students were given an oral examination on case simulation or asked to discuss a case on the ward to test basic cognitive information and problem solving ability.

With regard to NIHS, three classes are currently in progress. Each class is of thirty six months duration. Curriculum begins with a heavy introduction to basic sciences, moves to a period of cognitive information transfer in the major medical disciplines, then moves on to a community out-reach experience and culminates in a four to six month internship.

A number of key issues surfaced in the data gathering phase which need further attention. These included concerns about:

- a) Ultimate class size.
- b) Amount of curricular time devoted to basic sciences.
- c) Quality of clinical supervision.
- d) Adequacy of clinical sites for phases II, III & IV.
- e) Under use of field sites as teaching resources.
- f) Insufficient clinical leadership of AMP program.
- g) Lack of sufficient practical clinical experiences in phases III & IV, and the internship program.
- h) Lack of ability to effectively take a community leadership role in health matters.
- i) Insufficient opportunity for clinical elective time to choose rotations that more effectively correlate with job assignment.

In conclusion, curricula material as written appears adequate. Clinical emphasis in relationship to job assignment is underemphasised. An excessive classroom lecture methodology is the norm. Clinical supervision and instructions by clinical faculty should be enhanced by more physicians being involved in clinical training.

K. CAPACITY OF NIHS FOR INSTRUCTIONAL PURPOSES

The issue of capacity requirements to meet current and expected training needs is a complex question that, given currently available information, can only be partially addressed. More work is needed around the variables which are presented over the rest of this section. Appendix F lists the long term and short term courses offered. Appendix G reviews enrollment statistics, and Appendix N compares existing faculty depth with what is thought to be necessary by NIHS. The review team, while agreeing with the need for additional staff would emphasize that there is need for a more emphatic move to "management specialist" staff and not simply expanding and duplicating existing public health staff and the associated existing attitudes."

Capacity for education purposes will be influenced by a number of factors. The consultants assume that the majority of new constructions will be utilized for education support. In order to determine optimal capacity, the following variables need to be considered:

- Analysis of present and future space as to percent available for teaching, research, faculty offices, administration and student support.
- Proposed number of course offerings with minimal and maximal enrollments and supporting needs (library, audio-visual, etc.)
- Length of course offering
- Breakdown of available instructional space into percentage of classrooms, laboratories, demonstration theatres and multi-disciplinary functions.
- Nature and strength of faculty support by course and predominant educational modality. (Suggested standards)

<u>FORMAT</u>	<u>FACULTY STUDENT RATIO</u>
1. Lecture Format	1:50
2. Seminar Format	1:10
3. Clinical Instruction	1:40
4. Laboratory Demonstration	1:25
5. Laboratory Student Experiments	1:10
6. Field Survey	1:10

- Negotiated Faculty Responsibilities:

1. Faculty student classroom contact hours
2. Faculty student man hours of instruction

3. Faculty classroom assignments
4. Faculty committee time
5. Faculty research time
6. Faculty student non classroom time counselling, etc.
7. Faculty course preparation time
8. Faculty time for grading assignment, term papers, etc.
9. Faculty clinical responsibilities
10. Faculty availability, vacation, holidays, sick time, personal leave, administrative leave, fellowship/advanced training
11. Travel time of faculty to and from work
12. Travel time to and from field service teaching units
13. Net-full time equivalent faculty available for duty

- Available logistics to support education:

1. Number of vans, buses, vehicles
 2. Lead time of educational support unit required to produce slides, teaching materials, etc.
 3. Capacity of library, availability of texts
 4. Available dormitory space, eating and recreational facilities
- Faculty assignments and sequencing for more than one course and/or one group simultaneously; i.e. orientation to health systems for AMP, PHI and PHM.
 - Centralized room scheduling capacity
 - Standardized unit of instructions - 50 minutes vs. 70 class unit
 - Faculty depth for minimal FTE instruction; i.e. if one FTE bacteriologist required, in actuality must staff for two to cover vacations, leave, other assignments.
 - Availability of adequate clinical material. This will need constant attention, as the field service area of NIHS may become less representative of the needs of the country as a whole. If, for example, it has better water, hygiene, housing and increased exposure to health education, this will change the nature of pathology available for student educational material.

- Equipment, space, clinical material, instructions required for course work leading to preparation for clinical medicine; i.e. physical diagnoses, history taking, interviewing, skill development.
- Addition of new courses may impact on capacity. For example, a number of management courses, laboratory technology course, short term CME course, enrichment course, etc.
- Willingness to expand formal class time to more effectively use evening and weekend hours for instruction.
- Competition by existing faculty for new course offerings such as by a research unit, educational unit, management unit, etc.

As is amply demonstrated in this listing of variables, substantially more information needs to be drawn together before a meaningful statement of capacity can be devised for which, incidentally, computer programmes exist. In particular, it is suggested that additional and special attention be directed to:

- 1) length of existing course,
- 2) spacing and sequencing of classes,
- 3) specification of faculty responsibilities,
- 4) impact of NIHS new mission arising from this review and MOH decisions.

In the short term, it would be prudent to suggest NIHS take immediate steps in standardizing curriculum with a reduction in basic sciences, enhancing clinical teaching and more creatively utilizing existing field sites for instruction.

Finally, the issue of capacity can only be addressed most fully in the context of NIHS serving as the hub for a series of regional de-centralized centres, each offering components and extensions to what NIHS now does. De-centralization is a MOH central decision. If operative, the functional consequences will be that NIHS in Kalutara becomes a logistics, controlling, auditing and managing centre. It still will be involved in training and research, but now with the capacity to significantly increase its output of health manpower geographic locations close to the primary health care needs of the people.

L. FISCAL ASSESSMENT NIHS

A very limited budget assessment was performed. Two basic documents were reviewed. These are shown in Appendix I - Institutional Profile, and Appendix Y - NIHS Budget. A number of points can be made:

- 1) It is difficult to separate authorized budget and appropriated budget from proposed budget.
- 2) A satisfactory provision does not appear to be made for inflationary trends.
- 3) Expenditures by budget category are not available.

- 4) There does not appear to be an adequate provision for bringing the faculty fully "on stream" and maintaining it.
- 5) The recently announced raising of salary ceilings can be expected to have a major impact on revenue requirements. This has yet to be incorporated into budget statement.
- 6) The NIHS may benefit from attempting to introduce procedures to manage its fund around its objectives, rather than adhering only to administrative regulation.

V. METHODS

A. PROCESS

The complex nature of the micro and macro, internal and external dimensions of our analysis required the consultants to employ a variety of methodologies in their endeavour to shape a strategic plan for NIHS. They paid careful attention to process issues while information gathering, attempting to act in a culturally sensitive manner while engaging in deliberate and planned role postures. Interactive interviewing was employed to provide the NIHS director an opportunity to observe the response of key individuals to innovative ideas and queries.

The components of this process are listed for two reasons: first to ensure that the consultants have been comprehensive and thorough in their approach and second, to point out that the strategic plan was developed with considerable participation by the NIHS and the MOH. In the last analysis the utility, implementation, rational choices and options must be decided by the MOH, for which the involvement of the MOH in the early stages of thinking is crucial.

1. Team Composition

The team selected is composed of individuals with a wide breadth of experiences in management, technical planning, health care organization, medical and allied health education, strategic planning, system analysis, operations research, and behavioral and cultural organizational theory.

In order to assure that the team was knowledgeable in the Sri Lanka Health Systems, two members were recruited with prior experience in the country. The third team member has wide international experience as a Technical Consultant to numerous governments, private and philanthropic organizations and international agencies.

2. Pre Planning Team Conference

Prior to arrival in Sri Lanka, a two day team orientation meeting occurred. Representatives of USAID, Washington, Management Facilitators Inc., and the REACH Project - John Snow Inc., all met with the team to review previous evaluations of AID Projects; the proposed scope of work and how team members' background and strengths would contribute to the project. A tentative work plan and allocation of responsibilities was developed. Available background material was reviewed.

B. INTERVIEW STRATEGY

Three levels of interviews occurred. First specific information, in a specified format that was clearly definable was obtained. Structured interview data was verified usually from more than one source. A second type of interview was theme centered. A key informant was asked to give his opinion, judgement or beliefs pertaining to a particular topic. This type of strategy required frequent confirmation and clarification of what was perceived and said.

Within the interview structure various combinations of data sets and force fields were developed. A force of field analysis required the interviewee, with the assistance of the interviewer, to prioritize, make decisions and determine consequences of certain actions. Underlying assumptions were postulated as desirable prerequisites or simply wishes.

PHC field staff who were viewed as successful by colleges were interviewed. Causes and determinants of success were obtained. Faculty interviews were conducted using various group configurations: mixed faculty-staff groups, individual junior and senior faculty groups.

C. PROBLEM SOLVING ACTION GROUP

A special seminar was designed to test problem solving skills, group behaviour in prioritization, consensus development and to introduce the concept of action research. Appendix I provides the working documents, handouts and preliminary priority statements determined at this workshop.

D. SPECIALIZED METHODOLOGIES - MACRO, MICRO AND AIDA ANALYSIS

Two techniques borrowed from economics, micro-environmental analysis and macro-environmental analysis were incorporated into the tools used to develop strategic options. Micro-environmental analysis required attention to inter-personal, inter-organizational and detailed systems analysis of the National Institute of Health Sciences. Frequent personal interviews, inspections of facilities, field trips, document analysis, student interviews, observations of classes, hospitals, clinics and science units, curricular analysis and community about the operations of the NIHS as a system were obtained. Data obtained was qualitative, as well as quantitative, anecdotal, as well as precise and detailed.

Macro environmental analysis required a special focus on the external factors influencing NIHS directly and indirectly. This required information about decision making at senior levels of management, access to long range planning at the ministerial level, political and policy inter-dependence between ministries and an analysis of the contributions of external groups such as WHO, UNICEF, UNDP, USAID, Universities in Sri Lanka, Planning Units, and Bureaus.

E. GROUP CONTACTS, FEED BACK SURVEYS

Throughout the course of the data gathering phase frequent sessions were held at both macro and micro levels to ensure participants were able to test and react to information that was being obtained. The Minister and Secretary of Health were asked to comment on long term planning, organizational patterns and reporting responsibilities. The Director and

Deputy Directors of NIHS previewed recommendations and participated in a modified delphi analysis to identify likely and unlikely combinations of events, priority areas etc. Faculty and staff were asked for impact statements on the effect of certain decisions on their unit of functioning; i.e. increased enrollment of AMPs, uses of field clinics as teaching resources, research possibilities, etc. Faculty and teaching units completed surveys as to distribution of effort, curricula hours and educational methodology.

F. DOCUMENTATION AVAILABILITY

The appendices in volume II of this report identify the background material used, material required, personnel interviewed, places visited, etc. Additional background material can be found at the WHO office, the Ministry of Health - Planning Division & USAID information library.

VI. RECOMMENDATIONS

The consultants have prepared a series of recommendations and grouped them into fourteen categories. Where sufficient information exists, recommendations are specific and action oriented. Within categories recommendations are largely listed in order of priority.

Table I on page 79 depicts the flow of information and the functional relationship of the recommendation components that comprise the NIHS strategic plan.

The recommendations are clustered in to the following groupings; administrative, linkages, relationship to RDHS, regional centres, internal NIHS development, curricula planning, training analysis, field practice area, Kalutara hospital and priorities for technical assistance.

A. ADMINISTRATIVE STRATEGIES AND OPTIONS

1. ORGANIZATIONAL

- Convene a policy level conference to review recommendations and confirm directions and priorities for NIHS growth. Because of wide implications, the conference should be chaired by the Minister of health or Secretary of health with representations of senior management and relevant constituencies as necessary.
- Create a central health manpower development unit to strengthen coordination between service planning, training and staff employment and utilization - possibly linked to the planning unit (see details in section III).
- Reposition the NIHS in the MOH organizational structure to better facilitate its changing role - location in the planning division appears appropriate in the existing structure.
- Develop a computerized personnel information system at central and regional levels to support the management development process - location at the centre possibly in the administration unit.
- Develop a computerized management information training capability at

NIHS to support development of necessary skills in the regions - initial concentration might focus on training information.

- Expand current manpower planning models to project both basic training and continuing education needs to provide a basis for more manipulation of training resources particularly at NIHS and its possible satellite units.
- Long term technical assistance to NIHS supported by donors should be focused on single areas. Continuity of assistance rather than short term consultation should be emphasised. Some examples of supportable areas include: teacher education, manpower research, library and audio-visual development, management education, health service research, equipment and plant maintenance.
- The NIHS should seek to create a model field practice area with exceptional requirements for staff of proven performance in order to make the role model approach to training an effective one.
- Move towards the creation of decentralized and expanded training capacity under the direct control of NIHS - conversion of selected part 11 PHM training facilities would provide a possible network.
- Strengthen the formal links between NIHS and RDHS by charging NIHS with responsibility for determining (with RDHS) post basic, continuing training and health services research needs in the regions.

. STAFF PERFORMANCE

- As part of the management development process focus on training an effective staff. Improving personnel performances through improving and building on existing specification of regional objectives and translating these into staff performance goals.
- Regional directors of health service should be encouraged to explore opportunities for providing incentives in recognition of individual achievements and teamwork.
- Anomalies in the current pay and career structure is affecting teaching staff motivation. A major ministry wide review appears necessary which should include the designation of sufficient professional non-medical posts to create a viable career prospects for attracting management specialist staff.
- All NIHS staff (faculty & field) should have yearly assessments which are based on staff/supervisor objective setting - this should follow from an initial step of setting NIHS and divisional objectives.
- Social recognition and certificates of excellence should be used to award outstanding performance among faculty and field staff.
- End station position possibilities should be created for NIHS faculty, hospital and field staff to strengthen teaching quality and continuity. These positions should be controlled by NIHS and staff be subject to recurrent assessment.

- Field supervision must become a more meaningful part of the educational program. This will require adjustments of travel allowances to more realistic levels for staff to undertake this duty willingly.

B. LINKAGES OF NIHS TO OTHER AGENCIES AND ORGANIZATIONS

- Visiting lectureships and faculty exchange between NIHS and other academic institutions encouraged
- NIHS establish links with the university of Colombo and Peradeniya to foster joint teaching and research programs relating to health service research, teaching, development and management issues.
- NIHS explore university affiliations that would provide bilateral technical benefits to the university and NIHS
- NIHS explore membership in networks for community oriented primary health care and ongoing relationships with foreign universities sharing similar research and development goals. For example, University of Hawaii, University of Arizona, The Johns Hopkins University.
- NIHS to establish a working relationship with Sri Lanka Institute for Development Administration as a management education resource.
- Develop links between the following training units of NIHS and external agencies:

Develop the following linkage:

TEACHING UNIT	EXTERNAL AGENCIES
Health Education	Health Education Bureau
Family Health	Family Health Bureau
Epidemiology	Epidemiology unit
Environmental Health	Water and Drainage Board Housing Authority
Education Science Centre	University, Department of Education Colombo Plan Education Centre
Planning and Management	Management Departments of Universities, SLIDA
Research Resource Centre	Departments of Sociology at Universities
Biomedical Science	Medical Education WHO Collaborative centre, University of Peradeniya, Community Medicine Department

C. PROMOTION OF LINKAGES OF NIHS TO OTHER AGENCIES AND ORGANIZATIONS

- During quarterly meetings of RDHS, provide for discussion about research and training
- Arrange an inter-regional symposium on management development and training issues
- Provide a workshop for RDHS in action Health Service Research (HSR)
- Develop modular continuing education approach to management training and HSR linking course objectives to the "client driven" needs of RDHS
- NIHS to provide HSR facilitators to regions to mobilize regional HSR teams composed of RDHS staff having mid-level management training
- NIHS to serve as an HSR and management training resource center for a network of RDHS
- NIHS to coordinate/convene biennial RDHS-HSR workshops where the outcome of action research will be discussed and experiences compared.

D. REGIONAL TRAINING CENTERS

- NIHS should develop and maintain a regional network of decentralized training facilities for which it is administratively and technically responsible.
- At a minimum, two to four centers should be established. Centers should offer courses in mid-level management training, team training, as well as refresher courses for PHM and PHI.
- Medical Officers of Health (MOOH) and District Health Officers (DHO) will receive continuing education in management at these centers.
- Regional training centers should have full use, consultation and technical assistance from core NIHS faculty and staff. Periodic monitoring by the NIHS Educational Science unit should be established.
- An MOOH regional training director post be created.
- As in the NIHS field training area, attention should be given to the selection process for field staff at decentralized training centers to ensure the adequacy of role models.
- As in the NIHS field training area, provision for end station staff positions based on positive concurrent assessment.

E. HEALTH SERVICES RESEARCH

- NIHS only engage in Health Service "action" research.
- NIHS establish a research resource center and recruit necessary support staff.
- The research center primarily supporting existing teaching units, should not exist as an autonomous research unit.
- Two HSR facilitator recruited/developed, one to work with the education science center training monitoring division, the other to work with RDHS in an effort to decentralize HSR research.
- Special attention paid to securing a research coordinator for NIHS who may ensure that HSR is fostered within the training units, projects are tracked, project review undertaken and inter-disciplinary/intersectoral needs are addressed.
- A review and steering committee on research should be established within NIHS.
- An annual research fund secured for action research controlled by an NIHS research steering committee.
- A procedure is worked out to secure donor funds and to request additional funds for action HSR research from MOOH.
- NIHS should initiate HSR first in the NIHS field practice area and then in one area designated to be a trial regional training center area. HSR projects undertaken should be followed up and used as demonstration models.
- NIHS health service research activities at the regional level will be "client driven".
- Kurunegala is recommended to be developed as the initial regional center attached to NIHS where HSR is initiated.

F. NIHS INTERNAL DEVELOPMENT

- Re-evaluate training capacity of NIHS new facilities in the light of extended course requirement, new teaching loads (Laboratory technicians), short course needs and introduction of management, research and educational components.
- Create an education science resource center within NIHS having three divisions:
 - 1) teaching material production/teach training
 - 2) audio-visual production
 - 3) training monitoring and assessment.
- Create a Health Service Research Resource Center (see Appendix X) and appoint a research coordinator.
- Faculty positions and career structures for non-health

professionals be established through MOOH. Add the following non-health personnel to the NIHS faculty:

- Clerk Tutor
 - Statistician
 - Sanitary Engineer
 - Education/Curriculum Specialist
 - Social Scientist
 - Computer Programmer
 - Operations Researcher
 - Data Entry Clerk
- NIHS assume responsibility for management training operating in tandem with proposed MDU and Medical Officer of Health.
 - NIHS give priority to developing its Planning and Management training unit.
 - NIHS develop a modular continuing education approach to management training linking course objectives to the changing health service reality in the country. Management training is structured to be ongoing and supported by HSR.
 - NIHS assumes development of workshop on strategies for HSR and "facilitation" for RDHS.
 - Consider the future role of NIHS as:
 - 1) school for health related profession
 - 2) institute for primary care teaching and research
 - 3) Specialized center for mid-level management studies for primary health care.

G. CURRICULUM DEVELOPMENT: ASSISTANT MEDICAL PRACTITIONER PROGRAM

- Standardize AMP training on country level basis. Convene task force on AMP Curriculum. Review current requirements for basic science training. More closely correlate curriculum of AMP with jobs they will do. The needs of AMP in rural hospitals is different to needs in urban and/or outpatient departments.
- AMP training curriculum should be reviewed. Excessive time appears to be spend on theoretical preparation and less on on-the-job training skill development. Clinical supervision of AMPs should be strengthened. Consultants from the MEDEX program at the University of Hawaii could be asked to review this program.
- Enhance clinical supervision of AMP. Enhance the numbers of clinical faculty directly involved in AMP training both in the hospital and field setting.
- Intensity of clinical supervision of AMP students during Phase II, III, and IV should be increased. Optimal ratio of physician faculty to AMP would be 1:10.

- Inventory the availability of clinical teaching material in the Kalutara area to support Three AMP classes of trainees. Expand training opportunities to field unit both inside and outside of service area. Supplement hire of full-time physician clinical instructors.
- Conduct more analytic studies of AMP needs, locations, and assignments. Review future needs for AMP in light of physician manpower needs and distribution of health manpower.
- Strengthen AMP training in community negotiation, community leadership and community analysis. AMP appear unable to effectively communicate with village elders and leaders.
- Develop pilot project to train AMP with expanded capability to include AMP/geriatrics, AMP/school health, AMP/occupational medicine, AMP/cancer screening, AMP/chronic disease management, AMP/emergency medicine, AMP/manager.
- Upgrade Kalutara hospital teaching facility.
- Expand base hospital diagnostic capabilities of laboratory and x-ray.
- Add physical medicine and rehabilitation unit.
- Improve general level of hygiene and cleanliness of hospital.
- Develop expanded emergency room facility, upgrade ambulatory facility with examining rooms, modern diagnostic equipment.
- Add teaching seminar rooms and classrooms to hospital.
- Structure post graduate training of interns with additional conferences, formal rounds to occur with AMP, PMI, etc., participating.

H. CURRICULUM DEVELOPMENT: PLANNING AND MANAGEMENT TRAINING UNIT

- The preparation of course materials on management and middle-level management should be developed by the Management and Training Unit in coordination with regional training centers.
- A health service management text must be developed to fit the Sri Lanka health sector context.
- The Planning and Management Training Unit will require a management consultant to assist in the development of a management and administrative curriculum. Clarification from MOH will be required of the management responsibilities of different cadres of PHC staff. Management needs of Medical Officer of Health and District Health Officer should be differentiated.

- Short-term training courses in health systems administration protocol should be offered to new clerks entering the health service.
- This training unit should be encouraged to expand its in-service training workshop capacity in management for PHC workers and mid-level managers.
- Engage in the training of trainers for regional training courses on teamwork -- Begin a pilot project in Kuranegala.

I. CURRICULUM DEVELOPMENT: FAMILY HEALTH TRAINING UNIT

- Part One and Part Two PHM training must be better coordinated. Trainers from all training centers must routinely meet to review training curriculum
- Part One PHM training be streamlined to 9-10 months and a 2-3 month midwifery internship be established at peripheral/district hospitals. This training unit in conjunction with the education science center should play a role in the streamlining process by identifying overlap areas between Part One/Part Two training.
- Refresher courses in midwifery should be developed at regional training centers catering to the needs of PHM in areas where there are many home deliveries. This training unit should engage in HSR to identify those field areas requiring such courses, midwifery practice problems to be addresses, etc.
- Family Health Training Unit should guide MOH in allocating Part One PHM students to the various Part Two training centers. This training unit should carry out health service research to determine the actual training capacity of these centers based on the number of field staff capable of being used as role models for field apprenticeship.
- This training unit should develop and coordinate a decentralized three-day a year refresher course of PHM to be carried out at the regional level.
- The above refresher course should present common messages about health matters addressed by multiple health agencies in Sri Lanka (e.g. ORT). The planning of these three-day courses should be a joint venture by FHB, HEB, Epidemiology Unit, UNICEF, etc. The Family Health Training Unit of NIHS should coordinate the meeting.
- This training unit with the assistance of the education science center, should conduct learner analysis to determine how the PHM's multiple field functions and tasks are being carried out.
- This training unit should conduct health services research focussing on supervisory activities of PHN. Objectives for PHN supervision of PHM should be established and the process of supervision revised in the light of modern management principles.

J. CURRICULUM DEVELOPMENT: HEALTH EDUCATION TRAINING UNIT

- The role of a behavioral scientist should be created for the training unit.
- The Training Unit should play a key role in teaching material production assisting the education science unit develop culturally relevant, field responsive training materials.
- This training unit should focus attention on upgrading the communications and interviewing skills of PHC staff through practical exercise (e.g., role playing, simulated interviews, etc.).

K. CURRICULUM DEVELOPMENT: ENVIRONMENTAL HEALTH TRAINING UNIT

- The environmental health unit should review, with the assistance of a consultant, the present scope of work of the PHI and the degree to which PHI training corresponds to the scope of duties.
- This training unit should take the lead in considering how the present scope of work of the PHI might be changed in accord with modern management principles, the PHC team concepts, and a more modern eco-systems analytic perspective which has superseded a narrow environmental health focus.
- This training unit should consider the role of the PHI as an interactional team member acting as a liaison between health, agriculture and rural development workers.
- The duration of the PHI course should be extended to 18 months to afford for more field and technical skill preparation.
- Scheduling of PHI matriculation should be six months apart.
- PHIs training should include two field days a week in the NIHS field area during training. This training unit should play a key role in developing objectives for the range of activities carried out on these field days.
- Increased technical skills such as pump maintenance should be included in the PHI curriculum.

L. NIHS FIELD PRACTICE AREA

- Recognize the NIHS field service area as a field practice training area with respect to resource allocation and staff recruitment.
- Provide the Deputy Director of the field practice area with a field research coordinator (PHI tutor) enabling him to carry out model health service research in conjunction with the planning and management training unit and other training units.
- Provide the Deputy Director of the field practice area with some mechanism for carrying out concurrent assessment of staff and the

channels to remove ineffective staff and/or keep effective staff.

M. NIHS HOSPITAL

- Should be recognized as a training hospital and given resource provisions accordingly, not as a general Community Hospital.
- Upgrade faculty (see AMP recommendations).

N. REQUIREMENTS FOR TECHNICAL ASSISTANCE

- 1) Curricular Consultant in Management
- 2) Health Service Research
- 3) Education Materials Production
- 4) AMP Para-medical Training Curriculum

VII. MODELS

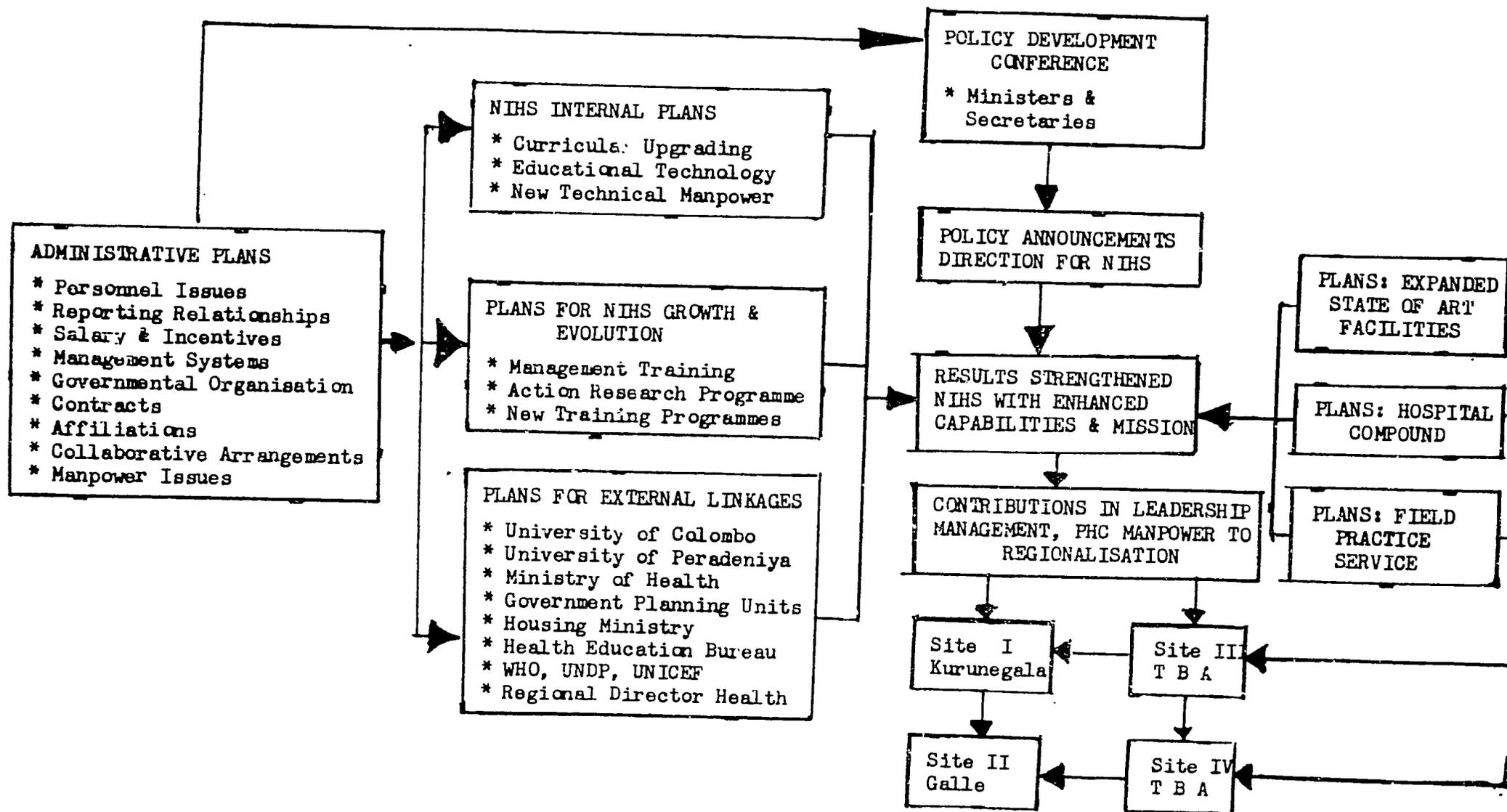
In the previous section, the arguments presented in the earlier part of the report have been translated into a set of recommendations. They encompass an array of changes touching many components of the complex system in which the NIHS operates.

In an attempt to make clearer the intention and substance of the recommendations, a series of pictorial representations have been prepared to provide visual pictures of the change process itself, the changes proposed and, systems relationships. The diagrams that follow shows:

1. elements of the strategic plan;
2. a recommended sequence for implementing selected components of the strategic plan;
3. strategic pathways for NIHS development -- systems design inter-relationships;
4. proposed regional role of NIHS in PHM training;
5. proposed role of NIHS in PHM monitoring and in-service training at the regional level;
6. composition of an operative education science center;
7. proposed role of NIHS as a facilitator of Health Service Research (HSR) at the regional level;
8. proposed NIHS regional facilitation functions and HSR
9. diagrammatic representation -- proposed research structure NIHS;
10. proposed membership in NIHS research resource center -- given IDRC funding.

DIAGRAMATIC ELEMENTS

NATIONAL INSTITUTES OF HEALTH SCIENCES



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2. RECOMMENDED SEQUENCE OF SELECTED COMPONENTS OF NIHS STRATEGIC PLAN

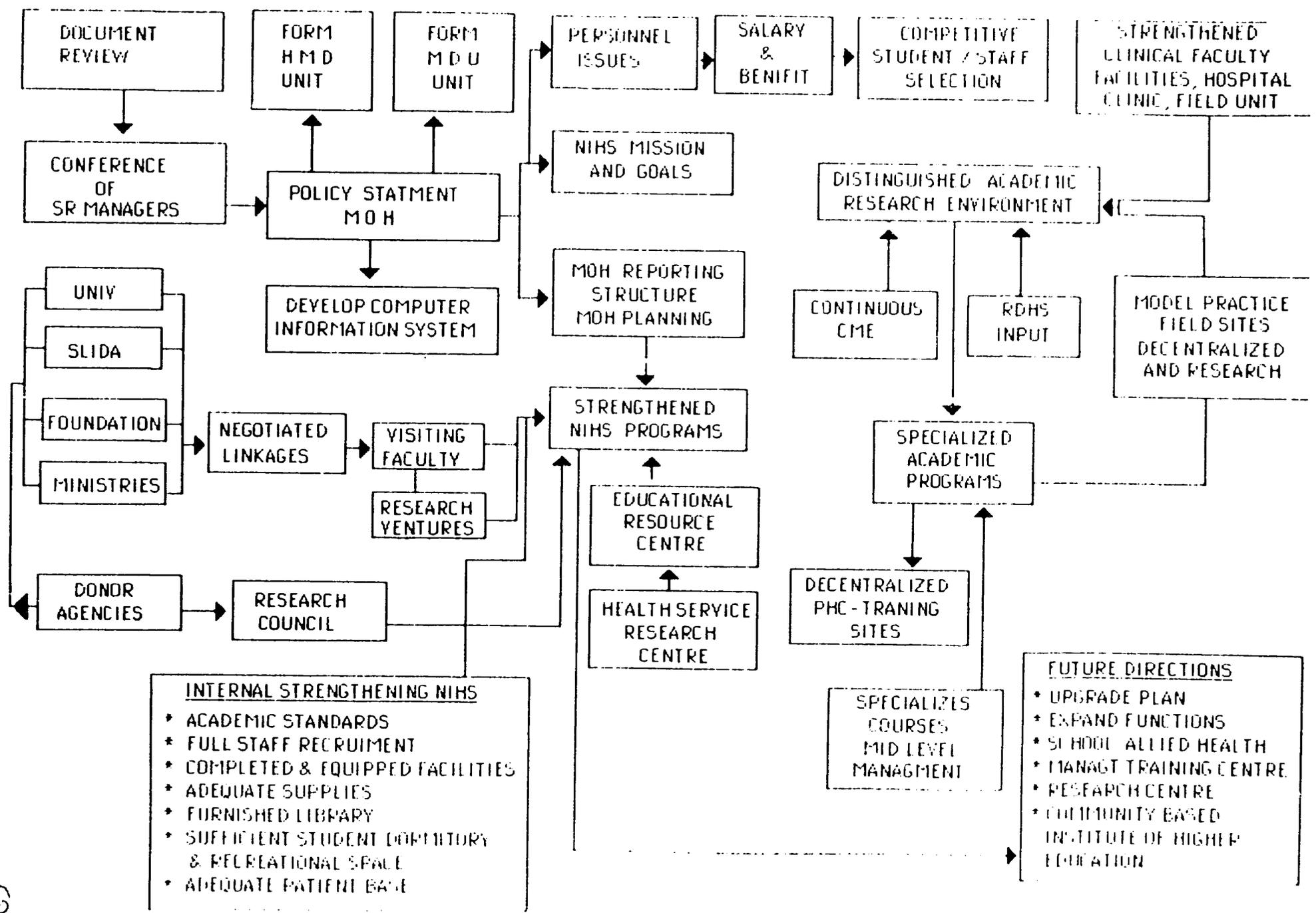
ACTIVITY		PHASES							
		I	II	III	IV	V	VI	VII	VIII
1.	Proposal Review	0	0	0	0	0	0	*	*
2.	Plan Update	*	*	*	P	P	P	0	0
3.	Plan Conference	P	0	*	*	*	*	*	*
4.	MOH Policy on NIHS	*	P	0	0	0	0	0	0
5.	Establish HMD	*	*	P	0	0	0	0	0
6.	Establish MDU	*	*	P	0	0	0	0	0
7.	Negotiate Ext. Linkages	P	0	0	0	0	0	0	0
8.	Strengthen NIHS Internally	P	P	0	0	0	0	0	0
9.	Establish HSR at NIHS	*	*	P	P	0	0	0	0
10.	Establish Education Service Centre at NIHS	*	*	P	0	0	0	0	0
11.	Establish Regional Academic Teaching Base	*	*	*	*	P	P	0	0
12.	Establish HSR Link With RDHS	*	*	*	*	P	P	0	0
13.	Teach Mid Level Management Courses	*	*	P	P	0	0	0	0
14.	Establish Management Information System - MIS	*	*	*	P	P	0	0	0
15.	Identify Ext. Funding	*	*	P	0	P	0	P	0
16.	Review All Curriculum. Implement Changes	*	P	P	0	0	0	0	0

NOTE: AT THIS STAGE, THE REVIEW TEAM CAN ONLY PROVIDE A LOGIC RELATIONSHIP BETWEEN THE VARIOUS DEVELOPMENT STEPS. NO DATES HAVE BEEN SET FOR COMPLETION OF THE PHASES. THESE WILL NEED TO BE DETERMINED BY THE NIHS WHEN IT BECOMES CLEAR WHAT RESOURCES WILL BE AVAILABLE AND ADDITIONALLY WHAT PATH THE MINISTRY ITSELF WILL FOLLOW.

KEY

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SYSTEMS DESIGN INTER-RELATIONSHIPS

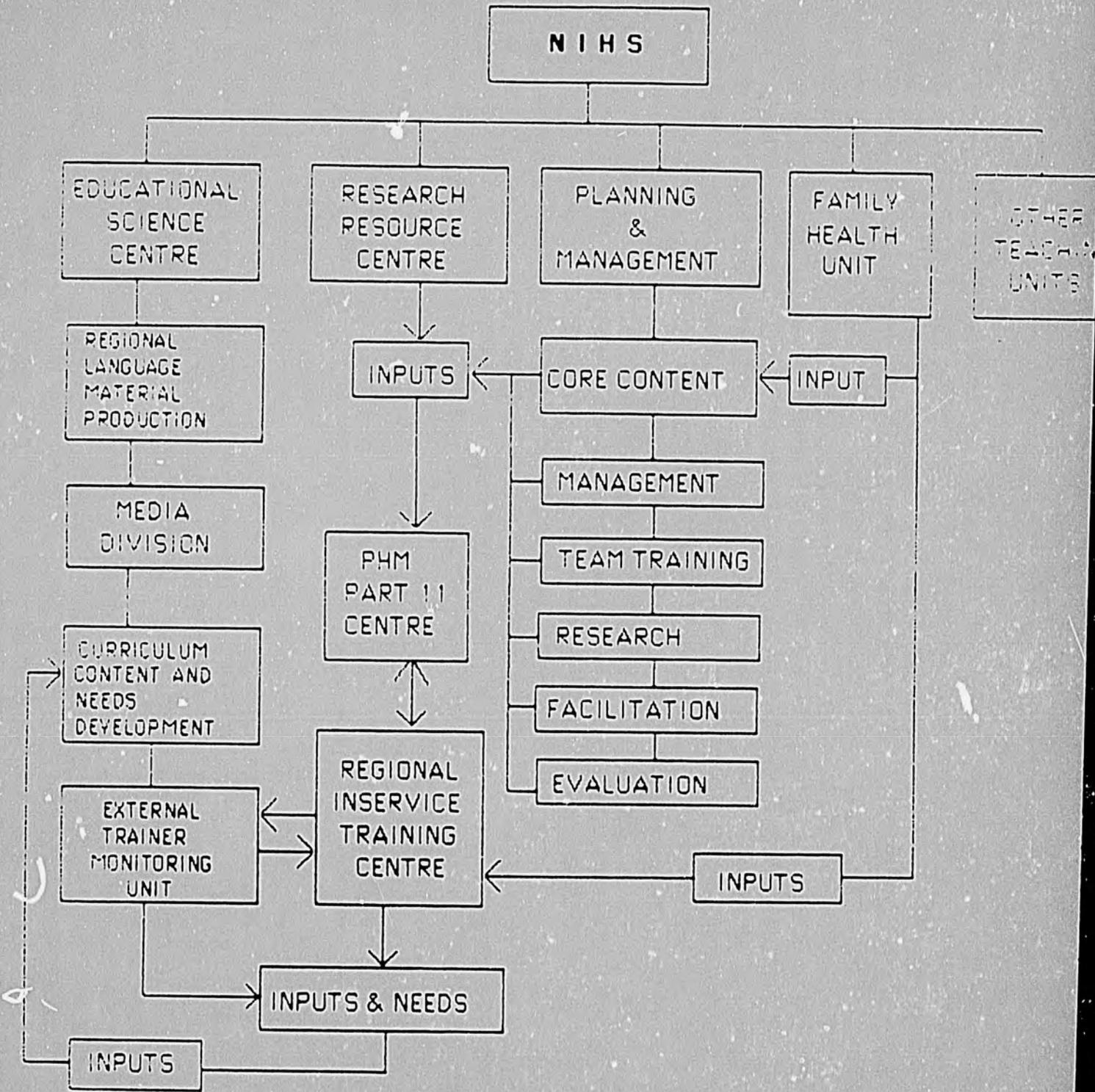


- INTERNAL STRENGTHENING NIHS**
- * ACADEMIC STANDARDS
 - * FULL STAFF RECRUITMENT
 - * COMPLETED & EQUIPPED FACILITIES
 - * ADEQUATE SUPPLIES
 - * FURNISHED LIBRARY
 - * SUFFICIENT STUDENT DORMITORY & RECREATIONAL SPACE
 - * ADEQUATE PATIENT BASE

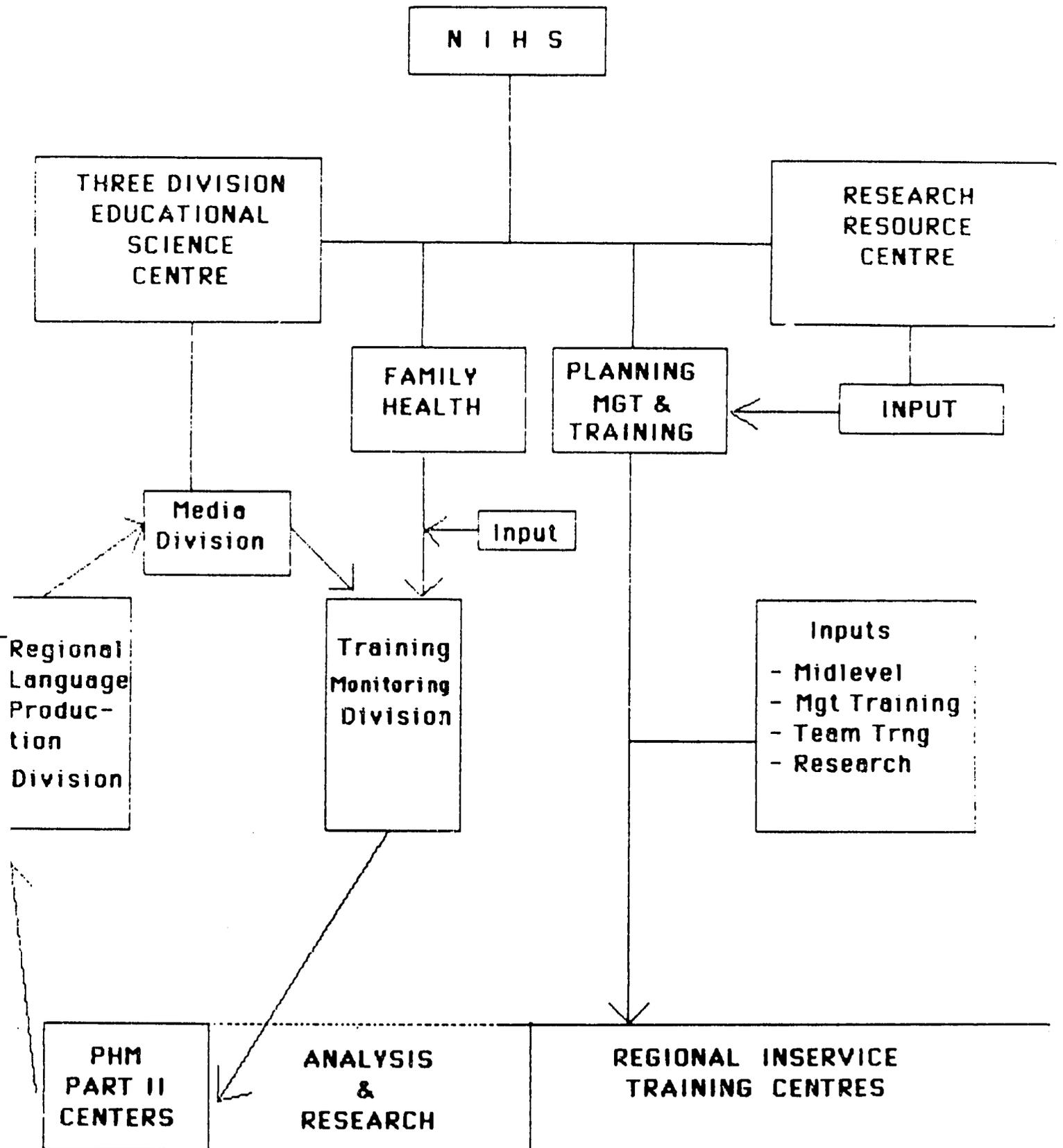
- FUTURE DIRECTIONS**
- * UPGRADE PLAN
 - * EXPAND FUNCTIONS
 - * SCHOOL ALLIED HEALTH
 - * MANAGT TRAINING CENTRE
 - * RESEARCH CENTRE
 - * COMMUNITY BASED INSTITUTE OF HIGHER EDUCATION

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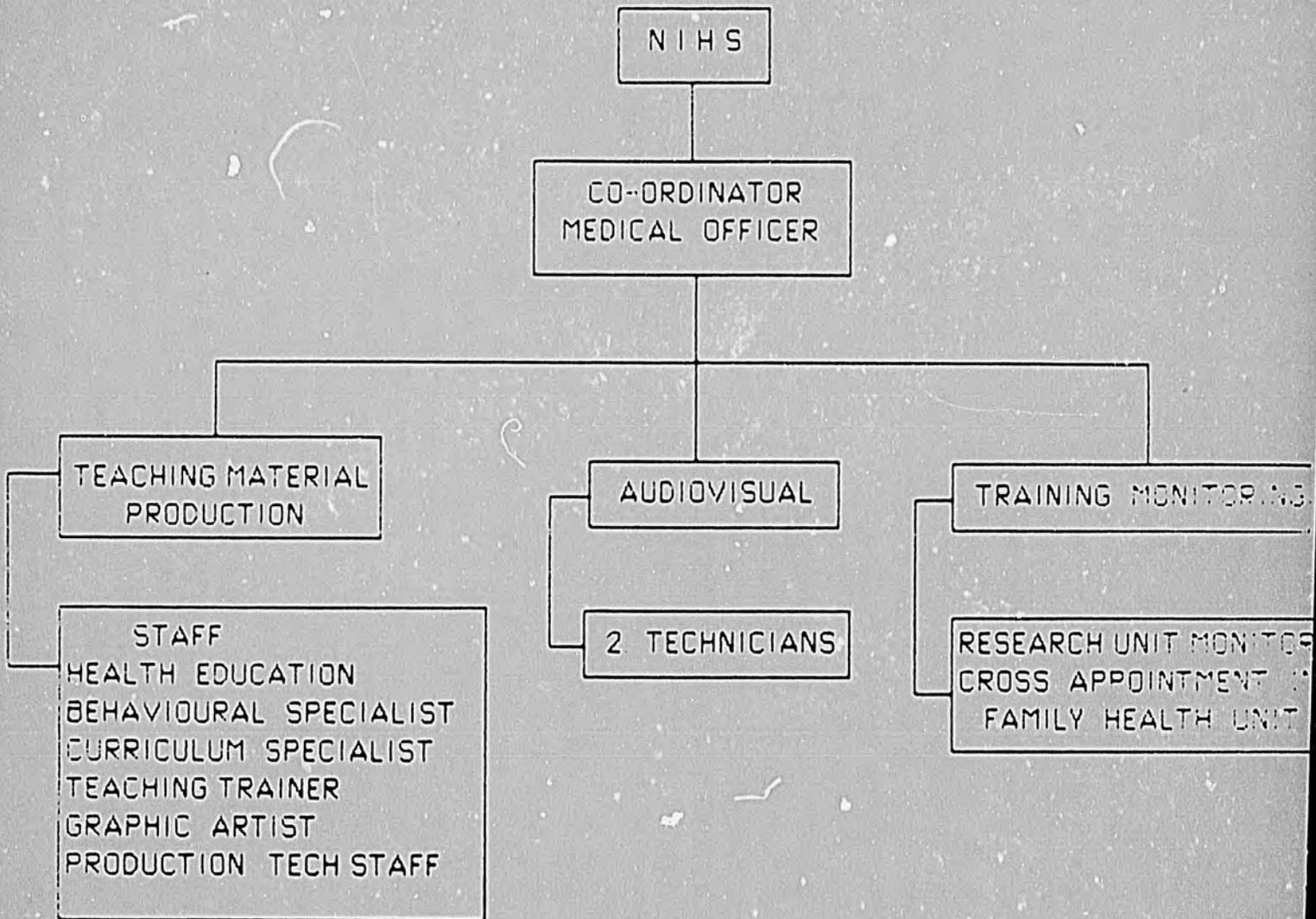
4. PROPOSED NIHS REGIONAL ROLE IN PHM TRAINING
 DIAGRAMATIC REPRESENTATION WITH FEEDBACK



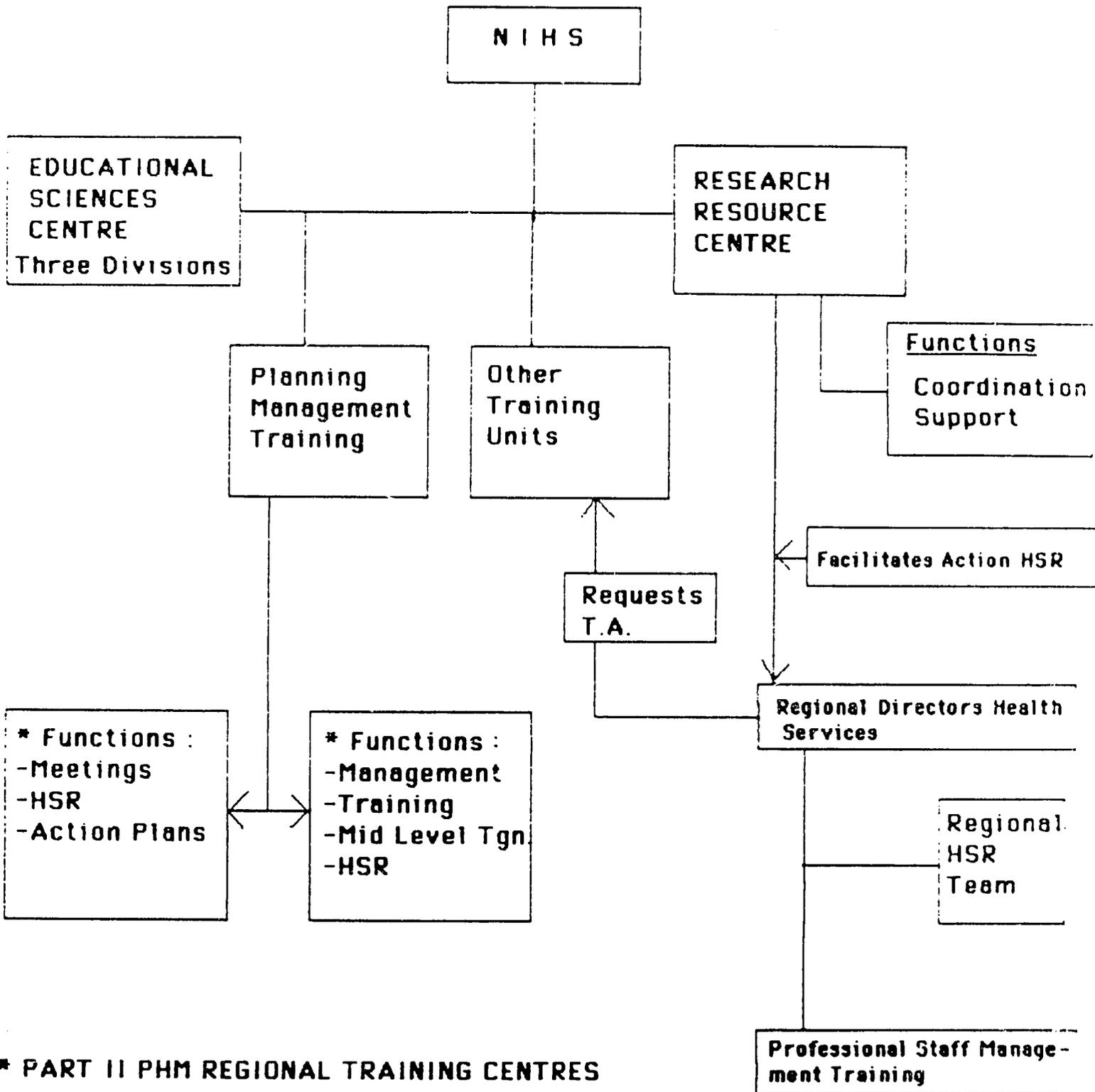
5. PROPOSED ROLE OF NIHS IN PHM MONITORING AND IN SERVICE TRAINING AT THE REGIONAL LEVEL



6. COMPOSITION OF AN OPERATIVE
EDUCATION SCIENCE CENTRE SUPPORTING
NIHS TRAINING UNITS - PROPOSED

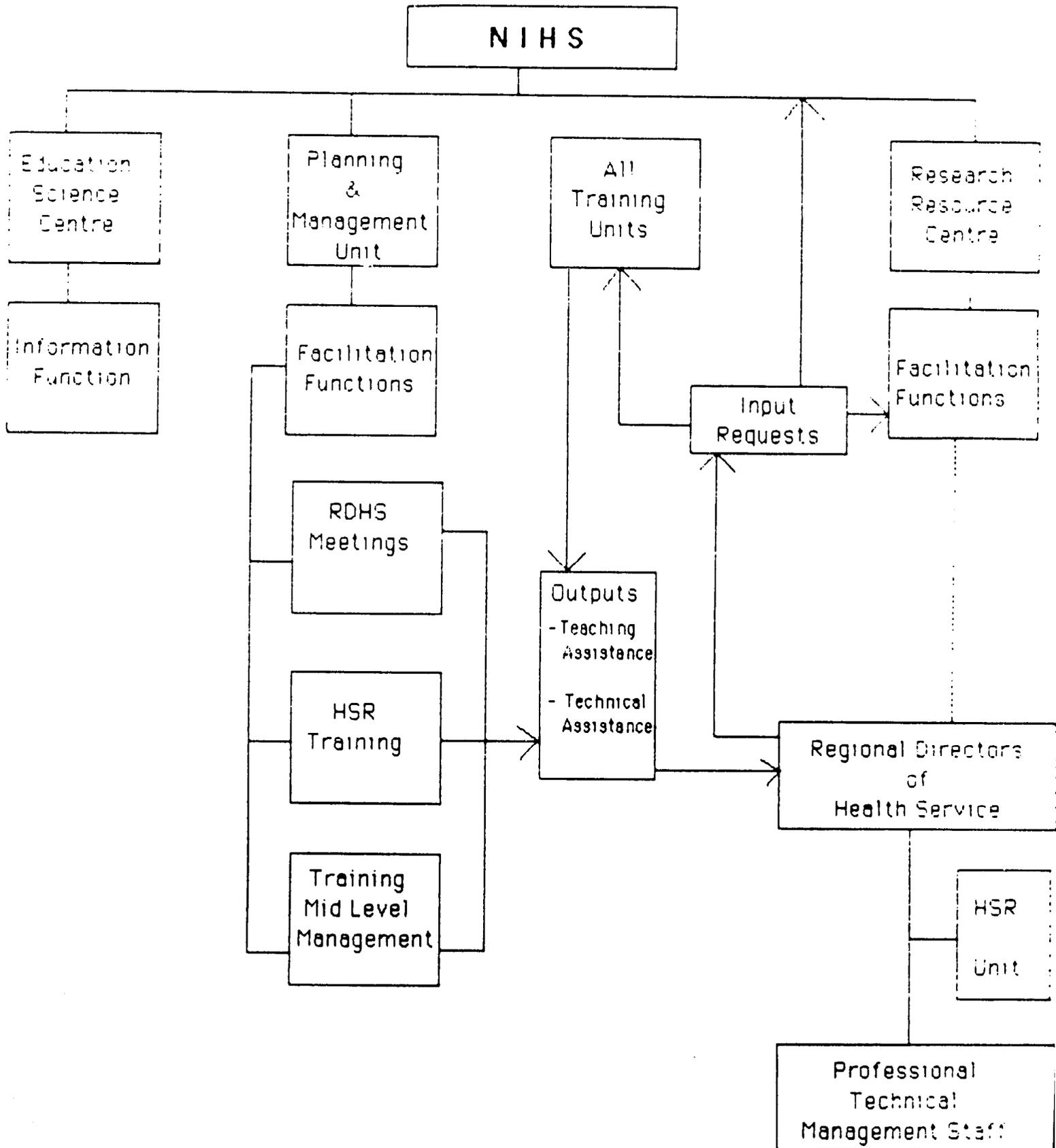


**7. PROPOSED ROLE OF NIHS
AS A FACILITATOR OF HEALTH SERVICES RESEARCH
AT THE REGIONAL LEVEL**

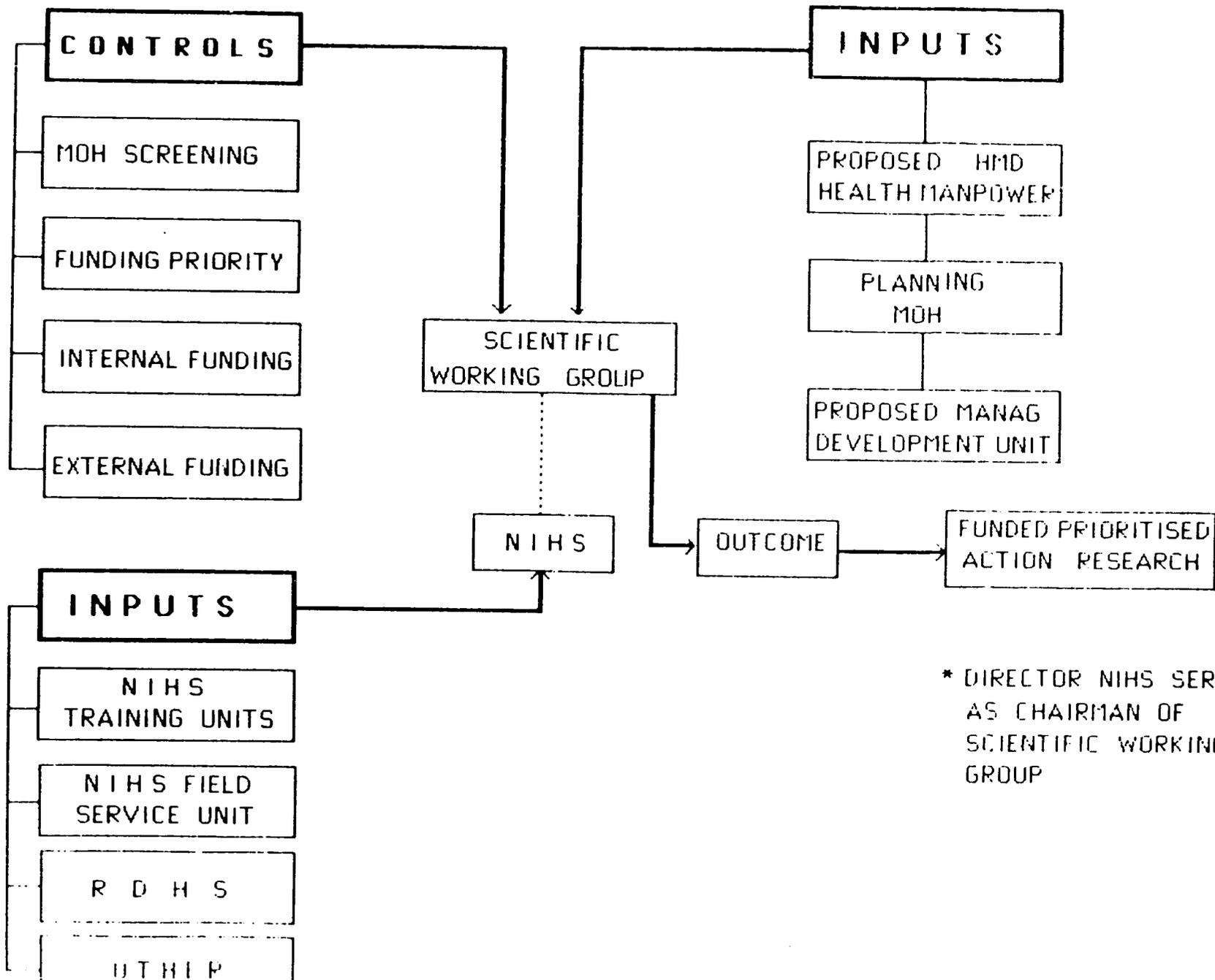


* PART II PHM REGIONAL TRAINING CENTRES

8. PROPOSED NIHS REGIONAL FACILITATION FUNCTIONS & HEALTH SERVICES RESEARCH

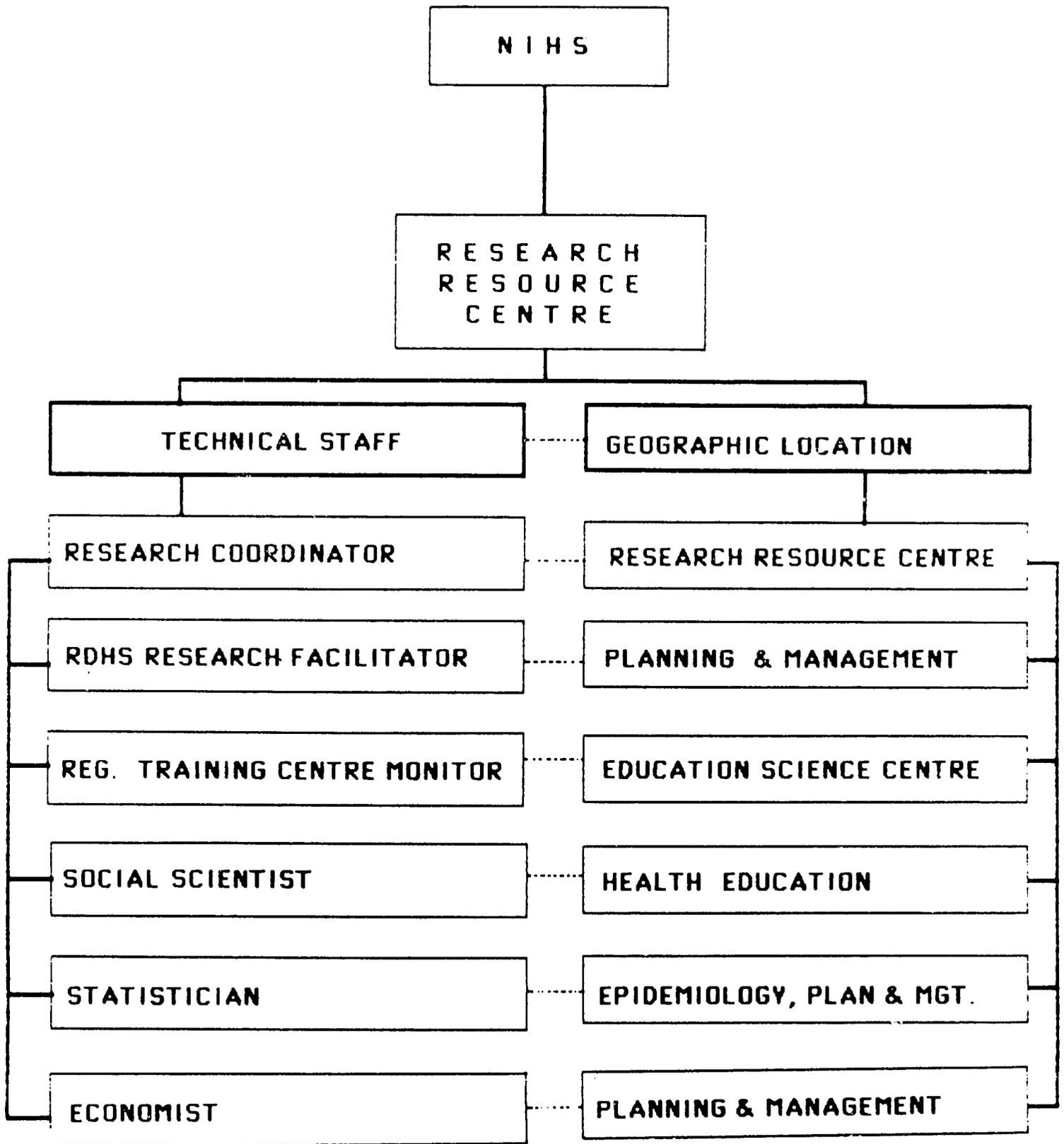


9. DIAGRAMATIC REPRESENTATION
PROPOSED RESEARCH STRUCTURE NIHS



* DIRECTOR NIHS SERVES
AS CHAIRMAN OF
SCIENTIFIC WORKING
GROUP

10. PROPOSED MEMBERS NIHS RESEARCH RESOURCE CENTRE - GIVEN IDRC FUNDING



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VIII. SUMMARY/CONCLUSION

Within this report and throughout the course of the consultation, the consultants strategic objective was to develop the best possible plan acceptable to both the MOH and NIHS. A plan developed in close participation with senior officials at both MOH and NIHS.

The proposals and recommendations made must be viewed, as for any strategic plan, as a first step, a consolidation and interpretation of the present situation, an informed judgement about the future.

Within volume I of the consultation report detailed analysis of the local and national relationships impacting upon NIHS has been made. Volume II incorporates the quantifiable supporting data base that has contributed to the judgements, conclusions and recommendations made.

The consultants wish to point out two key ingredients in this document's preparation and use. First with regard to the preparation, three critical interactions have been initiated to focus attention on the potential role of NIHS.

A. CONSENSUS DEVELOPMENT OF THE PROBLEMS AND ISSUES

There have been frequent meetings with MOH staff and other officials outside the Ministry to reach a consensus of the problems and issues. These have included: meetings with the Minister for Health Dr. Ranjith Atapattu, the Secretary for Health Dr. Malinga Fernando, the Vice Chancellor of Colombo University Dr. Stanley Wijesundera, and the distinguished WHO Representative, Dr. K. H. Notaney in addition to the almost full time commitment of Dr. T. Cooray, Director of NIHS.

B. CATALYSING THE CHANGE PROCESS

In itself it is not sufficient to simply identify problems. A mental attitude to explore options not readily apparent is required. It is through this exploration that abstract ideas in relation to the usual and customary way of doing business take shape and evolve to a broader set of issues equally important in affecting the creation of strategies. It is part of the role of the consultant to catalyse this process. The consultants saw a willingness within MOH and NIHS to explore fundamentally new organizational structures, operational scenarios and even the consideration of career and civil service personnel system changes as part of the overall plan. The consultants were impressed with the recognition of the importance of management training at all levels of the health service system. While much is to be done, management is now recognised as a vehicle to promote efficiency and maximize resources. The role of NIHS in this development has been fully explored.

C. PARTICIPATORY PLANNING

Consultant visits are short. Strategic plans often are lost in the pressures of daily work. A component of the scope of work was to leave behind not only a written document, but to initiate the following: a transfer of the relevant experience of the consultants, and a recognition

of the part of each level of management planning is a shared responsibility. For the different levels of participation, the consultants used different terminology and focused on those techniques that stimulated this sense of involvement in the planning process.

With the faculty we worked together on interdisciplinary curricula, a form of merged objectives. Within our seminars we discussed action research where change resulted, another response to planning. In reviewing recommendations we asked for prioritization, probability and practicality in final selection. Finally we introduced at the field level the distinction and merit that management and creative problem solving has over administration and a fascination with relatively fixed guidelines.

With regard to the use of this report and plan statement, it is hoped through these processes of consensus development, catalysing the search for options and participatory planning, we have been able to more effectively join our experience with our Sri Lankan counterparts in sharpening the planning process and maintaining a focus of attention on both the macro and micro environment changes necessary for NIHS to meet its full potential. Within the recommendation section, it is not the intent of the consultants to provide an exhaustive set of recommendations. Certainly of those that have been made, some recommendations will be infinitely easier to implement than others. Some can only be worked towards and others may be modified by the force of time. Overall, it is possible to distill four themes, directions or forces that the consultants believe must be viewed as guiding principles to be followed. These themes relevant to developing NIHS strategic plans now or in the future relate to:

1. Organizational relationship of MOH to NIHS.
2. Emphasis on management training for health professionals and its management practice in the MOH.
3. Maximal utilization of all available resources for excellence in teaching.
4. Implementation of Health Services Research Programs.

The strategic plan document, proposed organizational approaches and detailed and specific recommendations are listed with the main body of this report.

APPENDIX A

LOG OF EVENTS AND ACTIVITIES OF TEAM

APPENDIX A
TEAM ACTIVITY SCHEDULE

June 6	Washington D.C. - Pre Departure Team Conference	Washington U.C.
June 7	Washington D.C. - Team Conference	Washington U.C.
June 17	Meet with USAID - Orientation	Colombo
June 18	Orientation Cont. USAID Orientation to NIHS, Dr Cooray et.al Orientation to Secretary of Health and Ministry of Health, Dr M Fernando	Colombo
June 19	Meeting with USAID Meeting with UNICEF Review Scope of Work	Colombo
June 20	Travel to Kalutara Meeting with Faculty, NIHS	Kalutara
June 21	Prepare Preliminary Issue list Develop Interview Schedules	Colombo
June 23	Meeting with UNDP Meeting with WHO Meeting with Director - NIHS	Colombo
June 24	Meetings with Ministry of Health Dr S Fernando Dr M Fernando	Colombo
June 25	Travel to Kalutara Meeting with Senior staff Visit Hospital Facilities Review construction NIHS	Kalutara
June 26	Meetings with MOH, Planning Unit Meetings with Secretary of Health	Colombo
	Meetings with WHO Consultants Meetings with Faculty NIHS Review all NIHS Teaching Units	Kalutara

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June 27	Meeting with Regional Directors of Health Services	Colombo
	Travel to Matara	Matara
	Meeting with Medical Officers of Health	
	Interviews with Field Staff	
June 28	First draft Strategy Paper	Colombo
June 29	Review options for Strategic Plan Develop Alternative options	Colombo
June 30	Review draft Strategy with Director NIHS	Colombo
July 1	Meeting with Minister of Health Meeting with USAID Meeting with Family Health Bureau	Colombo
July 2	Continued Interviews Meeting with SLIDA Meeting with Dr Cooray First Draft Macroenvironment Interviews with NIHS Faculty Staff	Colombo Kalutara
July 3	Meeting with MOH Meeting with NIHS Faculty Preparation of 1st Draft Paper Manpower Issues Interviews with NIHS Faculty staff	Kalutara
July 4	Departure to Kandy Meetings with Regional Medical Directors Travel to Kegalle Meeting with Faculty and Dean, University of Peradeniya	Kandy
	Meeting with Two Teacher Education Units	Colombo
	Meeting with Staff Kadugannawa Centre Field Trip to Kurunegala Interview Team Training participants Interview participants mid level Management course	Kandy
July 5	Interview Health Education Bureau	Colombo

July 6	Preparation first draft Recommendations Preparation first draft Research Analyze all curriculum data Meeting with MOH, Secretary Travel to Kalutara	Colombo
July 7	Research Seminar	Colombo Kalutara
July 8	Draft of Revised Recommendations Meeting with Vice Chancellor, University of Colombo Meeting with Dean Faculty of Medicine University of Colombo	Colombo
July 9	Review 1st draft Recommendations NIHS Director, Deputy Director and USAID staff	Colombo
July 10	Meeting MOH Planning Unit Meeting with Director General MOH Travel to Kalutara Travel to Induruwa Travel to Dhargatown Field Interviews - Health Service Units	Colombo Induruwa
July 11	Draft completed Microenvironment Analysis Draft completed Macroenvironment Analysis	Colombo
July 12	Review draft documents with Director NIHS, Priority Setting	Colombo Kalutara
July 13	Meeting with USAID Draft Review	Colombo
July 14	Draft Editing, Prepare Appendix Meeting with WHO	Colombo
July 15	Meeting at University of Colombo Deans of Medicine, Arts, Education, Medicine - Dept. Heads, Management, Sociology, Education Develop linkage Affiliation	Colombo

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(4)

July 16	Draft document of Strategic Plan to MOH, Secretary, Director NIHS	Colombo
July 17	Revision draft document Development of Appendix Travel to Kalutara Present draft Plan to faculty NIHS	Colombo Kalutara
July 18	Revise Draft Document Meet with USAID Deputy Director Meet with Rep. Asian Development Fund	Colombo
July 19	Team Departure	Colombo

APPENDIX B

INDIVIDUALS INTERVIEWED, INSTITUTIONS VISITED

APPENDIX B - INTERVIEWS

NATIONAL INSTITUTE OF HEALTH SCIENCES

Dr N T Cooray	-	Director
Dr S A P Gnanissara	-	Deputy Director (Field Service)
Dr R A D W Bernard	-	Deputy Director (Medical Care)
Dr K C S Dalpadadu	-	Deputy Director (Training)
Dr P V Perera	-	Educational Science Unit
Dr S M Samarage	-	Head, Planning/Management Unit
Dr S de Silva	-	Head, Epidemicology Unit
Dr Mrs K Jayalath	-	Head, Health Education Unit
Mr Mrs S D de Silva	-	Head, Maternal Child Health Unit
Dr A M Rodrigo	-	Head, Environmental Health Unit
Dr Mrs B J L Gunawardhana	-	Bacteriologist
Mrs R Kumarage	-	PHN Tutor - Planning & Management unit
Mrs M A Weerasuriya	-	PHN Tutor - MCH Unit
Mr A Jayawardhana	-	Administrative Assistant
Dr Mrs K Kalingasunita	-	MO AMP Training
Mr A M J de Silva	-	PHI Tutor - Management & Planning Unit
Mr A L Perera	-	PHI Tutor - Environmental Health
Mr S Abeynayake	-	PHI Tutor - Environmental Health
Mr L L Perera	-	PHI Tutor - Epidemicology
Mr G Leelaratne	-	PHI - Epidemicology case Immunization
Mr A K Seneviratne	-	Tutor - Health Education Unit
Mr J Silva	-	PHI Tutor - Planning & Management Unit
Mr P K K Dahanayake	-	Statistician - Planning & Management Unit
Dr A D Fonseka	-	Biomedical Science Unit

(2)

INTERVIEWS

MINISTRY OF HEALTH (CENTRAL)

Dr Ranjith Atapattu	-	Minister of Health
Dr M Fernando	-	Secretary for Health
Dr J Fernando	-	Director General (Health Services)
Dr R Liyanage	-	Director (Planning)
Dr C S A Fernando	-	Senior Medical Officer (Planning)
Dr N Vidyasagara	-	Director, Family Health Bureau
Dr M Perera	-	Director, Health Education Bureau
Dr W Tennakoon	-	Additional Secretary of Health

UNIVERSITIES & INSTITUTE OF HIGHER EDUCATION

Prof. Stanley Wijesundera	-	Vice Chancellor - University of Colombo
	-	Dean, Faculty of Arts - University of Colombo
	-	Dean, Faculty of Education - University of Colombo
Dr Daphne Attygale	-	Dean, Faculty of Medicine - University of Colombo
Dr G A A De Fonseka	-	Biomedical Scientist, Pathologist - University of Colombo
	-	Head, Department of Sociology - University of Colombo
	-	Head, Department of Management - University of Colombo
Dr M A Fernando	-	Dean & Chairman - Community Medicine - University of Peradeniya
	-	

(3)

INTERVIEWS

- | | |
|---------------------|---|
| Dr Gamini Premadasa | - Director, Medicine Education Unit WHO Centre - University of Peradeniya |
| Dr T de Silva | - Head - Department of Sociology University of Peradeniya |
| Dr V T Navaratne | - Director - Sri Lanka Institute of Development Administration |
| Mr B Premaratna | - Director - U S Educations Foundation |

EXTERNAL AGENCIES

- | | |
|------------------|--|
| Mr W Schoux | - Deputy Director - USAID |
| Ms P Bryan | - USAID |
| Dr K Notaney | - WHO Representative |
| Prof. T J Ramiah | - WHO Consultant to Ministry of Health |
| Dr H Wijemanne | - PHC Officer - UNICEF |
| Mr M Kahane | - Deputy Resident Representative UNDP |

COLOMBO FIELD DIVISION

- | | |
|--------------------|---|
| Mr R A C Ranaweera | - Deputy Chief Health Education Officer |
| Mr B A Ranaweera | - Health Education Officer |
| Mr S Peiris | - Health Education Officer |

GAMPAHA FIELD DIVISION

- | | |
|---------------|-------------------------------|
| Dr S de Silva | - Regional Director of Health |
|---------------|-------------------------------|

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(4)

INTERVIEWS

KEGALLE FIELD DIVISION

Mr W A S Perera - Regional Director of Health Service

KALUTARA FIELD DIVISION

Dr Mrs C Jayasekera - MOH
Mrs K Epa - PHN
Mrs N Piyasena - PHNS
Mr M I M Moorez - PHI
Mrs E A W Wanniaratchchi - PHM
Mrs B V Karunawathie - PHM
Mrs Neetha Kanthi - PHM

RAMUNUGODA HEALTH COMMITTEE -

Mrs T D E Siriwardena - President
Mrs N Milinawathie - Secretary
Miss Ramya D Pothupitiya - Treasurer

KURUNEGALA FIELD DIVISION

Dr R T Arunachalam - Regional Director of Health Service
Dr S Warusavithane - MOH
Dr E S Weerakkody - MO (MCH)
Mrs S Wijesekera - PHN
Mr D B Samarakoon - PHI
Mr H M Sumanasekera - PHI
Mrs P K S Perera - PHM
Mrs W A P Dayananda - PHM

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(5)

INTERVIEWS

GALLE FIELD DIVISION

Dr Lakshman de Silva - Additional Medical Officer of Health
Dr D S De Silva - Medical Officer of Health
Mrs T Wijayasinghe - PHN (Tutor)
Mrs M K Chula - Health Education Officer

MATARA FIELD DIVISION

Mr Upasena Senenayake - Regional Director of Health Service
Dr Mrs Leela Rajaratne - MD (MCH)
Mr G Amaradasa - Health Education Officer

PERADENIYA FIELD DIVISION

Mrs D Abeyratne - PHN Tutor (MOH Kadugannawa)
Mr R Weerakoon - PHI (- do -)
Mrs W Marampanawa - PHNS (- do -)
Mrs Ranasinghe - PHNS (- do -)
Mrs B M Madawala - PHNS (- do -)

INDURUWA FIELD DIVISION

Dr M Piyaseeli - MOH Induruwa

A.M.P.s

Ms O D R Perera - AMP - Graduate NIHS 1983 - OPD Kalutara Hospital
Mrs I Mahfal - AMP - Rural Hospital Dhargatown - Graduate 1982 - University of Colombo

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(6)

INTERVIEWS

AMP STUDENTS - NIHS

Miss S Senadeera

Mr Seneviratna

Mr S Kumara

Mrs Wickramarachchi

APPENDIX C

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APPENDIX D

BACKGROUND STATEMENTS, SCOPE OF WORK, CLARIFICATIONS

THE NATIONAL INSTITUTE OF HEALTH SCIENCES: INSTITUTIONAL
DEVELOPMENT PLANNING

Statement of Work

A. Background

The expansion of the physical facilities of the National Institute of Health Sciences, an undertaking supported by USAID, will be completed by December 1986. Recent discussions with the Director of NIHS, Dr. N.T. Cooray, and his staff, have indicated that there is a need and desire to clarify the future role of NIHS. As a national public health training institution, NIHS is a major resource for health manpower training and health systems development; however, its fullest potential will be realized only if it develops the administrative capacity to assume an active role in the development of academic programs and health services research which can serve as a guide for national health policies and programs.

B. Objective

The proposed activity will be an institutional development effort, focussed initially on assessing the current role of NIHS as an organizational entity which is a focal point for Government's primary health care and public health interventions. A strategic plan for developing the NIHS academic and research programs, and health services support functions, will be produced.

C. Scope of Work

The consultants, in collaboration with the NIHS Director and staff, will elicit a variety of view points regarding the future role of NIHS, through interviews and meetings with senior officials of the Ministry of Health and other health training facilities. Some of the factors to be considered include adequacy of current programs; mechanisms for ongoing program and curriculum revision within a stable institutional framework; human and financial resource requirements; complementarity of inter-institutional offerings; the development of a capacity for health services research; and mechanisms for promoting inter-institutional exchange and collaboration in academic and research programs.

Taking into consideration the existing expertise and facilities, and also the expectations of ministries and institutions engaged in health-related training, research and service delivery, a draft strategic plan will be developed through which NIHS will attempt to define its future role. Key considerations in the development of the Strategy will be efficient resource management, and, if appropriate, the development of linkages with other institutions which might support and complement the work of NIHS. The contractor, in collaboration with the NIHS Director and staff, will produce a phased plan for the development of NIHS's multiple roles in training, research and health services support.

D. Activities

The responsibilities of the contractor shall include, but not be limited to, the following:

1. Analysis of the Current Situation

- a. Through interviews with appropriate personnel and the use of available background materials which describe the organization and current activities of NIHS (e.g. basic training, in-service training, field service activities, staffing patterns, research activity) characterize the current role of NIHS within the health system.
- b. Analyze existing interinstitutional coordination and/or overlap with respect to the role/functions of NIHS.
- c. Assess the current mechanisms for planning, coordination and evaluation of health training activities in NIHS.
- d. Assess donor interests, past and ongoing, as well as potential to provide future support for NIHS; assess degree of interest among donors in providing future financial assistance.

2. Assessment of the Future Role of NIHS

- a. Identification of expectations of the MOH and NIHS itself for the future role and activities of NIHS in terms of training, research, field-service provision and organizational development.
- b. Analysis of the future role and activities of NIHS within the context of service needs, potential collaboration with other organizations and training institutions within Sri Lanka.

3. Assessment of Future NIHS Staffing Needs

- a. Based on a realistic assessment of the future role and activities of NIHS, and categories of staff required and their requisite skills and experience.
- b. Assessment of the personnel development structure for training staff to maximize recruitment and retention of qualified personnel.
- c. If NIHS is to also be a research institution with a focus on health services and policy relevant research, recommend appropriate personnel and strategies required.

4. Analysis of the Training Management System

Assessment of the current mechanisms for planning and coordinating health training activities, including field service.

5. Resources for NIHS

Analysis of future resource and technical assistance needs of NIHS, possible sources of such assistance, and mechanisms for coordinating and managing all NIHS development activities. Discussions with multi and bilateral donor institutions regarding their recommendations.

E. Approach

The Director of NIHS, together with NIHS staff and consultant support, will:

- a. Gather information on current activities and resources of NIHS and other health-related training organizations within the country;
- b. Identify, through interviews/meetings with senior MOH, Medical Faculties, etc. the expectations for the future role of NIHS within the context of overall health training activities/resources of the Government.
- c. Preparation of draft strategic plan for the development of NIHS activities.
- d. Discuss draft plan with the Minister of Health and other appropriate officials. Revision and agreement.
- e. 20 copies of the report will be finalized prior to the departure of the team and 10 copies left with the USAID Mission.

Terms of Reference for UNRISD Review Team

Broad scope of assignment will be to identify and identify the personnel and other resource requirements of the NIHS for the period up to 1990 with the plan to develop NIHS as a regional training Centre and the focal point for Health Services Research.

Tasks would be:-

- (1) To develop a proposal for career development of the multidisciplinary faculty at NIHS including salaries, allowances, appropriate designations and promotions in keeping with their duties and functions.
- (2) To identify the steps required to develop the NIHS as a training centre for PHC personnel in the South East Asia region.
- (3) To suggest ways and means of establishing links with other training centres or teaching institutions in Sri Lanka and abroad such as Post Graduate Institute of Medicine and University of Hawaii.
- (4) To examine and comment critically on proposal to develop the Part II PHC training centres in Sri Lanka as Regional Centres for decentralized training with NIHS as the focal point in this network.
- (5) To determine the steps that should be taken to establish a sound Health Services Research unit at the NIHS based on the proposal already submitted to IDRS

THE ABOVE TERMS OF REFERENCE WERE PROVIDED TO THE CONSULTANT TEAM AFTER THEIR ARRIVAL BY NIHS. IT IS ATTACHED AS A REFERENCE POINT TO COMPLETE THE BACKGROUND INFORMATION THAT DOCUMENTS THE TEAMS WORK.

P.H. 5/30/86

Best Available Document

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APPENDIX E

NATIONAL INSTITUTES TRAINING CALENDAR, COURSE OFFERINGS

STUDENT ENROLLMENTS

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APPENDIX E

NATIONAL INSTITUTES OF HEALTH SCIENCES TRAINING CALENDAR - 1985

TRAINING PROGRAMMES

Type of Training	Category	Date of Commencement	Duration	No of Students Registered	No of Students Completing in 1985
Basic Training	1. Assistant Medical Practitioners	(a) 14.06.82	36 months	51	Completed
		(b) 16.05.84	36 months	59	In session
		(c) 24.12.84	36 months	61	In session
		(d) 23.01.86	36 months	63	In session
	2. Public Health Inspectors	(a) 23.04.84	12 months	50	Completed
		(b) 20.08.84	12 months	19	Completed
		(c) 31.12.84	12 months	59	Completed
		(d) 31.12.85	12 months	37	In session
	3. Public Health Midwives (Part II)	(a) 01.08.84	06 months	56	Completed
		(b) 01.03.85	06 months	26	Completed

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CONTINUING EDUCATION PROGRAMMES CONDUCTED AT NIHS

Type of Training	Category	Date of Commencement	Duration	No of Students Registered	No of Students Completing in 1985
Teacher Training :	1. Supervisory Public Health Midwives in PHM Part II Training Centres	04.01.85	One week	15	Completed
	2. Training of Trainers in CSD Projects	08.07.85 23.09.85	5 sessions	22	Completed
	3. PHM Trainers in Part II Training Centres	30.09.85	One week	20	Completed
	4. Teacher training for PHM of Gampaha Galle	04.11.85	One month	26	Completed

Type of Training	Category	Date of Commencement	Duration	No of Students Registered	No of Students Completing in 1985
Orientation Training :	1. In-service Training for PHN	16.05.85	One month	24	Completed
	2. Orientation in Community Health for MOH	27.05.85	06 weeks	14	Completed
	3. Orientation in Community Health for MOH	09.09.85	06 weeks	13	Completed
	4. Team Training Course for PHI & PHM	01.10.85 30.10.85	One month	18	Completed
	5. Team Training Course for PHI & PHM	02.12.85 30.12.85	02 months	24	Completed
	6. Team Training Course for PHI & PHM	10.01.84 09.01.85	One month	24	Completed
Management Training	1. Community Health Management Course for Middle Level Health Managers	12.11.85	06 weeks	16	Completed
	2. National Workshop for Developing a System of Continuing Education for Health Workers in Sri Lanka	25.03.85 29.03.85	06 days 06 days	16 21	Completed
	3. Field Health Education Project for NIHS Field Staff (continued from 1984)		02 days	89	Completed

Type of Training	Category	Date of Commencement	Duration	No of Students Registered	No of Students Completing in 1985
Other Training :	1. Social Work Diploma Students in Community Work	June August		04	Completed
	2. Library & Documentation Orientation Practical Training Programme for S L L A Students		02 weeks	04	Completed
Research :	1. A Research Study on Health Science Libraries in Sri Lanka				
	2. Case Studies related to home deliveries to be used in Part II Training of PHM				
	3. A Study on Knowledge, Attitudes, Practices regarding non-medical use of Dependence Producing Drugs among school children of Grades 8 - 12 in Kalutara District				Completed
	4. Usage and availability of A V Hardware and Software in PHC Training Centres in Sri Lanka				Completed

Adikarigoda Project :

The Multisectoral Community and Social Development Project covers Adikarigoda Village with a total of 246 families and a population of 1298. NIHS plays major role to achieve the target of health and social well being of the community, with the participation of other organisations. Project activities began in January 1985 which runs for a period of 17 months. Project functions by a Steering Committee consisting NIHS co-ordinators, sectoral personnel and community leaders. It facilitates "Learning by Doing" to all training categories who undertake studies in the project area.

APPENDIX F

TECHNICAL REPORT

DEVELOPMENT NIHS TRAINING OF ASSISTANT MEDICAL PRACTITIONERS

ON FILE - REACH PROJECT

APPENDIX G

INSTITUTIONAL PROFILE: NATIONAL INSTITUTES OF HEALTH SCIENCES

NATIONAL INSTITUTE OF HEALTH SCIENCES
MINISTRY OF HEALTH
SRI LANKA

AN INSTITUTIONAL PROFILE

CONTENTS

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4. Administration and Organizational Structure	6-14
5. Links with other Institutions	14-16
6. Research	16-22
7. Funding	23-23

Annexes 1-4

1. GENERAL INFORMATION:

- 1.1. Complete Name of the Institution National Institute of Health Sciences
- 1.2. Postal Address Kalutara, Sri Lanka
- 1.3. Telegraphic Address DIRECTOR, NIHS, KALUTARA (Sri Lanka)
- 1.4. Telephone 042-2264, 042-2319, 042-2659

2. OFFICERS OF THE INSTITUTION

2.1. Responsible Administrative and Technical Authority

Name	Dr N.T. Cooray
Post Held	Director

2.2. Chief Financial Officer of the Institution

Name	Mr T.S. Piyasena
Post Held	Accountant

3. BACKGROUND

In 1926 the first Health Unit in Sri Lanka was established at Kalutara. During the years that followed similar Health Units were established, in a phased manner, throughout the length and breadth of the country. The Health Unit at Kalutara functioned as the principal training centre for the production of health manpower required for these Health Units. In 1937, improvements were made to the Health Unit with assistance from the Rockefeller Foundation to further expand its capabilities for training. The training of Medical Officers of Health, Public Health Nurses and Public Health Inspectors was conducted exclusively at the Kalutara Health Unit.

In 1959, the Ministry of Health on the advice of the Director of Health Services, decided to further improve the training facilities of the Health Unit and also upgrade its status. Thus in 1966, the Kalutara Health Unit was named the Institute of Hygiene and moved to a more spacious building at Nagoda, which was built with assistance from the Australian Government, under the Colombo Plan.

In 1974, the post of Chief Medical Officer of Health Kalutara was upgraded to the non-transferable post of Director, with administrative responsibilities for training, laboratory services and field preventive services.

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In 1979 the Ministry of Health took a policy decision to establish a National Institute of Health Sciences for production of Health Manpower for the country's Primary Health Care Programme. In order to implement this policy, it was decided that the Institute of Hygiene be developed to be the National Institute of Health Sciences, (NIHS) functioning as a Decentralized Unit of the Ministry of Health.

The NIHS now consists of:

- (a) The Training Complex (formerly the Institute of Hygiene).
- (b) A field practice area of 52 square miles together with the medical care institutions and laboratories within the field practice area.

The period 1979-1983 constituted the First Phase of the Development of NIHS. During this first phase of development, emphasis was placed on:

- Reorganization of Teaching Faculty into multi-disciplinary Teaching Units.
- Development of Faculty in technical aspects of their special areas of responsibility.
- Establishment and development of Assistant Medical Practitioner training.
- Development of Library and Audio-Visual Unit.

During the period 1984-1988 Ministry of Health will take action to implement plans to develop health manpower required for the PHC programme. In addition to providing personnel for the peripheral levels of the PHC programme, action will be taken to fill vacancies in the referral tiers as well. This will include medical doctors, nurses, midwives as well as categories of minor staff such as attendants, labourers, etc.

NIHS will supply manpower required for the PHC programme such as Assistant Medical Practitioners, Public Health Nurses, Public Health Midwives and Public Health Inspectors. NIHS will also train the Divisional Health Officer. During the period 1986/1987 objectives of NIHS will be to:

- Conduct Basic and Post-Basic Training of PHC workers.
- Conduct teacher training programmes for teachers and primary health care workers.
- Conduct training in Health Services Management for senior and middle level health personnel.
- Develop mechanisms for evaluating all categories of training programmes conducted by the Institute.
- Conduct Health Services Research.

In order to achieve these objectives the following activities are envisaged:

1. Development of Permanent NIHS Faculty in areas of Educational Technology, Health Services Research and Health Planning and

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2. Development of Teaching Units so that each teaching unit will consist of two Medical Officers, two Tutors (Environmental Health) and two Tutors (Public Health Nursing).

As the Ministry of Health is keen to further increase the training capacity at NIHS, steps are being taken to commence work on a building complex consisting of an Auditorium, Teaching and Laboratory Blocks, Audio-Visual Laboratory, Library & Documentation Centre, Public Health Demonstration Room, Maintenance shops, Cafeteria and Garages. It is expected that construction will commence in 1985 and be completed by October 1986. This building project is being funded by USAID, and the Ministry of Health also anticipates contributing approximate Rs.7 million towards this. Concurrently with expansion of physical facilities, NIHS Faculty will be further strengthened.

Therefore, in the second phase of development, physical facilities will be expanded and Faculty will be strengthened especially in the areas of Health Services Research, Management Training and Teacher Training. NIHS will in fact be strengthened to function as the focal point for Health Services Research in Sri Lanka. For this purpose, in addition to inputs already committed by UNDP and WHO, assistance from IDRC is also anticipated, and a separate Project Proposal has been prepared for this purpose.

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4. ADMINISTRATION AND ORGANIZATIONAL STRUCTURE

4.1. Administration

The director/NIHS is assisted by Deputy Director (Training), Deputy Director (Medical Care Institutions) and Chief Medical Officer of Health in the management of the NIHS. Further, administrative support is provided by the Accountant and Administrative Officer. (Vide Annex. 1 for the Divisional Organization of the NIHS).

4.1.1. Teaching Staff

The composition of the Teaching Units are as follows:

(a) Health Planning & Management

Medical Officer	1
Tutor Public Health (Nursing)	1
Tutor Public Health (Sanitation)	1

(b) Family Health

Medical Officer	1
Senior Tutor Public Health (Nursing)	1
Tutor Public Health (Nursing)	1
Tutor Public Health (Sanitation)	1

(c) Health Education

Medical Officer	1
Senior Tutor Public Health (Sanitation)	1
Community Health Social Worker	1

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(d)	<u>Environmental and Occupational Health</u>	
	Medical Officer	1
	Tutor Public Health (Sanitation)	2
(e)	<u>Epidemiology</u>	
	Medical Officer	1
	Tutor Public Health (Sanitation)	1
	Public Health Inspector	1
(f)	<u>Biomedical Sciences</u>	
	Medical Officers (including the Pathologist and the Bacteriologist)	5
	Pharmacy Demonstrator	1
	Medical Laboratory Technologist	1
4.1.2.	<u>Library & Documentation Service (LDS)</u>	
	Librarian	1
	Asst. Librarian	1
4.1.3.	<u>Audio-Visual Unit</u>	
	Audio-Visual Officer	1
	Cinema Operator	1
	Roneo Operator	1
4.1.4.	<u>Field Services</u>	
	Chief Medical Officer of Health	1
	Medical Officers of Health	4
	Public Health Nurses	16
	Public Health Inspectors	16
	Public Health Midwives	60
	School Dental Nurses	11

4.1.5. Medical Care Services

Consultants	9
Medical Officers	29
Interns	12
Registered Medical Practitioner	1
Assistant Medical Practitioners	8
Metrons	2
Nursing Sisters	9
Male Nurses	5
Staff Nurses	148
Radiographers	4
Medical Laboratory Technologists	5

4.1.6. Administration

Accountant	1
Administrative Officer	1
Chief Clerk	1
Clerks	20
Book Keeper	1
Steno/typist	1
Store Keeper	1
Planning Assistant	1
English Typists	3
Sinhala Typists	3
Record Keeper	1
Telephone Operator	1

The Divisional Organization Chart is given in Annex-1.

4.2 Functional Organization

Main Areas of Activities of NIHS are:

Training
Services
Research

To achieve its objective, several changes were made in the organizational structure of National Institute of Health Sciences. One major change was the establishment of six Teaching Units composed of

multi-disciplinary faculty to facilitate field-based problem oriented training of the PHC workers. These Teaching Units are:

- Health Planning and Management
- Family Health
- Environmental and Occupational Health
- Epidemiology
- Health Education
- Biomedical Sciences

The functional organization Chart of NIHS is shown in Annex-2.

4.2.1 Training

NIHS is responsible for basic training and continuing education of Assistant Medical Practitioners, Public Health Inspectors, and Public Health Midwives. NIHS also conducts the one year post basic training programme for Public Health Nursing Sisters. In addition to the foregoing, this Institute conducts Management Training and Teacher Training Programmes for the Supervisors and Trainers of AMPP, PHII and PHMM - Viz. Medical Officers of Health, Public Health Nurses, Supervising Public Health Inspector and Supervising Public Health Midwives etc.

During the year 1984 a total of 26 Workshops/Seminars/Training Courses were organized and conducted by the NIHS (Vide Annex-3).

Training programmes conducted at NIHS since 1979 to 1984 is given in the Annex 4.

Visiting Lecturers

Visiting lecturers from other specialized agencies of the Ministry of Health such as Health Education Bureau, Family Health Bureau, Epidemiological Unit, Medical Research Institute, Specialized Campaigns etc., and other government departments and organizations and also from the Universities join the Institute in conducting the training programmes.

4.2.2. Health Care Services

NIHS is responsible for provision of comprehensive health care to a population of 210,000 within its field practice area of 52 Square miles through a network comprising one provincial hospital (G.H. Kalutara - 578 beds), One Peripheral Unit (P.U. Beruwela - 57 beds), Rural Hospitals at Aluthgama (16 beds) and Dharga Town, One Central Dispensary and 23 field MCH Clinics supplemented with domiciliary care provided through a team of 60 Public Health Midwives, 16 Public Health Inspectors and 16 Public Health Nurses.

The unique characteristic of the NIHS, is the availability of a Field Practice Area reflecting the health care delivery structure in the rest of the country, under the administrative control of the Director. This has facilitated to a great extent the orientation of the medical care institutions and the field MCH clinics for field based, problems oriented training. Such an administrative structure will also facilitate the development of the field practice area for health services research.

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4.2.3. Laboratory Services

The laboratory attached to the institute, although primarily meant to be a Public Health Laboratory, functions as a provincial Laboratory catering to the routine work of the General Hospital, Kalutara and the other hospitals in the Regional Director of Health Services Division Kalutara, Viz: Panadura, Horana, Ingiriya, Ittapana and Neboda.

The laboratory is in Charge of a Pathologist and a Bacteriologist under whose guidance a Senior Medical Laboratory Technologist and five other Medical Laboratory Technologists work.

The Service Laboratory is divided into four main divisions:

- Histopathology
- Bacteriology
- Serology
- Haematology

In addition to the above it conducts practical demonstrations for Assistant Medical Practitioner Students and other Primary Health Care Worker Students in Pharmacy, Parasitology, Bacteriology, Physiology and Pathology. Therefore, like the facilities in Field Practice Area, the NIHS Laboratory is also used extensively for training.

4.2.4. Library & Documentation Service

The Library and Documentation Service (LDS) was established in 1979. At present NIHS/LDS plays an important role in catering to the information needs of the Faculty for training, research and service

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provision. NIHS/LDS collects, organizes and disseminates information related to health sciences and related fields such as community health, health planning and management, Biomedical sciences, epidemiology, obstetrics and gynaecology food and nutrition, population and family planning, nursing etc.

The Library's main books & reports collection covers a substantially broad spectrum of academic interest and research. Resource Base of the NIHS-LDS is as follows:

Books and Reports	6000
Current Titles of Periodicals	35
Back Volumes of Periodicals	600

Non-Book Materials

Cassettes	60
Film Strips	12
Slide Sets	12

Establishment of a Documentation Centre is a long and expensive process and everything cannot be done at once. It was decided, therefore, to implement projects which were inexpensive but of maximum impact to the library clientele. Hence this service has produced a number of documents including Subject Bibliographies, Directories, Catalogues, Union Catalogues of Periodicals, Occasional Papers and Regular News Bulletins etc. These documents have created a new demand and new awareness and appreciation for services of a Documentation Centre.

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NIHS-LDS was, a pioneer in establishment of the Health Literature, Library and Information Service (HeLLIS) Sri Lanka Network in 1979, being among the few libraries which participated in the planning stages of the establishment of the network.

NIHS has developed its library as part of HeLLIS (Sri Lanka) Network and the following responsibilities were assigned to it:-

- (a) Compilation, publication and distribution of the "HeLLIS: Quarterly Publication of the HeLLIS (Sri Lanka) Network.
- (b) Compilation, publication and distribution of the Directory of Health Sciences Libraries in Sri Lanka.
- (c) Research Study on Health Sciences Libraries in Sri Lanka (Completed) 1984.

4.2.5. Audio-Visual Unit

Training activities being the chief concern of the NIHS, use of media plays an important role in teaching/learning, parallel to library and laboratory facilities. Among the training institutions under the Ministry of Health, the Audio-Visual Unit of this Institute can be classed as the most developed one. Aid from donor agencies like UNICEF, USAID, UNDP, and WHO was instrumental in developing this unit to its present level.

It has facilities for video production, audio recording and distribution, still photography, graphic production and reprography.

While supporting all basic, post-basic and in-service courses with the appropriate audio-visual hardware and software, the unit enriches field health education activities as well.

The unit is responsible for the production of various vidio films, slide-sound presentations, graphic media etc. Total reprographic output connected to teaching/learning and administration is handled by the unit. Facilities for pre-viewing are also provided to faculty members, for classroom use and for the field. The staff attached to this unit has been helping other agencies under the Ministry of Health by provision of audio-visual support and media coverage when requested.

Future development envisages expansion of photographic production facilities which are not so advanced at present.

5. LINKS WITH OTHER INSTITUTIONS

Commencing in 1979, NIHS has established close working relationships with organizations and Institutions engaged in teaching and research, both within and outside Sri Lanka.

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5.1. Links with Organizations in Sri Lanka

- (i) Universities:- NIHS has collaborative links with several departments in the Medical Faculties of the Colombo, Peradeniya, Jaffna and Ruhuna Universities. Working relationships have been established with Departments of Preventive and Social Medicine & Paediatrics. There are also close links with the AMP Training groups at Colombo, Peradeniya and Jaffna. The Deans of the Faculties of Medicine in Colombo and Peradeniya are members of the Advisory Board of Management of NIHS.
- (ii) Ministry of Health:- NIHS Works closely with the Planning Division of the Ministry of Health, Regional Directors of Health Services, Directors of Special Campaigns, Director Medical Research Institute, among others in the implementation of training programmes. Such working relationship makes it easy for NIHS Faculty to operate in all areas of the country.
- (iii) Other Ministries at National and District level:- NIHS is closely associated with specialized agencies of the Ministry of Plan Implementation, such as the Food and Nutrition Policy Planning Division and the Childrens Secretariat. Such close links have enabled NIHS to translate the concept of Intersectoral coordination into a working reality within the Kalutara District. Also at the District level NIHS has close links with the Ministry of Education, Local Government, Housing and Construction, Rural Development. NIHS has working relationship with the Sri Lanka Institute of Development Administration.

- (iv) Non-governmental Organizations:- NIHS has been involved in collaborative activities with NGOs such as Sarvodaya, JAYCEES and LIONS organization, the Red Cross, Girl Guide Association, Family Planning Association etc.

5.2. Links with organizations abroad

- (i) Students on the Masters in Community Health course in the University of Liverpool have been assigned to NIHS for their Field Projects since 1980.
- (ii) NIHS is exploring the possibility of establishing closer links with MEDDEX group of the University of Hawaii and the National Institute of Health and Family Welfare in India.

6. RESEARCH

6.1. Current Position

Among the developmental activities planned for the period 1984-1988 priority will be given to the further strengthening of NIHS capability for conducting Health Services Research (HSR). The foundation for Faculty development in HSR was laid in 1983, with WHO assistance when a Short-Term Consultant worked with NIHS staff for a period of 3 months. As a result of this initial input the following Research Studies were completed during 1984.

- Preliminary Household Survey for detection of Risk Factors for Cardiovascular Diseases, Diabetes and Oral Cancer (in collaboration with the Institute of Cardiology).

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- Morbidity Patterns and Utilization of OPD Services in NIHS Field Practice Area.
- Role of Traditional Practitioners in PHC
- Health Sciences libraries in Sri Lanka - a Research Study.

In carrying out the above studies the Principal Investigators/Project Coordinators from NIHS received necessary guidance and support from appropriate Resource persons in the Ministry of Health and the Universities. Field staff in the NIHS Field Practice Area and outside it were utilized for data gathering through questionnaires and clinical procedures. The mandate given to NIHS by the Ministry of Health to function as the focal point for HSR, greatly facilitated the task of obtaining this cooperation and support from different sources for these activities.

6.2. STRENGTHS AND WEAKNESSES

(a) Strengths

- (1) The organization of the Faculty into multidisciplinary groups is a positive and encouraging factor for conducting HSR. Faculty is strong in the areas of Health Planning and Management, Health Education and Epidemiology.

- (ii) The availability for an extensive Field Practice Area including Health Centres and Medical Care Institutions is a valuable asset for carrying out HSR projects.
- (iii) Ongoing phased programme for strengthening of Faculty in Research Methodology.
- (iv) Availability of good library facilities

(b) Weaknesses

- (i) The multidisciplinary faculty needs strengthening by addition of the following to the existing Teaching Units:
 - Statistician
 - Social Scientist
 - Economist
 - Operations Research Systems Analyst
 - Epidemiologist
 - Computer Programmer
- (ii) The absence of a full time experienced research administrator/coordinator to assist the Director
- (iii) Absence of Computer facilities

6.3. STAFF (PROFESSIONAL AND SUPPORTING)

Staff currently working in the institution

Staff within the institution who are currently engaged or who want to become involved in HSR in the institution

Name	Academic Degrees	Title of position held	Hours/week (Approximately)			
			Research	Teaching	Health Related Services	Administration
Dr N.T. COORAY	MBBS (CEY) DTPH (LOND)	Director	14	6	-	20
Dr R.A.D.W. BERNARD	MBBS (CEY) M.Sc (Singapore)	Deputy Director (Medical Services)	10	-	5	25
Dr K.C.S. DALPATHDU	MBBS (CEY) MD (CEY)	Deputy Director (Training)	15	10	-	15
Dr S.A.P. GNANISSARA	MBBS (CEY) DPH (Leeds)	Chief Medical Officer of Health	5	5	10	20
Dr S.D. DeSILVA	MBBS (CEY) M.Com.H. (Liverpool)	Head Teaching Unit Family Health	15	15	5	5
Dr A.M. RODRIGO	MBBS (CEY)	Head Teaching Unit Environmental & Occupational Health	10	15	5	10
Dr K. JAYALATHA	MBBS (CEY) MD (CEY) MPH (HAWAII)	Head Teaching Unit Health Education	15	15	5	5
Dr T.D.V. Perera	MBBS (CEY) MD (CEY)	Head Educational Science Unit	15	15	5	5
Dr A.A.S.O.DeSILVA	MBBS (CEY) MD (CEY)	Head Teaching Unit Epidemiology	15	15	5	5

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6.3. STAFF (PROFESSIONAL AND SUPPORTING) (contd....)

Staff currently working in the institution

Staff within the institution who are currently engaged or who want to become involved in HSR in the institution

Name	Academic Degrees	Title of position held	Hours/week (Approximately)			
			Research	Teaching	Health Related Services	Adminis- tration
Dr S.M. Samarage	MBBS (CEY)	Health Planning and Management Teaching Unit (Acting Head)	15	15	5	5
Dr G.A.A. deFONSEKA	MBBS (CEY) D Path (LOND)	Pathologist/Head Teaching Unit Biomedical Sciences	15	15	5	5
Dr B.I.I GONAWARDENE	MBBS (CEY) D.B.(MANCHASTER)	Bacteriologist	15	15	5	5
Dr K.R.W. DALPATHADU	MBBS (CEY)	Medical Officer of Health	5	5	20	10
Dr R.RAJAPAKSE	MBBS (CEY)	Medical Office of Health	5	5	20	10
Dr K. JAYASEKARA	MBBS (CEY)	Medical Officer of Health	5	5	20	10
Dr P.L.M.DeSILVA	MBBS (CEY)	Biomedical Sciences Teaching Unit	10	20	5	5
Dr R. SENEVIRATNA	MBBS (CEY)	Biomedical Sciences Teaching Unit	10	20	5	5
Dr P. ALUTHGE	MBBS (CEY)	Biomedical Sciences Teaching Unit	10	20	5	5
Dr K. DeSILVA	MBBS (CEY)	Biomedical Sciences Teaching Unit	10	20	5	5

6.3. STAFF (PROFESSIONAL AND SUPPORTING) (contd....)
Staff currently working in the institution
 Staff within the institution who are currently engaged or who want to become involved in HSR in the institution

Name	Academic Degrees	Title of position held	Hours/week (Approximately)			
			Research	Teaching	Health Related Services	Adminis- tration
Mr A.K.SENEVIRATNA	BA (CEY) MPH (HAWAII)	Health Education Teaching Unit and Senior Tutor (ENV. HEALTH)	15	17	-	8
Mrs. M.A. WEERASURIYA	DIP in PH Nursing Reg. Nurse	Family Health Teaching Unit and Senior Tutor (PH Nursing)	15	17		8
Mrs. S.H. LIYANAGE	DIP in PH Nursing Reg. Nurse	Family Health Teaching Unit	15	20	-	5
Mrs. D. KUMARAGEG	DIP in PH DIP in Nursing Education	Health Planning and Management-Teaching Unit	15	20	-	5
Mr A.L. PERERA	DIP for PHI (LOND) DIP in Sanitary Science (INDIA)	Environmental and Occupational Health Teaching Unit	15	20	-	5
Mr. H.M. SOMARATNA	BA (CEY) MS (USA)	Audio-Visual Officer Member Health Education Teaching Unit	15	10	5	10
Mr L.L. PERERA	DIP for PHI (LOND)	Epidemiology Teaching Unit	15	20	-	5

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6.3. STAFF (PROFESSIONAL AND SUPPORTING) (contd....)
Staff currently working in the institution
 Staff within the institution who are currently engaged or who want to become involved in HSR in the institution

Name	Academic Degrees	Title of position held	Hours/week (Approximately)			
			Research	Teaching	Health Related Services	Administration
Mr S. ABEYNAIKE	DIP for PHI (LOND)	Environmental and Occupational Health Teaching Unit	15	20	-	5
Mr. W.V. SENA VIRATNA	DIP for PHI (SRL) DIP in Social Work	Family Health Teaching Unit	15	20	-	5
Mr. J SILVA	DIP for PHI (SRL) DIP in Social Work	Health Planning and Management Teaching Unit	15	20	-	5
Mr H. LEELANANDA	BA (SPECIAL) (SRL) DIP IN SOCIAL Work	Health Education Teaching Unit Community Social Worker	10	10	15	5
Mr L.R. AMARAKOON	SLAA (FINALS) Professional Ad Certificate in Lib & Infn. Sci.	Chief Librarian	15	5	-	20
Mr S.C. SAMARASINGHE	SLAA (FINALS)	Assistant Librarian	20	-	-	20
Mr E.D.C.D. JAYAWARDENE	DIP for PHI RHS (LOND)	Supervising Public Inspector	10	10	5	25

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7. FUNDING

7.1. Local:

Funding for NIHS is provided by the Ministry of Health. The approximate budgetary allocation through 1985-1987 is given below:

	<u>AMOUNT IN SRI LANKA RUPEES ('000)</u>			
	1985	1986	1987	TOTAL
Project Personnel	15,486	19,034	21,937	56,457
Recurrent Costs	9,285	11,231	12,354	33,410
Grand Total	25,311	30,265	34,291	89,867
US \$ (Approx)	937,000	1,120,000	1,270,000	3,328,000

Recurrent costs comprise the following items

- Travelling expenses
- Supplies and Requisites
- Repairs and Maintenance of Capital assets
- Transportation, Communication, Utilities & other services

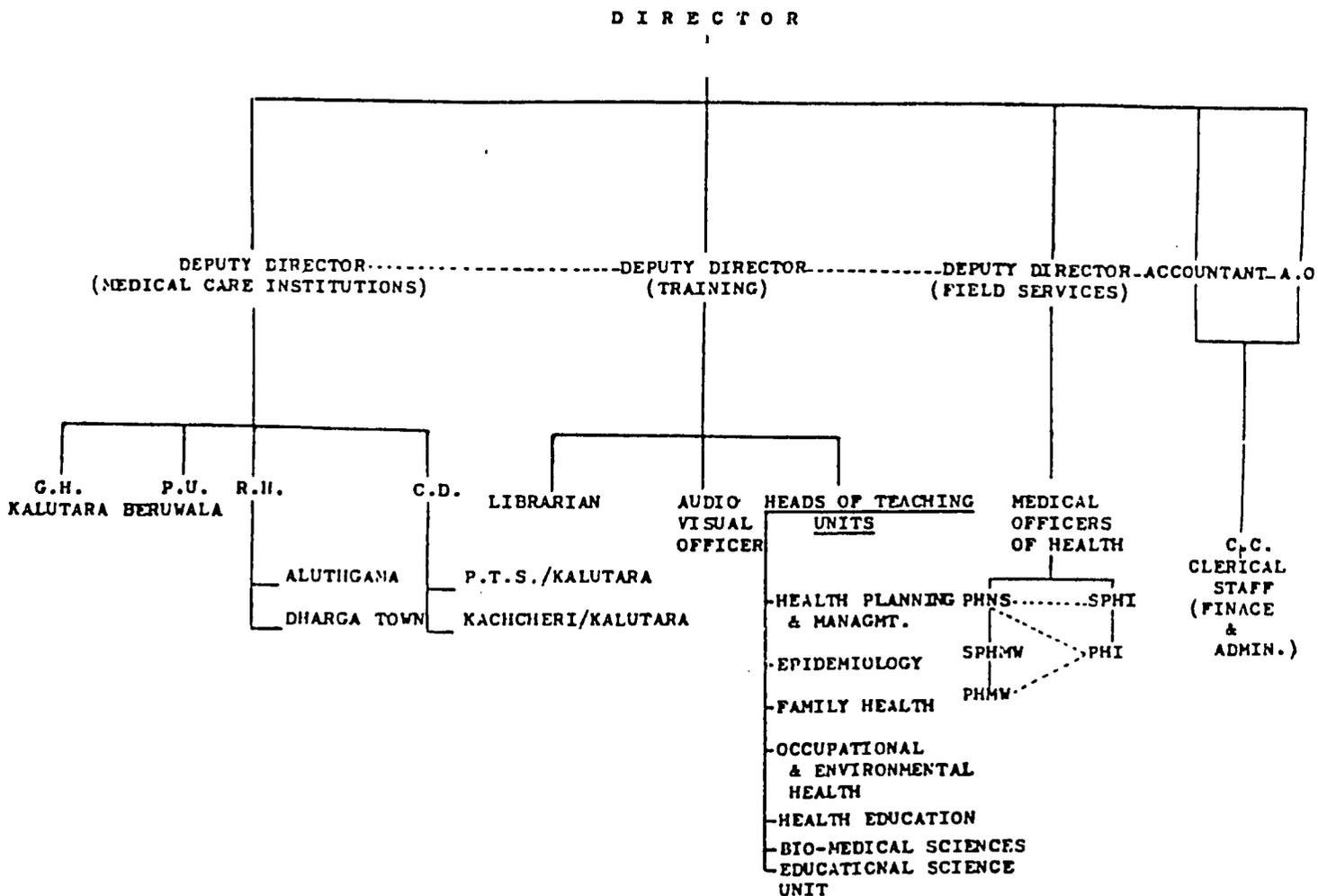
7.2. Foreign

From 1979 onwards NIHS has been supported by donor agencies such as UNDP, WHO, UNICEF and USAID.

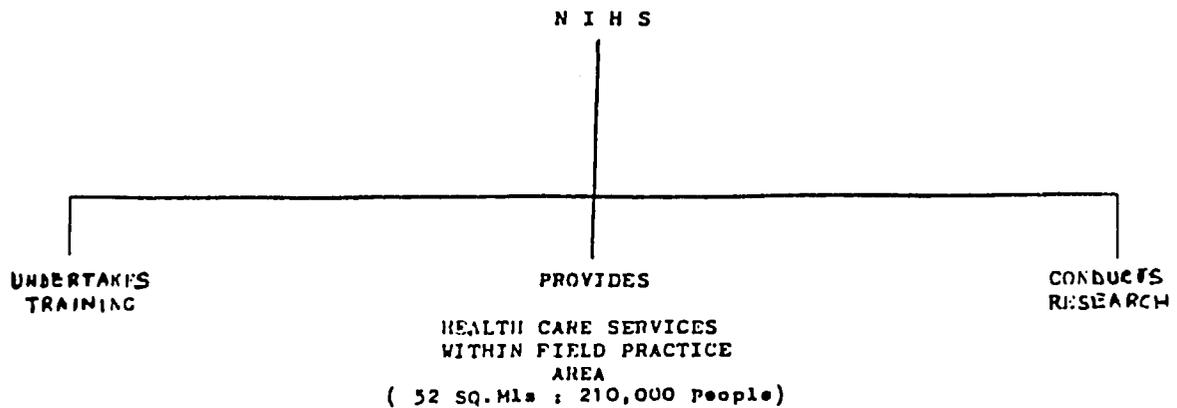
Anticipated donor assistance for period 1985-1988 is given below:

UNDP	- US \$	281,500
WHO	- US \$	110,000
USAID	- US \$	2,200,000

DIVISIONAL ORGANIZATION CHART OF THE NATIONAL INSTITUTE OF HEALTH SCIENCES
KALUTARA



FUNCTIONAL ORGANIZATION OF NIHS



Basic and Post-Basic
Training
&

Continuing Education
Through
SIX

TEACHING UNITS

- ENVIRONMENTAL AND OCCUPATIONAL HEALTH
- FAMILY HEALTH
- EPIDEMIOLOGY
- HEALTH PLANNING AND MANAGEMENT
- HEALTH EDUCATION
- BIO-MEDICAL SCIENCES

Through a network of clinics, institutions and a programme of domiciliary care

- Home Visits
- Field MCH Clinics
- Branch Dispensaries and Visiting Stations
- Central Dispensary
- Rural Hospital and Maternity Home
- District Hospital
- General Hospital
- Laboratory Support

Studies related to Health Services and Training

Supported By:

- Educational Science Unit
- Audio-Visual Unit
- Library and Documentation Service (LDS)

Training Programmes Conducted
at N. I. H. S. in 1984.

ANNEX-3

<u>Activity</u>	<u>Duration</u>	<u>No. of Trainees</u>	<u>Commenced</u>	<u>Terminated</u>
<u>BASIC TRAINING</u>				
Assistant Medical Practitioners (1982 Batch)	2½ yrs.	57	14.06.82	On going
Assistant Medical Practitioners (1984 Batch)A	2½ "	62	16.05.84	On going
Assistant Medical Practitioners (1984 Batch)B	2½ "	60	24.12.84	On going
Public Health Inspectors (1984 Batch) A	01 yr.	76	23.04.84	On going
Public Health Inspector (1984 Barch) B	01 "	60	31.12.84	On going
Public Health Midwives Part II (1983/84)	06 months	18	01.11.83	30.04.84
Public Health Midwives Part II (1984/85)	06 months	56	01.08.84	On going
<u>POST BASIC TRAINING</u>				
Public Health Nursing Sisters	01 yr.	46	21.03.83	20.03.84
<u>CONTINUING EDUCATION</u>				
Orientation in Community Health for Medical Officers	06 weeks	28	06.02.84	14.03.84
In-service Training for Public Health Inspectors I	01 month	36	28.12.83	27.01.84
In-service Training for Public Health Inspectors II	01 month	24	12.03.84	10.04.84
Team Training for Public Health Inspectors and Public Health Midwives	01 "	24	10.12.84	09.01.85
Teacher Training Programme for NIHS Field Staff I	01 week	20	23.07.84	31.07.84
Teacher Training Programme for NIHS Field Staff II	01 week	20	30.09.84	14.09.84

ANNEX 3 (cont)

Contd. Education Activity	Duration	No. of Trainees	Commenced	Terminated
Teacher Training Programme for NIHS Field Staff III	01 week	17	17.09.84	21.09.84
Teacher Training Programme for NIHS Field Staff IV	01 "	17	15.10.84	19.10.84
Teacher Training Programme for Supervising Public Health Midwives in PHM Part II Training Centres	01 week	15.	30.12.84	04.01.85
Working Group Meeting of Trainers for Public Health Midwife (Part II) Training Centres (two meetings)	02 days	21	26.07.84 30.10.84	27.07.84 31.10.84
Orientation in Community Health for Post Basic Ward Sisters and Ward Masters	01 month	52	01.09.84	30.09.84
Orientation in Community Health for Post Basic Ward Sisters and Ward Masters	01 month	56	01.10.84	31.10.84
Seminar on PHC for Personnel in Health Related Sectors in Kalutara District	04 days	46	15th, 16th, Nov. '84 26th, 27th " "	27.11.84
Workshop on Formulation of a Health Education Project for NIHS Field Staff	02 days	31	27.12.84	28.12.84
-do-	02 days	24	15.01.85	16.01.85
Communications Seminar for NIHS Field Staff	02 days	34	17.01.85	18.01.85
	06 days	89	27th, 28th 30th, 31st. Dec. '84	16.01.85
Library and Documentation Orientation (Practical Training Programme)	10 days	09	15th Jan. '85	"
				03.10.84

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TRAINING PROGRAMMES CONDUCTED AT NIHS

1979 - 1984

SL. NO.	CATEGORY	DURATION	1979	1980	1981	1982	1983	1984
<u>BASIC COURSES</u>								
(1)	Assistant Medical Practitioners	36 months	--	55	--	57	--	171
(2)	Public Health Inspectors Diploma	12 months	68	88	--	83	--	128
(3)	Public Health Nurses Diploma	09 months	--	46	--	--	46	46
(4)	Public Health Midwives (Part II)	06 months	65	--	78	88	50	74
(5)	Attendants	06 weeks	--	--	30	--	--	--
<u>IN-SERVICE COURSES</u>								
(6)	Public Health Inspectors	01 month	25	--	23	26	65	60
(7)	Supervising Public Health Inspectors	01 month	44	--	--	--	--	--
(8)	Orientation in Community Health for Medical Officers	01 month	38	44	43	12	09	28 (6 weeks)
(9)	Community Health Management for Middle Level Managers	02 months	--	--	47	--	30	--
(10)	Teacher Training for Primary Health Care	01 week	--	25	--	27	64	74
(11)	Preparation of curriculum on new functions	03 days	--	--	48	--	08	43
(12)	Training of core groups from decentralized Units	05 days	--	--	--	13	--	--
(13)	Orientation in Community Health for AMP Students from Colombo Medical Faculty	01 month	--	--	--	48	--	--
(14)	Orientation in Community Health for Sister Tutors and Ward Sisters	01 month	23	94	--	--	156	123
(15)	Public Health Midwife	01 month	--	--	59	--	--	--
(16)	Supervising Public Health Midwife	01 month	--	--	73	--	--	13
(17)	Orientation Course for Trainers of PHC Workers (New Functions)	12 Seminars of 02 day sessions	--	--	--	466	--	--
(18)	Library and Documentation Orientation (Practical) Training Programme	10 days	--	--	--	02	18	09
(19)	NIHS Field Staff on Project Formulation	06 days	--	--	--	--	--	39

APPENDIX H

HEALTH MANPOWER SITUATION IN SRI LANKA-DOCUMENT

- * Permission received from WHO, Dr C Fernando and MOH to reproduce attached Draft Document prepared for WHO Technical Conference Council for International Organizations of Medical Sciences, Acapulco, Mexico, September 1986.

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1. GENERAL COUNTRY INFORMATION

1.1 Introduction

The Democratic Socialist Republic of Sri Lanka or "Ceylon" as it was known for many centuries is a small island of approximately 65,610 sq. kilometers in area including about 959 sq. kilometres of inland waters. It is located in the Indian Ocean approximately on Northern latitude 5" to 9" and Eastern Longitude 79" to 81".

The Island has a central mountainous region with peaks as high as 2,524 metres and is surrounded by a plain which is narrow in the East, West and South and broadens in the North. A number of rivers spring up from these mountain peaks and flow towards the sea through low lying plains following a radial pattern.

Climatic conditions throughout Sri Lanka are mainly dependent on the monsoons and the elevation above sea level. Mean temperature range from 26° c to 28° c (79° F to 82° F) in the low country and from 14° c to 24° c (58° F to 75° F) in the hill country. The rest of the Island mainly the North, North Central and Eastern parts of the Island remain dry for a considerable period of the year.

The total land area amounts to 6.56 million hectares of which about a fifth is forest and forest reserves. About a quarter of the land has already been used for cultivation purposes.

Sri Lanka's economy is mainly based on agriculture. Tea, Rubber and Coconut are the main export crops, and Paddy the main domestic crop. Land utilization is as follows:-

2.

Tea, Rubber and Coconut	1.12	17.1
Paddy	0.55	10.1
Temporary Crops	0.36	5.5
Forest, Forest Reserves/National Parks & Intermediate Zones	2.38	36.3
Grass and Scrubland	0.07	1.1
Large inland water	0.09	1.4
Built-up area and unproductive land	<u>1.88</u>	<u>28.7</u>
Total	<u>6.56</u>	<u>100.0</u>

The estimated Mid-year population of Sri Lanka for 1983 was approximately 15.4 million with males slightly out-numbering females (51% to 49%). About 35% of the population was under 15 years of age. About 80% of the population lives in rural areas. Buddhism is the main religion of the people. Other religions are Hinduism, Christianity and Islam.

The 1983 per capita G.N.P. at current prices was Rs.7,071 or US \$301. Real per capita income rose by 2.5% from 1982 to 1983 as against the increase of 3.3% in 1982. This compares well with per capita rates of 2.4% and 3.5% in 1981 and 1982 respectively.

Sri Lanka, though a developing country, has a well developed social infra-structure. Health services and education are provided free of charge to all. At the 1981 Population Census, the literacy rate was found to be 86.5% (90.5% for males and 82.4% for females).

Sri Lanka has a Parliamentary Democratic System in which the sovereignty of the people and legislative powers are vested in parliament and the executive authority is exercised by a Cabinet of Ministers presided over by an Executive President. The Ministry of Health is one of the Ministries under a Cabinet Minister.

1.2 Population

The last decennial census held in 1981 recorded a population of 14.85 million. This corresponds to a sixfold increase since the first National census in 1871, which recorded a population of 2.4 million.

Until the second World War, Sri Lanka's annual rate of population growth was approximately 1.4%. The growth rate then rose to 2.8% per annum between 1946 and 1953, largely because of the dramatically reduced death rate. The population growth rate dropped to 2.3% between 1963 and 1971, after which it dropped further to 1.7%, where it has remained since 1977. If the current trend in population growth continues, it is estimated that the population of Sri Lanka will exceed 20 million by the year 2000.

1.3 Vital Statistics

Vital statistics for the period 1945-1983 are shown at Table 1.1. The crude birth rate which remained around 28 per 1000 population has shown a decrease in the last two years while the Crude Death Rate has remained approximately around 6 per 1000 population.

The Infant Mortality Rate has shown a reduction in 1980 to 34.4 per 1000 live births.

The variations in the vital rates among the districts are shown in Table 1.2. The most recent vital statistics show that only two of the twenty four districts in the Island have recorded an Infant Mortality Rate of over 50 per 1000 live births, as against four districts in 1979.

Life expectancy at birth increased during the period 1945 - 1979 from 46.8 years to 66.1 years for males and from 44.7 to 70.2 years for females.

1.4 Morbidity and Mortality

Table 1.3 indicates the Hospital Morbidity and Mortality in selected years for the period 1965 - 1983 by disease groups.

There has been no significant change in the number of cases discharged in 1983 (15471.9/100,000) compared to 1982 (15407.8/100,000). The mortality rate in 1983 (1974.1/100,000) has been identical to the rate in 1982.

The major causes for admission to Government Hospitals were attributed to:-

- (1) Pregnancy and childbirth (of which 60% were normal deliveries)
- (2) Infectious and parasitic diseases
- (3) Diseases of the respiratory system
- (4) Injuries and poisoning and
- (5) Symptoms, signs and ill-defined conditions

The overall mortality rate in hospitals has shown a 24% decrease during the period 1965-1983 with each disease group showing a decline except a slight increase in the group Injury and Poisoning.

2. Delivery of Health Care Services

2.1 Western Health Care Services

Western health care services provided by the Government are delivered by two Ministries, namely the Ministry of Health and the Ministry of Women's Affairs and Teaching Hospitals. The project Ministry of Indigenous Medicine, the State Pharmaceuticals Corporation and the Ayurveda Drugs Corporation are under the Ministry of Health. The two ministries together are integral components of the government system for providing health care.

The curative health care services are delivered by a hierarchy of institutions ranging from the sophisticated Teaching Hospitals with specialised consultancy services to the Central Dispensaries which provide only an outpatient service and is in charge of an Assistant Medical Practitioner/Registered Medical Practitioner :

Today in Sri Lanka we have the following institutions:-

1. Teaching Hospitals	10
2. Provincial Hospitals	12
3. Base Hospitals	18
4. District Hospitals	112
5. Peripheral Units	114
6. Rural Hospitals	118
7. Central Dispensaries & Maternity Homes	98
8. Maternity Homes	212
9. Central Dispensaries	335

These categories of health institutions represent in descending order the level of sophistication of health care services and reflect the referral pattern.

In addition there are the special hospitals comprising of:-

Maternity Hospitals	- 2
Mental Hospitals	- 2
Chest Hospitals	- 3
Leprosy Hospitals	- 2
Cancer Hospitals	- 1
Children's Hospital	- 1
Eye Hospitals	- 1
Dental Hospitals	- 1

Since 1950 the expansions of the curative care services may be observed from the increase in the number of hospital beds, as given in the table below.

	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1983</u>
No. of beds	19959	25482	31040	35868	37753	39568	42842	44016
No. of inpatients (Millions)	.846	1.042	1.391	1.784	2.007	2.113	2.360	2.524
No. of OPD (Millions)	11.444	17.631	23.217	31.742	29.582	24.371	31.891	30.702
No. of beds per 1000 pop'n	2.6	3.9	3.2	3.1	3.1	2.9	2.8	2.8

The preventive health care services are provided by 107 Health Units which cover the whole country. Each is in the charge of a Medical Officer of Health. He is assisted by a staff of Public Health Personnel comprising of Public Health Nurses, Public Health Inspectors and Public Health Midwives.

2.2 Primary Health Care

The Government of Sri Lanka has committed itself to provide "Health for All" by the Year 2000 A.D. and has further affirmed this position by signing the Health Charter. It has adopted the strategy of Primary Health Care for achieving this goal. The main feature of this strategy is the establishment of a series of Primary Health Care Complexes to cover the entire population. Each complex will

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7.

comprise of :-

1. a three-tiered referral system at the community level and serve a population of about 60,000.
2. will provide an integrated health care services.
3. will provide an infrastructure more amenable to better management.

Concurrently with infrastructure development, a National Health Development Network has been established to ensure intersectoral coordination and community participation in the delivery of primary health care services.

In 1983 a National Plan was developed indicating a phased implementation plan for Primary Health Care over the period 1984 - 1993. At 1983 prices it was estimated that this project will incur a capital cost of Rs.3,702 million and a recurrent cost of about Rs.606 million.

3. HEALTH MANPOWER PLANNING

Since Sri Lanka became independent in 1948, successive governments followed a policy which was directed at establishing a welfare state. Besides providing other services, emphasis was given to providing free education and free health care services to all its citizens.

3.1 National Planning Council

In 1959 the National Planning Council, under the chairmanship of the Prime Minister, formulated a Ten Year Plan for developing the economy. As regards the health sector, it resolved that greater emphasis needs to be given to the preventive services. But it also recognised that the shortage of health personnel, especially doctors, is a major impediment to development in this sector.

In 1962 the Department of National Planning developed a "Short Term Implementation Programme" which focussed on promoting and accelerating economic development. However, as regards the health sector this implementation programme identified that "the greatest restraining factor in the development of the Curative Health Services is the acute shortage of medical and para-medical personnel. Most medical institutions are severely under-staffed causing grave inconvenience to patients. The Personal Health Service is also seriously handicapped in its working due to shortage of personnel, especially doctors." This report prognosticated that even with the increased intake of students and the establishment of a second Medical Faculty at Peradeniya, it will not be possible to adequately meet the demand for doctors for about 5 to 6 years.

3.2 Plan Committee on Manpower and Education

In September 1965, the Prime Minister appointed a Planning Committee on Manpower and Education and its responsibility was to formulate a 7-year development programme for the social overheads. This

committee admitted that it was "handicapped by two main limitations:-

1. lack of adequate and reliable statistical data on the current manpower situation and;
2. absence of a clear and comprehensive programme of development for the next five years.

It observed that in 1965 the doctor/population ratio was about 1:4,900 and that there was a steady increase in the stock of medical doctors over the period 1950 to 1965:-

<u>Year</u>	<u>No. of Doctors</u>
1950	674
1955	952
1960	1173
1965	1546

The shortage of medical personnel in relation to the current needs of the public sector was attributed to the low supply levels.

The report goes on to say that "the demand for doctors in the public and private sectors during the period 1966 - 71 will comprise of :-

1. Replacement needs on account of deaths, retirements etc.
2. Requirements to meet existing backlogs
3. Requirements for expansion and development of medical facilities in accordance with acceptable targets."

It was estimated that the attrition rate for medical doctors will be about 2% per annum. What is conspicuous in this attrition rate is that emigration was not considered then as a major factor.

This committee also developed Norms/Criteria with which to determine the elements of critical health manpower needs, such as doctors and nurses, and based on these Norms/Criteria, it set targets to be achieved by 1970 such as:-

1. Doctor per 3000 population
- 1 Dental Surgeon per 20,000 population
- 2 Nurses per 9 hospital beds

3.3 Five-Year Plan - 1972-1976

Subsequently a five-year plan covering the period 1972-1976 was developed. As regards the health sector it observed that "though the country is studded with a net-work of medical institutions, the smaller units are neglected in favour of larger institutions. Specialist facilities are concentrated in the Provincial and Base Hospitals which are situated in urban areas, while these facilities are not provided in the District hospitals which are more accessible to the vast majority of the rural population". This plan also envisaged that the shortages of health manpower will act as a major constraint to its successful implementation.

3.4 National Health Manpower Study

During the period 1971-73 a National Health Manpower Study was conducted in Sri Lanka with assistance from the World Health Organisation and the study report "Better Health for Sri Lanka" was published in 1975. This study observed that even though the health care system in Sri Lanka appears satisfactory, "there were hidden deficiencies in the system which were made known by the health authorities and were mainly associated with the development and utilisation of health manpower. These are:-

- a) the inadequate utilization of medical doctors' skills and knowledge in the rural areas;
- b) the steady flow of doctors emigrating from Sri Lanka to other countries, developed as well as less developed;
- c) the feeling that personnel in the rural public health services were working at rather low levels of efficiency;
- d) the considerable maldistribution of doctors with regard to their posting in rural areas and to the services and specialities they were employed in;
- e) the exclusion of a large number of registered ayurveda doctors (indigenous medical practitioners) from being firmly incorporated in the national health care system; and
- f) finally, the evident misutilization of the existing health facilities: for example, the population was by-passing the small rural medical institutions and crowding the bigger hospitals.

All these factors were recognized by the government which felt that some changes should be introduced, especially regarding health manpower development and utilization. This shows that there was not only an awareness of the need to change the existing health care system but also an indication of the direction of this change."

This study showed that the increase of medical doctors from 1960 to 1972 was 83%, and was in excess of the rate of economic growth of the country. The doctor/population ratio in 1972 was 25.7 doctors per 100,000 population. This appeared to be satisfactory when compared with many developing countries, but there were also major inter-regional and intra-regional disparities prevailing in the country.

As regards the loss of health personnel this study revealed that about 41% of medical doctors were lost by the tenth year after registration, with emigration being the major cause.

During this period emigration did not appear to significantly affect other health personnel. Attrition rates were estimated at:-

Nurses	2.7%
Midwives	2.7%
AMP/RMP	2.1%
PHI	3%
Dental Surgeon	3.8%

Also, this study proposed five alternative solutions to the present system, but admits that it is very unlikely, that there will be any major changes in the roles and duties of health personnel. As regards doctors, it observes that "Doctors in Sri Lanka are overtrained for providing services as "basic health workers" in the present health care system". It holds the view that doctors will work as team leaders in integrated health centres.

3.5 Medium Term Investment Programme - 1978-1982

However, it needs to be borne in mind that during the past years there was a decline in the economy of the country and the imposition of government controls in various spheres of activity. With the ensuing discontent the emmigration of professionals including Medical Doctors, gathered momentum.

In 1977 there was a major change of government from one of "controls" to a "free economy".

This government developed a Medium Term Investment Programme for the period 1978-1982. As regards the health sector it noted that financial and manpower constraints severely hindered the implementation of the Five-Year Plan. It observed that "Financial constraints were aggravated by the increasing exodus of doctors which reached 10% of the total public health cadre during this period. Many doctors who had post-graduate qualifications left following the abolition of channelled consultation private practice in the Divisions of Colombo, Kandy, Jaffna and Kalutara, by availing themselves of the concession given to specialists to retire. The shortage of doctors which developed was further aggravated by the tendency of private doctors to concentrate on curative work in urban areas. Considering the picture in its totality it may be briefly stated that the health care delivery system was heading for a breakdown. Under the circumstances, as regards the health sector, the government investment proposals for the period 1978-1982 resolved that there was an immediate urgency to restore the existing health care infra-structure to full operational effectiveness and simultaneously develop and expand health manpower, especially the cadre of Doctors, Nurses, Assistant Medical Practitioners, Public Health Nurses and Public Health Midwives. The investment policy bore significant relevance to the priority of health/health related problems of the country.

An immediate outcome of this proposal was the decision to enhance training of health personnel. It decided that in 1980 budgetary provision will be made for the following trainees:-

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Medical Doctors	275
Assistant Medical Practitioners	170
Medical Laboratory Technicians	30
Radiographers	30
Physiotherapists	30
Dental Nurses	25
Public Health Inspectors	80
Nurses	1200
Public Health Midwives	2606

3.6 Staffing Study

However, the Ministry of Health continued to experience shortages of health manpower as a major constraint to its efforts to deliver a satisfactory level of health care. In 1979 it conducted a staffing study because of its concern regarding the supply and distribution of health manpower in the country and the need for a comprehensive health manpower development plan to meet future health manpower needs. The objectives of this study were :-

1. to obtain data on the present staffing of the Ministry of Health;
2. in accordance with established Norms/Standards
 - 2.1 to determine the staff required for the satisfactory operation of the various administrative units;
 - 2.2 to identify the potential for re-deployment of the present staff as appropriate;
 - 2.3 to identify areas requiring up-grading of the staff complements as necessary.

This study identified the following shortages of key health personnel:-

Doctors	933
Nurses	4753
Assistant Medical Practitioners	114
Public Health Inspectors	1038
Medical Laboratory Technicians	556
Midwives	4753

Based on the identified requirements and availability of key health personnel projections were developed for the period 1982 to 1987, taking into consideration the installed capacity of training institutions and estimated attrition rates. The projections for various categories of health personnel are given in tables 3.1 to 3.10

From these projections it is observed that shortages in key health personnel will continue for some years to come. However as regards some categories such as nurses and para medical personnell, the intake of trainees have been almost doubled to counteract this situation But this approach has led to severe strains being placed on training institutions.

3.7 Public Investment Programme

Public Investment Programmes for the country are prepared by the National Planning Division of the Ministry of Finance and Planning in collaboration with the line Ministries.

Regarding the health sector, the more recent Public Investment Programmes for the 5-year periods 1984-1988 and 1985-1989 observed that the Government policy to provide comprehensive health care to the entire population is constrained by shortages of medical manpower and vacancies in key managerial positions.

The 1984-1988 Programme estimated that in 1985 the following shortages will prevail:-

Medical Doctors	846
Assistant Medical Doctors	241.
Nurses	5214
Midwives	2581
Med. Lab. Tech.	642

It also concluded that in view of existing training capacities and the current rate of loss of qualified health personnel, these manpower deficiencies will not be rectified before 1990.

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1985-1989 as indicated in the table below:-

Health Manpower Position 1984

Category	Cadre	In Position	Deficit	Required Number	Deficit
1. Medical Officers	2270	1667	603	2416	749
2. Asst. Medical Prac./Reg. Medical Prac.	1179	1115	64	1443	328
3. Medical Laboratory Technicians	550	483	67	1144	661
4. Staff Nurses	8013	7597	416	12500	4953
5. Midwives	4800	4314	486	7767	3453
6. Public Health Inspectors	1097	917	180	2020	1103
7. Hospital Attendants	5435	3756	180	9249	5593

It also emphasised that these shortages of health personnel are posing a serious threat to the maintenance of an adequate level of health care, and advocated the use of more comprehensive planning and management of the health care delivery system, including manpower.

4. Health Manpower Production

4.1 Basic Training

The government of Sri Lanka has provided for the training of Medical Doctors, Nurses, Assistant Medical Practitioners and other para-medical personnel. The Medical doctors, Pharmacists and Assistant Medical Practitioners are trained at the Universities, and all other categories at training institutions coming directly under the purview of the Ministry of Health. The training institutions and their training capacities are indicated at Table (4.1).

Regarding training programmes it may be said that they have been conducted fairly regularly and that adequate financial provision has been made.

However, it appears as if the installed capacities of these training institutions are unable to meet the increasing demands on health care and the expansion of the health infra-structures, and the more recent increases in emmigration especially of medical doctors.

The curricula of these training institutions are formulated in consultation with the Ministry of Health and are based on service delivery needs. For this purpose coordinating committees have been constituted. In these curricula Community Medicine has been given greater emphasis in the recent past, and primary health care has been introduced as another component.

4.2 Post-graduate Training

Post graduate training is conducted locally and abroad. Table 4.2 indicate the courses being conducted, their duration and qualifications obtained.

(a) Local

The Post Graduate Institution of Medicine follows the practice of awarding an academic degrees after the trainee successfully completes the academic course and the final examination. However it is also a condition that a Board Certificate be obtained to ensure satisfactory professional competence. For this purpose the trainees are granted fellowships which

b) abroad

Employees are permitted periods of leave which could be on full-pay or no-pay, to enable them to obtain suitable post-graduate qualification abroad. The award of this facility depends on service records and the need for such post graduate training by the Ministry of Health.

4.3 In-service training

In service training programmes are conducted for all categories of staff. They are conducted as regular courses at the training institutions or on an ad hoc basis to meet special needs through workshop procedures. The latter types are usually the responsibility of administrative units of the Ministry of Health, such as the Family Health Bureau, Health Education Bureau, Planning Division and members of the directorate.

4.4 Selection of Trainees

Entrance to the Universities for obtaining medical degrees is by open competitive examinations. As regards the nursing and para-medical courses, the date of commencement of the course and required pre-qualifications are advertised in the government gazette and final selection is made by a selection Board. Selection for in-service training courses are based on the personnel records, service records and service needs, and individuals are selected by the respective programme/project officers.

4.5 Cost of Training

The cost of training health personnel is given at table (4.3) as effective in 1984. The source of this information is the Ministry of Health and the Ministry of Higher Education and indicate the total cost of one course.

4.6 Number of Trainees

The number of admissions to training institutions of the Ministry of Health is dependant on the financial provision for the current year, the training capacity and the need for personnel.

Financial provision for training is included in the annual budget after negotiations with the Treasury. In these negotiations the needs of the Ministry, the approved cadre and the training capacity are taken into consideration. Very often the needs of the Ministry as determined by its manpower plans are in excess of the cadre permitted by the Treasury.

In some categories such as Nurses, Public Health Inspectors and Midwives, the shortfall is so large that the Ministry of Health has been compelled to admit numbers in excess of the training capacity with a view to closing the gap as soon as possible.

The admissions and outputs of training institutions for the period 1973 to 1985 are given in tables 4.4 and 4.5. The former is an account of basic training and the latter of in-service training programmes conducted by the National Institute of Health Sciences - Kalutara. It is not possible to enumerate the outputs of other ad hoc in-service training programmes conducted by the Ministry of Health due to lack of information.

5. Health Manpower Management

5.1 Recruitment & Training

Based on the requirements of the Ministry of Health and the training capacity of institutions, trainees are recruited. Applications for specified courses are invited by advertisement in the Government Gazette or from the Job Bank. Pre-qualifications are specified for each category of trainee. Except in the case of medical degrees, final selection is made by a Board of selection comprising of members from the Ministry of Health and the Ministry of Public Administration. Entrance to the medical Faculties is by open competitive examinations.

5.2 Deployment

All employees in the public service are liable to be transferred after a period of service in any one locality. This could also occur at the employees request. Also, employees may be transferred for disciplinary reasons. In the case of routine transfers it is the policy of government to transfer employees to their home stations and thereby minimise inconvenience such as obtaining housing, schooling problems and the effects of adjusting to a new environment. Expenses incurred by routine transfers are met by the Ministry of Health.

Transfers are effected on an annual basis by a transfer Board constituted by the Secretary of Health and comprising of members of the Ministry of Health. It needs to be emphasised that though this mechanism does exist, great difficulty is being experienced regarding posting of personnel to under-developed and under-served areas due to transferees circumventing these decisions by various means.

5.3 Housing Facilities

It is the policy of the Ministry of Health to provide housing and other amenities to its employees, especially to those that are posted to remote areas. As regards the plans for the implementation of Primary Health Care, this aspect has been taken into consideration and housing is being provided for essential health personnel such as

doctors, nurses, assistant medical practitioners, public health nurses and midwives at all Primary Health Care Complexes. This policy is also being successfully implemented in the major socio-economic development projects such as the Mahaveli Development project and the Integrated Rural Development Projects.

5.4 Financial Assistance

Employees of the Ministry of Health are permitted to obtain loans at reasonably low rates of interest and long periods of payment. These loans may be utilised for purchasing housing, transport, or to meet any other exigency that may arise.

5.5 Health Facilities

All employees of the Ministry of Health are entitled to obtain free medical care at government medical institutions and are given privileged entry. Medical doctors are permitted entry into the paying-wards free of charge.

5.6 Welfare

All employees in the public services are pensionable. Recently the percentage of the consolidated salary payable as a pension has been increased to 85%.

5.7 In-service Training

Medical doctors, nurses and other para medical personnel are granted full pay leave to enable them to follow post basic in-service training courses. Eligibility for selection to these courses is dependent on satisfactory service records and the need for such training. The fact that an employee has followed these courses is taken into consideration for promotion to higher grades.

As regards graduates such as medical doctors, they are entitled to avail of earned-leave, full-pay leave or no-pay leave to enable them to follow postgraduate courses in any suitable training institution locally or abroad. The granting of this facility is largely dependant on the need for the particular type of postgraduate specialization by the Ministry of Health.

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On-going education is further facilitated by encouraging participation at international workshops and seminars. Selection of participants is based on their efficiency and the relevancy of participation to discharge of duties.

5.8 Career Development

Employees are recruited into service on the basis that they will receive salaries on an incremental scale. At various points on this incremental scale there is the requirement that the person qualifies at an efficiency bar or obtains further educational qualifications as a pre-condition to further progress on the scale. The same procedure applies for promotion to higher grades.

Selection to the higher and more prestigious posts is very dependant on the seniority in service, educational qualifications and service records which indicate proficiency and efficiency. On this basis a recruit medical doctor could aspire to being the Director General of Health Services after going through the pahses of being a Grade Medical Officer, Administrative grade officer and finally the Directorate. Other categories of health personnel may also follow a similar course in career development and possibly terminate service while holding a high post.

In this scheme of career development it needs to be recognised that it is limited by the paucity of posts at the higher levels. It implies that the vast majority of personnel continue to stagnate and receive salaries and benefits commensurate with the lower levels.

Another career development opportunity is provided by permitting in-service employees to apply for recruitment to higher paid job categories if they possess the required educational qualifications and satisfactory service records. To provide for this opportunity, a certain percentage of placements of new recruits are reserved for this purpose. As regards remuneration, the successful candidates are placed at a suitable point on the new incremental scale to ensure that there is no financial loss. On this basis a midwife for instance could join the nursing service.

5.9 Remuneration

As stated earlier, all employees in the public service including health personnel are paid salaries based on a time-scale.

However, in addition to the basic wages, some categories receive additional allowances. These are enumerated in table (5.1).

In lieu of the right to private practice doctors were paid an additional allowance. The present position is that this allowance is now paid as a consolidated salary and government doctors are allowed the right to private practice. Assistant Medical Practitioners also conduct their own private practice and thereby receive additional remuneration. In addition to this allowance, doctors are paid an overtime allowance when they are called to duty outside regular hours. A similar allowance is paid to nurses if and when they work in excess of the stipulated eight hours in a day.

Medical doctors holding administrative posts are paid an allowance because they are not entitled to private practice. However, new recruits to the administrative grades are now not eligible to this allowance. Middle level grades of technical officers such as Medical Laboratory Technicians, Pharmacists and Physiotherapists augment their income by working in the private sector outside their regular hours in the public service.

Besides these allowances, some categories such as nurses are paid allowances for outfitting purposes.

5.10 Migration

In 1972 a Special Topics Committee under the sponsorship of the Colombo Plan met to deliberate on "the loss of skilled personnel from developing countries, its incidence, effects and measures for control". The various countries within the aegis of the Colombo Plan submitted Country Papers. As regards Sri Lanka, the salient features of its country paper were:-

1. That like other developing countries coming within the

due to the immigration of technical personnel to developed countries, and that this problem appears to have aggravated in recent years.

2. The pattern of immigration of skilled personnel during the period May 1971 to April 1972 is shown in Table (5.2), (5.3), (5.4). From this table it is evident that 62.7 of the migrants proceeded to developed countries. Developing countries such as Zambia which experienced shortages of professional and technical personnel were able to attract 23 percent of the migrants by providing financial incentives.

The paper expressed concern about the magnitude of migration which will adversely affect the manpower requirements of the country and secondly whether there are stable long term trends which could be identified, its causes analysed, and policy decisions for its correction evolved.

An estimate of skilled and high level manpower requirements for the implementation of development plans was made for the period 1969-1978. (table 5.5). There appeared to be a degree of balance between supply and demand. However, it expresses the view that the crucial categories of skilled personnel needed for rapid economic development will be jeopardised if the migration levels of the period May 1971 to April 1972 were permitted to continue.

It concluded that socio-economic factors such as salary levels and living standards, professional needs and career prospects will continue to be operative factors in the migration of skilled people from Sri Lanka.

The employment and Manpower Planning Division of the Ministry of Plan Implementation conducted a study on the Inflow and Outflow of Medical Doctors during the period 1960 - 1977. Its findings in summarised form are as follows:-

Period 1960 - 1965

Total number serving	- 1960 (Government Service and Private Sector)	- 2,201
Additions 1960-1965	(a) - National Universities	- 844
	(b) - Foreign Trained	- 34
		<u>3,079</u>
Total Number serving	- 1966	<u>2,725</u>
Withdrawals from employment 1960-1965		<u>354</u>

Period 1966 - 1969

Total number serving	- 1966	- 2,725
Additions 1966-1969	(a) - National Universities	- 1,089
	(b) - Foreign Trained	- 44
		<u>3,858</u>
Total number serving	- 1970	<u>3,238</u>
Withdrawals from employment 1966-1969		<u>620</u>

Period 1970 - 1977

Total number serving	- 1970	3,238
Additions 1970-1977	(a) - National Universities	1,661
	(b) - Foreign Trained	66
		<u>4,965</u>
Total number serving	- 1977	<u>3,368</u>
withdrawals from employment 1970-1977		<u>1,597</u>

A similar investigation for the period 1980 - 1984, covering only government doctors, is as follows:-

Total number serving	- 1980	1,858
Additions	- 1980-1984	<u>1,306</u>
		3,164
Total number serving 1984		<u>1,573</u>

The average annual inflow and outflow of medical doctors during this period in summary is as follows:-

<u>Period</u>	<u>Average Annual Inflow</u>	<u>Average Annual Outflow</u>
1960/1965	146	58
1966/1969	283	155
1970/1977	216	200
1980/1984	261	318

It is quite evident that over this period the annual loss of doctors has gathered momentum and has reached a level at which production is unable to cope with losses, resulting in the steady depletion of the total stock of doctors.

The Employment & Manpower Planning Division of the Ministry of Plan Implementation conducted a survey on foreign employment. It commenced in January 1984 and concluded in October 1984. One of the objectives of this Study was to determine "the Economic and Social objectives the immigrant had at the time he left the country and the extent to which he attained his objectives and goals".

The data obtained from this survey showed that about 85% of the immigrants fell within the age range of 20 - 40 years (table 5.6). It is therefore evident that the most economically active age groups are utilising opportunities for immigration.

This survey also determined the reasons for immigration by interviewing them at the Katunayake Airport. The outcome is summarised at (table 5.7) by category of manpower, and the main reasons. The overall picture indicates that about 67% of immigration was due to financial reasons. It is interesting to note that as regards the high level and managerial immigrants, 41% immigrated because of the high salaries and 18% because of financial difficulties.

Sri Lanka experienced accelerated immigration of high level personnel since the ethnic violence of 1983. But this study reveals that only 0.4% of immigrants left for this reason. It

reason for immigration from Sri Lanka is the wide salary differentials between Sri Lanka and the recipient countries. This is quite evident from table 5.8. In the case of professionals, the salaries obtained abroad was about 12 times as much as obtained in Sri Lanka.

5.11 Remuneration from Employment

The emmigration of health personnel, especially doctors, has gathered momentum since the early 1970's. At various times in the past committees and such like have been appointed to study this phenomenon and report on its effects on development programmes and the economy of the country. From the Colombo Plan Study and the Study by the Manpower Division of the Ministry of Plan Implementation it has become clear that inadequate salaries is a major factor operative in this phenomenon of emmigration.

A comparison of the increase in salaries of some key health personnel, over the period 1955 - 1985, is given at table 5.9. This comparison shows:-

1. that there has been a considerable increase in the starting salary of all categories over the period 1955 to 1985.
2. it appears that the same degree of increase has not been achieved at the upper reaches of the salary scales.
3. the greatest increase in salaries, both starting and terminal, since 1955 is seen in the least skilled categories such as attendants and labourers.

In this aspect medical doctors appear to be least benefitted. During the 30 years period ending 1985. cost inflation has been estimated at 452 percent (that is 4.52 times over the 1955 prices). From this it is evident that even though the initial salaries could cope with the inflation factor to some extent, it appears that subsequent salary increments do not compensate for this factor. Under these circumstances it may be assumed that employees with about 10 to 15 years of services will experience much difficulty in maintaining a desirable level of living from the remuneration obtained by way of employment in the public sector. It is also significant that this is the group which is most susceptible to immigration.

5.12 Distribution

In 1980 the Government committed itself to the implementation of Primary Health Care. For this purpose it established a National Health Development Network comprising of the National Health Council (NHC), National Health Development Committee (NHDC) and other Executive Committees. Of the six Standing Committees serving the NHDC, one was on Health Manpower Development.

It was recognised that a major constraint experienced in the implementation of PHC was the shortage of health personnel in the rural areas. In 1982 the health manpower situation was reviewed to identify the manpower needs for PHC.

Table 5.10 indicates the health manpower available and their requirements for PHC implementation in peripheral health institutions. From this table it is evident that there is a marked shortage of critical personnel needed for the successful delivery of primary health care services.

Table 5.11 & 5.12 indicates the availability and requirements of health personnel of all categories for health care delivery services, table 5.13 is a computation of the percentage adequacy of staffing. From these it is evident that the higher level health care institutions are much better staffed than the Primary Health Care services. It needs to be noted that the situation regarding Public Health Midwives has improved since 1982, but otherwise there has been no significant change. What is significant is that existing manpower management practices as yet favour a manpower drift from peripheral to higher level health care institutions in urban localities.

Table 5.14 indicates the distribution of key health personnel by Health Divisions. Here again it is evident that the better developed regions such as Colombo and Kandy have a much larger share of the available staff.

What is more is that in the other regions the available health staff tend to concentrate in large townships leading to neglect of the more remote rural population. It may be concluded that there prevails a significant disparity in the inter-regional and intra-regional distribution of available health personnel. This may be attributed to there being under-privileged and under-served areas not only as regards their health care services, but also regarding other social needs such as educational facilities, communications, power, availability of goods etc. This gives an idea of the setting in which PHC is being implemented and the current difficulty experienced by the Ministry of Health in deploying essential health manpower.

5.13 Information

A major problem in Health Manpower Management is the absence of comprehensive and reliable information on manpower.

Information pertaining to individuals is maintained in individual personal files in various administrative units and is not regularly up-dated. Nor is any recorded information readily available.

Secondly information is lacking on the quality, quantity and range of service being rendered by the various institutions. This situation does not permit one to match manpower requirements to manpower needs.

Thirdly information is lacking on proposed health infra-structure expansion and development. It is common to observe sudden persistent demands for sophisticated health institutions which do not take into account the availability of manpower. Considering this aspect, a redeeming feature is that for the delivery of primary health care, national plans have been projected up to 1990 and has taken into consideration the need for adequate manpower.

Fourthly, information as regards the work loads, performance standards and work norms for various health personnel is not well defined. Information in this field needs to be obtained through detailed work studies, and could be an important component of manpower research

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6. Impact of Health Manpower Shortages

The continuing shortages of health manpower has been a major concern in view of its impact on the delivery of health care services. These effects are as follows:-

- 6.1 The Government of Sri Lanka has in the past few years made heavy investments in lead projects such as the Mahaveli Development Project, the Free Trade Zones and the District Integrated District Development Projects. These projects have either re-settled large population groups or encouraged migration to new localities and is establishing the physical infrastructure required to provide them with suitable health services. However due to the shortage of personnel it has not been possible to provide this population with satisfactory levels of health care. With a view to resolving this constraint Board papers were presented before the National Health Council for policy decisions on health manpower production and management.

These included :-

1. Health manpower development for the implementation of primary health care - January 1984
2. Health manpower requirements for development project - March 1984
3. Inadequacies of the Mahaweli Health Programme - March 1984
4. Proposal for short term solution of health manpower deficiencies in development projects - May 1984
5. Health manpower development - July 1984
6. Health manpower needs for implementation of Primary Health Care - September 1984
7. Proposal for training health personnel - November 1984
8. Training health personnel for establishing a Mahaweli health service - January 1985

- 6.2 The Ministry of Health continues to experience difficulty in posting health personnel to peripheral institutions because of health manpower shortages. This has led to a deterioration of the quality of services being provided by these institutions, and loss of credibility by the community manifests itself by their by-passing these peripheral institutions and patronising the larger health institutions which are

- 6.3 The shortage of health manpower is a major constraint to the implementation of primary health care. Firstly the peripheral institutions which form the hub of the P.H.C. system remain under-staffed. Secondly due to shortages of key health personnel it is very difficult to constitute a complete health team which could deliver a comprehensive package of health care.
- 6.4 There is an increased reluctance of health personnel to take up to Community Medicine due to the low remuneration. This is especially true of doctors and nurses. It has resulted in a conspicuous deficiency in providing leadership, direction and guidance, and the management of primary health care services. This situation has affected the quality of services being delivered at peripheral institutions and that by field personnel.
- 6.5 Besides the basic training that health personnel receive, they are constantly exposed to on-the-job training with a view to improving their knowledge and skills and enhancing motivation. However, the absence of facilities commensurate with these skills and knowledge has acted as a disincentive.
- 6.6 Also the difficulty experienced in appointing health personnel to peripheral institutions is a good indication of weaknesses in personnel management. There is a wide variation in the availability of facilities such as housing, schools, communications etc. from station to station, in fact some are designated as punishment stations. These circumstances emphasise the need for fairness in manpower administration. However, this being not practised, has led to dissatisfaction, and very often personnel have therefore obtained their appointments by favour than by merit by resorting to extra-administrative influences. This in itself has led to low morale and motivation and eroded discipline.

- 6.7 As regards the management of health services, there is a hierarchy of supervision and this activity is supported by departmental manuals which identify the roles and functions of personnel. In view of the basic training and subsequent on-going education it may be reasonably assumed that Sri Lanka health personnel possess the ability to organise, allocate duties, supervise, maintain discipline and monitor and control work performance. However, the current situation is that supervisory staff is very often the recipient of accusations by subordinates and penalisation from above. This may be attributed to political and trade union issues which are given priority over service delivery factors. This has led to lackadaisical approach to supervision and difficulty in implementing organisational development with a view to improved performance efficiency.
- 6.8 As indicated earlier, emigration has been identified as the major causative factor for current shortages of key health personnel. This shortage has adversely affected the quality of health care services being delivered. But what is as important is that Sri Lanka which has limited resources is experiencing a tremendous financial loss. On account of the immigration of Doctors this loss could be estimated at about Rs 13 million per annum (200 doctors per annum at Rs.65000 c.o.p.) . If other categories such as nurses and middle-level technical personnel are considered this figure may be doubled. Opportunity costs will further accentuate this financial loss.

Health Manpower Policy

From the foregoing account it is evident that Health Manpower deficiencies has been a major concern of the government of Sri Lanka for the past 25 years or more. In the very early stages the deficiencies were attributed to low levels of production whereas now it is due to increased emigration from the country. The tables 7.1, 7.2 & 7.3 shows its effects on health manpower stocks for the period 1981 - 85. It is observed that the attrition rates for doctors have increased to more than 20% in recent years and the other categories such as nurses and physiotherapists have also increased. However what is even more significant is that very often the annual loss quite offsets the annual intake, thereby prolonging the time span needed for correcting mis-matches with the existing training capacity and manpower management practice.

The need for developing health manpower was further reinforced by Sri Lanka gaining the Health Charter and its commitment to provide "Health for All", utilizing Primary Health Care as its main strategy.

As a result of this a National Health Development Committee was established and as regards health manpower development it endorsed the policy of :-

1. Based on scientific norms and standards appropriate to the local conditions, the requirements of trained health personnel will be worked out and Government approval obtained by the end of 1981.
2. Steps will be taken to train and deploy the full cadres required of all categories except, medical graduates by 1985.
3. Facilities in Medical Faculties will be enlarged to train the full cadre of medical graduates required, by 1990.
4. Training and deployment of medical graduates, Assistant Medical Practitioners and Pharmacists will be rationalised to avoid overlapping and loss of potential.
5. Greater reliance will be placed on auxiliaries, and new

6. Medical education will be reorganised on models designed to suit local needs, even if they do not conform to standards in countries in which the present system is based. This will in no way lower the basic requirements to practise modern medicine.
7. Post-graduate medical education will be provided in the local Universities and weightage will be given to degrees obtained from the Universities in the matter of Specialist appointments. Steps will be taken to ensure that those receiving post-graduate medical education get the benefit of academic and practical training in suitable institutions abroad.
8. Curriculum of all health personnel will be revised and updated to be in line with the emphasis placed on Primary Health Care.
9. Training of health personnel will be strengthened with the National Institute of Health Services, as the focal point. Emphasis will be given to the management component in training and the assistance of other training institutes will be obtained for this purpose.
10. Better working conditions will be provided to health personnel with special emphasis on remuneration and housing facilities.

With a view to implementing this policy, there has been a positive effort to enhance the output of trained health personnel. Some of the efforts to resolve these problems are :-

1. Expanding the National Institute of Health Sciences (NIHS) with a view to increasing its capacity and range of training, and thereby providing more personnel for the community health services.
2. Introducing a course in Community Medicine at the Post Graduate Institute of Medicine with specialist recognition in order to implement Primary Health Care.

3. The establishment of a Private Medical College and thereby increasing the output of medical doctors who are in acute shortage.
4. Enhancing in-service training at foci such as the National Institute of Health Sciences, the Health Education Bureau and the Family Health Bureau, with emphasis on the implementation of Primary Health Care.
5. Incorporating the training component in health projects such as the Health and Population project assisted by the Asian Development Bank and the Integrated Rural Development Projects assisted by various international and national agencies.
6. Enhancing the health planning and management capabilities at district level by the Planning Division of the Ministry of Health in collaboration with the WHO
7. By encouraging health personnel to follow relevant courses at other national training institutes such as the Sri Lanka Institute of Development Administration and courses conducted on planning at the Ministry of Plan Implementation.
8. By utilization of assistance from international and national agencies for training health personnel abroad, the emphasis being on Community Medicine, Primary Health Care and Health Services Management
9. The establishment of a health manpower development cell in the Planning Division of the Ministry of Health.
10. The establishment of an improved National Health Information System which will finally incorporate a health manpower data component.
11. By developing a National Health Plan which will tend to synchronise infra-structure development with health manpower development.

12. By re-structuring the health care delivery system so that it is more amenable to a referral pattern which will lead to rationalised utilization of trained health personnel, and provide better management support for the delivery of health care services.
13. By attempting to utilize community resources for the delivery of community health services especially through health volunteers and the Gramodaya Mandalayas.
14. By improving management skills and the development of Programme plans at the Central and District levels in collaboration with the WHO
15. It is proposed to establish a manpower data base and a suitable organisation for manpower development.

8. Problems :-

Problems regarding health manpower development in Sri Lanka may be identified as having arisen due to several casual factors.

Some of the important casual factors in summary are :-

- 8.1 The inability to retain trained health personnel in the public service due to better prospects outside it, including abroad. The table at 8.1 indicate the inflow and outflow of trained health personnel during the period 1980/81. As regards medical doctors there has been a steady depletion of the stock, and this tendency appears to be affecting other categories such as Nurses and Radiographers.
- 8.2 Over the years the health infrastructure has been expanding without giving due consideration to the inadequate supply of health manpower. This is aggravating the situation regarding health manpower deficiencies.
- 8.3 Within the country there is a wide variation in the availability of facilities such as housing, schools, communication etc. The absence of such amenities and incentives is a major constraint to better distribution of the limited numbers of health personnel that are currently available.
- 8.4 The lack of adequate supervision has led to under utilization of available health personnel.
- 8.5 A health manpower data base is conspicuous by its absence. This situation is not amenable to systematic manpower planning and management.
- 8.6 Today manpower planning and development activities are occurring in independent and isolated foci in an ad-hoc manner. The absence of an organizational mechanisms to coordinate these activities using the manpower data base needs to be rectified.
- 8.7 Weakness in the recruiting and posting procedures need to be reviewed and appropriate corrective action instituted.

- 8.8 There is a wide range of health institutions in Sri Lanka and within each category also there is a wide variation. It is necessary that work studies be conducted on these health institutions to rationalise the deployment of staff complements and ensure their better utilization taking into consideration the specific needs of each category of institution.
- 8.9 There appears to be a need for strengthening the planning and management capabilities at the decision making, programme management and operational levels. Inadequacies in this field manifest itself in the inability to match manpower needs and service needs.
- 8.10 Very often there is expression of political commitment in developing manpower, however, this does not manifest itself in the budget. Very often the budgetary emphasis is on Capital expenditure for physical infrastructure development without making provision for required health manpower and adequate recurrent expenditure.
- 8.11 It is observed that training institutions are inadequately provided with staff, teaching aids, and other physical facilities.
- 8.12 A major constraint in developing health manpower is the lack of financial support. Today in Sri Lanka western government health care services are rendered free to the population. It is necessary that an appropriate means of financing the health services of the country be devised so that it will take into account these services in its totality including health manpower development.
- 8.13 Problems have arisen due to policy statements of conflicting interests. For instance doctors in government service are entitled to private practice and other categories of health personnel are also conducting their own practises. This situation has led to management problems.

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Considering the above issues the main areas of concern regarding Health Manpower Development may be identified as the inability to retain trained health personnel, deficiencies in health manpower management practices, the absence of a cohesive organisation for health manpower development and the conspicuous absence of a comprehensive health manpower management information base.

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Table 1.1

VITAL STATISTICS 1945 - 1983

Year	Estimated Mid-year Population ('000)	Crude birth rate	Crude death rate	Maternal Death Rate	Infant Mortality Rate
1945	6,650	36.6	21.9	16.5	140
1950	7,678	40.4	12.6	5.6	82
1955	8,723	37.3	10.8	4.1	71
1960	9,896	35.6	8.6	3.0	57
1965	10,903	33.1	8.2	2.4	53.2
1970	12,516	29.4	7.5	1.5	47.5
1971	12,608	30.4	7.7	1.4	44.8
1972	12,861	30.0	8.1	1.3	45.6
1973	13,091	28.0	7.7	1.2	46.3
1974	13,284	27.5	9.0	1.0	51.2
1975	13,496	27.7	8.5	1.0	45.1
1976	13,717	27.8	7.6	0.9	43.7
1977	13,942	27.9	7.4	1.0	42.4
1978	14,190	28.4	6.6	0.8	37.1
1979	14,471	28.9	6.5	0.8*	37.7*
1980	14,738	28.4	6.2	0.9*	31.3*
1981	14,988*	28.0*	6.0*		
1982	15,189*	26.8*	6.1*		
1983	15,416*	26.2*	6.1*		

Provisional

Source: Register General's Office

Table 1.2

VITAL STATISTICS BY DISTRICT

District	Crude birth Rate 1983*	Crude death Rate 1983*	Maternal death Rate 1979	Infant Mortality Rate 1980
SRI LANKA	26.2	6.1	0.8	41.4
1. Colombo	25.4	9.0	0.5	43.0
2. Gampaha	17.6	5.5	0.3	31.0
3. Kalutara	22.4	5.7	0.5	37.0
4. Kandy	30.3	8.1	1.2	55.0
5. Matale	29.3	5.5	0.6	35.0
6. Nuwara Eliya	23.9	6.3	1.7	74.0
7. Galle	23.0	6.8	0.9	39.0
8. Matara	23.6	6.0	1.1	34.0
9. Hambantota	23.6	4.2	0.4	22.0
10. Jaffna	24.4	4.7	1.2	38.0
11. Mannar	31.6	4.3	1.4	25.0
12. Vavuniya	31.5	5.0	1.2	16.0
13. Mullaitivu	27.7	3.7	0.0	17.0
14. Batticaloa	33.2	5.6	1.3	34.0
15. Amparai	31.1	4.3	1.2	20.0
16. Trincomalee	32.2	4.2	0.9	29.0
17. Kurunegala	27.0	6.3	0.6	40.0
18. Puttalam	28.3	6.4	0.5	21.0
19. Anuradhapura	29.2	4.5	0.6	17.0
20. Polonnaruwa	29.0	3.2	0.7	19.0
21. Badulla	28.5	6.0	0.9	47.0
22. Moneragala	29.1	3.1	1.2	14.0
23. Ratnapura	29.9	6.2	1.0	43.0
24. Kegalle	21.1	5.8	0.6	31.0

* Provisional

Source: Registrar General's Department

Table 1.3

HOSPITAL MORBIDITY AND MORTALITY IN SELECTED YEARS 1965 - 1983

Disease Groups (ICD Ninth Revision Grouping)	Cases Discharged from Government Hospitals per 100,000 Population					Deaths in Government Hospts. per 100,000 Population				
	1965	1970	1975	1980	1983	1965	1970	1975	1980	1983
Infectious and Parasitic Diseases	1,731.8	3,206.1	2,703.0	2,065.4	2,521.3	32.5	43.3	42.1	23.1	24.6
Tuberculosis	122.3	137.4	155.7	129.6	134.6	8.3	10.3	8.8	6.4	7.7
Endocrine, Nutritional and Metabolic Disorders and Mental Disorders	837.2	338.9	325.2	234.1	216.9	8.5	7.1	15.9	3.5	4.1
Diseases of Blood and Blood Forming Organs	611.7	533.9	450.9	359.0	314.6	8.3	6.7	10.5	3.5	2.9
Mental Disorders	133.2	176.8	174.3	226.9	193.6	1.0	0.6	1.5	2.2	0.5
Diseases of the Nervous System and Sense Organs	405.6	397.2	350.3	398.0	416.7	10.8	6.6	7.1	6.6	7.2
Diseases of the Circulatory System	520.7	528.7	574.9	617.4	648.2	32.0	35.4	42.1	33.7	37.8
Diseases of the Respiratory System	2,699.9	3,053.7	2,341.2	2,342.6	2,339.1	29.7	30.3	30.5	19.1	20.2
Diseases of the Digestive System	1,486.0	883.0	899.7	692.0	701.2	27.0	11.6	12.5	8.4	9.0
Diseases of the Genito-Urinary System	468.3	598.3	577.1	662.3	674.7	5.1	5.1	4.8	3.0	3.6
Complications of Pregnancy, Child birth and Perinatal Mortality	2,844.6	2,739.7	2,998.1	3,427.6	3,136.7	6.6	3.2	2.4	2.5	1.4
Diseases of the Skin and Subcutaneous tissues	490.8	651.0	711.4	596.8	586.1	0.5	0.3	1.2	0.5	0.2
Diseases of the Musculoskeletal & connective tissues	443.9	338.0	350.4	414.7	467.3	0.4	0.3	0.2	0.2	0.1
Chromosomal Anomalies	22.7	56.6	34.0	30.6	34.0	2.4	5.4	5.7	3.3	1.9
Main conditions originating in the perinatal period	167.0	104.0	89.6	90.4	96.0	23.8	23.9	17.7	20.0	15.5
Symptoms, signs and ill-defined cond.	264.7	711.5	920.4	1,154.9	1,328.9	11.5	10.5	15.6	14.1	12.0
Accidents, Injury and Poisoning	1,523.3	2,055.0	1,750.7	1,743.3	1,662.7	20.6	17.8	21.2	27.5	25.1
TOTAL (ALL DISEASES)	14,773.0	15,509.8	15,406.9	15,185.4	15,471.9	229.1	228.8	239.2	173.7	174.1

Table 3.1

Projection - Grade Medical Officer

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Stock at beginning of year	1243	1119	1134	1147	1235	1499
Intake		140	140	230	300	350
Total	1243	1259	274	1427	1605	1879
Attrition 10'	124	125	127	142	166	137
Stock at end of year	1119	1134	1147	1235	1499	1692
Required Stock	1942	1980	2020	2060	2102	2144
Mismatch + (-)	(823)	(846)	(873)	(775)	(603)	(452)

Table 3.2

Projection - Assistant Medical Practitioners

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Stock at beginning of year	1057	1036	1202	1178	1156	1320
Intake		190	0	0	190	190
Total	1057	1226	1202	1178	1346	1510
Attrition (2%)	21	24	24	22	26	30
Stock at end of year	1036	1202	1178	1156	1320	1480
Required Stock	1415	1443	1472	1501	1531	1562
Mismatch + (-)	(379)	(241)	(294)	(345)	(211)	82

Table 3.3

Projection - Nurses

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Stock at beginning of year	7214	7070	7336	7459	7310	7604
Intake	0	416	275	0	450	450
Total	7214	7486	7611	7459	7760	8054
Attrition (2%)	144	150	152	149	156	160
Stock at end of year	7070	7336	7459	7310	7604	7894
Required Stock	12304	12550	12901	13057	13319	13584
Mismatch	(5234)	(5214)	(5342)	(5747)	(5714)	(5690)
	+					
	(-)					

Table 3.4

Projection - Midwives

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Stock at beginning of year	4788	4692	5186	5524	5854	6178
Intake		600	450	450	450	450
Total	4788	5292	5636	5974	6304	6628
Attrition (2%)	96	106	112	120	126	132
Stock at end of year	4692	5186	5524	5854	6178	6496
Required stock	7615	7767	7922	8081	8243	8407
Mismatch + (-)	(2923)	(2581)	(2398)	(2227)	(2065)	(1911)

Table 3.5

Projection - Medical Lab. Technicians

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1987</u>
Stock at beginning of year	522	512	502	522	541	559
Intake			30	30	30	30
Total	522	512	532	552	571	589
Attrition	10	10	10	11	12	12
Stock at end of year	512	502	522	541	559	572
Required Stock	1122	1144	1167	1190	1214	1239
Mismatch + (-)	(610)	(642)	(645)	(649)	(655)	(607)

Table 3.5

Projection - Pharmacists

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Stock at beginning	480	471	533	581	629	675
Intake		72	60	60	60	60
Total	480	543	593	641	689	735
Attrition (2%)	9	10	12	12	14	14
Stock at end of year	471	533	581	629	675	721
Required stock	559	570	581	593	605	617
Mismatch + (-)	(88)	(38)	0	36	70	104

Table 3.7

Projection - Physiotherapists

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Stock at beginning of year	149	146	152	149	171	192
Intake		9	0	25	25	25
Total	149	155	152	174	196	217
Attrition (2%)	3	3	3	3	4	4
Stock at end of year	146	152	149	171	192	213
Required stock	295	301	307	313	319	326
Mismatch + (-)	(149)	(149)	(158)	(142)	(127)	(113)

Table 3.8

Projection - Radiographers

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Stock at beginning of year	211	207	203	199	224	249
Intake	0	0	0	30	30	30
Total	211	207	203	229	254	279
Attrition	4	4	4	5	5	6
Stock at end of year	207	203	199	224	249	273
Required stock	194	197	202	206	210	214
Mismatch + (-)	13	6	(3)	13	39	59

Table 3.9

	<u>PUBLIC HEALTH NURSES</u>					
	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Stock at Beginning of Year	220	216	237	281	325	369
Intake		36	50	50	50	50
Total	220	242	287	331	375	416
Attrition (2%)	4	5	6	6	7	8
Stock at end Year	216	237	281	325	369	411
Required stock	283	289	294	300	306	312
Mismatch + (-)	(67)	(52)	(13)	25	63	99

Table 3.10

Projection - Public Health Inspectors

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Stock at Beginning of Year	934	916	898	958	1018	1076
Intake	0	0	80	80	80	80
Total	934	916	978	1038	1098	1156
Attrition (2 %)	18	18	20	20	22	24
Stock at end of year	916	898	958	1018	1076	1132
Required stock	1981	2020	2051	2102	2144	2187
Mismatch + (-)	(1065)	(1122)	(1103)	(1084)	(1068)	(1055)

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Table 4.1

Basic Training of Health Personnel

	Training Capacity	Period of Training	Qualification for Recruitment
Medical Officers	90 Peradeniya) 150 Colombo) 70 Galle) 70 Jaffna) 100 Gampaha)	5 years	Competitive selection after Adv./level
Dental Surgeons	50 Peradeniya	4 years	Competitive selection after A/Level
P.H.I	40 - Institute of Hygiene Kalutara	1 year	O/Level - Six subjects
A M.P	60 Peradeniya 60 Colombo 60 NIHS Kalutara 30 Jaffna	3 years	G.C.E. O/level at two subjects with 4 credits including Mathematics
Physiotherapists & Occupational Therapists	25 G.H.C.	2 years	O/level at two sittings physics compulsory
M.L.TT	50 M.R.I.	2 yrs	O/Lev. at two sittings Chemistry compulsory
Radiographer	30 G.H.C	2 yrs	O/level at two sittings, physics compulsory
Nurses	450 (6 NTS)	3 yrs	O/level with 3 credits in two sittings
Pharmacist Dispensers	60(Colombo) (colombo)	1 Yrs 6/12 practical	do Minor staff promoted, 50% recruited
Midwives	600 Provincial Hospitals	1 1/2 Yrs	O/Level
Attendants		6/12	Minor employees promoted
Dental Nurses	25 Maharagama	2 yrs	O/lev. with 2 Credits.

Table 4.2

Courses conducted by the Post-Graduate Institute
of Medicine

<u>Course</u>	<u>Course</u>	<u>Board Certificate after</u>	<u>Degree</u>
Family Medicine	1 Year		Diploma
Community Medicine	2 years	1 Yr	M.D.
Health Education	1 1/2 years	-	M.Sc.
Surgery)			
Obstetries & Gynaecology)			
Opithalnoogy)	2 1/2 yr s	2 yrs	M.S.
Dental Surgery)			
General Medicine)			
Paediatrics)			
Radiotherapy &)			
Oncology)	2 yrs	2 yrs	M.D.
Anaesthesiology)			
Radiology)			
Psychiatry)			
Pathology)			
Forensic Medicine)			

Cost of Training Health Personnel
(per Course)

<u>Category</u>	<u>Cost per Trainer (Rs)</u>
Medical Doctors	66,400
Nurses	23,580
Asst. Med. Practitioners	7,740
Midwives	9,900
Med. Lab. Technicians	8,520
Pharmacists	8,520
Physiotherapists	8,520
Radiographers	8,520
Pub. Health Nurses	4,000
Pub. Health Inspectors	8,520

BASIC TRAINING OF HEALTH PERSONNEL - 1973-1985

Table 4.4

CATEGORY		1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Lab. Technicians	Intake	34	23	33	-	29	-	30	-	72	-	-	90	43
	Output	-	33	23	22	32	-	28	-	30	-	70	-	-
M.L.T.	Intake	-	20	-	-	28	-	30	-	64	-	-	39	18
	Output	5	20	20	16	19	-	25	-	28	-	52	-	-
Dentists	Intake	20	22	-	14	14	-	20	-	53	-	10	40	12
	Output	-	16	21	-	10	10	-	15	-	-	48	-	-
Therapists	Intake	-	-	-	6	6	-	6	-	15	-	-	-	5
	Output	-	-	-	-	-	6	4	4	-	-	-	-	-
Physicians	Intake	19	24	22	24	20	22	22	22	18	24	-	29	28
	Output	0	25	19	24	20	21	25	17	17	18	18	24	12
Nurses	Intake	153	62	215	103	199	157	146	71	59	179	-	-	-
	Output	150	64	210	103	199	137	135	124	59	174	-	-	-
Dentists	Intake	9	382	140	366	351	1070	583	445	417	321	-	806	600
	Output	65	367	281	136	380	72	391	320	634	402	369	173	557
Physicians	Intake	-	348	115	89	370	-	-	465	231	629	-	166	527
	Output	-	215	200	138	286	77	123	217	215	83	703	207	395
Dentists	Intake	-	-	-	-	-	-	-	216	57	-	246	207	-
	Output	-	-	-	-	-	-	-	113	32	117	14	-	-
Physicians	Intake	-	-	-	-	-	-	-	-	73	-	-	45	-
	Output	-	-	-	-	-	-	-	-	-	55	21	38	-

TRAINING ACTIVITY - NATIONAL INSTITUTE OF HEALTH SCIENCES, KALUTARA.

Category	Duration	1973 Group No.		1974 Group No.		1975 Group No.	
<u>BASIC COURSES</u>							
Assistant Medical Practitioners	2 1/2 Yrs	-	-	-	-	-	-
Public Health Inspectors Diploma	01 Yr	-	-	01	83	-	-
Public Health Nurses Diploma	01 Yr.	01	18	01	51	-	-
Family Health Workers (Part II)	06 Mths.	-	-	-	-	-	-
<u>Inservice Courses</u>							
Public Health Inspectors	01 Mths	01	25	03	67	02	43
Supervising Public Health Inspectors	02 Weeks	-	-	-	-	-	-
Orientation in Community Health for Medical Officers	01 Mth.	02	36	02	64	02	45
Community Health Management for Middle Level Managers	02 Mths	-	-	-	-	-	-
Teacher Training for Primary Health Care	10 days	-	-	-	-	-	-
Preparation of curriculum on new functions	03 days	-	-	-	-	-	-
Training of core groups from Decentralised Units	05 days	-	-	-	-	-	-
Orientation in Community Health for A.M.P. Students from Colombo Faculty	01 Mths	-	-	-	-	-	-
Orientation in Community Health for Sister Tutors & Ward Sisters	01 Mths	01	75	-	-	-	-
Family Health Workers	01 mth	-	-	-	-	-	-
Supervising Public Health Midwives	03 Mths	-	-	-	-	-	-
Supervising Public Health Nurses (Div.)	01 Mths	-	-	-	-	-	-
Senior Public Health Nurses training for promotion to Grade III	04 Mths	-	-	-	-	-	-
Training of Clerks for Health Work	01 Week	06	75	02	34	03	21
Orientation Course for Trainers of P.H.C. Workers (new functions)	03 days	-	-	-	-	-	-
Training in Family Planning for A.M.P.P & R.M.OO, etc.	01 Week	06	180	24	120	05	150
Library and Documentation Orientation	10 days	-	-	-	-	-	-

Table 4.5

No.	1977		1978		1979		1980		1981		1982		1983		Total	
	Grps.	No.														
							01	55			01	57			02	112
8	01	66	-	-	01	68	01	88	-	-	01	83	-	-	06	416
	-	-	-	-	-	-	01	45	-	-	-	-	-	-	-	-
8	-	-	01	19	02	65	-	-	01	78	02	88	-	-	08	348
													01	46	04	161
1	02	54	02	36	01	25	-	-	01	23	01	26	-	-	16	370
	-	-	-	-	01	44	-	-	-	-	-	-	-	-	01	44
4	01	22	01	20	02	38	02	44	04	43	01	12	01	09	20	397
	-	-	-	-	-	-	-	-	02	47	-	-	-	-	02	47
	-	-	-	-	-	-	01	25	-	-	01	27	-	-	01	54
	-	-	-	-	-	-	-	-	02	48	-	-	-	-	02	48
	-	-	-	-	-	-	-	-	-	-	03	73	-	-	03	73
	01	25	01	26	-	-	-	-	-	-	01	48	-	-	03	99
	01	21	-	-	01	23	03	94	-	-	-	-	02	156	10	460
	-	-	-	-	-	-	-	-	02	59	-	-	-	-	02	59
	02	45	-	-	-	-	-	-	02	73	-	-	-	-	04	118
	-	-	01	05	-	-	-	-	-	-	-	-	-	-	01	05
	01	48	02	80	-	-	-	-	-	-	-	-	-	-	03	128
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	146
	-	-	-	-	-	-	-	-	-	-	12	466	-	-	12	466
	02	50	-	-	-	-	-	-	-	-	-	-	-	-	23	722
	-	-	-	-	-	-	-	-	-	-	01	02	01	18	05	20

Emoluments Health Personnel (Sri Lanka Rupees)

Table 5.1

Category	Annual Salaries		Pension (monthly)	No. Pension (monthly)	"On Call" Allowance (monthly)	Per case	Uniform Allowance per year	Non Medical Duty Allowance (monthly)	Shoe Allowance per year
	Minimum	Maximum							
Specialists			500 750 1000						
Medical Officers	19,800	43,200		PG-300 II-500 I-700					
Dental Surgeons	19,200	43,200		PG-300 II-500 I-700					
MRMP	10,140	25,200			III-75 II-100 I-125			II-250 I-350	
Nurses	9,420	24,000	-	-	-	-	17 Metres (450/=)	-	200/=
	8,250	16,080	-	-	-	-			
Photographers	8,250	16,080	-	-	III-75 II-100 I-125	5/=			
Physiotherapists	8,250	16,080	-	-	III-75 II-100 I-125				
Pharmacists	8,250	16,080	-	-	III-75 II-100 I-125				
	8,250	16,080	-	-	III-75 II-100 I-125	5/=			
Physicians	7,740	13,560	-	-	-	-	10.5 metres (264/=)	-	100/=
Surgeons	6,660	7,980	-	-	-	-	8.80 Mtrs. 8 Mtrs for shirts		

Table 5.2

Table 5.2- Skilled Personnel who migrated to developed countries between May 1971 - April 1972

Occupations	Countries											TOTAL		
	U.K.	U.S.A.	Canada	Australia	Japan	France	Switzerland	New Zealand	Sweden	Germany	Norway		Ireland	U.S.S.R.
Doctors	41	24	4	9	-	1	-	16	1	-	-	1	-	97
Engineers	28	-	3	4	-	-	1	1	-	2	-	-	1	40
Accountants	5	1	1	4	1	-	-	1	-	-	-	-	-	13
Teachers	11	10	1	3	-	-	-	-	-	-	-	-	-	25
Nurses	13	-	-	-	-	-	-	-	-	-	-	-	-	13
Lawyers	7	-	-	-	-	-	-	-	-	-	-	-	-	7
Graduates	9	3	1	3	-	-	-	-	-	-	-	-	-	16
Others	17	4	9	5	-	1	2	-	-	2	-	-	-	40
Total	131	42	19	28	1	2	3	18	1	4	-	1	1	251

Table 5.3

Table 5.3 - Skilled personnel who left Sri Lanka
for employment abroad by country of
destination May 1971-April 1972

Occupations	Countries										Total	Percentage
	U.K.	U.S.A.	Canada	Australia	New Zealand	Zambia	Malaysia	Singapore	Nigeria	Others		
Doctors	41	24	4	9	16	4	1	2	1	6	108	28
Engineers	28	-	3	4	1	6	1	5	-	6	54	14
Accountants	5	1	1	4	1	10	-	-	-	1	23	6
Teachers	11	10	1	3	-	49	1	-	3	4	82	22
Nurses	13	-	-	-	-	-	-	1	-	-	14	4
Lawyers	7	-	-	-	-	-	-	-	-	1	8	2
Graduates	9	3	1	3	-	-	-	-	-	2	18	5
Others	17	4	9	5	-	18	3	1	3	12	72	19
Total	131	42	19	28	18	87	6	9	7	32	379	-
Percentage	34.5	11.1	5.0	7.4	4.7	23.0	1.5	2.3	1.8	8.4		

Table 5.4

Table 5.4 Skilled personnel who migrated to developing countries between May 1971 to April 1972

Occupations	Countries																TOTAL		
	Zambia	Malaysia	Singapore	Jamaica	Nigeria	Sarawak	India	Maldivé Islands	British Honduras	Thailand	Kenya	Philippines	Sierra Leone	Hong Kong	Iraq	Indonesia		Mozambique	Trinidad
Doctors	4	1	2	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	11
Engineers	6	1	5	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	14
Accountants	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Teachers	49	1	-	-	3	-	-	1	-	-	-	3	-	-	-	-	-	-	57
Nurses	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Lawyers	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Graduates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2
Others	18	3	1	-	3	-	1	-	-	1	1	1	-	1	1	-	-	1	32
Total	87	6	9	1	7	1	2	2	1	1	1	3	1	1	1	2	1	1	128

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Table 5.5

Table 5.5 Sri Lanka; Demand and Supply of Skilled and High-level Manpower, 1969-1978

<i>Occupation</i>	<i>Demand</i>	<i>Supply</i>	<i>Studying Abroad (1963-1971)</i>
<i>Engineers</i>	1,852	1,850	1,158
<i>Architects</i>	50	50	30
<i>Technicians</i>	8,943	9,000	-
<i>Skilled Craftsmen</i>	23,060	24,000	-
<i>Doctors</i>	2,280	2,045	564
<i>Dentists</i>	305	334	16
<i>Nurses</i>	4,520	4,520	478
<i>Agriculture Graduates</i>	585	582	18
<i>Agriculture Technicians</i>	1,100	1,100	-
<i>Veterinarians</i>	205	224	-
<i>Science Graduates</i>	4,945	4,240	33
<i>Teachers</i>	33,152	35,328	-

Table 5.6

Distribution of Migrants for Foreign Employment
by Age & Sex

Age Group	Males		Females		Both Sexes	
	No.	%	No.	%	No.	%
15 - 19	3	0.8	35	6.6	38	4.1
20 - 24	65	16.2	109	20.7	174	18.8
25 - 29	120	30.0	109	20.7	229	24.7
30 - 34	93	23.2	135	25.7	228	24.6
35 - 39	66	16.5	92	17.5	158	17.1
40 - 44	35	8.8	26	4.9	61	6.6
45 - 49	7	1.7	5	1.0	12	1.3
50 - 54	-	-	1	0.2	1	0.1
Above 55	3	0.8	1	0.2	4	0.4
Not Stated	8	2.0	13	2.0	21	2.3
All Age Groups	400	100.0	526	100.0	926	100.0

dp/-

Table 5.7

Reasons for Outward Migration - Migrants Leaving Sri Lanka

Manpower Reasons	High level	Midd- le	Skill- ed	Un- skill ed	House ma- ids	Occu- pation not stated	Total	%
1. Attractive Salary	09	20	23	19	71	04	146	15.8
2. Interest of spouse and children	-	04	02	01	-	-	07	0.8
3. Further education/ training	02	02	01	-	01	-	06	0.7
4. Professional Needs	02	-	01	01	02	-	06	0.7
5. Change of work	-	-	-	-	-	-	-	0.0
6. Join Family/Spouse	-	-	-	-	02	-	02	0.2
7. Social/Cultural preference	-	-	-	-	-	-	01	0.1
8. Influenced by family members	01	-	01	01	01	-	04	0.4
9. Friends already secured foreign employment	-	-	-	-	03	01	04	0.4
10. Desire for travel	-	-	01	-	02	-	03	0.3
11. Unemployed	-	05	10	09	33	01	53	6.3
12. Loss of jobs	-	02	-	-	01	-	03	0.3
13. Overcome financial difficulties	04	16	106	63	286	03	478	51.6
14. Dissatisfaction with present jobs	-	-	01	02	-	02	05	0.5
15. Discrimination in employment	-	-	-	-	-	-	-	0.0
16. Racial Discri- mination	01	-	-	03	-	-	04	0.4
17. Political discri- mination	-	-	-	02	01	-	03	0.3
18. Family problems	-	02	19	12	59	03	95	10.3
19. Other	01	02	-	01	01	-	05	0.5
20. Not stated	02	04	14	09	38	29	96	10.4
Total	22	57	180	123	501	43	926	100.0

Wage Differential by Manpower Level

Manpower level	Number of Respondents who provided answers	Average Wage		Index	Index
		Local Rs.	Foreign Rs.	¹ ₁	¹ ₂
High level	12	1825	22,053	12.1	12.5
Middle level	21	1326	14,631	11	16.6
Skilled	128	869	6,672	7.7	10.4
Unskilled	38	629	4,495	7.8	9.8
Housemaids	39	468	2,911	6.4	9.7

dp/-

STAFF WAGES 1955 - 1985

Table 5.9

	1955		1960		1965		1970		1975		1980		1985		% Change	
	Mini	Max	Mini	Max	Mini	Max	Mini	Max	Mini	Max	Mini	Max	Mini	Max	Mini	Max
rs	5160	11200	5700	13200	5700	13200	9520	18840	15200	11040	35200	16040	19200	43200	5.70	3.8
s	1824	4620	1824	4620	1824	4620	3864	8040	3864	8040	4260	11040	9420	24000	5.16	5.2
	1380	3580	1620	6780	1620	6780	3864	9420	3864	9420	3900	11040	10140	24200	7.34	4.5
	4440	9940	5160	13200	5160	13200	8160	17840	8160	18840	8160	11040	19200	43200	4.70	4.4
	1140	5580	1140	5580	1140	5580	3208	8280	3208	8280	3432	9760	8520	16080	7.47	2.9
graphers	1200	4620	1620	6540	1620	6540	3764	8040	3864	8040	3900	9700	8520	16080	7.1	3.5
cists	1380	2940	1380	2940	1380	2940	3164	6456	3064	6456	3900	8760	8520	16080	6.17	5.5
p	2920	4620	2920	4620	2920	4620	3864	8040	3864	8040	3900	9700	8520	16080	3.32	3.5
	834	4800	834	5580	834	5580	2760	9240	2760	9240	3450	9700	8520	25200	10.2	5.25
ves	696	1038	696	1038	696	1038	2640	3960	2640	3960	3070	4100	3400	11400	11.12	11.
ns.ries							2124	3240				7740	8960			
ers	480	624	480	684	480	684	2154	2500	2154	2500	2160	2770	6600	7980	13.7	13.
dents	600	900	600	900	600	900	2424	2910	2424	2910	2760	3430	7410	3460	12.3	9.4

3

Table 5.10

Staff Requirements for P.H.C Implementation

	Gr.I	Gr.II	Gr.III	Total Req.	P.U. D.H. H.U.	RH CD CD & MH M.H.	Total Avail- able	Deficit
<u>Personnel</u>	283	849	4535					
Doctors	849			849	362	11	373	(476)
Dental Surgeons	283			283				
AMP/RMP	566	849		1415	292	505	797	(618)
Nurses	3679			3679	1221	8	1229	(2450)
Midwives (inst.)	1698			1698	587	266	853	(845)
Pharmacists	283			283	58		58	(226)
M.L.T.	283			283	36		36	(247)
Radiographers								
Attendants	2830			2830	1356	408	1764	(1066)
Dispensers		849		849	212	433	645	(204)
Lab. Orderlies	283			283	9		9	(274)
Labourers (G & S)	2830			2830	2340	904	3244	414
S/P.H.I.	283			283				
P.H.I.		1698		1698	675		675	(1023)
P.H.N.	283			283	191		191	(92)
S/P.H.M.		849		849				
P.H.M.			4535	4535	1522		1522	(3013)
Health Educators	283			283				
School Dental Nurses	566			566				

HEALTH MANPOWER AVAILABLE 1982

	A.M.P.	Nurses	Midwives (inst.)	M.L.T.T.	Pharmacists	Physiotherapists	P.H.II.	S.P.H.I.	P.H.I.	S/P.H.M.	P.H.N.
for Primary Health Care	797	1229	853	36	57	-	191	-	675	-	1522
for Teaching Hosp. for Colombo Group Hosp.)	11	2114	221	145	126	82	-	-	-	-	-
for Provincial Hosp.	11	1090	158	78	75	25	-	-	-	-	-
for Base Hospitals	30	1142	209	64	106	13	-	-	-	-	-
for New Base Hospitals	14	69	17	6	16	-	-	-	-	-	-
for Jayawardanapura Hospl.	-	-	-	-	-	-	-	-	-	-	-
for Peradeniya Hosp.	-	-	-	-	-	-	-	-	-	-	-
for Special Hospitals	4	475	-	21	21	21	19	-	-	-	-
TOTAL	867	6119	1458	359	402	139	191	-	675	-	1522

Table 5.12

HEALTH MANPOWER REQUIREMENTS - 1982

	A.M.P.	Nurses	Midwives (inst.)	M.L.T.T.	Pharmacists	Physiotherapists	P.H.II.	S/P.H.II.	P.H.I.	S.P.H.MM	P.H.MM.
for Primary Health	1415	3679	1347	283	283	-	283	283	1698	849	4535
for Teaching Hosp. for Colombo Group Hosp.)	-	2655	279	259	110	138	-	-	-	-	-
for Provincial Hosp.	-	1609	193	208	45	46	-	-	-	-	-
for Base Hosp. + large D.H.)	-	1938	326	132	77	62	-	-	-	-	-
for New Base Hosp.	-										
for Jayawardanapura Hosp.	-	447	53	40	12	14	-	-	-	-	-
for Peradeniya Hosp.	-	205	33	20	10	6	-	-	-	-	-
Special Hospitals	-	1771	-	220	22	29	-	-	-	-	-
Total	1415	12304	2231	1122	559	295	283	283	1698	849	4535

dp/-

1/10

Table 5.13

PERCENTAGE ADEQUACY OF HEALTH PERSONNEL (1982)

	A.M.P.	Nurses	Midwives (inst.)	M.L.TT	Pharmacists	Physiotherapists	P.H.NN.	S/P.H.I.	P.H.I.	S./P.H.I.	P.H.M.
Primary Health Care	56.33	33.41	63.33	12.72	20.14	-	67.49	-	39.75	-	33.56
Teaching Hosp. & Colombo Group Hosp. }	-	79.62	79.21	55.93	(114.55)	59.42	-	-	-	-	-
Provincial Hosp.	-	67.74	81.87	37.50	(166.67)	55.56	-	-	-	-	-
Base Hospitals	-	58.93	64.11	30.77	(137.66)	20.97	-	-	-	-	-
New Base Hospitals	-										
Jayawardanapura Hosp.	-										
Peradeniya Hospital	-										
Special Hosp.		26.82	-	9.55	95.45	65.52					
		49.73	65.35	31.19	71.74	47.12	67.49	-	39.75	-	33.56

NB. - Excesses in brackets

dp/-

Table 5.14

KEY HEALTH PERSONNEL BY SHS DIVISION-1 AUGUST 1982

SHS Division	Medical Officers ¹		RMP/AMP		Nurses ²		MOH		PHN		PHI		PHM	
	No	Rate ³	No	Rate ³	No	Rate ³	No	Rate ³	No ¹	Rate ³	No	Rate ³	No	Rate ³
All Island	1942	12.9	884	5.9	6931	45.9	93	0.6	241	1.6	962	6.4	2296	15.2
Colombo	598	34.8	43	2.5	1760	102.3	13	0.8	47	2.7	65	3.8	98	5.7
Gampaha	129	9.1	73	5.2	482	34.1	9	0.6	20	1.4	66	4.7	228	16.1
Katara	69	8.2	31	3.7	337	40.2	8	1.0	46	5.5	63	7.5	188	22.4
Kandy	197	17.4	72	6.4	745	65.9	6	0.5	18	1.6	80	7.1	240	21.2
Matale	37	5.8	43	6.7	177	27.7	2	0.3	4	0.6	39	6.1	77	12.1
Nuwara Eliya	27	5.2			103	19.8	2	0.4	-	-	9	1.7	20	3.8
Galle	59	7.2	50	6.1	307	37.3	6	0.7	37	4.5	48	5.8	148	18.0
Matara	54	5.0	49	4.5	252	23.2	7	0.6	10	0.9	65	6.0	174	16.1
Jaffna	147	17.4	67	7.9	330	39.0	7	0.8	3	0.4	48	5.7	155	18.3
Vavuniya	22	7.5	39	13.3	54	18.4	2	0.7	-	-	18	6.1	31	10.6
Batticaloa	40	11.8	30	8.8	106	31.3	3	0.9	1	0.3	12	3.5	28	8.3
Ampara	18	4.5	29	7.2	44	10.9	1	0.2	-	-	20	5.0	58	14.4
Kurunegala	88	7.1	92	7.5	458	37.1	6	0.5	18	1.5	69	5.6	271	22.0
Puttalam	31	6.1	41	8.1	155	30.6	4	0.8	7	1.4	21	4.1	60	11.8
Anuradhapura	69	16.6	72	17.0	276	31.4	4	0.5	5	0.6	39	4.4	92	10.5
Badulla	65	10.1	39	6.0	248	38.4	2	0.3	5	0.8	24	3.7	106	16.4
Monaragala	9	3.1	23	7.9	42	14.5	2	0.7	-	-	11	3.8		
Ratnapura	86	10.6	44	5.4	298	36.7	3	0.4	7	0.9	41	5.1	122	15.0
Kegalle	43	6.3	40	5.8	266	38.8	6	0.9	12	1.8	47	6.9	200	29.2
Special Campaigns	71	0.5	6	0.0	253	1.7	-	-	-	-	160	1.1	-	-
Others	83	0.5	1	0.0	238	1.6	-	-	1	0.0	17	0.1	-	-

Excluding MOH

² Excluding 1531 Student Nurses³ Rate per 100 000 population

Trends in Attrition of Health Personnel

Table 7.1

Medical Officers

	81	82	83	84	85
Stock at January	1483	1612	1536	1744	1557
Intake	237	254	291	348	337
Expected stock at December	1720	1866	1827	2092	1894
Actual stock at December	1612	1536	1744	1557	1531
Annual loss	108	330	83	535	363
Mid year Estimates	1601	1739	1681	1918	1725
Attrition rate	6.7%	18.9%	4.9%	27.9%	21.9%

RMP/AMP

	81	82	83	84	85
Stock at January	882	960	933	984	957
Intake	113	23	117	14	-
Expected stock at December	995	983	1110	998	957
Annual stock at December	960	933	984	957	
Annual Loss	35	50	126	41	
Mid year estimate	938	971	1021	991	
Attrition rate	3.7%	5.14%	2.5%	4.1%	

Public Health Inspectors

	81	82	83	84	85
Stock at January	925	962	944	917	975
Intake	55	97	-	67	66
Expected stock at Dec.	1010	1059	944	984	1041
Actual stock at Dec.	962	944	917	975	
Annual loss	48	115	27	9	
Mid year estimate	967	1010	944	950	
Attrition rate	4.9%	11.3%	2.8%	0.9%	

Trends in Attrition of Health Personnel (contd.)

Table

Nurses

	81	82	83	84	85
Stock at January	6437	6931	7112	7053	7103
Intake	634	420	369	173	305
Expected stock at December	7071	7351	7481	7226	7403
Annual stock at December	6931	7112	7053	7103	
Annual loss	140	239	429	123	
Mid year Estimate	6754	7141	7032	7078	
Attrition Rate	2.0%	3.3%	6.0%	1.7%	

Midwives

	81	82	83	84	85
Stock at January	3273	3216	4265	4314	4539
Intake	313	1212	294	629	302
Expected stock at Dec	3586	4428	4559	4943	4841
Annual stock at Dec.	3216	4265	4314	4539	
Annual loss	370	263	245	404	
Mid year estimate	3429	2820	4412	9257	
Attrition rate	10.7%	9.3%	5.5%	4.3%	

Physiotherapists

	81	82	83	84	85
Stock at January	107	110	108	156	130
Intake	14	1	48	-	-
Expected stock at Dec.	121	111	156	156	
Annual stock at Dec.	110	108	156	130	
Annual loss	11	3	0	26	
Mid year Estimate	114	110	132	156	
Attrition Rate	9.6%	2.7%	0	16.6%	

Trends in Attrition of Health Personnel Table 7.3
(Contd.)

Pharmacists

	81	82	83	84	85
Stock at January	418	421	415	446	457
Intake	12	-	55	21	38
Expected stock at Dec.	430	421	470	467	495
Annual stock at Dec.	421	415	446	457	
Annual loss	9	6	24	10	
Mid year Estimate	424	421	442	456	
Attrition Rate	2.12%	1.4%	5.4%	2.8%	

Medical Lab. Technicians

	81	82	83	84	85
Stock at January	453	463	445	460	436
Intake	30	-	71	-	-
Expected stock at Dec.	483	463	516	460	
Actual stock at Dec.	463	445	460	436	
Annual loss	20	18	56	24	
Mid year Estimate	468	463	480	460	
Attrition Rate	4.2%	3.9%	11.2%	5.2%	

Radiographers

	81	82	83	84	85
Stock at January	150	172	165	192	192
Intake	28	-	52	56	
Expected stock at Dec.	178	172	217	248	
Actual stock at Dec.	172	165	192	192	
Annual loss	6	7	25	56	
Mid year Estimate	164	172	191	220	
Attrition Rate	3.6%	4.6%	13%	25.4%	

APPENDIX I

INTRODUCTION TO PRINCIPLES OF ACTION AND OPERATIONS RESEARCH -
SEMINAR AND WORKSHOP

R E S E A R C H A T T H E N I H S

SOME NOTES AND DISCUSSION TOPICS

. P HORNBY
M NICHTER
A VUTURO

July 7, 1986.

1987

WORKING NOTES

RESEARCH NOTES

The word "research" carries with the idea of :

- something that is unknown
- systematic and rigorous study
- well documented and repeatable conclusions.

Within these broad ideas, there are many different types of research varying in purpose from "description" to "prescription". For the purposes of today's discussion, we would like to divide research into three types :

- I Basic / Fundamental Research
- II Applied Research
- III Action Research

Each of these types of research have different characteristics and purpose. We suggest that one of these may be the most appropriate for NIHS in the light of its mission and goals.

CHARACTERISTICS OF THE DIFFERENT TYPES OF RESEARCH

I BASIC / FUNDAMENTAL

Focus is on the scientific method.

- sets up a hypothesis to be tested
- meticulous attention to
 - a) instruments of measurement
 - b) sample size and characteristics
 - c) absolute or statistical validity of results

Core of purpose is to discover things previously not known. Application of results is a minor purpose. Concerned with the pursuit of knowledge for its own sake.

II APPLIED OPERATIONAL RESEARCH

Focus on changing/improving an existing situation either through a quantitative or qualitative approach.

- defines system variables
- tests manipulation of variables
- predicts/projects likely outcomes
- may or may not be reproduceable
- is often not concerned with absolute quality of conclusions

Principal purpose of applied research is to provide guides for manipulating operational situations to modify attitudes, perceptions, behaviors, etc.

.....2/

III ACTION RESEARCH

Has similar characteristics to applied research, but with the additional qualities that it is undertaken :

- to solve a specific problem arising in an operational situation
- that the solution must be implementable
- that the "client" is closely involved in the research process itself
- that concentration is on finding solutions quickly
- that solutions are unlikely to be "absolute" in their application
- that equal time may be spent in preparing the "client" system to absorb the proposed changes as in doing the research

The principal characteristic of action research is that it is only as "scientific" as it has to be and is much more concerned, as a measure of success, with getting results implemented.

THE CASE FOR ACTION RESEARCH AT NIHS

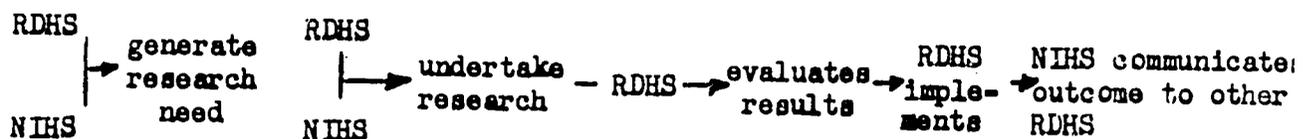
The problem for an Institution in the position of NIHS is that it needs to clarify why it is undertaking research. We would suggest that there are two reasons for the research in which NIHS may engage. These are :

- 1) to improve the quality and relevance of their training, and
- 2) to engage as an active participant in the management development processes of the Ministry.

In either case, the type of research would be concerned with exploring and resolving operational problems of the Ministry, as they relate to the way the Ministry's resources are brought to bear on the delivery of health care or on the improvement of Health. This is still a very wide field of activity and the danger is that the research may drift away from operational needs and while being of good quality, remain unimplemented.

To overcome this difficulty, it is suggested that NIHS should commit itself to ACTION RESEARCH aimed at HEALTH ORGANISATION SYSTEMS (HEALTH SERVICES RESEARCH) and that no research should be undertaken which is not in some way sponsored by operational units and for which an explicit mechanism and commitment exists to implement the results.

The research process might be as follows :



SOME SUGGESTED DISCUSSION TOPICS

1. Types of research needed and why.
2. Organisation of research in NIHS
3. Operational processes for ensuring that all NIHS staff take part in health services research.

Generally speaking :

METHOD

BEST UTILISED

Community based interviews / surveys

- 1) determine health needs
- 2) impacts of services
- 3) broad availability and use of health resources
- 4) check against*

Observational and health personnel studies

- 1) manpower inputs
- 2) details of health service activities
- 3) check against*

* Records and reports

- 1) information about resources used
- 2) services provided
- 3) quality of information system

Action research in the health field usually involves four major types of data collection :

- 1) community key informant interviews and small surveys
- 2) surveys of health personnel
- 3) observational studies of health service and training activities
- 4) use of existing or special records and reports

Data provided by each method may be categorised into five basic types :

- 1) information about health needs
- 2) information about the use of available resources - both manpower and materials
- 3) activities of the health service system - use of time / resources
- 4) health services provided
- 5) impact of these services on the community.

RESEARCH SEMINAR NIHS 6/7/86

A workshop was held to discuss and clarify differences between different types of research. In addition to a short seminar and handout, the consultants acted as facilitators for group discussions concerning the direction research should take at NIHS, what processes might foster and support research and what themes might serve as focal points for research. Emphasis was placed on action oriented health service research. Participants in the workshop were asked to generate, as part of a short exercise, a list of topics warranting action research based on their past field experiences. Demonstrated during the discussion which followed was how to transform these ideas into more focused problem centered action statements. Lists of the kind of problems identified by the multi disciplinary faculty attending the workshop were developed. Also discussed and debated were ideas about how a research support division should be set up and function within NIHS.

Attached are examples of research questions identified.

APPENDIX I

INTRODUCTION TO PRINCIPLES OF ACTION AND OPERATIONS RESEARCH -
SEMINAR AND WORKSHOP

APPENDIX I

RESEARCH PRIORITIES: WORKSHEET SUMMARY

- 1) What type of problems do AMP car for?
- 2) Are there any gaps in AMP training?
- 3) How much time is lost in transporting students to the field education sites?
- 4) What is the student faculty teaching ratio?
- 5) How much theoretical training is required for AMP, PHI etc?
- 6) Are mobile clinics more efficient than permanent clinics?
- 7) How long do people wait for services?
- 8) Do people take their medicine correctly?
- 9) Do field based midwives deliver enough babies for teaching purposes?
- 10) Do medical records reflect continuity of treatments?
- 11) Do trainers have minimum educational qualifications?
- 12) How does student selection process affect job satisfaction?
- 13) What is the productivity of an AMP?
- 14) How many hospital cross infections are there?
- 15) What to cross infection when length of stay reduced?
- 16) What are expectations of community toward PHI?
- 17) What is the necessary number of dental hyginist?
Where should they be located?
- 18) How do you measure effectiveness of rehabilitation?
- 19) How do PHNs do two jobs at once, supervising and running clinics?

APPENDIX J

PART II PUBLIC HEALTH MIDWIVES TRAINING CENTRES

APPENDIX J

PART TWO PHM TRAINING CENTRES

Permanent Centes

- 1) Galle
- 2) Kalutara
- 3) Panadura
- 4) Moratuwa
- 5) Gampaha (new)
- 6) Homagama (new)
- 7) Kurunegala
- 8) Kadugannawa (pending)

Additional

Werellagama

Jaffna

APPENDIX K

CLASSIFICATION OF MID LEVEL MANAGERS

APPENDIX K

MID LEVEL MANAGERS AT LEVEL
OF REGIONAL DIRECTOR OF HEALTH

- 1) Medical Officer of Health
- 2) Divisional Supervising Public Health Nursing Sister
- 3) Divisional Supervising Public Health Inspector
- 4) Medical Officer (MCH)
- 5) Health Education Officer
- 6) Divisional Health Officer
- 7) Divisional Medical Officer
- 8) Regional Epidemiologist
- 9) Divisional Registered Medical Practitioner
- 10) Divisional Pharmacist
- 11) Regional Dental Surgeon
- 12) Supervising School Dental Therapist

APPENDIX L

FACULTY SELF REPORTED TEACHING LOADS

A P P E N D I X L

FACULTY CASE LOAD - REPORTED *

COURSE	UNIT					TOTAL
	BIO MED	HEALTH ED	PLAN + AD.	EpT.	FamH	
AMP	1290	0	8	51	117	1466
PHI	26	216	29	120	123	514
PHM	-	200	4	40	100	344
SHORT TERM COURSES	-	-	42	23	-	65
PHNS	-	-	-	40	-	40
FHW					100	100
GEN ADM			210			210
TOTAL	1316	416	293	274	440	2739

* CONTACT/LECTURE HOURS ASSIGNED AS REPORTED BY
TEACHING UNIT + FACULTY SURVEYED.

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APPENDIX M

CONTINUING EDUCATION PROGRAMS NIHS

APPENDIX M

CONTINUING EDUCATION PROGRAMS AT NIHS

<u>COURSE</u>	<u>Number Offered</u>	<u>Duration (Weeks)</u>	<u>Students Enrollments</u>
1. TUTOR TRAINING			
1.1 Supervision PMM	1	1	15
1.2 NIHS Field Staff	4	1	74
1.3 Trainers PHM	2	0.5	42
2. MANAGEMENT TRAINING			
2.1 Planning & Evaluation of Field Projects	1	0.5	37
3. INSERVICE TRAINING			
3.1 PHI	2	4	60
3.2 PHI/PHM Team	1	4	24
3.3 NEW PHC Functions	2	2	43
4. ORIENTATION			
4.1 Community Health	1	6	28
4.2 Ward Sisters	2	4	123
4.3 PHC	2	0.5	46

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APPENDIX N

TEACHING AND STAFF PERSONNEL REQUIREMENTS
NIHS *

ATTACHED INFORMATION REFLECTS WHAT IS
PRECEIVED AS NEEDED BY STAFF AND TRAINING
UNIT.

APPENDIX N

TEACHING STAFF ACTUAL

AND PROPOSED - BY NIHS STAFF

UNIT/TITLE	PRESENT	PROPOSED NIHS FACULTY	TOTAL
1.0 <u>HEALTH PLANNING & MANAGEMENT</u>			
MEDICAL OFFICER	1	1	2
TUTOR PUBLIC HEALTH NURSING	1	1	2
TUTOR P.H. SANITATION	1	1	2
ADMINISTRATIVE SECRETARY	0	1	1
CLERK TUTOR	0	1	1
TUTOR FINANCE/MANAGEMENT	0	1	1
STATISTICIAN	0	1	1
TOTAL	3	7	10
2.0 <u>FAMILY HEALTH</u>			
MEDICAL OFFICER	1	1	2
TUTOR P.H. NURSING (SHARED)	1	3	4
TUTOR P.H. SANITATION	1	1	2
TOTAL	3	5	8
3.0 <u>HEALTH EDUCATION</u>			
MEDICAL OFFICER	1	1	2
SR TUTOR P.H. SANITATION	1	1	2
COMMUNITY SOCIAL WORKER	1	1	2
BEHAVIORAL SCIENTIST	0	1	1
P.H.N. TUTOR	0	1	1
TOTAL	3	5	8
4.0 <u>ENVIRONMENTAL & OCCUPATIONAL</u>			
MEDICAL OFFICER	1	0	1
OCCUPATIONAL HEALTH SPECIALIST	0	1	1
TUTOR-SANITATION	2	3	5
TOTAL	3	4	7
5.0 <u>EPIDEMIOLOGY</u>			
MEDICAL OFFICER	1	2	3
TUTOR PUBLIC HEALTH	1	1	2

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APPENDIX 0

BASIC AND POST BASIC COURSES AT NIHS

APENDIX O

BASIC AND POST BASIC COURSES AT NIHS-1984

<u>COURSE TYPE</u>	<u>DATE MATRICULATION</u>	<u>MONTHS DURATION (MO)</u>	<u>NUMBER STUDENTS</u>
1.0 BASIC			
1.1 AMP	6/82	36	51
1.2 AMP	5/84	36	59
1.3 AMP	12/84	36	61
1.4 PHI	4/84	12	50
1.5 PHI	8/84	12	19
1.6 PHI	12/84	12	59
1.7 PHM	11/83	6	18
1.8 PHM	8/84	6	56
2.0 POST BASIC			
2.1 PHNS	3/83	12	46

APPENDIX P

SAMPLE DAILY WORKING SCHEUDLE NIHS

APPENDIX P

NATIONAL INSTITUTE OF HEALTH SCIENCE WORKING WEEK CALENDAR *

ACTIVITY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
CLINICS	Kalutara South a) Polyclinic b) Polyclinic	Dediyawala a) MCH b) Polyclinic	NIHS a) Polyclinic	Special Projects	School Medical Examinations
TRAINING	a) Filiarsis b) Health c) Dental d) Latrine Construction	Community Health AMP	Community Health AMP	Community Health AMP	Community Health AMP
SPECIAL ACTIVITIES	<u>HEALTH PROMOTION WEEK</u>				
	1. Pre School Dental Exams	6. Immunization Program	11. Pre-school exam		
	2. Medical Survey	7. Sanitation Program	12. Nutrition Survey		
	3. Food Handlers Training Program	8. Health Education Project	13. MCH Health Education		
	4. Parasite Control	9. Geriatric Survey (BP)	14. Review Communicable disease		
	5. Family Planning	10. Chlorination of Water	15. Dental Therapy		

* FACULTY ASSIGNMENTS OMITTED FOR CLARITY WEEK OF JULY 7, 1986.

APPENDIX Q

REPORTED DISTRIBUTION OF EDUCATIONAL METHODS

APPENDIX Q

REPORTED DISTRIBUTION OF EDUCATIONAL
METHODS BY COURSE OF INSTRUCTION

COURSE	EDUCATIONAL METHOD			
	Lecture Hrs.	Seminar Group	Field Experience	Total
1.0 PHM	65	6	160	231
2.0 PHNS-Part I	276	133	80	489
3.0 PHNS-Part II	180	80	180	440
4.0 PHI- Basic	527	NR	514	1041
5.0 AMP*	1290	NR	150	1440
TOTAL**	2338	219	1084	3641

KEY:

NR - Not Reported

* Clinical effort may have not been reported or tabulated
by faculty effort analysis

** Faculty self reporting survey

APPENDIX R

KALUTARA HOSPITAL CLINIC SCHEDULE

APPENDIX R

KALUTARA HOSPITAL CLINICS *

	<u>MONDAY</u>	<u>TUESDAY</u>	<u>WEDNESDAY</u>	<u>THURSDAY</u>	<u>FRIDAY</u>	<u>SATURDAY</u>
**	ENT	OPTH	ENT	OPTH	ENT	OPTH
	MED	PEDS	MED	SURG	OB/GYN	DERM
	DERM	DENT	OB/GYN	DENT	DENT	VD
	VD		DENT			
	DENT		VD		MENT	
	MENT					

** KEY WORDS

- ENT - OTOLARYNGOLOGY
- MED - INTERNAL MEDICINE
- DERM - DERMATOLOGY
- VD - SEXUAL TRANSMITTED DISEASES
- OPTH - OPHTHALMOLOGY
- DENT - DENTAL
- MENT - PSYCHIATRIC
- OB/GYN-- OBSTRETRICS AND GYNECOLOGY
- SURG - SURGICAL SPECIALITIES

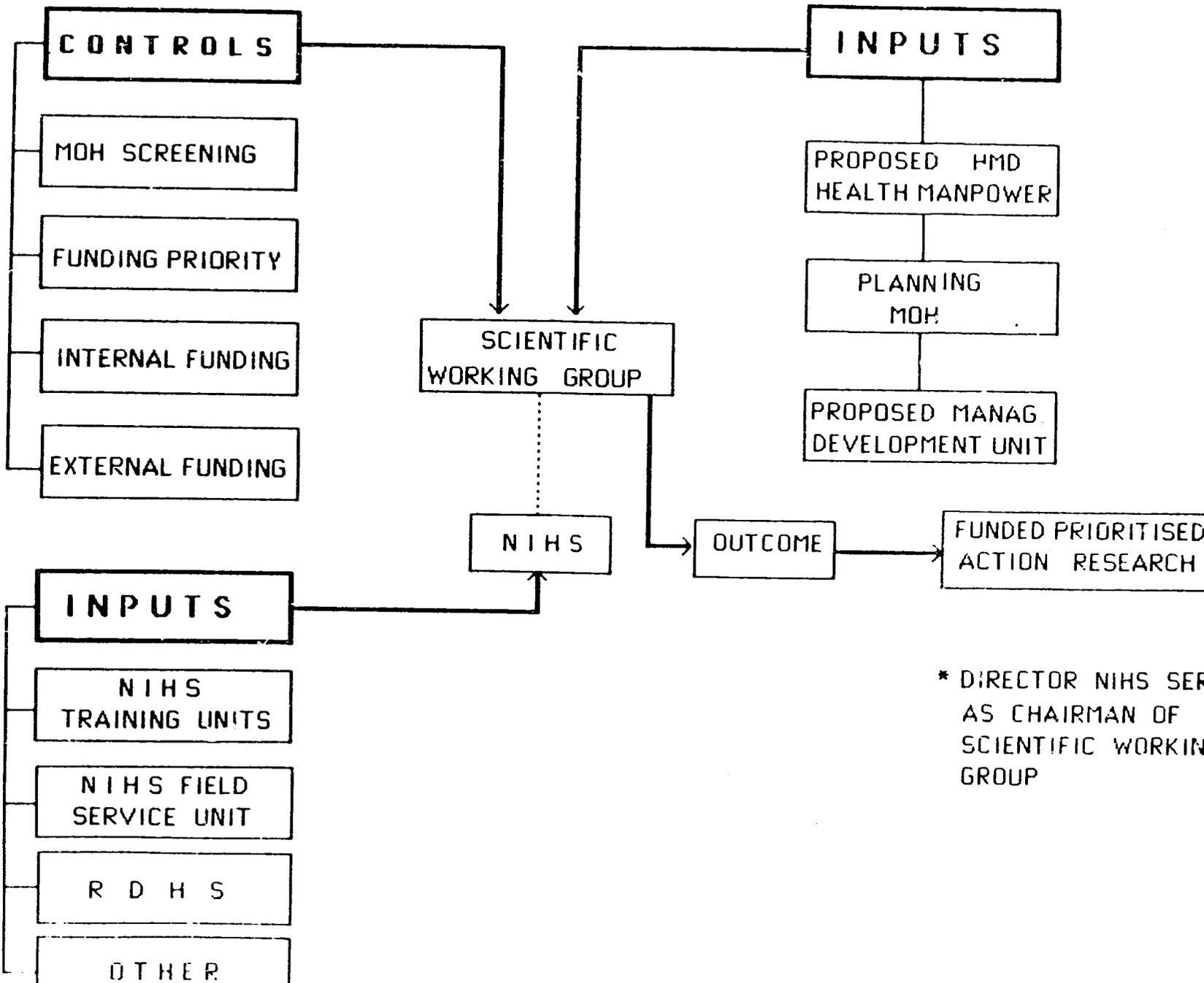
* CLINICS AVAILABLE TO AMP STUDENTS FOR INSTRUCTIONAL PURPOSES

APPENDIX S

DIAGRAMATIC REPRESENTATION PROPOSED RESEARCH STRUCTURE NIHS

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DIAGRAMATIC REPRESENTATION PROPOSED RESEARCH STRUCTURE NIHS



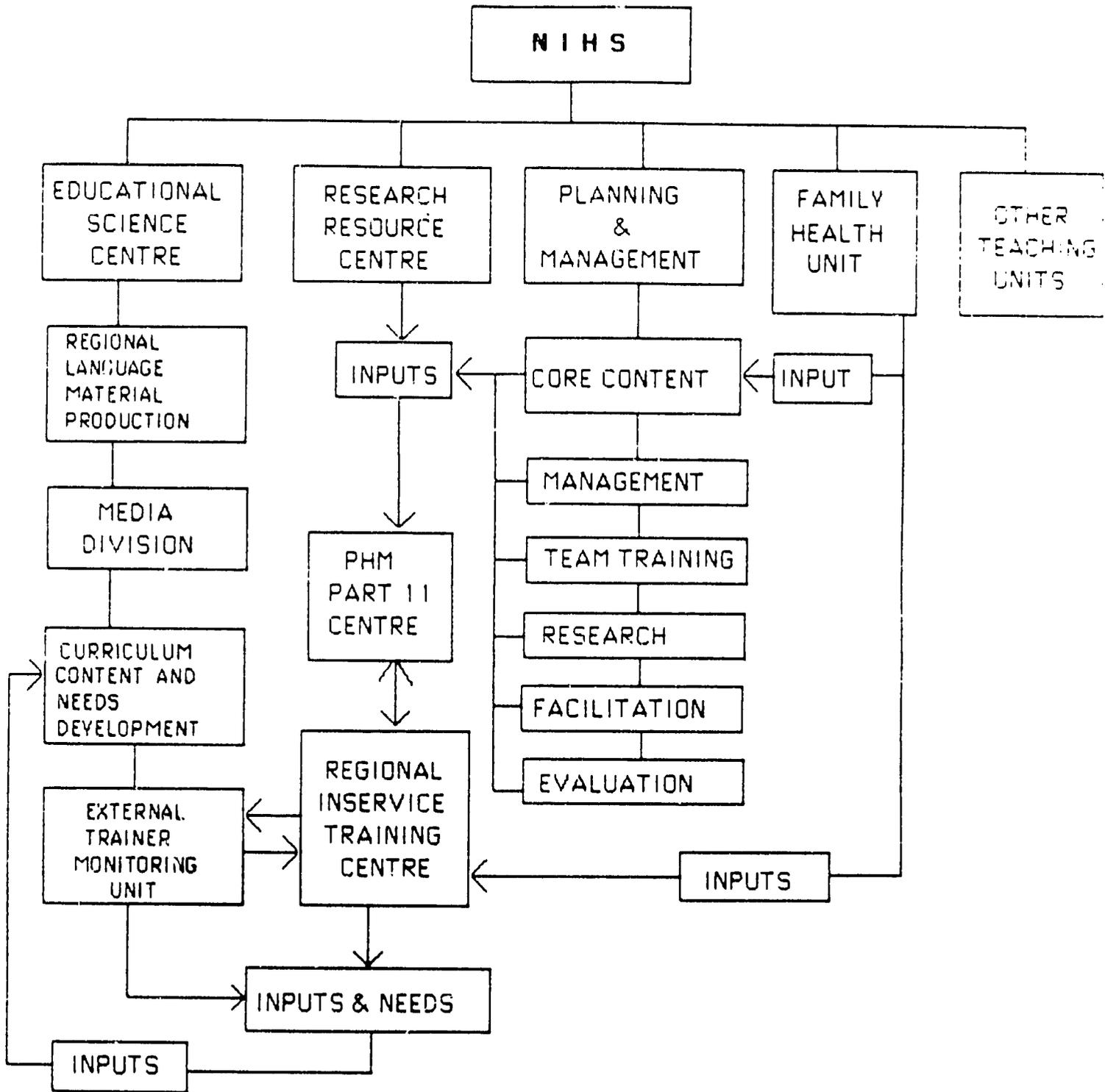
* DIRECTOR NIHS SERVES AS CHAIRMAN OF SCIENTIFIC WORKING GROUP

APPENDIX T

PROPOSED REGIONAL ROLE NIHS IN PHM TRAINING

DIAGRAMATIC REPRESENTATION WITH FEEDBACK

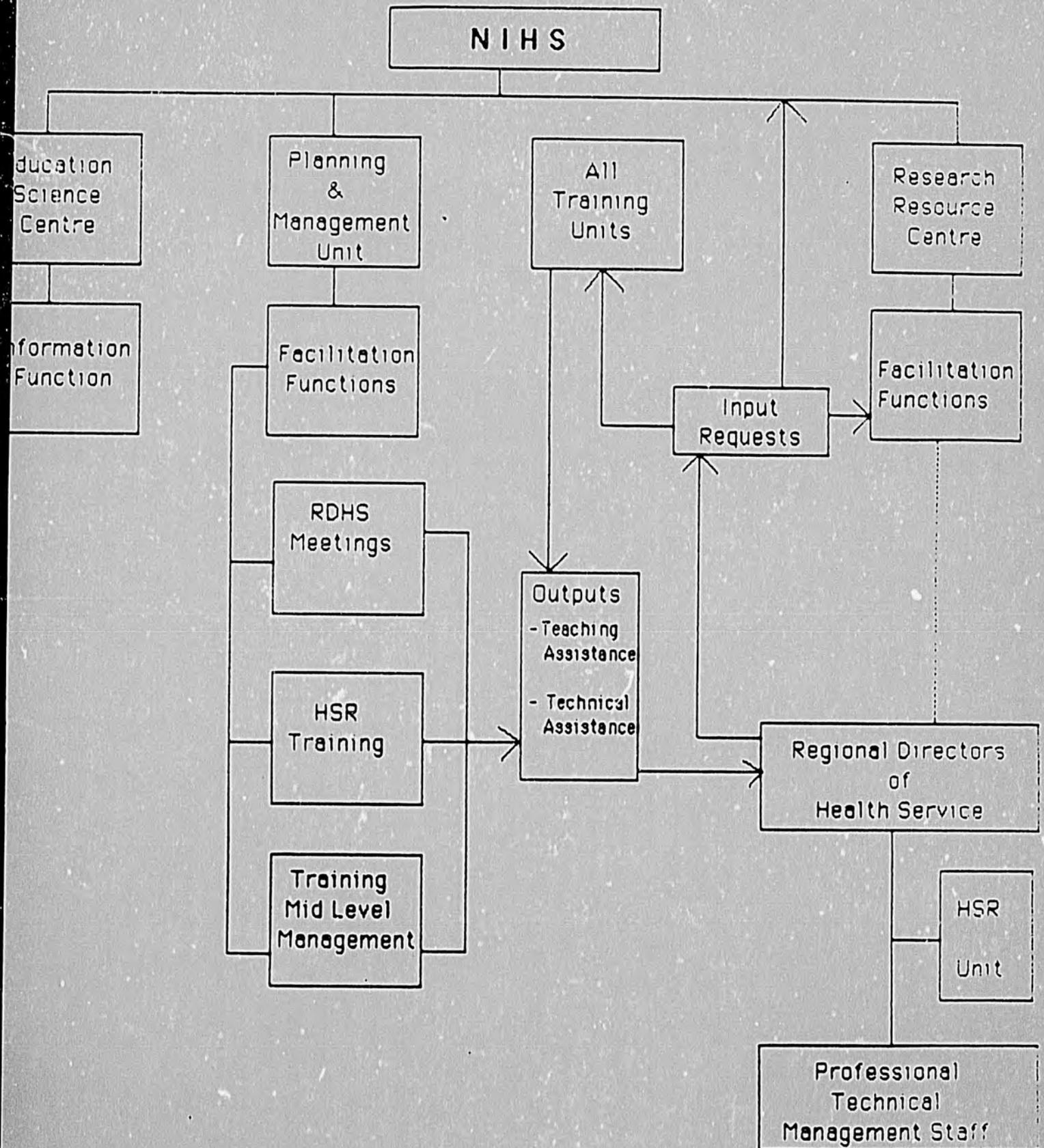
**PROPOSED NIHS REGIONAL ROLE IN PHM TRAINING
DIAGRAMATIC REPRESENTATION WITH FEEDBACK**



APPENDIX U

PROPOSED NIHS REGIONAL FACILITATIVE
FUNCTIONS AND HEALTH SERVICES RESEARCH
DIAGRAMATICALLY OUTLINED

**PROPOSED NIHS REGIONAL FACILITATION
FUNCTIONS & HEALTH SERVICES RESEARCH**



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APPENDIX V

DIAGRAMATIC COMPARISON OF SUPERVISION IN
DIFFERENT MANAGEMENT SYSTEMS

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APPENDIX V

	ADMINISTRATION	MANAGEMENT
METHOD	RECORD BASED	FIELD BASED
DUTIES	<p>SUPERVISOR AS:</p> <ul style="list-style-type: none">* "Checking up" task list, or published policy* Punitive based	<p>SUPERVISORS AS HELPERS FOR:</p> <ul style="list-style-type: none">* Problem Identification* Problem Solving* Objective Setting* Self Assessment

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APPENDIX W

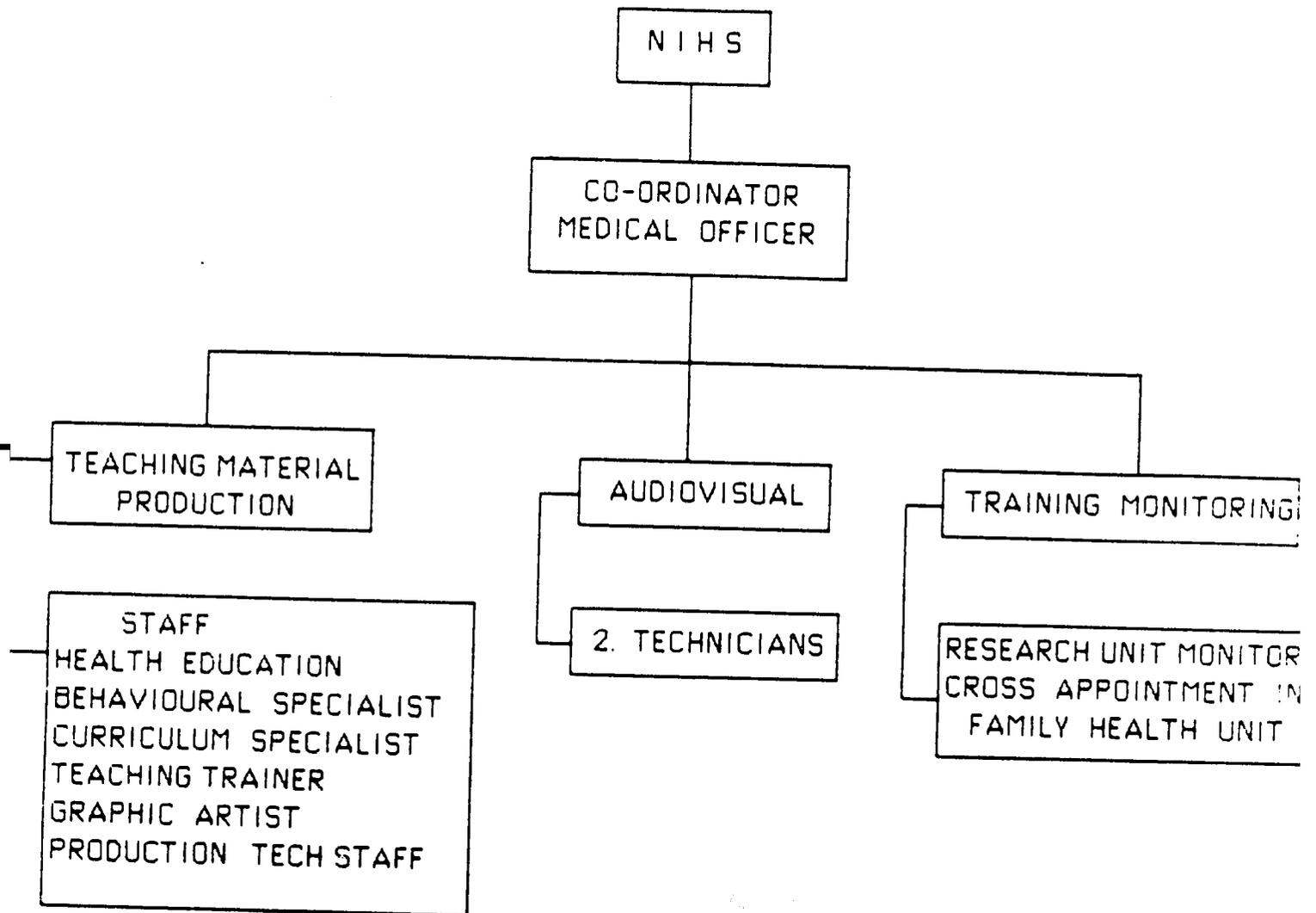
COMPOSITION OF AN OPERATIVE EDUCATIONAL
SCIENCE CENTRE SUPPORTING NIHS TRAINING

UNITS

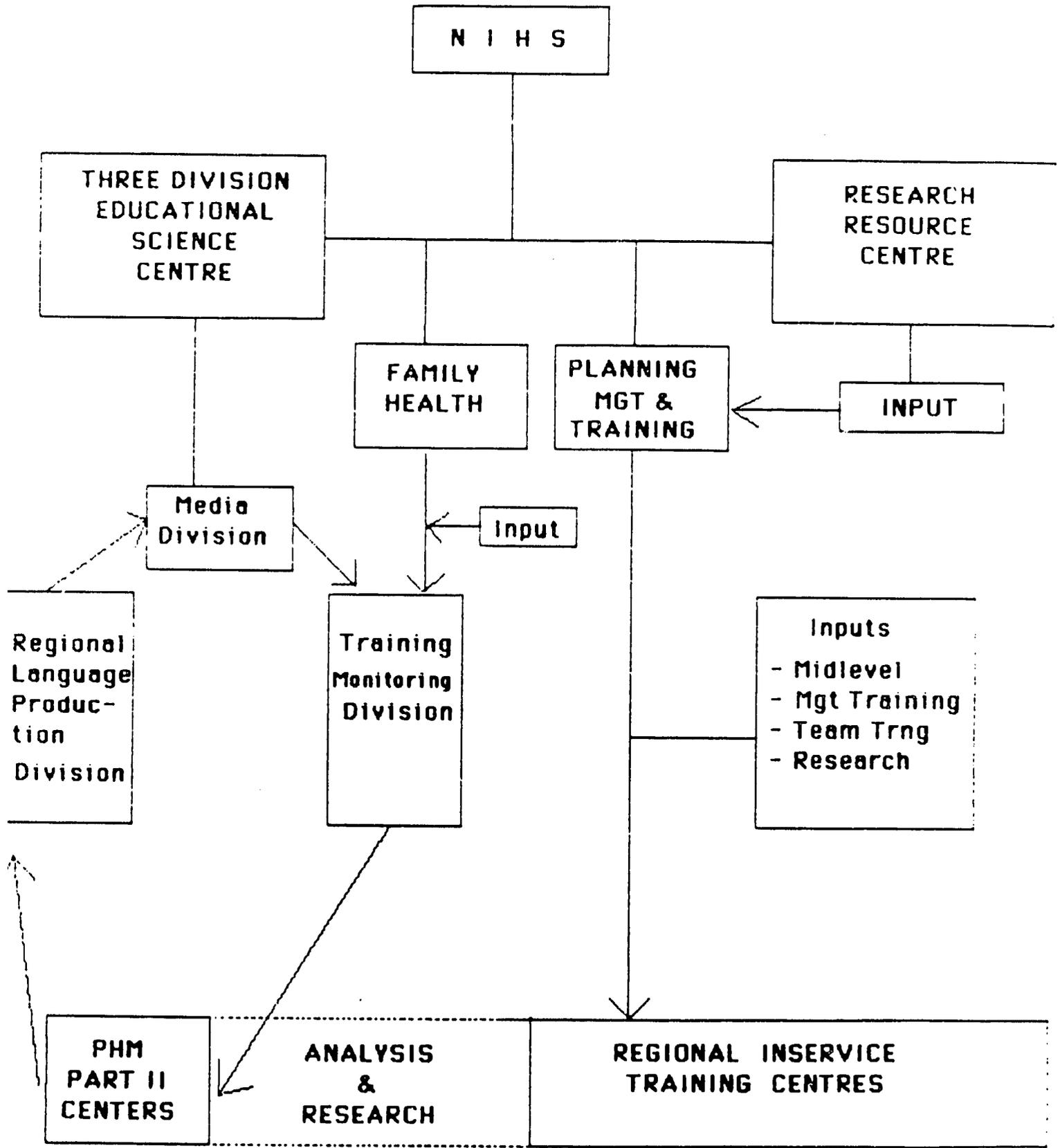
W-1 COMPOSITION OF OPERATIVE EDUCATIONAL
SCIENCE CENTRE

W-2 PROPOSED ROLE NIHS IN PHM MONITORING

COMPOSITION OF AN OPERATIVE
EDUCATION SCIENCE CENTRE SUPPORTING
NIHS TRAINING UNITS - PROPOSED



**PROPOSED ROLE OF NIHS IN PHM MONITORING
AND IN SERVICE TRAINING AT THE REGIONAL LEVEL**



APPENDIX X

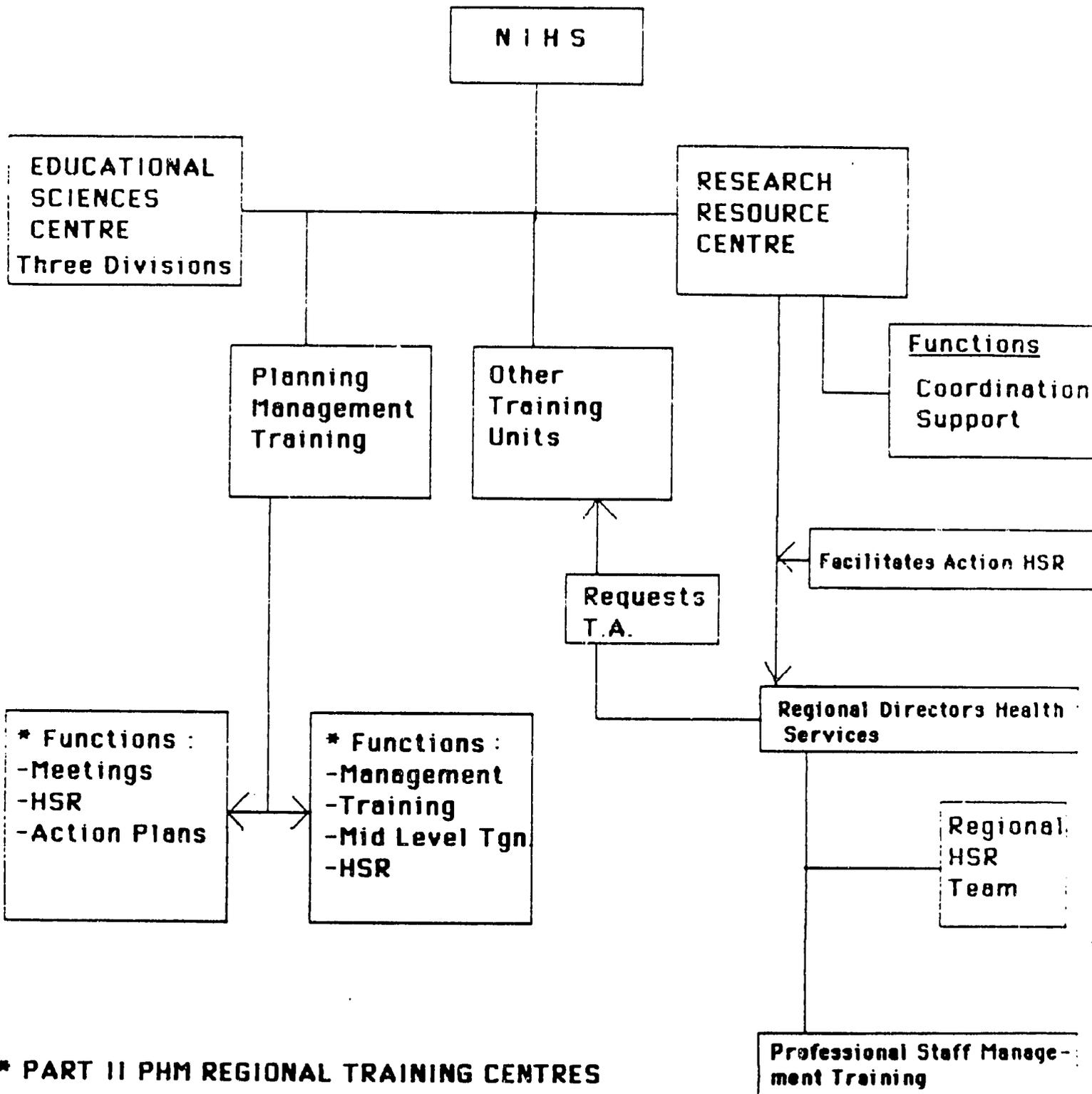
MEMBERS OF PROPOSED NIHS RESEARCH RESOURCE
CENTRE GIVEN I D R C FUNDING

X-1 PROPOSED ROLE OF NIHS IN HSR REGIONAL
LEVEL

X-2 RESOURCE CENTRE - IDRC

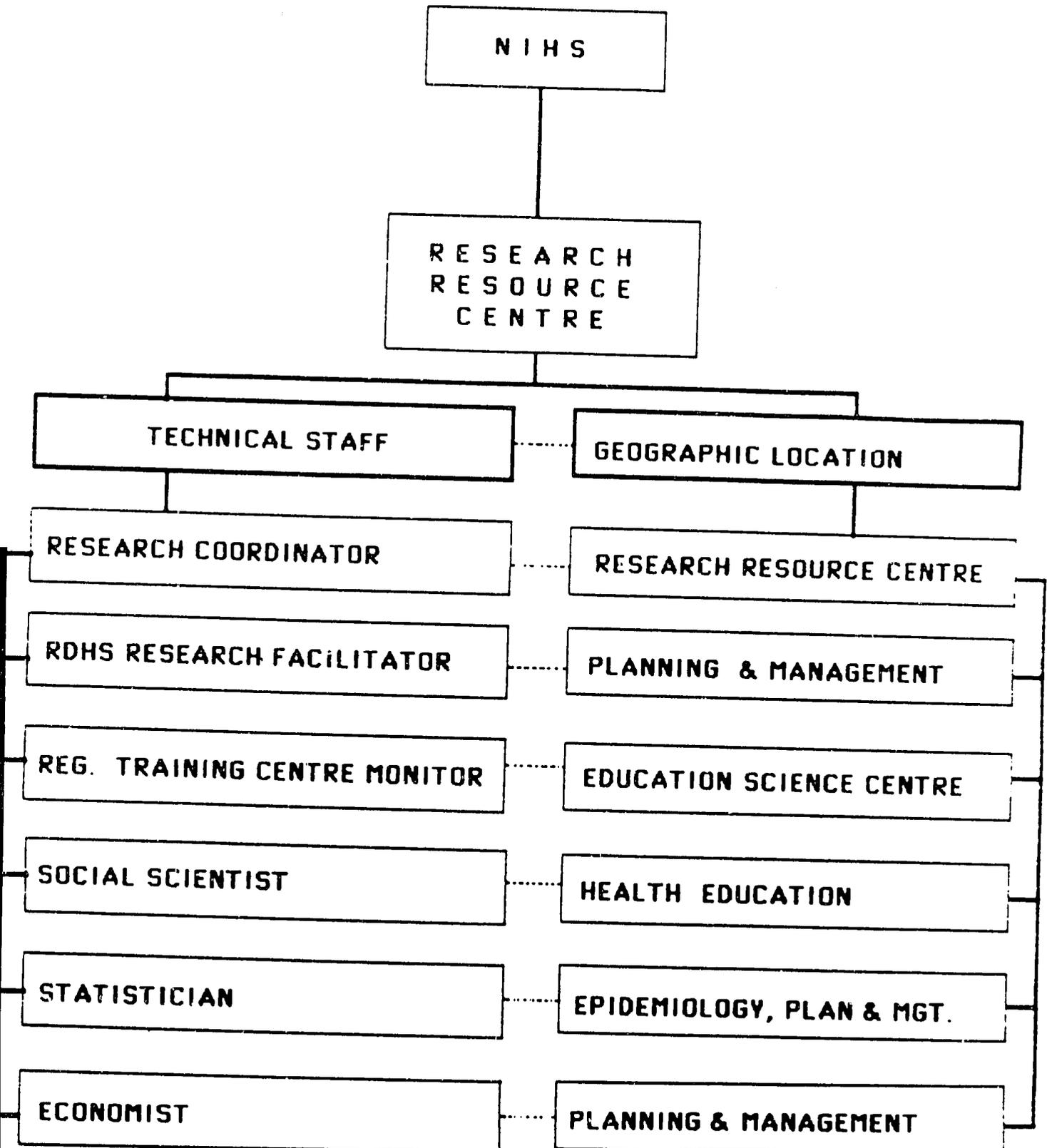
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**PROPOSED ROLE OF NIHS
AS A FACILITATOR OF HEALTH SERVICES RESEARCH
AT THE REGIONAL LEVEL**



*** PART II PHM REGIONAL TRAINING CENTRES**

PROPOSED MEMBERS NIHS RESEARCH
RESOURCE CENTRE - GIVEN IDRC FUNDING



APPENDIX Y

BUDGET - NIHS

APPENDIX Y

<u>FUNCTION</u>	<u>AMOUNT IN RUPEES</u>	
ADMINISTRATION	692,674	
TRAINING	3,706,780	
BASE HOSPITAL KALUTARA	15,862,906	
PERIPHERAL HOSPITAL	2,570,984	
DISPENSARIES	641,012	
LABORATORIES	665,626	
HEALTH - PUBLIC HEALTH CLINICS	743,794	
DENTAL	<u>250,406</u>	
* TOTAL NIHS OPERATIONS BUDGET	25,134,182	
CAPITALIZATION FACILITIES (NIHS)	3,630,000	
CAPITALIZATION HOSPITALS	385,000	
MAINTENANCE PROJECTIONS (10% OF CAPITALIZATION AND EQUIPMENT COSTS)	<u>401,500</u>	
** TOTAL COMBINED BUDGETS	29,550,182	= EQUIVALENT US
	=====	DOLLARS 1,055,363
		=====

(Conversion rate: 1 US\$ = Rs. 28/-)

* OPERATIONAL- EXCLUDES EXTERNAL GRANTS, CONTRACTS, LOANS,
MOH SUPPLEMENTS. EXCLUDES FRINGE BENEFITS, PENSIONS.

** OPERATIONAL BUDGETS, APPROPRIATED BUDGET, AUTHORIZED BUDGETS,
AUDITED ACTUAL EXPENDITURES NOT AVAILABLE.

APPENDIX Z

STRATEGIC PLAN, PHASE IN AND INTER-RELATIONSHIPS

RECOMMENDED SEQUENCE OF SELECTED COMPONENTS OF NIHS STRATEGIC PLAN

ACTIVITY		PHASES							
		I	II	III	IV	V	VI	VII	VIII
1.	Proposal Review	0	0	0	0	0	0	*	*
2.	Plan Update	*	*	*	P	P	P	0	0
3.	Plan Conference	P	0	*	*	*	*	*	*
4.	MOH Policy on NIHS	*	P	0	0	0	0	0	0
5.	Establish HMD	*	*	P	0	0	0	0	0
6.	Establish MDU	*	*	P	0	0	0	0	0
7.	Negotiate Ext. Linkages	P	0	0	0	0	0	0	0
8.	Strengthen NIHS Internally	P	P	0	0	0	0	0	0
9.	Establish HSR at NIHS	*	*	P	P	0	0	0	0
10.	Establish Education Service Centre at NIHS	*	*	P	0	0	0	0	0
11.	Establish Regional Academic Teaching Base	*	*	*	*	P	P	0	0
12.	Establish HSR Link With RDHS	*	*	*	*	P	P	0	0
13.	Teach Mid Level Management Courses	*	*	P	P	0	0	0	0
14.	Establish Management Information System - MIS	*	*	*	P	P	0	0	0
15.	Identify Ext. Funding	*	*	P	0	P	0	P	0
16.	Review All Curriculum. Implement Changes	*	P	P	0	0	0	0	0

NOTE: AT THIS STAGE, THE REVIEW TEAM CAN ONLY PROVIDE A LOGIC RELATIONSHIP BETWEEN THE VARIOUS DEVELOPMENT STEPS. NO DATES HAVE BEEN SET FOR COMPLETION OF THE PHASES. THESE WILL NEED TO BE DETERMINED BY THE NIHS WHEN IT BECOMES CLEAR WHAT RESOURCES WILL BE AVAILABLE AND ADDITIONALLY WHAT PATH THE MINISTRY ITSELF WILL FOLLOW.

KEY

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