

Development of Health Services Research in Nepal

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Present Health Status and Strategy of Nepal

In Nepal more than 96% of its population, particularly which are in rural areas, have little or no access to government health services. The major health problems that are responsible for its high morbidity and mortality are the poor environmental sanitation, lack of primary health care facilities, lack of safe drinking water facilities, nutritional deficiencies, diarrhoea, dysentery, parasitic infestations, vector-borne diseases particularly vectorborne viral zoonotic diseases, childhood infections, tuberculosis and other respiratory infections, leprosy and blindness.

The present health status of the Nepalese people is very low as was evident during the country health programming exercise of 1974 as well as 1979, the average longevity of the Nepalese people is 42 years (recently gone up to 45 years), the crude mortality rate is 22.2 per thousand per year, the annual crude birth rate is 43.6 per 1000 and the Infant Mortality Rate is 133.6 per 1000 live births (HMG/WHO Report 1981).

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The National Development Council meeting under the Chairmanship of His Majesty King Birendra which was concluded in late 1979 has declared as one of the objectives of development planning for the Sixth Five Year Plan and for the subsequent plan period on the provision of **Basic Minimum Needs** to the people. Health occupies a very important place in planning for the provision of basic minimum needs. The government has declared policy or health strategy to make "Minimum Basic Health Needs" available to the maximum number of its people in all parts of the country by the year 2000.

The delivery of rural health care services as one of the basic minimum needs remains a priority programme in the health sector and will continue to be till the year 2000 and beyond (Planning Report 1981).

Establishment of Nepal Medical Research Committee (NMRC)

At present there are not yet solutions or answers available to many of our biomedical and public health problems for which we must conduct more scientific health research to find out the solutions of above mentioned problems. Therefore, public health research has to take initiation and it should include serious inquiries on the pattern and causation of disease in the different communities living in different geographical regions with various sociocultural and ethnical contexts. Application of such scientific research knowledge and technology gained would help the community for the betterment of their basic health needs (vaidya et al 1981). In view of the fact that in Nepal health services research is being carried out in a relatively small number institutions and also in isolation. Many scientists and researchers are not aware of health services research procedures, methodology, project formulation, monitoring the project and report writing. Therefore, His Majesty's Government of Nepal, Ministry of Health has formed a following 7 member Nepal Medical Research Committee (NMRC) on 15 April 1982 to make it as National Focal Point on Health Services Research. It is kept directly under the Ministry of Health.

NMRC Members

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|---------------------|-----------------------------------|----------|
| 1. Mr. M. S. Dhakal | Act. Secretary Ministry of Health | Chairman |
| 2. Dr. B. R. Pande | Chief FP/MCH Project | Member |

3. Dr. S. M. Shrestha	Physician, Bir Hospital	"
4. Dr. M. R. Pande	Royal Cardiologist, Bir Hospital	"
5. Dr. H. N. Upreti	Sr. P. H. Administrator, MOH	"
6. Dr. H. Dixit	Dean, Institute of Medicine	"
7. Dr. D. D. Joshi	Chief, Zoonotic Diseases C. S.	Membes-Secretary

Director General of the Department of Health Services and Department of Ayurved Medicine were nominated by HMG, Nepal as a Committee member on 27 Sept. 1982. Further more, NMRC made a recommendation to include pharmaceutical drug administration and herbal medicine research activities on HSR. Therefore, Dr. S. B. Malla, Director General of the Department of Medicinal Plant, Ministry of Forest has been nominated as a committee member by HMG of Nepal on 14 Oct 1982. So now at present total number of committee members are as follows:

1. Mrs. C. K. Kiran	- Act. Secretary Ministry of Health.	Chairman
2. Dr. N. L. Maskey	- Director General Dept. of Health.	Member
3. Dr. G. Acharya	- Dean, Inst. of Medicine.	"
4. Mr. K. K. Adhikari.	- Director General Dept. of Ayurved.	"
5. Dr. M. R. Pande	- Royal Cardiologist, Bir Hospital.	"
6. Dr. H. N. Upreti.	- Sr. P. H. Administrator Ministry of Health	"
7. Dr. S. M. Shrestha.	- Physician, Bir Hospital.	"
8. Dr. B. R. Pande.	- Chief FP/MCH Project	"
9. Dr. S. B. Malla.	- Director General Dept. of Medicinal Plant	"
10. Dr. D. D. Joshi.	- Chief. Zoonotic Diseases Control	"
	Section	Member Secretary.

Three member Ethical Review Body (ERB) has also been formulated under NMRC. This ERB reviews the project proposals submitted for approval to NMRC from ethical point of view.

At present this is a temporary adhoc E R B and in near future there will be a permanent E R B which will have scientists from different discipline including one lawyer or judge. Three member E R B are as follows:-

1. Dr. M. R. Pande.
2. Dr. G. Acharya
3. Dr. S. M. Shrestha.

The National Council of Science and Technology (NCST) has formulated a national policy and guidelines for all kinds of research to be conducted by the scientists of different ministries, departments, projects, associations and other individual researcher of the country. Several research institutes that exist have adopted these guidelines and policy as applicable to medical research. This NMRC has also followed the policy and guidelines formulated by NCST.

Main Objectives of NMRC

1. To formulate policy planning and guidelines on research both basic and applied at the national level.
2. To act as a "National Focal Point" on health services research.
3. To set up priority areas of the research in medical and health sciences and to approve the research grant applications.
4. To promote and support of research that leads to the solution of priority national medical and public health problems.
5. To organize seminars and workshops on medical and health research and to disseminate the research informations to the users.

Activities of NMRC

- To develop - formats for project application, formulation and for synopsis of the project.
- To organise a training workshop in Medical Research methodology
- To promote the HSR in Nepal by disseminating the information to the interested researchers.

- To monitor and evaluate of the ongoing project.
- To send all the project proposals submitted to NMRC for approval to the Ethical Review body (ERB/NMRC)
- To guide the research scholar on how to write a project proposal and how to implement it.
- To collect all the information regarding health research activities in Nepal, make an inventory of it and finally publish it.
- Try to find out the funds and source of financing agencies for implementation of research projects in the county.
- To make a list of priority areas of the research.
- To publish a NMRC News Letter annually.

Health Services Research in Nepal

To date most health services research on Health problems in Nepal has been of limited operational value because, among other reasons, it has relied almost exclusively in the survey research methodology neglecting the wide spectrum of contemporary behavioural science methodologies and data gathering techniques many of which are appropriate to research on health problems.

During the past decade the WHO/SEARO has increasingly recognised that health and disease are bio-social as well as biomedical phenomena. The implication of this view is that social as well as medical research is essential for genuinely effective health care delivery. Behavioural science research can play an important role in planning and carrying out projects addressed to specific diseases such as malaria, leprosy and infant diarrhoeal diseases, as well as in specific programmes such as health education, the expanded programme on immunization, water supply and sanitation and nutrition.

Institutions which are involved at present in health services research in Nepal are Institute of Medicine, National Council of Science and Technology, Department of

Health Service, Nepal Paediatric Society, Bir Hospital, Mrigendra Guthi, Eye Hospital, and few others. Besides these some individual scientists like Dr. M.R. Pande and Dr. M.P. Upadhyaya are conducting research projects.

Institute of Medicine has started and completed 14 health research projects since its inception. Standard formats for information on research project activity and for research application are developed by the institute (see Annex 3). Besides, institute has given approval to many foreign researchers of different nationalities to conduct research on Health Services in Nepal.

There are five medical research projects sponsored by National Council of Science and Technology from the fiscal year 1977/78 to 1981/82. Research projects are mainly on eye diseases, urinary calculi, lipid level and problem of cor-pulmonale with local environmental factors.

Department of Health Services Ministry of Health with the collaboration of WHO has approved already 3 research projects in nutrition, 3 diarrhoeal disease, 2 malaria and one viral encephalitis particularly on Japanese encephalitis surveillance and control projects.

NMRC has become now a national focal point for all kinds of medical and health reresearch. Research project proposal are now being sent to this committee for approval. So far 20 projects are approved (see Annex 5) and sent to the principal investigators (PI) for implementation, 2 projects are sent beck to the PI to reformulate the project proposals and 3 projects are under process of approval.

This committee has developed two formats one for "Preparation of Research Applications" and other for the "Synopsis of the Research Project (See Anx. 1 & 2). These formats are mainly based on WHO formats developed for its use. At present this committee has prepared a list of "Priority Areas of the Research" after having close collaboration and discussion with the Dean of the Institute of Medicine (See Anx 4).

Constraints

Some of the constraints in the functioning of reresearch organization and management of an administrative nature are :

- Lack of research manpower resources,
- Lack of utilization of research fund,
- Lack of interest and consequently lack of support by institutions and granting authorities and
- Lack of fellowships for health personnel at various levels to familiarize the different aspects of medical and health research.

Recommendations

There is an urgent need for development of research manpower resources (Pande 1981) and dissemination of scientific knowledge in the country with research focused in developing appropriate technology conducive to the needs of rural population to achieve the goal "Health for All" by the year 2000 through primary health care approach. In this respect there must be an active programme developed with TCDC of WHO (Annex 6)

Acknowledgement

We are most grateful to Mr. M.S. Dhakal, Ex-Secretary, Ministry of Health and Mrs. C. K. Kiran, Act. Secretary, Ministry of Health, HMG, Nepal, Chairman of NMRC and other committee members who have given us this opportunity to write this paper.

References

1. Pande B. R. (1981) Country Report presented to WHO/SEARO Advisory Committee on Medical Research.
2. Planning for Meeting the Basic Minimum needs of the people between 1980 - 2000 First Revision, HMG, Nepal. HMG/WHO Management Group, Kathmandu, 1981.
3. Vaidya, B.N., Khan I.H. Suwal, P.N. and Sharma, B.P. (1981) Application of science & technology for Health and Nutrition Development in Nepal, National Council of Science and Technology, Nepal.
4. WHO/SEARO reports on Health Services Research Seventh Session and Eight Session. 1981 and 1982.

Annex 1-1

His Majesty's Government
Ministry of Health
Nepal Medical Research Committee

Format for Preparation of Research Applications: *

NMRC/RES/1.
Addendum.

1. Project title:
2. Objective of the Project:
(List in summary form).
3. Summary of Research Plan
 - indicate the specific aims of the Project.
 - salient points from the project description.
 - mention the short and long term outcome of the study & duration of the study.
4. Principal Investigator:
Name..... Address
Post Phone
5. Institution Responsible for Research Project:
Name..... Address
6. Other investigator (s), Department (s), Section (s), Collaborating with the project.
Name..... Address
7. Duration of Project:
Total: Year.....Months
 From.....
 To.....
8. Funds requested:

* Please fill up the points only which are applicable to your project.

Total Rs.....or US \$.....

Year	I	II	III	IV	V
Total					

9. Responsible financial authority and financial arrangements;
Name..... Address
10. Other support for proposed research:
If Yes indicate the organisation (s).
11. Ethical clearance from National Ethical Review Committee.
12. Acceptance of General conditions and declaration by principal investigator:
Signature of applicant.....
Name.....Address.....
Date.....
13. Declaration of the head of the Department/Faculty/Institute:
Signature.....Date.....
Name.....Address
14. Certification by chief financial authority of the Department/Institution;
Signature.....Date.....
Name.....Address
15. National / Ministry / Institutional approval:
Signature.....Date.....
Name.....Address
16. Project Description:
 - objectives and rationale.
 - experimental design and methodology.
 - research training needs and opportunities.

17. Curricula vitae:

- Principal investigator:
 - Name.....
 - Date of birth.....
 - Qualification.....
 - Present and past posts.....
 - Academic research
 - Publications & Communications.....
- Collaborating Scientists as above.

18. Budget:

- Calculate the budgetary requirements very carefully.
- Duration of research project.
- Personnel.
 - Operating expenses
 - (Chemicals / Supplies / Glasswares / minor equipments)
- Books and Journals.
- Stationary, Postage, Telephone.
- Patient costs - such as transportation / reimbursement / of travel expenses and lost income.
- Transport, Travel and Subsistence.
- Lab animals costs.
- Major equipments (Costing over US \$ 500 each)
 - give details of supplies name, address, catalogue number, year of publication, electrical specifications etc.
 - and add 20% cost in addition to original for packing transportation, insurance etc.
- Other expenditure - which is not included above as for example - air conditioning to the lab or construction of additional fume cup - board ect.
- Budget summary;
 - This will give total budget requirements for the project.

19. Local Resources and Facilities.

- Personnel (manpower)
- Laboratory area space.
- Equipment.
- Animal facility, laboratory animals.
- Office facilities and equipment.
- Computer facilities.
- Clinical facilities.
- Transport facilities.
- Other facilities.

20. Budget justification;

- Explain the necessity for hiring the personnel, research assistants or interviewers etc.
- Indicate the reasons for requestion any chemicals, supplies, equipmentsetc.
- Transport, travel and subsistence etc.

Date:.....

.....
Signature of Principal
Investigator.



Annex 2

NMRC / RES / 2 / Addendum

Format for the
ynopsis of the Research Project

1. Project Title.....
2. Princial Investigator.....
3. Responsible Institutions.....
4. Starting date and duration.....
5. Study area
6. Problem and aim of study (Objectives).....
7. Method.....
8. Interim results.....
9. Significance of the study / results.....
10. Publication of the study.....
11. Fund, source and amount.....
12. Plans for continuation of the study:
 Completion.....
 On going

Date.....

.....
Signature of Principal
Investagator.

Annex 3

Institute of Medicine
Tribhwan University
Kathmandu.

Format for
Information on Research Project / Activity

1. Name of Institution.....
2. Address... ..
3. Name (s) of Researcher (s).....
4. Title of Research Project / Activity.....
5. Objectives
6. Duration of Project / Activity.....
7. Funds allocated
8. Sponsorship of the project / of Research grants received from other institution.
(if any).....
9. Work Collaboration with other Institution (s) (if any)
.....
10. Present state of project.....
completed.....on going.....None.....
11. Other relevant information concerning the research project / activity.
.....

Date

.....
Signature

JNMA July Sept (1982)

Annex 4

PRIORITY AREAS OF THE RESEARCH

Biomedical Research

1. Nutritional diseases such as malnutrition, vitamin A deficiency and blindness, Iodine and goitre, Iron and anaemia.
2. Parasitic Infestations and incidence such as hookworm, roundworm, tapeworm, hydatid disease, Malaria, filariasis, Kala-azar, amoebiasis.
3. Tuberculosis and leprosy.
4. Diarrhoeal diseases - salmonella, cholera rehydration therapy, campylobacter and other treatment aspects of diarrhoea.
5. Chronic liver diseases - infective hepatitis, serum hepatitis and other viral, bacterial and parasitic diseases of liver.
6. High altitude public health problems:-
 - 6.1 Chronic obstructive lung diseases and cor-pulmonale,
 - 6.2 Acute respiratory infection in children.
7. Viral diseases such as viral encephalitis - Japanese encephalitis, rabies, measles, influenza, Dengue fever.
8. Streptococcal infection, rheumatic fever, nephritis.
9. Vesical calculi.
10. Tetanus, tetanus neonatorum.
11. Brucellosis,

Health Services and Management Research

1. Basic health studies of disease patterns in the mountainous, hilly and the terai regions.
2. Rural health needs, Follow - up investigations.
3. Basic sanitation needs - use of toilets in rural and urban areas.
4. Local beliefs, re health, family planning.
5. Quality control of hospitals - standards of care.
6. Time / Motion / Study in relation to hospital outpatients.
7. Hospital case recording and reporting systems.

Health Manpower Development Research

1. Manpower utilization - position of indigenous health worker eg. Dhami, Jhaankris, Sudinis etc.
2. Causes of attrition of physicians in Nepal.

Research in Appropriate Technology for Health

1. New test procedures.
2. New instrumentation.
3. Medical research methodology for research workers.

Research on Medical Education

1. Aspects of medical Education.
2. Health education effectiveness for rural and lay people.

Annex 5

INVENTORY OF BIO-MEDICAL AND HSR PROJECTS PROCESSED BY NMRC

S. No.	Name of the Projects	Remarks
1.	Community Participation in Health and Family Planning Services	On going
2.	Surveillance of Echinococcosis Hydatidosis in animals and Human of Kathmandu	Proposed
3.	Epidemiological and Epizootological Study of Leishmaniasis (Kala-azar) in some Plain Districts of Nepal	Proposed
4.	Comparative Study of Different Strategies of Delivery of Oral Rehydration Therapy (ORT) for Diarrhoea at the community Level	Proposed
5.	National Data Collection on Health Services Research in Nepal.	Completed and report is published
6.	Study on Problems on Hypertension in Nepal	Proposed
7.	Study of the efficacy of the ImmunoGlobulin made in India and Compare it with that made in the western Countries in the Prevention of FAECAL, ORAL, TRANSMITTED NON-A NON-B VIRAL HEPATITIS	Proposed

S. No.	Name of the Project	Remarks
8.	A Proposal Study the Impact of Oral Rehydration Therapy Among Rural Nepalese Children	Process of implementation
9.	Evaluation of Health Aide Performance	Proposed
10.	Survey Study on Existing Meat Hygiene and Sanitation Practices in Kathmandu Town Panchayat	Proposed
11.	A Proposal of Behavioural Study on Acceptability of Sanitary Intervention in two Population Groups in rural Nepal.	Process of implementation
12.	Pilot study on Lay Reporting System Morbidity and mortality in Nepal.	On going
13.	Extended Paediatric Services in children of Boudha Mahankal panchayat	On going
14.	Baseline Epidemiological Data Collection on Snake-bite Poisoning in Human	Proposed
15.	A Preliminary study of out door air Pollution in urban and Rural Kathmandu and measurement of particulate matter in domestic smoke and its correlation with respiratory function.	Proposed
16.	Morbidity and mortality Pattern of ARI in infants and Children in a Rural Community of Mid Hill Nepal	Proposed
17.	Research Proposal on Aetiology of Diarrhoeal Disease Control in the Kathmandu Valley	Proposed

S No. :	Name of the Project	Remarks
18.	Proposal for Study of the Prevalence of Hepatitis 'B' Carrier rate in the Community of Nepal.	Proposed
19.	Evaluation of Alternate Approaches to PHC to Develop Long Term Health Strategies	Proposed
20.	Effectiveness of ANM Staffs at the Health Post in Nepal	Proposed
21.	Case Study on Team-work and its Role in the Provision of Primary Health Care	On going
22.	Special Study of Mosquito Vector Responsible for Transmission of Arbovirus infection particularly Japanese encephalitis and Dengue fever in Nepal.	Proposed
23.	"Sanitary Survey of eating establishments, Hotels and Lodges within Kathmandu Town Panchayat "	Proposed
24.	"Effectiveness of A.N.M. staffs at the Health posts in Nepal"	Proposed
25.	"Programme of Development of Surveillance System of communicable Diseases"	Proposed
26.	"A comparative study on the budget expenditure made by integrated Community Health Services Development Projects and other vertical projects Deserving some Services in different Districts of Nepal	Proposed

S. No. :	Name of the Project	Remarks
27.	Development of a H.S.R. Information System Integrated with the HELLIS of Nepal".	Proposed
28.	Epidemiology and microbiology of Corneal suppuration in Nepal.	Proposed
29.	"The effect of Life long High levels of. Physical Activity on the going process."	Proposed
30.	"Nepalese Medical Research and Service Mission 1983."	Proposed
31.	Research on modified treatment and Epidemiological Survey of Infective Hepatitis (Hepatic coma associated with pregnancy)	Proposed

