

SEA-RES-114

Meeting of the Scientific Working Group on Management of Health Research Information

*Report to the Regional Director
New Delhi, 15-17 December 1999*

WHO Project: ICP RPC 001



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1. INTRODUCTION

The first meeting of the Scientific Working Group (SWG) on Management of Health Research Information was held at the WHO Regional Office for South-East Asia, New Delhi, from 15-17 December 1999. It was conducted as a follow-up to the first joint session of South-East Asia Advisory Committee on Health Research and Medical Research Councils held at Colombo in 1998, where in four SWGs were proposed, namely; (1) Formulation of national health research policies and strategies; (2) Management of health research information; (3) Criteria for setting health research priorities; and (4) Mechanisms for coordination of health research activities in the countries.

The objectives of the SWG meeting on management of Health Research Information were:

- (1) To review the existing situation of health research information in selected countries of the Region;
- (2) To develop a framework of effective management of health research information;
- (3) To make a gap analysis in order to identify a strategy for the management of health research information;
- (4) To prepare a plan of action for improving the management of health research information.

All the members of SWG, constituted by SEARO, participated in the meeting and presented their country papers in the Business Session and discussed various issues related to management of health research information.

The meeting started with greetings from the Regional Director, Dr Uton Mughtar Rafei and Dr U Than Sein, Director, Department of Evidence and Information for Policy, read out the Regional Director's opening address on his behalf. He hoped that the deliberations and outcome of the SWG meeting would enable member countries of the region to develop better ways of management of health research information in accordance with WHO's aim of establishing a common strategy.

2. BUSINESS SESSION

This session mainly included a series of presentations of country papers which were followed by discussions, and group work for the development of a framework, and a plan of action for improving management of health research information. The outcome of each group work was presented by individual groups and subsequently discussed at the plenary.

The session started with a presentation by Dr U Than Sein, who gave an overview of management of health research information in the Region. He explained the definition of research information as an increment in the knowledge generated through the conduct of research; and the research material that is applied for decision-making and taking effective action. In his opening remarks and presentation, he identified the following issues for discussion by the Scientific Working Group:

- How to exploit the rapid development of information technology within the management of health research information?
- How far research institutions and health ministries adopted good management practices on management of health research information?
- How to develop an appropriate linkage between those responsible for health research information generation with those responsible for information valuation for decision-making?
- What is the role of health research councils? Are they only policy-making bodies or do they also play the role of managers for health research information management?
- What is the role of the research institutions or similar organizations? Should they just be institutions responsible for the generation of knowledge?

2.1 Presentations

Members of SWG presented country papers. The following presentations were made in the plenary session:

- (1) Procedures and mechanism to identify health research information need in relation to available resource allocation for health research at country level (Dr Agus Suwandono)

- (2) Health research information flow and its potential networking in India (Dr (Ms.) Medappa)
- (3) Management of health research information services (Ms Kannigar Chollampe)
- (4) Health research information utilization, problems and ways and means to promote it (Dr Amnuay Gajeena)
- (5) Approaches and methods for validation of health research data and information (Dr Pem Namgyal)
- (6) The role of universities in research information collection, validation, analysis, dissemination and research forum activities (Prof Lalitha Mendis)
- (7) Monitoring and evaluation of health research information system at the country level (Dr Wiput Poolcharoen)
- (8) The role of research councils in monitoring and evaluation of research information at the country level (Dr Harun-ar-Rashid)
- (9) Key issues and alternative approaches in developing research information management in the near future (Dr S.D. Gupta)

The presentations were elaborated and the meeting discussed the need for health research information for evidence-based policy and decision-making; need for national health research policies; and key issues in the management of health research information in the respective countries. The meeting noted that the rapid developments in information technology in recent years had greatly influenced health research information generation, dissemination and management process.

2.2 Group Work

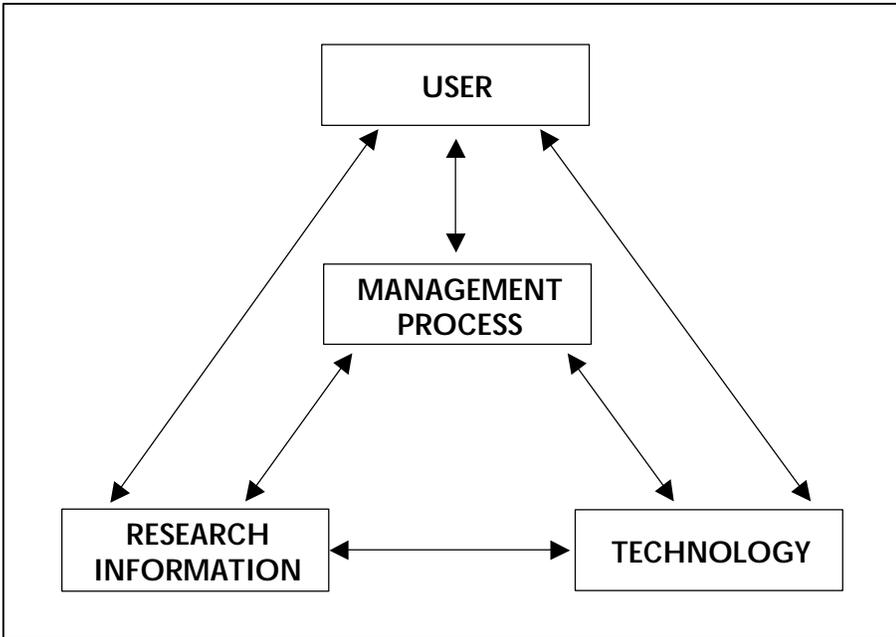
Group work was conducted on two major areas:

- (1) Development of a framework for the management of health research information.
- (2) Plan of action for improvement of management of health research information.

The SWG members deliberated and discussed in-depth the issues associated with the above major areas, which was followed by a presentation by each group and further discussion.

3. KEY ISSUES IN THE MANAGEMENT OF HEALTH RESEARCH INFORMATION

The SWG members deliberated and discussed in-depth the key issues in the management of health research information during the presentations and working groups. A simplified framework for management was proposed to identify the issues. The proposed management framework has four dimensions, viz; research information, technology, users, and management process. In this framework, research information, technology and users are inter-related and interdependent, with management processes at the core, as shown below:



3.1 Issues Related to Users

Policy and decision-makers, academicians, planners and programme managers and researchers are the main users of research information. Research is not considered important by health policy-makers and programme managers. A low priority is given to health research and sufficient funds are not available.

The interface between the researchers and policy-makers and programme managers is not very strong. Research users are from different sectors and research information is not communicated to them in a simple and systematic manner. As a result, available research is not utilized in policy analysis, decision- making and improving programme implementation.

3.2 Issues Related to Research Information

The key issues in research information include: national research policy and priorities, health policy, information generation by researchers and research institutions, reliability and validity of research information.

(1) National health research policy

The meeting emphasized the need for a national health research policy which should clearly identify the thrust areas and priorities of health research. It should be evolved in the context of the national development policy, health policy national health priorities, health systems and services. The health research policy should also address the health needs of the community.

Dr Wiput Poolcharoen, (Thailand), discussed the guiding principles for policy in health research. Research should lead the county to self-reliance; should be a value-added service or technology; should support societal strengthening to well-being and human development, and should assess resource potential. Governments should commit themselves to the development of health research information management systems and provide necessary institutional and financial support.

The national health research policy should have clear objectives and strategies. Dr Agus Suwandono, (Indonesia) discussed the objectives of the national health research policy, and strategies for developing management

systems for health information research. The objectives of national health research policy in Indonesia, are:

- (1) To promote health research based on needs and priorities of health development;
- (2) To increase the utilization of research results for evidence-based policy formulation analysis and decision-making;
- (3) To accelerate health research information dissemination and sharing through setting up websites and networks and other means of dissemination, and
- (4) To build national capacity through strengthening research resources and competence and skills development for health research.

The salient strategic elements are: health research should be based on the needs and priorities of health development; equity, quality and sustainability of health services; research agenda should be developed and committed by researchers and stakeholders and should be inter-sectoral and multidisciplinary; human resource development through training, education and partnership; and providing necessary infrastructure and financial support.

(2) Information generation

Health research information is generated by researchers in medical colleges, universities, research organizations and specialized institutions. The role of these institutions is critical in conducting research in the areas of priority in the context of national health policy and research policy. They have an important role in the validity and reliability of information through developing appropriate designing of research studies and methodology, data collection, processing and analysis. They also play an important role in the dissemination of information through publications and presentations in various fora.

Prof Lalitha Mendis (Sri Lanka) emphasized the role of universities in health research information, and the types and sources of research information that should be shared. She also underlined the important role that universities could play in validating and disseminating information.

Dr N. Medappa (India) elaborated upon the wide network and research base in medical, health and biotechnology in India. Various research

organizations, such as Indian Council of Medical Research, Department of Science and Technology, Council for Scientific and Industrial Research and several other regional organizations, are the leading organizations supporting and conducting research. The Indian Council of Medical Research is the leading research organization in India and has an important role in policy and programme research. She also highlighted the research information management system at ICMR, the use of research information and dissemination through developing databases and creating websites and network.

Some of the salient issues related to information generation were:

- There is a lack of interest and motivation in research, especially in medical colleges, and institutional support and encouragement is very low.
- There is a lack of competence and skills in the designing of research studies and processing and analysis of data.
- Facilities for conducting research are inadequate and data collection procedures are not standardized resulting in the lack of comparability and quality.
- There is no systematic validation process of the study designs and the results. Reliability and validity of work is open to question.

(3) Storage and retrieval

Information technology has a crucial role in the storage and retrieval of health research information. However, information technology is not widely accessible and available. It would require hardware, software, servers and adequately-trained manpower in computer and information technology. The role of library resource was highlighted during the meeting. Ms Kannigar Chollampe (Thailand) discussed the role of libraries in the management of research information services by acting as a resource and documentation centre for the dissemination and utilization of research information. She presented the future structure and role of libraries and use of information technology in information storage, retrieval, transmission and dissemination. She also mentioned about changing technology and advances e.g., computerized libraries, networked libraries, electronic libraries, digital and virtual libraries.

Members identified some salient issues related to information storage and retrieval.

- Most institutions have no organized system of management of research information. No databases are maintained and research information is kept haphazardly.
- Inadequate facilities in institutions for data and information storage. Generally, the information is kept with researchers in the form of raw data, manuscripts or reports.
- Lack of information management infrastructure, such as non-availability of microcomputers, servers, and software. There is no adequate manpower to manage the databases of institutional as well as individual research work.
- Access and retrieval of information is difficult due mainly to manual operations.

(4) Information Dissemination

- Rapid transmission and dissemination of research information is crucial for timely availability and utilization in a meaningful way.
- No formal and systematic dissemination activities are undertaken to share research information.
- Modern information technology is not available to researchers and institutions.
- Research information is generally presented in seminars and conferences by researchers and that is the end of the purpose.
- Research is also published in journals, subject to suitability of the manuscript and significance of the work. Generally, studies showing positive and significant results are accepted for publication (publication bias).
- Much of the research information remains unpublished due to problems in study designs, sample size etc.
- Client organization does not allow publication of research findings (which are supported by them).
- Research work in the form of report generally remains on the shelf and is not shared.

3.3 Issues Related to Technology

Information technology has a critical role in the management of health research information, especially in the processing and analysis of information, and its storage and retrieval. The electronic media has radically transformed information dissemination, accessibility and availability. Creation of websites, internet networking and CD ROM databases have revolutionized information transmission and sharing among researchers, policy-makers and planners. The important issues related to information technology are:

- accessibility and availability of modern technology;
- competence and skills in processing and utilization, and
- cost of technology.

4. FRAMEWORK FOR MANAGEMENT OF HEALTH RESEARCH INFORMATION

A framework for the management of health research information is essential to operationalize the system. It would require adequate infrastructure, development of processes and effective management.

4.1 Infrastructure / Inputs

(1) Health research policy

A policy for health research at national and institutional levels is an essential prerequisite for the development of health research information management. Commitment at the policy level is critical.

(2) Financial support

Sufficient financial support and budget allocation is necessary for the promotion of health research and development of management system for health research information. In addition, there should be continuity in financial support.

(3) Coordinating institution

A national-level institution should be designated to coordinate research and manage health research information. Medical research councils and analogous bodies may be given the responsibility.

(4) Technology

Modern information technology in terms of hardware and software, is a necessary infrastructure support for the management of health research information. Microcomputers, servers and networking equipment are critical inputs for information processing, storage, retrieval and dissemination.

(5) Human resource

Human resource is an essential input. Health research information management would require sufficient manpower, adequately-trained in information technology and software development.

4.2 Process

Process is the key element in the management of health research information. A number of activities are required to operationalize the system. Following are the critical elements in the processes:

(1) Prioritization of research agenda

The countries of the region should prioritize their research needs keeping in view their health policy, research policy and health services needs.

(2) Develop strategy

Develop a strategy for prioritized areas on what and how research would be conducted, and how it would be managed.

(3) Identify sources of research information

Several sources of research information exist, such as, research institutions, medical colleges, universities, libraries, documentation and resource centres, reports of various departments, etc.

(4) Conduct and support research

Designing of research studies, collection of data, processing and analysis of data, and collation of information.

(5) Validation of data

Validation of research data and findings is necessary prior to their application in policy and decision-making. A systematic validation process must be established through peer review and other mechanisms.

(6) Developing a system for storage and retrieval

Develop infrastructure and a system for storage and retrieval of information to enhance accessibility and availability of research information using modern technology.

(7) Dissemination of information

Dissemination of information is an important process element in research information management. Dissemination could be done through networks, websites, publications, conferences and scientific meetings, workshops, press briefings and electronic media.

(8) Promote utilization of research information

Ultimately, research information must be utilized in policy analysis and formulation, decision-making and generating new knowledge, by policy-makers, programme managers, researchers, academicians and others.

4.3 Management Process

Management of health research information includes planning, organization and coordination with respect to infrastructure, inputs and processes. The key management process is to establish and maintain linkages between policy-makers, service providers, researchers and end users of research information.

(1) Mechanisms for sharing and communicating research information

Develop a mechanism for sharing and communicating research information to policy-makers and other stakeholders. The following mechanisms are suggested:

- Formation of a research advisory committee (with a policy-maker in chair).
- Forum for discussions and meetings with stakeholders.
- Policy framework for review and monitoring.
- Policy to articulate financial support.

(2) Logistic support

Logistic support is a key management function. To maintain the research information system, necessary logistics and supplies must be maintained regularly and continuously.

(3) Financial support

Efficient financial management for the allocation and flow of funds, accounting and auditing, and coordinating with the funding agencies.

(4) Human resource management

Recruitment of appropriate manpower, competence and skill development through training, and professional and career development.

(5) Technology

Standardization of technology and procedures for health research information management.

(6) Quality assurance

Registration of research studies and projects, peer review, validation of research information, correct focuses on the correct issues.

5. PLAN OF ACTION AND STRATEGIES FOR MANAGEMENT OF HEALTH RESEARCH INFORMATION

The meeting discussed the plan of action and future strategies for the management of health research information. It considered the issues and

framework for the management of health research information, and the summary report of the joint session of SEA-ACHR and MRC, held at Colombo in 1998.

The broad strategy for developing management of health research information includes:

- Development of health research policy; identification of research information needs for policy, decision-making and evaluation of activities.
- Strengthening of structure and processes at national and regional levels and of research organizations by providing modern technology - microcomputers, software.
- Training of manpower in information technology for data processing, storage and retrieval, transmission and documentation.
- Setting up linkage and network between research organizations, policy-making institutions, and programme managers.
- Capacity building in planning and undertaking policy and programme-related research.

The meeting identified several action points at country and institutional levels, as well as at the level of WHO/SEARO.

5.1 At the Country Level

- (1) All Member Countries should have a policy for the management of health research information as an integral part of the national health research policy. The health research policy itself should be in the broader context of national health development and within framework for national development.
- (2) Member Countries should undertake country situation analysis of management of health research information and its utilization keeping in view the suggested framework. The situation analysis should include national focal points and research organizations, research priorities and agenda, infrastructure, technology, availability

of human resource, sources of health research information, available resources, stakeholders and utilization of research information.

- (3) Member Countries should develop guidelines for the management of health research information. Emphasis should be given to standardization of case definition, such as the use of ICD-10 on health research, data collection and processing techniques and its analysis, such as DALY methods for priority setting and development of appropriate indicators for research information management systems.
- (4) Member Countries should develop an appropriate system for the management of health research information at the national level to make research information readily available and easily accessible to policy-makers, planners and researchers.
- (5) Member Countries should initiate the development of an appropriate human resource plan for research information development and create a critical mass of researchers. Systematic efforts should be made for capacity and competence building. Training programmes may be conducted for the management of health research information and information technology.
- (6) Libraries and other resource centres should be strengthened by developing infrastructure and providing information technology support. A national-level centre of excellence may be set up to collect, collate, and provide access to research information.
- (7) Inter-institutional networking should be developed for sharing and exchanging of health research information using modern information technology. A nodal agency may coordinate the networking of the institutions.
- (8) Registration of research studies and projects should be made mandatory to create a database and monitor research. Fugitive research should also be given due cognizance and placed on website or network.
- (9) A forum should be developed for dissemination and communication of research to policy-makers and planners to create awareness and increase utilization of research information. It will also help develop

commitment among them for health research information as evidence for policy, and generate institutional and financial support for its management.

- (10) A mechanism should be established for research information exchange and network among the funding agencies for identifying research priorities and needs. Inter-agency meetings may be organized to coordinate research efforts and information sharing.

5.2 At the Level of Research Institutions

At the level of institutions, several key actions are necessary for better management of health research information and its utilization.

- Competence and skills should be developed in the area of data collection, analysis, presentation, and dissemination.
- High quality research information should be ensured through better management of data collection and analysis.
- Computer-based databases should be developed in respect of the research work done.
- Linkages should be set up with research networks for allowing access to research information. Own Webster should be created.
- Dissemination of research findings should be budgeted as part of research study - workshops, seminars and publication of briefing papers etc.

5.3 At WHO/SEARO Level

WHO/ SEARO has a pivotal role in promoting health research information management and dissemination of research information for utilization in evidence-based policy and decision making:

- (1) WHO should provide technical support to Member Countries of the Region in country situation analysis of health research information management. It should provide support for information technology and training of personnel in research and information technology.

- (2) WHO should provide financial support to countries in the development of a management system for health research information, and in undertaking policy and programme research.
- (3) Financial and technical support should be coordinated with other development agencies.
- (4) Regular meetings on health research information management in SEAR countries should be organized for monitoring progress, evaluation of research, and dissemination of research information.

Annex 1

LIST OF PARTICIPANTS

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Annex 2

AGENDA

Introductory Session

Regional Director's address and introductory remarks by Dr Than Sein, Director, Evidence and Information for Policy, South-East Asia Regional Office

Introduction of participants

Appointment of Chairperson

Introductory remarks by Chairperson of the Scientific Working Group

Adoption of Agenda and Working Schedule for this session

Nomination of the report drafting group

Business Session

Overview of management of health research information in the SEA Region – Dr U Than Sein.

Procedure and mechanism to identify health research information need in relation to available resource allocation for health research at country level (Dr Agus Suwandono).

Health research information flow and its potential networking in India (Dr Ms S. Medappa).

Management of health research information services (Ms Kannigar Cholumpee).

Health research information utilization, problems and ways and means to promote it (Dr Amnuay Gajeena).

Approaches and methods for validation of health research data and information (Dr Pem Namgyal).

The role of Universities in research information collection, validation, analysis, dissemination and research forum activities (Prof Lalitha Mendis).

Monitoring and evaluation of health research information system at country level (Dr Wiput Poolcharoen).

The role of research council in monitoring and evaluation of research information at country level (Dr Harun-er-Rashid).

Key issues and alternative approaches in developing research information management in the near future (Dr S.D. Gupta).

Group Work

To develop a framework on effective management of health research information, with particular reference to infrastructure, process and management, including monitoring and evaluation of progress of development.

To prepare a plan of action for improvement of management of health research information.

Closing Session

Remarks by Dr Than Sein, Director, Department of Evidence and Information for Policy, WHO, South-East Asia Region.

Closing remarks by Chairperson.

Annex 3
WORKING SCHEDULE

	Morning session 8.30 a.m. to 12.00 noon	Afternoon session 1.30 to 4.30 p.m.
15 Dec 1999 (Wednesday)	<p>Inaugural Session</p> <p><i>Regional Director's address and introductory remarks</i> – Dr U Than Sein</p> <p><i>Introduction of participants</i></p> <p><i>Appointment of Chairperson</i></p> <p><i>Introductory remarks by Chairperson of the Scientific Working Group</i></p> <p><i>Adoption of Agenda and Working Schedule of the session</i></p> <p><i>Nomination of the report drafting group</i></p> <p>Business Session</p> <p>Overview of management of health research information in the SEA Region – Dr U Than Sein</p> <p>Procedure and mechanism to identify health research information need in relation to available resource allocation for health research at country level – Dr Agus Suwandono</p> <p>Health research information flow and its potential networking in India – Dr Ms N. Medappa</p>	<p><i>Management of health research information services</i> – Ms Kannigar Cholumpee</p> <p><i>Health research information utilization, problems and ways and means to promote it</i> – Dr Amnuay Gajeena</p> <p><i>Approaches and methods for validation of health research data and information</i> – Dr Pem Namgyal</p>

	Morning session 8.30 a.m. to 12.00 noon	Afternoon session 1.30 to 4.30 p.m.
16 Dec 1999 (Thursday)	<p><i>The Role of universities in research information collection, validation, analysis, dissemination and research forum activities</i> – Prof. Lalitha Mendis</p> <p><i>Monitoring and evaluation of health research information system at country level</i> – Dr Wiput Poolcharoen</p> <p><i>The role of research council in monitoring and evaluation of research information at country level</i> – Dr Harun-er-Rashid</p> <p><i>Key issues and alternative approaches in developing of research information management in the near future</i> – Dr S.D. Gupta</p>	<p>Group Work 1</p> <p>To develop a framework on effective management of health research information, with particular reference to infrastructure, process and management, including monitoring and evaluation of progress at development.</p>
17 Dec 1999 (Friday)	<p>Group work 2</p> <p>To prepare a plan of action for improvement of management of health research information</p>	<p>Closing session</p> <ol style="list-style-type: none"> 1. Remarks by Dr U. Than Sein 2. Closing remarks by Chairperson

Annex 4

LIST OF WORKING DOCUMENTS

(1)	List of Participants	SEA/SWG/HRI/A
(2)	Agenda	SEA/SWG/HRI/B
(3)	Working schedule	SEA/SWG/HRI/C
(4)	List of Working Documents	SEA/SWG/HRI/D
(5)	Terms of Reference	SEA/SWG/HRI/D
(6)	Overview of management of health research information in the SEA Region	SEA/SWG/HRI/E
(7)	Key issues and alternative approaches in developing research information management in the near future	SEA/SWG/HRI/F
(8)	The role of universities in research information collection, validation, analysis and dissemination and research forum activities	SEA/SWG/HRI/G
(9)	Procedure and mechanism to identify health research information need in relation of available resource allocation for health research at country level	SEA/SWG/HRI/H
(10)	Health research information flow and its potential networking in India	SEA/SWG/HRI/I
(11)	Approaches and methods for validation of health research data and information	SEA/SWG/HRI/L
(12)	The role of research council in monitoring and evaluation of research information at country level	SEA/SWG/HRI/K
(13)	Monitoring and evaluation of health research information system at country level	SEA/SWG/HRI/L
(14)	Management of health research information services	SEA/SWG/HRI/M
(15)	Health research information utilization, problems and ways and means to address it.	SEA/SWG/HRI/N