REPORT

WORKSHOP FOR RESEARCH DESIGN, METHODOLOGY AND PROPOSAL WRITING ON INFECTIOUS DISEASES OF POVERTY

Convened by

WORLD HEALTH ORGANIZATION
REGIONAL OFFICE FOR THE WESTERN PACIFIC

Manila, Philippines
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The views expressed in this report are that of the Research Institute for Tropical Medicine which was subcontracted to conduct the workshop and do not necessarily reflect the policies of the World Health Organization.
SUMMARY

The Workshop on Research, Design, Methodology on Infectious Diseases of Poverty was conducted by the Research Institute for Tropical Medicine (RITM) of the Department of Health, Philippines from November 29 to December 3, 2010 at the RITM Training Center. The objectives of the workshop were:

1. to build the capacity of participants on operational research methods and design and on preparing proposals for research grants;
2. to update participants on various research grant opportunities and potential funding sources; and
3. to strengthen collaboration between academic/research institutions and disease-control programmes in conducting operational research.

The workshop was attended by 28 participants who were either senior technical officials of the ministry or department of health or with a research institution responsible or involved in either tuberculosis (TB) or malaria and other vector borne and parasitic disease (MVP) control programs or research. There were at least two participants from each country except for two countries which sent only one participant each; each pair was encouraged to work on one research proposal. The participants were from Cambodia, China, Fiji, the Lao Republic, Mongolia, the Philippines, Papua New Guinea, the Solomon Islands, Vanuatu and Vietnam. A WHO consultant served as a resource person for the duration of the workshop. There were two observers; staff from the Special Programme for Research and Training in Tropical Diseases (TDR) in Geneva and the WHO- Western Pacific Regional Office served as the secretariat.

The learning method used were lectures for technical inputs, writeshops or independent writing, consultation sessions between the participants and their mentors and the presentation of the workshop outputs during the plenary sessions. In all, a total of fourteen (14) research proposals were developed: seven (7) on tuberculosis, four (4) on dengue, one on malaria, one on schistosomiasis, and one on yaws during the five day activity.

The participants commented that the workshop provided them with the skills on proposal writing which they can apply in the future and in training junior researchers. They commended the workshop organization, the competence and mentorship provided by the RITM. A major recommendation provided by the participants was the use of a sample, model proposal that will be developed progressively by all the lecturers, such that after all the lectures was made, there was this one proposal developed.
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I. INTRODUCTION

1.1. BACKGROUND INFORMATION

Substantial programmatic gaps exist in the prevention and control of infectious diseases of poverty\(^1\) requiring operational research. Such gaps include insufficient service coverage, vulnerable and marginalized group not accessing adequate diagnosis and care, slow adaptation and adoption of available technology and care delivery innovation. The quantity as well as the quality of operational studies on these diseases is still insufficient in the Western Pacific Region. One of the challenges is the weak capacity among researchers and disease control programmes, especially in the less developed countries, in designing and conducting operational research which addresses programmatic gaps. Insufficient training opportunities in research methods and design among researchers and disease control programme staff have prevented them from developing competitive research proposals. Despite existing grant opportunities, many of them have been less successful in accessing these. Furthermore, collaboration between the academic and research institutes and disease control programmes is weak. The number of operational research projects which effectively involve both disease control programmes and academic and/or research institutes is limited. Strengthening collaborations is crucial to effectively link research and programmes for evidence-based policies and programmes.

A draft Regional Plan of Action (RRPA) in Infectious Diseases of Poverty for 2010-2015 was developed in collaboration with leading scientists within and beyond the Region, Malaria, other Vectorborne and Parasitic Diseases (MVP), the Special Programme for Research and Training in Tropical Diseases (TDR/HQ) and Stop TB and Leprosy Elimination (STB). Among nine expected results (ER) set in the Plan of Action, ER 1 calls for strengthening applied and operational research capacity of existing academic and research institutions and programmes in Member States. Research capacity building and disease-specific operational needs are also addressed in WPRO’s Regional Plan of Action for Malaria (2010-2015), for Dengue (2008-1015) for Tuberculosis (2006-2010) and for Neglected Tropical Diseases (2010-2015, draft). TDR/HQ also prioritizes research capacity building as one of their priority areas (under Empowerment: Business Line 2 of TDR’s ten year vision and strategy).

With this, MVP and STB jointly proposed to organize a workshop on research design, methodology and proposal writing on infectious diseases of poverty. The workshop will be directly addressing ER1 of the RRPA and TDR’s Business Line 2. This workshop is part of a capacity building cycle for strengthening research in the Region beginning with: (1) support for proposal/grant writing, (2) grant support (e.g. through TDR Small Grants Programme); and (3) training on scientific writing to disseminate research results. This cycle can be used as a model for other public health programmes such as non-communicable diseases, maternal and child health and others.

The World Health Organization has placed high on its agenda the need for quality and relevant research to back its policies and strategies on different public health programmes including infectious diseases of poverty. In the Western Pacific Region, a draft Regional Research Plan of Action in Infectious Diseases of Poverty for 2010-2015 was developed in collaboration with leading partners within and beyond this Region, Malaria, other Vectorborne and Parasitic Diseases, the Special Programme for Research & Training in Tropical Diseases, and Stop TB and Leprosy Elimination (STB). The draft Plan of Action aims to fill programmatic gaps in the prevention and

\(^1\) Infectious diseases of poverty include Chagas diseases, dengue, helminthes, human African trypanosomiasis, leishmaniasis, leprosy, lymphatic filariasis, malaria, onchocerciasis, schistosomiasis, STI, tuberculosis and TB/HIV.
control of infectious diseases of poverty. One of its expected results is to strengthen the research capacity of academic and research institutions and disease control programmes in Member States. Research capacity building and disease-specific operational research needs are also addressed in WHO's regional action plans for malaria, dengue, tuberculosis and neglected tropical diseases. The Special Programme for Research and Training in Tropical Diseases also prioritizes research capacity-building as one of their priority areas.

With this, the Regional Office for the Western Pacific organized a workshop on research design, methodology and proposal writing on infectious diseases of poverty in Manila, Philippines. This workshop will contribute to the strengthening of the research capacity of academic/research institutes and disease-control programmes in designing operational research studies. This workshop was subcontracted to the Research Institute for Tropical Medicine of the Department of Health.

1.2. OBJECTIVES

The objectives of the workshop are:

1. to build the capacity of participants on operational research methods and design and on preparing proposals for research grants;

2. to update participants on various research grant opportunities and potential funding sources; and

3. to strengthen collaboration between academic/research institutions and disease-control programmes in conducting operational research.

1.3. PARTICIPANTS

The workshop was attended by 28 participants who were either senior technical officials of the ministry or department of health or with a research institution responsible or involved in either tuberculosis (TB) or malaria and other vector borne and parasitic disease (MVP) control programs or research. There were at least two participants from each country except for two countries which sent only one participant each; each pair was encouraged to work on one research proposal. The participants were from Cambodia, China, Fiji, the Lao Republic, Mongolia, the Philippines, Papua New Guinea, the Solomon Islands, Vanuatu and Vietnam. A WHO consultant served as a resource person for the duration of the workshop. There were two observers; staff from the Special Programme for Research and Training in Tropical Diseases (TDR) in Geneva and the WHO- Western Pacific Regional Office served as the secretariat. A list of the workshop participants, the WHO resource person, observers and secretariat members are found in Annex 1.

1.4. LEARNING METHOD

1.4.1. Selection of Participants

Collaboration between academic/research institutions and disease-control programmes are weak in this Region. The number of operational research projects which effectively involve both disease-control programmes and academic/research institutions is limited. As such, participants for the workshop were strategically selected to encourage these two groups to collaborate and work together in identifying programmatic gaps in TB,
malaria and NTD prevention and control programmes. Workshop organizers believe this collaboration would strengthen the crafting of evidence-based policies and programmes in the Region.

1.4.2. Participants’ Preparation

Prior to coming to the Philippines, the WHO Organizers communicated with each of the country participant. They were grouped by country and encouraged to communicate with each other to agree on a singular research topic. They were also provided an advance copy of the disease research priorities as a means of inspiring them to think of a research topic. They were then requested to send their research topic to the organizers so that the training institution will be able to identify a mentor who can assist and facilitate in their work.

1.4.3. Preparation of Workshop Agenda

The final Workshop Agenda is found in Annex 2. The workshop was so organized such that there were didactics, independent writing sessions and mentoring of the participants. This agenda was reached after several consultations and discussions between the WHO organizers and the RITM. The topics were selected on the basis of the necessity of technical inputs in writing that specific part of the proposal. Ample consideration was also given to the timing of the lectures, scheduling of the writeshops in relation to technical inputs, and when consultations and mentoring sessions were to be timed. For instance, it was deemed important that the participants should present and have their research title, rationale and objectives be critiqued on Day 1; this presentation was necessary towards a more effective writing of the succeeding parts of the proposal.

1.4.4. Lecturelettes

The presentations and lecturelettes provided technical inputs on what specific parts of the proposal should contain or how it should be written. These presentations were in the form of powerpoint presentations, hard copies of which were provided to the participants. There was also a demonstration on the benefits of the use of referencing software made by Dr Nobuyuki Nishikiori. The participants were fortunate to have consultants from the WHO/TDR. Dr Jane Kengeya Kayondo, for instance, emphasized the significance of operational research studies and was very helpful in distinguishing operational, implementation and health services research from one another, as she went around the different teams during the writing sessions.

1.4.5. Writeshop, Consultation and Mentoring Sessions

Immediately after a set of lectures, the participants went into writeshops. Writeshops were three to four hours of independent work. During this time the team discussed and agreed on what should be included in each section of the proposal; when agreements were made, these were then written down as part of the proposal. Soon after the writeshop sessions, the participants sat down with their mentors and discussed the writeshop output which took at least two hours.
Each team was provided with one mentor, who worked with them throughout the workshop and until the completion of their proposal. The mentors were senior scientists of RITM with varying disease expertise. The mentors were assigned to the teams on whom they can make significant contributions. Thus, for instance, the team working on dengue research topic, had for its mentor, a dengue expert herself.

The objective of the consultation and mentoring sessions was for the mentors to discuss with the team their work, comment and critique on the output and assist them in ensuring that the technical content was accurate, correct and appropriate, that there was cohesiveness and continuity from one section to the next. Immediately after the mentoring sessions, the teams proceeded to revise the document, when they saw fit and appropriate. In all, there were four (4) writing and three (3) mentoring sessions.

In addition to the mentors, the Institute’s epidemiologist and biostatisticians made themselves available and circulated around the different groups to assist and guide the teams in writing the Methods section of the proposal. This section, which consist of a description of the study design, sampling procedures and sample size calculation, required the valuable inputs of the technical staff.

1.4.6. Plenary Sessions

The workshop had also two plenary sessions: the 1st session required participants to present the title of their research proposal, its rationale and objectives; the 2nd and final plenary session required the teams to present the whole proposal, i.e. from the rationale of the study up to its ethical considerations. In both sessions, the teams received peer and mentor critique and suggestions for the improvement of their proposal.

1.4.7. Learning Materials

Two sets of materials were provided to the participants: one set included materials in hard copies put together in binders (Annex 3) and another was a set of references in electronic copies and placed in USBs (Annex 4). The latter contained the research agenda for TB and MVP and presentation materials. The latter contained reference materials which may be used during the workshop or in the future. Both materials were distributed to the participants at the start of the activity.
2. PROCEEDINGS

2.1. Summary of Presentations

2.1.1. Priority Topics in Infectious Diseases of Poverty: Tuberculosis

Dr Nobuyuki Nishikiori started with an explanation of the significance of operational research. He showed graphically why operational research is critical for TB control programmes. TB control today in the Region is in a stage of stagnation after the significant progress in TB control in the past 10 years. It is critical to invest on research to try out and develop innovative approaches for TB control which will spur eventual success in the coming decade. He also informed the participants that, in terms of scientific publications, the contribution of the Region to the global TB control knowledge is relatively small despite the fact that the region has four countries with a high burden of tuberculosis. He proceeded to present the strategic research agenda for the Western Pacific region and available WPRO TB operational research grants and its details.

2.1.2. Priority Topics in Infectious Diseases of Poverty: MVP

Dr Jun Nakagawa informed the participants that there are regional strategic plans for the control and elimination of malaria, dengue and tuberculosis and draft plans for neglected tropical diseases (NTDs) and for research. Similarly, he also disseminated to the group that there are regional research priorities identified by regional researchers and stakeholders for malaria, dengue and NTDs.

2.1.3. Where Do Research Topics Come From

Dr Veronica Tallo talked about the different sources of possible research topics. She stressed, however, that for researches to be relevant and responsive to gaps in disease programme implementation, monitoring and evaluation reports are valuable sources. She added that the identification of a problem required the availability of a specific set of information. She added that since several research questions may emerge out of these reports, she provided a list of criteria by which research questions may be prioritized or selected. She also provided tips on how selected problem may be analyzed and dissected. This is valuable in writing the background and rationale of the study and could be used as a guide in doing literature review.

2.1.4. The Research Proposal: Contents

While there may be several formats of a research proposal, Dr Fe Esperanza Espino discussed the WHO structure for operational research used in its TDR Small Grants Programme. She described in detail what each section should include and how it should be written.

2.1.5. Formulating the Research Objectives

The writing of the research question and its general and specific objectives was crucial to be able to write the succeeding sections of the research proposal. Thus, Dr Socorro Lupisan clearly expounded on how the general objectives were to be written and presented examples of them. She clarified the need to break down the general objective
into small manageable parts which will form the specific objectives. She added that the specific objectives will guide the researchers in choosing their study design. She also gave suggestions on how to develop the hypotheses, if this was necessary.

2.1.6. Conducting a Literature Review

Dr Luz Acosta defined what literature review is and is not. She stressed that a well written literature review will be among those factors that may convince reviewers on the significance of the study. She provided tips on how to read and review the materials which may provide similarities, differences with the study being proposed. She also stressed the significance of citing the references reviewed.

2.1.7. Introduction to Reference Management Software for Effective Literature Storage and Use

The management of scientific literature and materials used in writing the study proposal, i.e. books, publications, reports, is critical to ensure that all of these are appropriately cited and listed. It has also been a common practice that researchers build and keep their own bibliographical database so that browsing, reviewing and referencing literature can be done efficiently. Dr Nishikiori informed the group that there are some software packages available for such purposes. As examples of such packages, he introduced two solutions: one commercial package (Endnote) and one free online package (Mendeley). He demonstrated how the software can be used to facilitate, not only during the writing of the proposal and manuscript but also when doing the literature search and systematic reviews. He also cited technical similarities and differences between the two software to guide participants in choosing right solution for their purposes.

2.1.8. Study Methods and Design

The methods section of the proposal consists of a description of the study design, the sampling method, the sample size calculation, a description of the data collection tools to be used and, if indicated, a detailed description of the study procedures, i.e. as in the case of an intervention. This is a technical section and will need inputs from either an epidemiologist or a biostatistician.

Mr. Alvin Tan, an epidemiologist, discussed this topic. He described the different study designs one may use and gave examples on when a specific design may be applicable as well as the advantages and disadvantages of using each. He also discussed the considerations when selecting a specific study design.

2.1.9. Data Collection Procedures and Tools

Ms Christine Joy Dureza, a biostatistician, approached this topic by looking at whether the research will require the collection of primary or secondary data and their corresponding advantages and disadvantages. She explained the data collection techniques necessary for the source of the data to be obtained and the appropriate tools which need to be developed. She proceeded to discuss the data collection tools that need to be developed if the researcher was obtaining information directly from study participants vs the tools applicable for data collection from existing records, reports and detailed how a questionnaire will be done.
2.1.10. Sampling and Sample Size

Ms Marianette Inobaya, a biostatistician, stressed that an important factor on how the sample for a study will be estimated is the research objective. She discussed the different ways by which a sample may be estimated, the requirements for each estimation and proceeded to present applications of the estimation methods. She also mentioned that sample size estimation may be done using the software such as EPIINFO or STATA, for as long as the researcher knows what information to input into the software. She also stressed that the sample size estimation should be done during the planning stage of the study and should already involve the inputs of a biostatistician.

2.1.11. Data Management and Analysis

Data management, according to Ms Inobaya, refers to the processing, consolidation and organization of the information collected by the study – a process which commences at the development of the data collection tools, until the point where the data is cleaned and validated in readiness for data analysis. She also mentioned that although studies continue to collect information on paper forms and transferred to an electronic database, there is already the possibility of electronic data capture. She included an overview of basic data analysis which may be done using statistical software, such as EPIINFO, SPSS, STATA, and SAS.

2.1.12. Ethical Considerations

Studies involving human subjects require a discussion of the ethical considerations relative thereof. Dr Gemiliano Aligui presented a historical background of research ethics and relevant aspects of the Declaration of Helsinki, the guidelines on the conduct of biomedical research by the Council of International Organization of Medical Sciences (CIOMS) and that of the International Conference on Harmonization – Good Clinical Practice (ICH-GCP). He discussed the significance of ethical review and a detailed description of obtaining ethics committee approval – from the submission of documents up to notification of approval. He also discussed the information which should be included in the document to be used in obtaining informed consent from research participants.

2.1.13. The Grant Proposal: What should it include?

Since the purpose of the proposal writing is for the participants to submit it for funding to a donor agency, the workshop included a presentation on what a grant proposal should include. Dr Philip LoVerde stated that proposals should be well written as was discussed in the previous sections, and should also include discussion of the expected outcomes from the study, the anticipated pitfalls, problems and limitations of the study, the alternative approaches to the study and a proposed study budget (the latter was described in detail). He advised the participants that submissions should comply with the requirements of the donor agency, i.e. number of pages, font size, margins and the like. He also gave the participants an idea on how donor agencies evaluate and assess submissions which will eventually receive the grant they offer.
2.1.14. Research Grant and Funding Opportunities

Dr. LoVerde gave the participants an overview of several agencies which provide funding support for research studies. For each donor agency, he described the purpose of the grant, the nature of the research they will fund and the website where more information may be obtained. He strongly advised participants that complete compliance and adherence to submission requirements of the funding agency is important.

2.2. Summary of Workshop Outputs

The participants submitted two outputs: (1) the complete research proposal containing in Word format and (2) a 15-slide PowerPoint presentation which summarizes the whole proposal and was presented in a plenary session. The following summarizes the workshop outputs:

2.2.1. TB Research Proposals

a. Country: Cambodia
   Proponents: Dr. Kien Sorya, Dr. Tan Kundara
   Mentor: Dr. Veronica L Tallo
   Title of Research: Improving referral compliance rates for TB diagnosis in urban Cambodia
   General Objective: To develop strategies to improve referral compliance rates of TB suspects from the private sector to the public DOTS facility.

b. Country: China
   Proponents: Dr. Fei Yan, Dr. Zhang Hui
   Mentor: Dr. Rosanna Ditangco
   Title of Research: Do transportation subsidy and living allowance improve treatment completion among internal migrants TB cases in Shanghai, China?
   General Objective: To determine if transportation subsidy and living allowance improve treatment completion among internal migrant TB cases in Shanghai, China.

c. Country: Lao People’s Democratic Republic
   Proponents: Dr. Kongkham Sayalath, Dr. Sakhome Suthepmany
   Mentor: Dr. Mari Rose de los Reyes
   Title of Research: Factors influencing community participation in TB case detection during a TB prevalence survey in Laos: implications for future policy decisions
   General Objective: To determine the factors that affect participation of community in TB case detection during prevalence survey in Vientiane Capital and Vientiane Province.

d. Country: Mongolia
   Proponents: Dr. Enkhzaya Taznaa, Dr. Dashdavaa Dorjma, Dr. Oyuntsetseg Purev
   Mentor: Dr. Charissa Fay Tabora
   Title of Research: Analysis of treatment outcomes of pulmonary TB among...
prisoners in Mongolia

General Objective
To determine treatment outcome of pulmonary TB among prisoners in Mongolia

e. Country
Papua New Guinea

Proponents
Sister Okotai Travertz, Dr Joseph Bana-koiri

Mentor
Dr Socorro P Lupisan

Title of Research
Reduce default rates among TB patients referred to their catchment public clinics for treatment PNG

General Objective
To reduce referral default rate of newly diagnosed TB patients seen at PMGH and sent back to their respective public clinics.

f. Country
Philippines

Proponent
Dr Lalaine Mortera

Mentor
Dr Celia Carlos

Title of Research
Factors affecting the implementation of a hospital DOTS referral system in private hospitals in the Philippines and its policy implications.

General Objective
To determine the factors affecting the implementation of a hospital DOTS referral system in private hospitals in the Philippines

g. Country
Vietnam

Proponents
Dr Dang Minh Sang, Dr Vu Van Hoan

Mentor
Ms Marianette Inobaya

Title of Research
National TB Program strengthening for migrants in Ho Chi Minh City

General Objective
To understand characteristics, determinants of treatment outcome and needs of migrant TB patients in HCM City for National TB Programme to provide effective TB care for migrant TB patients.

2.2.2. MVP Research Proposals

a. Country
Cambodia

Proponents
Dr. Teng Srey, Dr. Yenn Roumany

Mentor
Dr Beatriz P Quiamboo

Title of Research
The use of mobile phones for dengue reporting at health center level in Takeo Province, Cambodia.

General Objective
To determine the effectiveness of using mobile phone on the reporting of dengue cases at Health Center level.

b. Country
Fiji

Proponents
Dr. Ilisapeci Samisoni, Dr. Sheetalpreet Singh

Mentor
Dr Philip LoVerde

Title of Research
Improving the timely notification of dengue fever in Fiji.

General Objective
To improve the timely notification of dengue fever in Fiji.

c. Country
Lao People’s Democratic Republic

Proponents
Dr. Mayfong Mayxay, Dr. Sibounhom Archkhwongs

Mentor
Dr Fe Esperanza Espino
Title of Research: Effective approaches to improve dengue diagnosis and treatment in Lao.

General Objective: To develop an intervention package aimed at improving the application of WHO 2009 dengue diagnosis and treatment guideline in Laos.
To implement & evaluate the intervention package aimed at improving the application of WHO 2009 dengue diagnosis & treatment guideline in Laos.

d. Country: Philippines
Proponents: Dr Francis Isidore Totanes, Mr Aldrin Reyes, Ms Ma Paz Rostrata
Mentor: Dr Mario Jiz
Title of Research: A pilot test on operational integration of mass treatment administration for S. japonicum and soil-transmitted helminthiasis among school age children in co-endemic areas in the Philippines.
General Objective: To pilot-test an operational integration of mass drug administration for S. japonicum and soil-transmitted helminthiasis in co-endemic areas in the Philippines.

e. Country: Solomon Islands
Proponent: Dr Lyndes Wini
Mentor: Ms Jennifer Luchavez
Title of Research: The use of simple hemoglobin test as a predictors for G6PD deficiency in P. vivax malaria patients in Solomon Islands.
General Objective: To screen for G6PD deficiency in P. vivax malaria patients treated with primaquine by determining hemoglobin level changes and assess the usefulness of this method in rural clinic settings in Solomon Islands.

f. Country: Vanuatu
Proponent: Dr Len Tarivonda
Mentor: Dr Luz Acosta
Title of Research: Determining the extent of yaws resurgence in Vanuatu
General Objective: To estimate the prevalence of yaws in Vanuatu in order to guide appropriate operational treatment and elimination strategies.

g. Country: Vietnam
Proponents: Dr Tham Chi Dung, Dr Tran Van Ban
Mentor: Ms Edelwisa S Mercado
Title of Research: Improvement of the targeting of dengue control in Vietnam through vector mapping
General Objective: To improve the targeting of dengue control in Vietnam through vector mapping using GIS technology.

2.3. The Next Steps

All teams working on MVP research topics were requested by Dr Nakagawa to complete their draft proposals after the workshop and submit to the MVP unit for review. He also encouraged them to submit their proposals to various research funders such as TDR small grants programme.
Similarly, Dr Nishikiori encouraged the TB participants to complete their proposals and apply for funding if they want to.

They were informed further that should there be a need for further technical assistance, arrangements can be made with RITM, through the WPRO workshop organizers.
3. WORKSHOP EVALUATION

3.1. Workshop Evaluation Process

The participants were requested to do two sets of evaluation – (1) on lectures presented and (2) on the overall workshop methodology and organization. In addition to the standard evaluation rating scales, there were also open ended questions eliciting opinions on those parts of the workshop which participants can do away with, and those which were not included in the agenda but was perceived as necessary to generate the output required.

3.2. Evaluation of the Lecturers/Lectureettes

The presentations were evaluated based on the following criteria in a scale of 1-5, with 5 being the highest score.

a  Lecture was clear and understandable
b  Lecture was presented in an organized and logical manner
c  Examples are clear and helpful
d  Time allocated for lecture is adequate
e  Lecture materials provided are relevant and helpful
f  Lecturer was knowledgeable about the topic presented
g  Lecturer answered questions satisfactorily

There were 14 lectures provided. On the average, the participants generally ‘agreed’ that the different technical inputs were clear, understandable, were presented in an organized and logical manner and that they were helpful for the output they had to deliver. They further agreed that materials provided were relevant to the topics presented and useful and that the lecturers and mentors generally were knowledgeable about the topics they talked about and responded to the queries raised satisfactorily.

A few participants commented that the time allocated for the following lectures were ‘inadequate’: (1) Study methods and design, (2) Data Management and Analysis, (3) Ethical Considerations, and (4) Funding Opportunities.

3.3. Evaluation of the Workshop Methodology

This section of the report states the value of the activity according to the participants.

Annex 5 shows that majority of the participants identified that the most positive value of the workshop relate to the clarity of the workshop objectives and the workshop output expected of the participants, that the four day duration of the workshop was adequate, and that the consultation meetings with the competent mentors were helpful and effective. Majority of the participants strongly agreed that the mentorship strategy for the workshop were appropriate and effective and that the mentors were competent and helpful.

The workshop experience was expected to provide the participants with some confidence to complete the research proposal they have started during the workshop or applying and transferring the same skills in writing other proposal in the future. Annex 5 also shows that majority of the
participants agreed and strongly agreed that they can write nearly all the parts of the proposal with confidence; a few however, expressed that this may not be the case for the sections on Study Design, Sampling, Data Management and Data Analysis Plan. This is however, understandable since writing these sections of the proposal will require the inputs of a biostatistician.

3.4. Responses to Open Questions

Some 26 comments were asked on what they considered were most valuable and helpful to the workshop. These are summarized as follows:

- 12 of the comments pertain to the significance and appreciation of the technical inputs to be able to complete a draft proposal.
- 6 commented on the valuable assistance of the mentors, the mentoring process, and the help they received relative to the completion of their draft proposals.
- 6 of the comments considered valuable that they were able to complete a proposal and that they will now be better equipped to help junior researchers.
- 1 comment pertain to the appreciation of awareness of the reference management software.
- 1 comment also was on increased awareness of ethical considerations in the conduct of research.

The question on what was least helpful to the accomplishment of the workshop objectives yielded 6 comments which were generally related to the topics included in the curriculum. The topics which were regarded as least helpful are: (a) problem identification (1 comment), (b) contents of the research proposal (2 comments), (c) sampling and sample size (1 comment), (d) data analysis (1 comment); (e) and funding opportunities (1 comment).

Ten participants stated that they will recommend this course to their fellow researchers, should it be conducted in the future.

The participants were also asked to respond to some open questions as a basis for obtaining additional information to improve the course. Nearly all participants commented that all technical inputs were most helpful; 3 participants stated that the lecture on “Research Grant and Funding Opportunities” was not necessary, 1 participant each said that (a) there should be more discussions to differentiate operational, implementation and evaluation research; (b) it will be helpful to see other proposal formats, not only the standard one, for comparison purposes; (c) that sample proposal should have been developed to illustrate how the different parts were put together; and (d) they should have had more time to use the reference management software.

To make workshops of this nature more effective, 16 comments were offered: (a) that more examples on proposal writing should be given and that it would have been better if there was a sample, model proposal that was referred to progressively by all the lecturers, such that after all the lectures, there was this one proposal developed (5 comments), (b) that it would have been useful when the lectures were followed with small group discussions (3 comments), (c) that there should have been a more in-depth discussion of sampling, sample size calculation and data analysis (2 comments), (d) that the workshop duration should have been longer (2 comments), (e) there should be a demonstration on what happens after proposal approval (1 comment) and that (f) the lecture materials should have been provided to the participants earlier to allow for interactive sessions (1 participant).
3.4. Lessons Learned by the RITM Organizers, Lecturers and Mentors

The RITM has a long history of organizing national and regional meetings, conferences and workshops; nevertheless every event has its unique characteristics and provide lessons which contribute to improvements and enhancements of the conduct of similar activities in the future. These lessons take on a distinct meaning and implications since the Institute was selected by TDR/WHO as the TDR Regional Training Center for Good Health Research Practices for the Western Pacific Region in December 1, 2010.

For this specific training workshop, the following were cited as lessons learned from the experience:

1. The mentors are seasoned scientists and researchers of the institute; some have completed their post-graduate degrees. Thus, their working knowledge on protocol writing come from either experience, didactic exposures or both; these may also be skills which they take for granted. Despite this, some of the mentors expressed the need to refresh their own knowledge on concepts in writing the different parts of the proposal so that they can translate their skills and experience into the concepts necessary for mentoring.

2. All of the participants were asked to come to the workshop with their research topics. However, the ensuing discussion of the research questions revealed that the topic was not fully developed. Although it was the function of the workshop to facilitate the crystallization of their plan into a proposal, the mentors had some difficulty trying to guide them through the process, leading eventually to what they really wanted to do. The mentors learned that for them to be effective, they should have a concept paper about the topic the participants will work on before hand, so that they can prepare better and update themselves about the topic. This highlights the need to develop appropriate criteria required of those who apply as participants to workshop of this nature and will necessitate the submission of a one to two pages concept paper.

3. Working in a multi-lingual setting is challenging. Since some of the participants could not communicate well in English, it was quite difficult for mentors to appreciate what they really planned to do or whether they understood the questions, suggestions posed to them. Mentors learned to be doubly patient in their discussions and explanations with their groups; for some, these necessitated not only talking but writing down some of their discussions.

4. Although majority of the participants were computer literate, a few were truly not. Given these situation, mentors learned that they have to be prepared to assist or even perform some of the writing for the participants. This may be difficult because the writing may reflect that of the mentor’s ideas and not those of the participant’s.

5. Some mentors reported that a few participants were not able to submit the deliverables as expected. They believed that since these participants are senior officials in their organizations, they may not be used to this type of writing activity, or that this was a reflection of the inability of the pair to reach a mutually acceptable decision on some issues, considering that they were dissecting the problem from different perspectives. Mentors learned to be diplomatic and tactful and realized that they also mediated to ensure that outputs were made.
6. The mentors perceive that some of the participants will not be able to follow-through the research topics they were working on. Since some of the topics will truly beneficial to the program, there should be some way of ensuring commitment to seeing their research topic at least submitted to a donor agency for funding. On the other hand, the mentors’ exposure to the disease control programs of other countries, broadened and expanded their own perspective – leading to a critical reflection not only of their own work but also renewed interest in the issues and research questions raised by the disease programs they are currently involved in.
ANNEX 1
List of Participants, Temporary Adviser, Consultant, Representatives, Observers and Secretariat

I. PARTICIPANTS

CAMBODIA

Dr Teng Srey
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Ministry of Health, CDC Department
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**LAO PEOPLE'S DEMOCRATIC REPUBLIC**

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Vientiane

Dr Sibounhom Archkhawongs  
Director of Disease Prevention Division  
Department of Hygiene and Prevention  
Ministry of Health  
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Dr Kongkham Sayalath  
Technical Staff, National Tuberculosis Center  
Ministry of Health  
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Dr Sakhome Suthepmany  
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135 Nui Truc, Ba Dinh  
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TEMPORARY ADVISER

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Professor  
Member, South-South Initiative for Infectious Diseases of Poverty  
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United States of America

2. REPRESENTATIVES/OBSERVERS

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|  | Ms Erin Caroll  
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Health information and Evidence for Policy
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Office of the WHO Representative in China  
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Chaoyang District  
Beijing

2. MENTORS

<table>
<thead>
<tr>
<th>Name</th>
<th>Title / Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luz P Acosta, PhD</td>
<td>Head, Immunology Department</td>
</tr>
<tr>
<td>Socorro P Lupisan, M.D., MSc</td>
<td>Assistant Director</td>
</tr>
<tr>
<td>Celia C Carlos, M.D.</td>
<td>Chief, Laboratory Division</td>
</tr>
<tr>
<td>Edelwisa S Mercado, PhD Candidate</td>
<td>Head, Molecular Biology Department</td>
</tr>
<tr>
<td>Rosanna Ditangco, M.D.</td>
<td>Head, HIV/AIDS Research Study Group</td>
</tr>
<tr>
<td>Beatriz P Quiambao, M.D.</td>
<td>Chief, Clinical Research Division</td>
</tr>
<tr>
<td>Christine Joy Dureza, MPH Candidate</td>
<td>Biostatistician</td>
</tr>
<tr>
<td>Mari Rose A De Los Reyes, M.D.</td>
<td>Head, Medical Department</td>
</tr>
<tr>
<td>Fe Esperanza J Espino, M.D., PhD</td>
<td>Head, Parasitology Department</td>
</tr>
<tr>
<td>Charissa Fay Tabora, M.D.</td>
<td></td>
</tr>
<tr>
<td>Mariannette T Inobaya, MPH</td>
<td>Biostatisticist</td>
</tr>
<tr>
<td>Veronica L Tallo, PhD</td>
<td>Head, Department of Epidemiology and Biostatistics</td>
</tr>
<tr>
<td>Mario Jiz, PhD</td>
<td></td>
</tr>
<tr>
<td>Jennifer Luchavez, PhD Candidate</td>
<td></td>
</tr>
<tr>
<td>Alvin G Tan, MPH</td>
<td>Epidemiologist</td>
</tr>
</tbody>
</table>
WORKSHOP FOR RESEARCH DESIGN, METHODOLOGY AND PROPOSAL WRITING  
ON INFECTIOUS DISEASES OF POVERTY  
RITM Training Center  
November 29 – December 3, 2010

AGENDA

<table>
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<td><strong>DAY 1/ Nov 29</strong></td>
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<tr>
<td>8:30</td>
<td>Registration of Participants</td>
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<tr>
<td>9:00</td>
<td>Opening Program</td>
</tr>
<tr>
<td>9:45</td>
<td>Photo shoot and Coffee Break</td>
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<tr>
<td>10:15</td>
<td>Introduction of Participants and Faculty</td>
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<tr>
<td>10:45</td>
<td>Workshop Mechanics</td>
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<tr>
<td>11:00</td>
<td>Where do research topics come from ?</td>
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<tr>
<td>11:30</td>
<td>Priority Topics in Infectious Diseases of Poverty: Tuberculosis</td>
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<tr>
<td>12:00</td>
<td>Priority Topics in Infectious Diseases of Poverty: Malaria, other Vector Borne and Parasitic Diseases</td>
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<td>12:30</td>
<td>LUNCH</td>
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<tr>
<td>1:30</td>
<td>The Research Proposal: Contents</td>
</tr>
<tr>
<td>2:15</td>
<td>Formulating the Research Objectives</td>
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<td>2:45</td>
<td>Coffee Break</td>
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<td>3:00</td>
<td>WRITESHOP 1/CONSULTATION WITH MENTORS</td>
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<td>OUTPUT:</td>
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<td>4:30</td>
<td>Plenary Session (Break-up Groups) : Dr Vickee L Tallo</td>
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<td>Presentation of Writeshop Outputs</td>
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<td>6:00</td>
<td>Close of Day 1 Session</td>
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<td>Day</td>
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<td>Day 2/Nov 30</td>
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<td>8:30</td>
<td>Recapitulation of Day 1 Activities</td>
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<td>PLENARY: Presentation of Revised Topic Titles and Objectives</td>
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<tr>
<td></td>
<td>VERONICA L TALLO, PhD</td>
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<tr>
<td></td>
<td>Head, Department of Epidemiology and Biostatistics, RITM</td>
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<tr>
<td>9:30</td>
<td>Conducting a Literature Review</td>
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<tr>
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<td>LUZ P ACOSTA, PhD</td>
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<td></td>
<td>Head, Immunology Department, RITM</td>
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<td>10:00</td>
<td>COFFEE BREAK</td>
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<tr>
<td>10:15</td>
<td>Introduction to Reference Management Software for Effective Literature Storage and Use</td>
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<td>NOBUYUKI NISHIKIORI, M.D., PhD., DTM&amp;H</td>
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<td></td>
<td>Stop TB and Leprosy Elimination, World Health Organization - WPRO</td>
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<tr>
<td>11:15</td>
<td>Study Methods and Design</td>
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<tr>
<td></td>
<td>ALVIN G TAN, MSc</td>
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<td>Epidemiologist, RITM</td>
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<tr>
<td>11:45</td>
<td>Data Collection Procedures and Tools</td>
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<tr>
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<td>CHRISTINE JOY DUREZA</td>
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<td>12:30</td>
<td>Lunch</td>
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<tr>
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<td>Sampling and Sample Size</td>
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<td>MARIANETTE T INOBAYA, MSc</td>
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<td>2:15</td>
<td>WORKSHOP 1: Conducting a Literature Review</td>
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<td>COFFEE BREAK</td>
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<td>WRITESHOP 2: Output</td>
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<td>(1) Introduction and Rationale</td>
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<td>(2) Study Design: Section to include: Methods, Study Procedures, Study Population, Description of Study Tools</td>
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<td>(3) Reference Section</td>
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<td>5:30</td>
<td>Submission of Writeshop Outputs</td>
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<tr>
<td>8:30</td>
<td>Consultation Meeting with Mentors</td>
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<td>Lunch</td>
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<td>Data Management and Analysis</td>
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<td>MARIANETTE T INOBAYA, MSc</td>
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<td></td>
<td>Biostatistician, RITM</td>
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<tr>
<td>1:30</td>
<td>Ethical Considerations</td>
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<tr>
<td></td>
<td>GEMILIANO DL ALIGUI, M.D., PhD</td>
</tr>
<tr>
<td></td>
<td>Chair, RITM Institutional Review Board</td>
</tr>
</tbody>
</table>
1:00 Consultation with Mentors / Preparation of Proposal Presentations
5:00 Close of Day 4 Session

Day 5/ Dec 3
8:30 Proposal Presentations (Break-out Groups)
12:00 Lunch
1:00 Course Evaluation
1:30 Closing Program

Course Impressions ........................................

Course Impression ...........................................

Presentation of Workshop Outputs..............

Message ......................................................

PHILIP LOVERDE, PhD.
Mentor

VERONICA L TALLO, PhD

CATHARINA VAN WEEZENBEEK, M.D./EVA
CHRISTOPHEL, M.D.
World Health Organization - WPRO

Closing Remarks ..........................................

REMIGIO M OLVEDA, M.D.
Director, RITM

4:00 Close of Workshop
### ANNEX 3
List of Documents in Workshop Binder

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1</td>
<td>List of Participants, Temporary Adviser, Representatives/Observers and Secretariat</td>
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<td>2</td>
<td>Workshop Agenda</td>
</tr>
<tr>
<td>3</td>
<td>Presentations and Reference Materials</td>
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<tr>
<td></td>
<td>3.1. Where do research topics come from?</td>
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<tr>
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<td>3.2. Priority Topics in Infectious Diseases of Poverty: Tuberculosis</td>
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<tr>
<td></td>
<td>3.3. Priority Topics in Infectious Diseases of Poverty: Malaria, other Vectorborne and Parasitic Diseases</td>
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<td>3.4. Operational Research Needs in Malaria, Dengue, and Neglected Tropical Diseases in the Western Pacific Region</td>
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<td>3.5. Contents of a Research Proposal</td>
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<td>3.6. Formulation of Research Objectives</td>
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<td>3.7. Conducting a Literature Review</td>
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<tr>
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<td>3.8. Getting Started with Mendeley</td>
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<td>3.9. Research Methods and Study Design</td>
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<td>3.10. Data Collection Techniques</td>
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<td>3.11. Sampling Designs</td>
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<td>3.12. Sample Estimation</td>
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<td>3.13. Data Management and Analyses</td>
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<td>3.14. Ethical Considerations</td>
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<td>3.15. Components of a Grant Proposal</td>
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<td>3.16. Grant Opportunities</td>
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</table>
ANNEX 4
List of Documents in USB

WHO PROPOSAL WRITING REFERENCES:
1. Declaration of Helsinki Oct 2008
2. Framework for Operations Research
3. Lessons Learned in Malaria Home Project
4. Operational Guide Global Fund Supported Research
5. Operational Research in Tropical Diseases
6. Practical Guide Health Researchers
7. TDR Guidelines for Implementation Research Proposals
8. TDR Guidelines Grant Proposal Writing SEB Research
9. TDR Implementation Research Conceptual and Operational Framework
10. WHO Recommended Format for a Research Protocol
11. Writing Protocol

REFERENCES
1. Malaria Regional Plan for Control and Elimination
2. Dengue Strategic Plan for the Asia Pacific Region
3. Draft NTD Regional Strategic Plan
4. Draft Regional Research Plan of Action Plan
5. WHO Practical Guide for Health Research
6. WHO Health research Methodology
7. Disease Specific Research Needs Revised
8. Operational Guidelines for Ethics Committees that Review Biomedical Research
9. Framework for OR and IR in Health and Disease
10. Guide to Operational Research in Programs Supported by GFAT
11. Research Agenda for Childhood Tuberculosis

ENDNOTE
1. Endnote Getting Started
2. Endnote Installer
3. Endnote PDF

MENDELEY
1. Mendeley Getting Started
2. Mendeley Installer
3. Mendeley Tezching Presentation

JUN NAKAGAWA
1. Overview of the Course
   2. Operational Research Priorities for Malaria, Dengue and Neglected Tropical Diseases
## ANNEX 5

### WORKSHOP EVALUATION

### 1. Evaluation on the Overall Value of the Workshop

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Strongly Agree (%)</th>
<th>Agree (%)</th>
<th>Neither nor Disagree (%)</th>
<th>Disagree (%)</th>
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</thead>
<tbody>
<tr>
<td>1 Mechanics of the Activity</td>
<td></td>
<td></td>
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<tr>
<td>1.1. Objectives of the activity was clear from the start</td>
<td>66.7</td>
<td>33.3</td>
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<tr>
<td>1.2. Objectives of the activity are achievable within the duration of the workshop</td>
<td>39.1</td>
<td>56.5</td>
<td>4.4</td>
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<tr>
<td>1.3. Mechanics of the workshop, i.e. lectures, writeshops, consultations, are appropriate strategies to achieve objectives.</td>
<td>43.5</td>
<td>52.2</td>
<td>4.4</td>
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</tr>
<tr>
<td>1.4. Writeshops were relevant and helpful</td>
<td>45.8</td>
<td>50.0</td>
<td>4.2</td>
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</tr>
<tr>
<td>1.5. Workshop time was adequate.</td>
<td>62.5</td>
<td>33.3</td>
<td>4.2</td>
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<tr>
<td>1.6. Internet access was adequate.</td>
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<td>58.3</td>
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<tr>
<td>1.7. Writeshop time was adequate.</td>
<td>29.2</td>
<td>50.0</td>
<td>16.7</td>
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<tr>
<td>1.8. Consultation sessions with mentor were helpful and effective.</td>
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<tr>
<td>1.9. Mentors are competent and helpful.</td>
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<td>1.10. Time allocated for consultations was adequate</td>
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<td>16.7</td>
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### 2. When I go back home, I feel confident to do the following:

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<tr>
<th>Criteria</th>
<th>Strongly Agree (%)</th>
<th>Agree (%)</th>
<th>Neither nor Disagree (%)</th>
<th>Disagree (%)</th>
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<td>2.1. Problem identification</td>
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<td>2.5. Describe the study design</td>
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<td>2.7. Data collection tools</td>
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<td>2.8. Sampling and sample size</td>
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