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Knowledge Transfer and Exchange Practices in the Context of Lao PDR

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List of abbreviations

CMPE	Center for Malaria, Parasitology, and Entomology
CORHED	Council on Health Research for Development
DARE	Database of Abstracts of Reviews of Effectiveness
GDP	Gross Domestic Product
EU	European Union
FP	Focal Point
GTZ	Deutsche Gesellschaft fÜr Technische Zusammernarbeit
HINARI	Health Inter Network Access to Research Initiative
IMR	Infant Mortality Rate
ICPD	International Conference on Population and Development
IBN	Impregnated bed net
IDRC	International Development Research Center
JICA	Japan International Cooperation AIDS
KTE	Knowledge Transfer and Exchange
Lao PDR	Lao People's Democratic Republic
MMR	Maternal Mortality rate
MCHC	Maternal and Child Health Center
MOH	Ministry of Health
NHS	National Health Survey
NSC	National Statistical Center
NIOPH	National Institute of Public Health
PI	Principal Investigator
RHS	Reproductive Health
SD	Standard Deviation
SPC	State Planning Committee
TFR	Total Fertility Rate
UNICEF	United Nation Children's Funds
UNFPA	United Nation Fund for Population Activities
USOM	United State Operated Military
U5MR	Under five mortality rate
WFP	World Food Program
WHO	World Health Organization

Main messages

- Policy makers should well understand health research as input to policy decision making, thus they would allocated/search for research funds to support health research.
- Policy makers/managers/users of health research should ideally provide enabling research environment (facilities, research funds, access to information technology, and giving awards/incentives), in addition, with the investment in developing of human resources for knowledge transfer and exchange (KTE).
- Policy makers/managers/users of health research should state clearly what kind of information they need for their suitable decision-making.
- Possessing quality leadership, resources, capacity to do health research in order to acquire, assess, adapt, and apply research's results for maintaining/restoring/improving health status are the efforts to proper strengthen behaviours of producers and users of health research.
- Policy makers/managers/users of academic and research institutions should train/upgrade KTE skills among assigned staffs, and dedicating some funds to facilitate KTE activities and process, in addition, with free articles /reports, and synthesis documents should be provided free and upon request.
- Producers of research should promote the culture and practices of KTE activities including system thinking, learning, and open debate should be expanded not only among research/academic institutions, but and also to potential users outside the scholarly community.

- Researchers should always inform their research results in a very short note and in concise form, thus to helping policy makers/decision makers for quick decision making and to avoid confusion.

Executive summary

Malaria and reproductive health are the concern health problems in the country, therefore, these two health topics were chosen for a survey of research use in the health sector under the theme of knowledge transfer and exchange practices in Lao PDR. The survey was conducted by the team of National Institute of Public Health (NIOPH), Ministry of Health Lao P.D.R. with an overall research question what factors explain whether and how the producers and users of research support the use of and/or use health research as inputs to decision making, and with some specific questions as: (1) what factors explain whether and how the producers of research support the use of health research by transferring health research to potential users outside the scholarly community (2) what factors explain whether and how health-care providers support and are supported in their own use of health research by developing the capacity to acquire, assess, adapt, and apply health research and (3) what factors explain whether and how policymakers use health research as inputs to decision-making.

Self-administered questionnaires for both researchers and health care providers as well as in-depth interview guidelines for policy makers were prepared by who's team. the NIOPH's team implemented according to all recommended research procedures. A total of 108 self-administered questionnaire forms were sent by personal drop off and pick up for researchers of malaria and contraceptive topics (54 forms for each) and 100 questionnaire forms (50 forms for each) were returned; a total of 241 health care providers out of 431 health care providers obtained from the list provided by department of personnel and organization, and provincial health department were participated in the study in which 137 for malaria topic and 106 for contraceptive topic; and 14 policy makers (7 for each) were in-depth interview. Data entry template and program analysis

were prepared by who's team and all collected data were entered and analyzed as recommend.

Researcher's survey: the study found that many research's institutions were not able to make easier access for their audiences to obtain research on both health topics when they needed it (0.08-0.18), no searchable data base nor websites, newsletters, and others communication means. Many research's institutions were rarely conducted workshops/ seminars to increase the capacity to use research for their target audiences in particular those outside the scholarly community. Only 20.7% of total work time researchers spent performing KTE activities during a typical 12-month period. There were a very small proportion (0.35) of researchers/research institutions reported, that representatives and/or members of their target audiences established the overall direction of KTE activities, and assessed the progress of research use. the existing of structure and processes to link researchers and their target audiences were the means for KTE activities (0.77), which has access to technical support for translating research into action, and created opportunities to develop joint research initiatives with them (0.51). The barriers of KTE activities were the cost for translating research into action (0.68) and target audiences lacked the expertise for translating research into action (0.60).

Health care providers' survey: both producers (0.35 to 0.59) and users (12.5%) have limited access to information sources, however, both of them should have jointly responsibility in translating research into action (0.77), and the availability of financial and human resources to assist researchers with KTE activities (0.60). Half of respondents indicated correctly the answer to knowledge on malaria prevention question (0.57 ± 0.60 sd), and 49.9% were practically performed. there were half of respondents with correct answer to knowledge on care of women with contraception question (0.50 ± 0.14 sd) but

better practically performed (88.5%). 26.7% of respondents have received research evidence and 47 out of 63 respondents have read and understood research evidence, 42.2% of respondents have cited research evidence to patients as a reference in their professional practice, and 35.9% have made efforts to promote the adoption of research evidence in their field of professional practice. 27.4% of respondents indicated that research evidence has led them to make professional choices and decisions, and 36.0% of them pointed out the utilization of research evidence has led to concrete changes in their professional practice. 24.5% of respondents indicated that they trusted "a systematic review of randomized controlled double-blind trials" as the first grade system of hierarchy of evidence much or more than any other type of evidence. the most important work setting indicated by health care providers were the training (60.5%), higher quality of available research (53.1%), better security (49.6%), better equipment or supplies (44.2%), more access to peers/networks (43.3%), and financial incentives (better pay) (37.9%). most of health care providers are interacting with patient groups (85.4%) and with peers to exchange ideas, experiences and best practices (91.3%), but less than half are interacting with policy makers (43.3%).

Policy makers' survey: despite the recognition of the role of research in policy decision-making, but research input into the policy process is still limited. thus, the research facilities and potentials are neither fully developed nor fully explored, therefore, the country has not been able to take full advantage of existing research infrastructure, it was seen that the relevant research is an embodiment of various types, which have the potential of influencing public policy, and the government should increase its research funding through the annual budgetary allocations. it should be possible for the think tanks to establish a research trust fund, which they can invest in a very reliable manner. Such

prospective of investment can be used as supplement annual budgetary releases from the government. a network of think tanks would operate jointly to influence policy decision-making in pooling resources (human, financial and others).

As malaria is still one of the top diseases caused health problem and reproductive health is an concern problem in Lao PDR, however, research evidence in these fields are relatively small, as efforts of KTE practices are low included facilitating user-pull efforts and exchange efforts. translating research evidence into action is very difficult due to lacking of expertise of both researchers and users in particular those potential users outside the scholarly community. Many efforts are performed by researchers, research's institutions for KTE activities. Access to the information sources both electronic/online or papers sources are limited. Scientific research evidence from high-income countries that contain more randomized controlled trials are limited, so a review could not be done systematically. Thus, research evidence from randomized controlled trials had little influences to the changes of the professional practice of health care providers. Even though, they had received some training related to disease prevention and health promotion, but for knowledge transfer and exchange practices were insufficient, so more training related to KTE activities are highly needed. policy makers are supporting the use of research for decision-making; researchers should put more efforts to perform KTE activities. Some interventions should be strengthened to improve the use of research evidence in decision-making, in addition with some investment in the field of training, research, and KTE practices.

1. BACKGROUND AND CONTEXT

1.1 Overview of the funding, production and dissemination of research in Lao P.D.R.

Lao People's Democratic Republic located in the middle of the South East Asia region one of the land-locked developing countries, with its population of 5.8 million and GDP of 402 USD per capita[1].

Research activities in the health sector were initiated since 1992, starting with the establishment of the Council of Medical Sciences in 1989 according to Prime Minister decree,[2] acting as an advisory body for the Ministry of Health (MOH) on health research strategic plan development, the development of guidelines on health research training for health personnel. Thus, the first five-year national health research master plan[3] was developed (1992-1996) with technical and financial support from the IDRC-Canada, focusing on the building of health research capacity in the Lao PDR. The second five-year health research master plan was developed (1997-2001)[4] aiming at the building and strengthening of health research capacity in the country. Due to the high demand in fostering health research and training activities, therefore, the National Institute of Public Health was established in 1999[5] as the main organization responsible for the fifth national health work plan of the MOH on health research and training management[6]. One of its main functions is stewardship to promote, advocate, coordinate and conduct researches in collaboration with the internal key research institutions at the central level, included National Statistical Center, National Research Institute for Education, National Institute for Cultural Research, Faculty of medical Sciences, National University of Laos, National Agricultural Institute, National Institute for Economic Research, and Research Institute of Sciences, Technology, and Environment.. Currently the third five-year national health

research master plan (2002-2006)[7] is being implemented according to the 5th main work plans of the MOH.

During the last decade, the research activities were mostly funded by international donors (IDRC Canada, WHO, CORHED), and the evaluation of the first[8], second[9] five-year national health research master plans and midterm review[10] of the third five-year national health research master plan revealed that only one third of the proposed projects have been conducted, with additional two third of research projects are aligned according to the needs and donors' interest at each period. However, it is noted that research results have been disseminating every two years internally and internationally, in particular since 1998, research findings were disseminated in rotation either in Vietnam [11] or in Laos [12] by promoting health research to promote the quality of preventive medicine using wide sector approach within the country and in close collaborationship through bilateral cooperation with SR Vietnam, trilateral between Lao-Vietnam-Cambodia[13,14] and multilateral cooperation and support from WHO, JICA, UNICEF, and EU.

The first national health survey[15] in Lao PDR which considered as a product of the promotion of Essential National Health Research mechanism was conducted successfully thanks to a strong collaboration between the above mentioned research institutions at central and provincial level nationwide under the technical and financial support from different donor agencies as UNICEF, WHO, JICA, WFP, COHRED, EU, and GTZ. This event was promoted the research environment and research process nationwide, moreover it was promoting the environment for translating research into action as well.

The health research system analysis findings showed that 47.5% of the research findings have been published at the international journals (1997-2001), 12.0% of policy makers utilized the findings for policy decision-making and 65.0% used by funding agencies[16]. A

total of 107 articles have been produced and published in the scientific journals (1998-2002)[17]. Both researchers and policy makers realized that utilization of knowledge to improve health as well as to improve health equity is extremely and very extremely important. However, access to scientific journals and Internet for researchers, policy makers, and users are still low (15.0-45.0%). At central level, many research results were utilized for decision-making, planning, and policy formulation, but there were still lacking of conscious and awareness at provincial level[16].

1.2 Overview of the situation for the malaria and reproductive health

1.2.1 Malaria

- ***Burden of problem***

Malaria is one of the top ten diseases caused rather high morbidity and mortality rate among the population of all strata in Lao P.D.R., thus malaria control program has been a major challenge over the past years for health system capacity strengthening. Several strategies have been implemented and periodically evaluated. Over the years malaria control activities included residual DDT spraying (1953-1988) [18], used of impregnated bed nets (1991-2005)[19], some achievements demonstrated the decreasing of morbidity and mortality rate from malaria (see figure 1-3 in appendix). It is noted that the elimination of malaria is a major public health challenge in Lao P.D.R. and its strategy is still on going.

- ***Clinical context for action***

Malaria control services are under the direct technical guidance of the Center of Malaria, Parasitology, and Entomology CMPE[20] under the policy and strategy support from the department of preventive medicine of the Ministry of Health at the top. At the provincial level, the malaria station of the provincial health Department is responsible for

organizing malaria control activities. At district level, the district health office operates malaria control in terms of vector control, microscopy, health promotion and education. Some sub districts have health centers that responsible for integrating malaria services and activities within the general health delivery services to provide diagnosis, treatment, etc. The health center is also responsible for training, supervising, supporting village health volunteers, who consequently undertake activities such as impregnated of bed nets, treatment of uncomplicated malaria, referral and health education. Where, there is no health centers, the district is responsible for these activities[21].

- ***Policy context for action***

Due to malaria caused high morbidity and mortality among hundred thousand of people during 1953-54, with 279,266 people from 650,579 were at risk & were prevented by DDT spraying[22], then malaria control initiative was started with administrative personnel of 4 Surveillance units and laboratory with 3 technicians & 2 specialists trained from Pasteur Institute of Saigon, Vietnam. During that period, each province (of 12 provinces) had DDT spraying unit with DDT spraying conducted twice in that year. In 1955, the 8th World Health Assembly officially adopted a malaria eradication program worldwide[23]. In October 1956, Malaria Department was established to fight with malaria under MOH responsibility & get the support from USOM[24]. In 1957-1960, DDT spraying started once a year first in the south and 1959 in the north & in all districts of Vientiane province in 1959, but malaria control program was slowly going and limited due to the difficulty of administrative procedure relating to financial problem[25]. In 1960 DDT spraying stopped due to financial difficulty and USOM stopped its support, but Malaria continued as a main cause of death of Lao & Japanese experts working in Namgum areas and affected people migrated from the high land to the plain areas (more than 600,000 migration), in

particular during the year of 1969. Therefore, DDT spraying and chloroquine distribution supported by WHO restarted again but only in Namgum areas[19]. During 1969-1972, DDT spraying was covered Saythani district & Phonhong district, and during 1973-1975, in Nasaithong district[26]. Malaria epidemic in Vangvieng & Xiengkhouang where the migration from high land moved to plain areas was a critic one[27], unfortunately no report about malaria activities from 1975-1977[19]. In 1977-1979, Malaria control activities were renewed in collaboration with WHO firstly started in Vientiane province, then covered another 9 provinces by DDT spraying and Chloroquine distribution[28]. In 1979, the government was responsible for all malaria control activities in the field with a plan how to step by step extend the program in order to cover all provinces in 1989[25].

In 1981, Institute of Malaria Parasitology and Entomology have been established[29], its role was to coordinate and monitor of all malaria control activities and ***conducting research activities to support the control activities****. The* distribution of Chloroquine & Pirimetamine in Vientiane & Champassack province was done in that year[28]. In the following year, *Entomology survey was conducted* by collecting mosquitoes in target villages *with annual malaria survey* to assess malaria control outcome[26]. In June 1983, Trilateral Meeting between MOH, UNICEF, WHO to develop malaria control program based on early diagnosis and prompt treatment under primary health care program, as well as evaluated program strategy for new planning program before its completion in 1987[19]. It was found that, when DDT spaying stopped, malaria situation get worse and more severe cases happened.[30] In 1986, the 4th Lao Revolutionary Party Congress concluded that Malaria was the first health problem priority to be focused on[31]. In 1988-1999, malaria activities get strongly support from the government, CMPE, MOH, since then IBN implementation have been introduced with support from many international

donors such as *WHO, JICA, WB, ADB, UNICEF, EU, NGO's, etc*[32, 33,34,35,36,37]. In 2000, the National Malaria Policy was officially endorsed which served as a strong imperative argument to be implemented accordingly[21].

1.2.2 Reproductive health

- ***Burden of problem***

According to the world fertility survey conducted in more than 30 countries (1970-1980) revealed that too many pregnancies, teenage pregnancies, too often birth, too late pregnancy are determinants of ill health for mothers and children.[38] Lao women on average used to marry early before the age of 20 and giving too many birth. According to the first NHS and reproductive health survey 2000[39] in Lao PDR revealed that TFR 4.9, (varies from 4.4-10.0), the maternal mortality rate 530 per 100,000 live births, ranging from 170 in urban areas to 580 in the more remote provinces. 13.5% of women reported to have illness during pregnancy such as high blood pressure, swelling, wrong position uterus[31]. The median age at first birth was 20, however, 14.7% of mothers or pregnant women with their first child were teenagers aged 15-19, these means of at greater risk of serious social and health problems. In 1995, a modern birth spacing method were using by married women aged 15-49 was 15.0% and 29.0% in the year 2000[40]. Contraceptive prevalence rate in Lao PDR was relatively low, compared to neighboring countries (Vietnam 56.7%, [41]Thailand 72.0%, and China 83.3%). [42]

- ***Clinical context for action***

Maternal and child health care routine services are available at all levels of health system, (i.e. maternal and child health hospital (MCHC), provincial, and district hospitals) to the communities (i.e. health centers). Such services include, prenatal care and antenatal care, basic childcare, normal delivery assistance, postpartum care, and birth spacing/family

planning services. Health care providers are composed of physicians, nurses and health personnel, who are enable and empower to provide quality of services. In recent year, *a number of research studies have been conducted that examined various aspects of maternal and child health*, most notably: *the rapid evaluation of maternal and child health and birth spacing services*[43], *the Lao Social Indicator Survey*[44], *the Lao fertility and birth spacing survey*[45], *the maternal health needs assessment 1998*[46], *the reproductive health situation analysis 1999*[47], *RHS 2000*[40], and child health and nutrition research: on assessment of research priorities and research institutions in Lao PDR[48]. All of these studies *provide useful information to stimulate high-level awareness of maternal health issues in order to strengthen the delivery program and services capacity to influences policy-making in term of maternal and child health benefits on evidence based*.

- ***Policy context for action***

Since 1988, Birth spacing was accepted because it was realized that health of mothers and children was badly affected if women did not space births, therefore, in 1989 the MCH Institute was established under the guidance of preventive medicine department[49]. Its primary role included formulating maternal and child health policy and coordinating the nationwide provision of maternal and child health services. The Committee on Family Planning under responsibility of Maternal and Child health Institute of MOH established in 1990[50]. The first legislation in Lao PDR enacted in 1991 to ensure equal right concerning political, socio-economic, cultural and family activities[51]. In 1992 the LAO government had established a national committee for mother and child[52]. In May 1993, Birth spacing policy was approved by the Council of Ministers of Lao PDR, and the creation of family law was not only to strengthen the equal right, but in terms of harmonize life in the family.[53]. In 1994, mother and child health hospital was operated,

and in the same year the Safe Motherhood program was declared as an urgent priority by members of states at the International Conference on Population Development (ICPD) [54] and called for "Population Policy". This commitment was reiterated the following year in 1995 at the IV World Conference on women held in Beijing[55] thus, a number of goals and targets have been set and *the National Birth Spacing Policy* was adopted[56] in order to improve maternal and child health and the quality of family life, in one year later (1996) the Sixth Party Congress stated *"the population Policy shall be actively implemented* in order to make the population growth correspond to economic growth"[57]. At the government meeting in 1999, the *National Population and development policy* was adopted, and key elements were established, included: Reproductive health: extend primary health care, *reproductive health and family planning services to all areas nationwide,* aimed to reduce MMR, IMR, U5MR, TFR; Improving the status of women and children, promoting literacy, net school enrolment, enhancing enrolment rate, employment opportunities; *Support data collection & research on population*, especially *the research necessary for more effective formulation of policies*, *planning, and programs implementation*[58]. Thus contributing to socio-economic development in each period, this commitment was pushed in the following year by the conduction of *Reproductive Health Survey 2000* by NSC, SPC and expected to conduct every five year, supported by UNFPA, all of these mentioned activities are to fostering step by step the translation of related national policies into concrete action accordingly.

1.3 Overall research question

- What factors explain whether and how the producers and users of research support the use of and/or use health research as inputs to decision making?

1.4 Specific research questions

- What factors explain whether and how the producers of research support the use of health research by transferring health research to potential users outside the scholarly community?
- What factors explain whether and how health-care providers support and are supported in their own use of health research by developing the capacity to acquire, assess, adapt, and apply health research?
- What factors explain whether and how policymakers use health research as inputs to decision-making?

2 Approach

2.1 Survey of researchers

2.1.1 Pre-field work

The research team under the direct guidance of Principal Investigator was studied carefully all technical guidance from WHO's team in Geneva, before implementing all research assignment's procedures. As Lao PDR used Lao language as working language, therefore, all documents were translated into Lao language by two research's team members and edited by another two research's team members, then final checked and edited by the Principal Investigator for it completeness and accuracy.

Sampling

The list of researchers was developed by the research team always under the technical guidance from the Principal Investigator according to the criteria/definition of researchers (i.e., an individual who spends more than 10% of his/her time conducting research) were included in the sample. Thereafter, research coordinator get their contact information

(address, telephone number, and e-mail address) and a unique ID (identification) number for each researcher was assigned accordingly.

The researcher version of the cover letter and questionnaires was translated into Lao language. The cover letters and questionnaire was then pilot tested with five colleagues that not related to the health topics. Before fieldwork, the translated cover letters and questionnaires was modified by replacing health topic with the contraceptive mix and malaria; adding contact information (title, name, and address), date, and greeting to researcher; then adding their contact information (title, name, address, telephone number, e-mail address) to be send to 2 research coordinators; printing all envelopes addressed to researchers; the questionnaires were printed up to 140% of the sample size as guided by WHO's team; printing all cover letters; printing the questionnaire; printing all enveloped addressed to Emmanuel Guindon at the World Health Organization (180% of the sample size); and printing all self-addressed envelopes in which the questionnaires to be returned; the unique ID numbers was added to each questionnaire; and assembling the package that consisted of one translated, specifically modified *Researcher Version* of the cover letter; one translated, specifically modified *Researcher Version* of the questionnaire; one envelope addressed to Emmanuel Guindon; and one envelope addressed to the research coordinators by personal drop off and pick up;

2.1.2 Field works

Both methods were used for the distribution and collection of questionnaires: 1) distribution by personal drop off and pick up; and 2) distribution by mail. Each researcher was asked for his/her telephone number to notify and confirm the availability of a pick up date two weeks later, and recording the date of drop off.

2.1.3 Post field-works

A total of 54 forms were sent to malaria researchers and 54 forms to contraceptive mix researchers. A total of 50 forms for both health topics were returned. All collected data were cleaned before data entry using the data entry template designed by the WHO's team, then the data files was transferred to WHO's team in Geneva. The analytical plan developed by WHO's team was used and all tables of analysis was checked by the PI's before sending to WHO's team in Geneva.

All administrative procedure for researchers surveying in the context of Lao PDR was going rather well except, it took much more time than expected, instead of two weeks, it took more than one month.

2.2 Survey of health-care providers

2.2.1 Sampling

The list of 431 health care providers obtained from the Department of Human Resources for Health and organization of the Ministry of Health were studied and checked with the list of 281 health care providers obtained from 4 provincial health departments in which the study was conducted for notifying and confirm the availability of individuals at work place. Selection of sample was done by given each individual in the list a unique identification number and numbers were then randomly selected until reaching proposed sample size. 137 health care providers for malaria and 106 for contraceptive mix were selected.

Facility setting: the health care providers for each health topic either medical doctors or nurses who worked at district, provincial, and central hospitals were included. Geographic location: 12 districts and 1 provincial hospital at Vientiane province, 4 districts and 1 provincial hospital at Bolikhamxay province, 4 districts and 1 provincial hospital of Savannakhet province, and 15 districts and 3 central hospitals were included.

The final version of the cover letter and health care providers' questionnaires were translated into Lao language by three research staffs and edited by two research team members before the final edition by the PI for accuracy and completeness. Pilot testing of the cover letters and questionnaire were conducted with five colleagues that not related to the health topics. The process document was done in the same way as researcher's survey (see sub-heading 2.1.1).

2.2.2 Field works

The questionnaires were distributed by personal drop off and pick up. Each researcher was asked for his/her telephone number to notify and confirm the availability of a pick up date two weeks later, and recording date of drop off. It was observed that during data collection time, some of providers were not in place, there were 6 providers (for malaria) and 10 providers (for contraceptive mix) for whom research team's member undertook more than 3 follow-up using personal effort to get the returned completed questionnaire forms, so it took much more time for picking up than expected, instead of two weeks, in particular health care providers who are working at central hospitals for both health topics took almost two months.

2.2.3 Post field-works

A total of 137 forms *health care providers version* for malaria and 106 forms for contraceptive, was send by personal drop off and pick up. 136 forms completed for malaria and 105 forms for CM were received. All collected data were then cleaned before data entry using the data entry template designed by the WHO's team. The analytical plan developed by WHO's team was fully used. All administrative procedure for health

care providers surveying in the context of Lao PDR was going rather well except, it took much time than expected.

2.3 Case study of a landmark policy decision

Based on the interview guide developed by John Lavis dated 27 September 2004, the research team under the guidance of the PI was adopted and translated into Lao version before interview. The interview guideline was translated by two individuals and edited by one research coordinator before reviewing by PI. The final version of interview guide in Lao version was then printed and distributed to thee research members who were assigned to do interview. A list of keys policy decision was created and a Lao PDR timeline event for policy decision on malaria and contraceptive was developed under the guidance of the PI. The study participants were listed according to their roles, responsibility and influence over the issues of CM or malaria. A total of 7 keys policy makers for CM and malaria health topic were listed and interviewed according to the recommended proceeding. All study participants were then asked for their time available to make appointment for interview. Based on the timeline proposed by WHO's team, the interview was due at time, however, some problems encountered were appointment's time, due to the interview was conducted with the busy policy makers.

3 Results

3.1 Researchers' efforts to transfer health research findings

Description of researchers' knowledge transfer and exchange (KTE) activities

- **Producer-push efforts**

There were a very small proportion of researchers (0.18) reporting that they *developed messages for their target audiences such as recommendations, take-home messages, and*

actionable messages related to malaria topic (0.15) and to contraceptive mix (0.23), as well as *developed brief summaries of articles and syntheses* (0.10)(Table 1).

The main target audiences for malaria topic were *general public and civil society groups (0.40), managers at donor agencies and international organizations (0.40)*, and public policy-makers/ clinicians (0.30), but for contraceptive mix (CM) were *clinicians (0.44), patients and their families (0.38), and managers in health care institutions* (0.38) (Table2). *Obtaining and/or updating contact information* for their target audiences was the main KTE activity that more frequent and always performed by the research institutions than other activities (0.50 for malaria and 0.29 for CM), followed by *obtaining and/or reviewing information such as their audiences' needs/goals (0.45* for malaria *and 0.17* for CM). In addition, proportion of research institutions invested *by employing dedicated staff* in KTE activities related to malaria topic was 0.64, *by dedicating part of budget* was 0.61, but *by creating explicit incentives for staff to engage KTE activities* only 0.10 (Table 3 & 4).

Main KTE method to share KTE approaches related to malaria topic that frequently performed by the research institution or researchers was *participation in KTE skill building such as conferences or courses about KTE* (0.55), followed by sharing experiences with people performing KTE roles in other research institutions than other activities (0.50), but a small proportion of researchers (0.29) related to CM reporting, that their organizations participate in *KTE skill building* and reviewing the research literature about effective approaches to KTE (Table 5).

There were a very small proportion of researchers reporting about mechanism of research knowledge transferring (0.02 up to 0.25). Main mechanism to transfer research

knowledge reported was *providing free upon request articles, reports, syntheses and/or formal systematic reviews (but not through a website)* (Table 6).

For both health topics, representative and/or members of target audiences were more *involved in research process only in the stage of executing research 0.50 related to malaria and 0.25 to CM* (Table 7). Proportion of researchers reporting that their organization interacted with representatives and/or members of their target audiences about research on malaria mostly *through events organized by research institutions* (0.40), through conferences/ *workshops* and *government-sponsored meeting* (0.30) than other activities outside of the research process (Table 8).

Proportion of researchers related to malaria topic more frequent (0.45) assess the perceived usefulness of research products such as reports, brief summaries, and messages and KTE activities than other types of KTE evaluation included *any changes in their target audiences awareness, knowledge, attitudes, self-reported or actual behaviors*. There were a very small proportion of researchers on contraceptive mix (0.16) *assessed their audiences' knowledge* (Table 9).

- **Facilitating user-pull efforts**

Passive strategies: Many research's institutions were not able to make easier access for their audiences to obtain research on both health topics when they needed it neither through searchable data base (0.11) nor websites/newsletters and others communication means (0.05)(Table 10).

Active strategies: Developing strategy of target audiences to acquire research through searchable databases (0.05) and apply research (0.02) was very low. It was better for research's institutions developing capacity of their target audience to assess quality and applicability of research (0.15), however research institution related to malaria topic

developed capacity of their target audiences to adapt research to increase its perceived relevance by linking it to local issues 0.35 for malaria topic and only 0.05 for CM (Table11).

- **Exchange efforts**

There were a very small proportion of researchers/research institutions reporting that they established and/or maintained long term partnership (0.05), a need assessment (0.15), and establishing *the overall direction of KTE activities* (0.25) *(only malaria topic* but none for contraceptive topic), however researchers did involve representatives of their target audiences in assessing the progress of research (0.30 for malaria and 0.05 for contraceptive) and assessing the progress of KTE activities (Table 12).

Overall, only 1.20 times for all researchers, 0.63 times for malaria researchers and 1.88 for contraceptive mix researchers *provided print/copies of articles published in scientific journals to their target audiences during the last 12 month period* as well as only 1.25 times *interacting through government-sponsored meetings,* 1.14 times *events organized by research institutions*, and *informal conversations with their target audiences* (Table 13). Only 12.3% of researchers' total work time *spent performing KTE activities* related to malaria topic and 31.2% of researchers' total work time spent for contraceptive mix topic (Table 14).

Potential correlates of KTE activities

- **System**

State of research knowledge

Proportion of researchers on the malaria topic reporting that they agree and strongly agree with the statement " *one or more syntheses were available for use was 0.61, but not in language spoken by the general public and society groups (0.65)"* and *not in no-*

technical language used by the general public and society groups related to CM topic (0.50) (Table 15).

Barriers / facilitators of knowledge transfer and exchange activities

There were number of barriers to and facilitators of KTE reported by researchers when they were involved in research and in KTE activities related to malaria and CM. In the opinion of researchers related to both health topics concerning barriers to KTE, was *the cost for translating research into action was very low* (0.68) (0.80 for Malaria and 0.55 for CM) and *target audiences lacked the expertise for translating research into action (0.60, 0.65 malaria and 0.55 CM).* Facilitators of KTE reported by researchers were *the existing of structure and processes (0.77) to link researchers and their target audiences, which has access to technical support for translating research into action (0.52), and created opportunities to develop joint research initiatives with them (0.51) (Table 16).*

Access to information

More than half of researchers reporting that they had access to the information sources when they were involved in research on malaria and in KTE activities related to malaria such as had access to at least five scientific journals indexed in the Health Inter Network Access to Research Initiative (HINARI) with full text or full text electronic and to at least five scientific journals published locally, nationally, or regionally (65.0%), in other international references databases (e.g. Medline, Pubmed) (60.0%), and 50.0% had access to the internet/website at least once a month to conduct download searches. A proportion of researchers related to CM topics reporting that they had access to different types information sources mentioned above were lower (from 0.35 up to 0.52) (Table 17).

- **Organization which support for KTE activities**

Proportion of researchers reporting that the translation of research on malaria into action was *helped by the mix of researchers and their target audiences within their organization (0.80) and their organization also assumed responsibility for undertaking KTE activities on researchers' behalf* (0.75), as well as the *availability of financial and human resources to assist researchers with KTE activities* (0.60). Proportion of researchers related to CM topic reported that within their organization, the translation of research on CM into action was helped by requirements to publish findings and by the mix of researchers and their target audiences was up to 0.64, followed by *availability of financial and human resources to assist researchers with KTE activities (0.62)* and *assumed responsibility for undertaking KTE activities on researchers' behalf (0.51)* (Table 18).

- **System and organization which support for KTE activities and changes over time in support for KTE activities**

More than half of researchers reported that *health research environment in Lao PDR was supportive of individuals who conduct research on both health topics and became more supportive over the time in particular research related to CM (0.81),* however, proportion was *lower for those undertook to KTE activities (0.75).*

In contrast, at institutional level, *health research environment was supportive and became more supportive (0.68) over the time in particular for those undertook KTE activities (0.82) (Table 19).*

- **Individuals**

Research

At the time the researchers were conducted research on malaria and CM, their *research coincided with both country's priorities (0.94 and 0.87 respectively) and the needs and*

expectations of target audi

[ACQUIRE]

2) Please indicate whether you had access to the following *electronic/online* sources of information over the past 12 months.

Unaware of information source 1	**Aware of but not accessible 2**	**Accessible but never used/read 3**	**Used/read 3-4 times per year or less often 4**	**Used/read about once a month 5**	**Used/read weekly or more often 6**

a.	Reproductive Health Library [FOR CONTRACEPTION ONLY]	1	2	3	4	5	6
b.	Medical textbooks (e.g., Users' Guides to the Medical Literature, Scientific American Medicine)	1	2	3	4	5	6
c.	Clinical practice guidelines, clinical protocols, and/or clinical decision support tools	1	2	3	4	5	6
d.	Database of Abstracts of Reviews of Effectiveness (DARE)	1	2	3	4	5	6
e.	Cochrane Library (which includes both Cochrane Reviews and reviews covered in DARE)	1	2	3	4	5	6
f.	HINARI - Health Internetwork Access to Research Initiative (an open access initiative)	1	2	3	4	5	6
g.	Other open access initiatives (e.g., FreeMedicalJournals.com, African Journal Online)	1	2	3	4	5	6
h.	International bibliographic databases (e.g., MedLine, PubMed)	1	2	3	4	5	6
i.	Regional bibliographic databases (e.g., LILACS, AIM, IMSEAR, IMEMR, etc.)	1	2	3	4	5	6
j.	Scientific journals from high-income countries (e.g., New England Journal of Medicine Online, The Lancet Online, BMJ Online)	1	2	3	4	5	6
k.	Scientific journals from your region (INSERT REGION NAME) (e.g., INSERT TWO REGIONAL EXAMPLES)	1	2	3	4	5	6
l.	Scientific journals from your country (e.g., INSERT TWO COUNTRY EXAMPLES)	1	2	3	4	5	6
m.	Articles, reports, and reviews from public or not-for-profit health organizations such as the Ministry of Health, professional associations, non-governmental organizations and international organizations (e.g., WHO)	1	2	3	4	5	6
n.	Articles, reports, and reviews from for-profit health organizations (e.g., pharmaceutical companies, medical device manufacturers)	1	2	3	4	5	6
o.	E-mail summaries of articles, reports, and reviews from public or not-for-profit health organizations such as the Ministry of Health, professional associations, non-governmental organizations and international organizations (e.g., WHO)	1	2	3	4	5	6
p.	Other online/electronic resources (please specify): _____	1	2	3	4	5	6
					Use		

[APPLY]

3) Please indicate the ways in which research evidence from the following *electronic/online* sources of information influenced your clinical practice over the past 12 months. Please answer *only* for those sources of research information that you used over the past 12 months (i.e. responses 4, 5, or 6 in the previous question). (Please circle *all* that apply)

		Changed approach to preventing a clinical condition **1**	**Changed approach to diagnosing a clinical condition** **2**	**Changed approach to treating a clinical condition** **3**	**Changed/developed a local clinical practice guideline, clinical protocol or clinical decision support tool** **4**	**Changed the type of medication, medical devices and other technologies you stock in your facility** **5**	**Not applicable** **na**					
a.	Reproductive Health Library [FOR CONTRACEPTION ONLY]						1	2	3	4	5	na
b.	Medical textbooks (e.g., Users' Guides to the Medical Literature, Scientific American Medicine)						1	2	3	4	5	na
c.	Clinical practice guidelines, clinical protocols, and/or clinical decision support tools						1	2	3	4	5	na
d.	Database of Abstracts of Reviews of Effectiveness (DARE)						1	2	3	4	5	na
e.	Cochrane Library (which includes both Cochrane Reviews and reviews covered in DARE)						1	2	3	4	5	na
f.	HINARI - Health Internetwork Access to Research Initiative (an open access initiative)						1	2	3	4	5	na
g.	Other open access initiatives (e.g., FreeMedicalJournals.com, African Journal Online)						1	2	3	4	5	na
h.	International bibliographic databases (e.g., MedLine, PubMed)						1	2	3	4	5	na
i.	Regional bibliographic databases (e.g., LILACS, AIM, IMSEAR, IMEMR, etc.)						1	2	3	4	5	na
j.	Scientific journals from high-income countries (e.g., New England Journal of Medicine Online, The Lancet Online, BMJ Online)						1	2	3	4	5	na
k.	Scientific journals from your region (INSERT REGION NAME) (e.g., INSERT TWO REGIONAL EXAMPLES)						1	2	3	4	5	na
l.	Scientific journals from your country (e.g., INSERT TWO COUNTRY EXAMPLES)						1	2	3	4	5	na
m.	Articles, reports, and reviews from public or not-for-profit health organizations such as the Ministry of Health, professional associations, non-governmental organizations and international organizations (e.g., WHO)						1	2	3	4	5	na
n.	Articles, reports, and reviews from for-profit health organizations (e.g., pharmaceutical companies, medical device manufacturers)						1	2	3	4	5	na
o.	E-mail summaries of articles, reports, and reviews from public or not-for-profit health organizations such as the Ministry of Health, professional associations, non-governmental organizations and international organizations (e.g., WHO)						1	2	3	4	5	na
p.	Other online/electronic resources (please specify): _____						1	2	3	4	5	na

[ACQUIRE]

4) Please indicate whether you had access to the following *paper* sources of information over the past 12 months.

Aware of but not accessible 2	**Accessible but never used/read 3**	**Used/read 3-4 times per year or less often 4**	**Used/read about once a month 5**	**or more often 6**					
a.	American Medicine)			1	2	3	4	5	6
b.	support tools			1		3	4	5	6
c.	of Medicine, The Lancet, BMJ)			1	2	3	4	5	6
d.	Scientific journals from your region (INSERT REGION NAME) (e.g., INSERT TWO REGIONAL EXAMPLES)				2	3	4		6
e.	EXAMPLES)			1	2	3	4	5	6
f.	such as the Ministry of Health, professional associations, non-governmental organizations and international organizations (e.g., WHO)			1	2	3	4	5	6
g.	pharmaceutical companies, medical device manufacturers)			1	2		4	5	6
h.	profit health organizations such as the Ministry of Health, professional associations, non-governmental organizations and international organizations (e.g., WHO)			1	2	3	4	5	6
i.	_____			1	2	3	4	5	6
							Use		

[APPLY]

5) Please indicate the ways in which research evidence from the following *paper* sources of information influenced your clinical practice over the past 12 months. Please answer *only* for those sources of research information that you used over the past 12 months (i.e. responses 4, 5, or 6 in the previous question). (Please circle *all* that apply)

Changed approach to preventing a clinical condition **1**	**Changed approach to diagnosing a clinical condition** **2**	**Changed approach to treating a clinical condition** **3**	**Changed/developed a local clinical practice guideline, clinical protocol or clinical decision support tool** **4**	**Changed the type of medication, medical devices and other technologies you stock in your facility** **5**	**Not applicable** **na**

a.	American Medicine)	1	2	3	4	5	na
b.	tools	1	2		4	5	na
c.	Medicine, The Lancet, BMJ)	1	2	3	4	5	na
d.	INSERT TWO REGIONAL EXAMPLES)	1	2		4	5	na
e.	EXAMPLES)	1	2	3	4	5	na
f.	such as the Ministry of Health, professional associations, non-governmental organizations and international organizations (e.g., WHO)	1	2	3	4	5	na
g.	pharmaceutical companies, medical device manufacturers)	1	2	3	4	5	na
h.	health organizations such as the Ministry of Health, professional associations, non-governmental organizations and international organizations (e.g., WHO)	1	2		4	5	na
i.	_____	1	2	3	4		na

[ACQUIRE, ASSESS, ADAPT, APPLY]

6) Please indicate whether you have received any training in any of the following domains since completing your last degree (e.g., MD, RN, PhD)? If yes, please indicate the most recent year in which you have received training. Please also indicate whether you feel you have any unmet training needs in any of the domains.

	Domains	**Received training**				**Unmet training needs**		
		Yes If so, when	**No**	**Not sure**		**Yes**	**No**	**Not sure**
a.	General computer skills	❑ year: ____	❑	❑		❑	❑	❑
b.	Searching the internet	❑ year: ____	❑	❑		❑	❑	❑
c.	Acquiring systematic reviews through the Cochrane Library	❑ year: ____	❑	❑		❑	❑	❑
d.	Acquiring copies of full-text journal articles from open access initiatives	❑ year: ____	❑	❑		❑	❑	❑
e.	Acquiring titles and abstracts of articles from bibliographic databases	❑ year: ____	❑	❑		❑	❑	❑
f.	Critically appraising clinical practice guidelines, clinical protocols, and/or clinical decision support tools	❑ year: ____	❑	❑		❑	❑	❑
g.	Critically appraising systematic reviews	❑ year: ____	❑	❑		❑	❑	❑
h.	Critically appraising individuals studies of diagnostic tools and/or approaches	❑ year: ____	❑	❑		❑	❑	❑
i.	Critically appraising individual studies of the effectiveness of an intervention (e.g., randomized controlled trials)	❑ year: ____	❑	❑		❑	❑	❑
j.	Critically appraising economic evaluations	❑ year: ____	❑	❑		❑	❑	❑
k.	Adapting research evidence to local settings (e.g., incorporating it into a local clinical practice guideline)	❑ year: ____	❑	❑		❑	❑	❑
l.	Integrated Management of Childhood Illness (IMCI) [FOR MALARIA ONLY]	❑ year: ____	❑	❑		❑	❑	❑
m.	Prevention of Malaria? [FOR MALARIA ONLY]	❑ year: ____	❑	❑		❑	❑	❑
n.	Techniques of treatment of nets and/or indoor spraying [FOR MALARIA ONLY]	❑ year: ____	❑	❑		❑	❑	❑
o.	Reproductive health and counseling? [FOR CONTRACEPTION ONLY]	❑ year: ____	❑	❑		❑	❑	❑

[ASSESS]

7) Please indicate how much trust you have in each of the following sources of information to make clinical decisions about prevention or treatment options.

Do not trust at all	Distrust somewhat	Neither trust 3	Trust somewhat 4	Trust completely

a.		1	2	3		4	5	.DK
b.	trials	1	2	3		4	5	
c.		1	2	3		4	5	
d.		1	2	3		4	5	
e.		1	2	3		4	5	
f.		1	2	3		4	5	
g.		1	2	3		4	5	
h.	Case report		2	3		4	5	

[APPLY]

8) Please indicate the extent to which you have used research evidence about [INSERT HEALTH TOPIC] over the past 12 months.

Never 1	Rarely 2	Sometimes 3	Often 4	Very often 5	Not applicable na

a.	TOPIC].	1	2	3	4	5	na
b.	received.	1	2	3	4	5	
c.	reference in your professional practice.	1	2	3	4	5	
d.	your field of professional practice.	1	2	3	4	5	na
e.	decisions that you would not have made otherwise.	1	2	3	4	5	na
f.	professional practice.	1	2	3	4	5	na

The following section seeks to collect information on your current practices and knowledge concerning [INSERT HEALTH TOPIC]

[PRACTICES]

9) Please indicate how often did you do for each choice of action for the following practices.

[FOR CONTRACEPTION ONLY]

Never 1	**Rarely 2**	**3**	**Often 4**	**Very often 5**	**Not applicable na**

a.	what proportion of the time did you perform a pelvic/genital examination	1	2	3	4	5	NA
b.	contraceptives (COCs), what proportion of the time did you perform STI/HIV screening (laboratory tests)	1	2	3	4	5	
c.	what proportion of the time did you recommend a follow-up visit after the first menses or 3-6 weeks following insertion	1	2	3	4		NA
d.	contraceptives (COCs), what proportion of the time did you recommend an annual follow-up visit	1	2	3	4	5	NA
e.	pelvic inflammatory disease (PID), what proportion of the time did you recommend women *not* to use intrauterine device (IUDs)	1	2		4	5	NA

[FOR MALARIA ONLY]

Never 1	**Rarely**	**Sometimes 3**	**Often 4**	**Very often 5**	**Not applicable na**

a.	proportion of the time did you enquire about their and their caretakers' home-use of insecticide-treated nets (ITNs)	1	2	3		5	NA
b.	proportion of the time did you recommend caretakers to use insecticide-treated nets (ITNs) for their young children	1	2	3	4	5	NA
c.	proportion of the time did you inform caretakers who used insecticide - treated nets (ITNs) of the need to regularly re-treat their ITNs	1		3	4	5	NA
d.	women, what proportion of the time did you (or someone on your behalf) provide caretakers and pregnant women with an insecticide-treated net (ITN) for home-use	1	2	3	4	5	NA
e.	proportion of the time did you inform caretakers about the links between the use insecticide-treated nets (ITNs) and human cancers	1	2	3	4	5	NA

[KNOWLEDGE]

10) [FOR CONTRACEPTION ONLY] Although some question may seem simple, please indicate, in your opinion, if the following statements are True or False.

		True	False
a.	A woman can have a copper-bearing intrauterine device (IUD) inserted any time within the first 12 days after the start of menstrual bleeding, at her convenience, not just during menstruation. No additional contraceptive protection is needed.		False
b.	Spotting or light bleeding between menstrual periods is common during the first 3–6 months of copper-bearing intrauterine device (IUD) use. It is not harmful and usually decreases over time.	True	False
c.	Copper-bearing IUD should be removed if the intrauterine device (IUD) user is diagnosed with pelvic inflammatory disease (PID).	True	False
d.	A follow-up visit is recommended after the first menses or 3–6 weeks following copper-bearing intrauterine device (IUD) insertion.	True	False
e.	Intrauterine devices (IUDs) may act as abortifacient (i.e., may induce miscarriage or abortion).	True	False

[FOR MALARIA ONLY] Although some question may seem simple, please indicate, in your opinion, if the following statements are True or False.

		True	False
a.	prematurely	True	False
b.	sleepers without nets in the same houses	True	False
c.	The use of untreated nets can divert extra biting to sleepers without nets in the same houses		False
d.	effective	True	False
e.	episodes in communities with stable malaria has *not* been demonstrated	True	False

[GENERAL CLIMATE (PREDICTOR)]

11) Please indicate how important the following issues are for you to improve your work?

Unimportant 1	Somewhat important 2	Moderately important 3	Important 4	Very Important 5

a.		1	2		4	5
b.		1	2	3		5
c.		1	2	3	4	5
d.		1	2	3	4	5
e.		1	2	3	4	5
f.		1	2	3	4	5
g.		1	2	3	4	5
h.	Quality of available research		2	3	4	5
i.		1		3	4	5
j.		1	2	3	4	5
k.		1	2	3	4	5

[INDIVIDUAL CHARACTERISTICS (PREDICTOR)]

12) Please indicate whether you were involved in any the following activities (either formally or informally) to improve your clinical practice and/or the quality of your working life over the past 12 months?

		Yes	No	Not sure
a.	Working with researchers or researchers' groups	❑	❑	❑
b.	Working with policy-makers	❑	❑	❑
c.	Working with patient groups	❑	❑	❑
d.	Working with representatives of non-governmental organizations (NGOs)	❑	❑	❑
e.	Working with representatives of for-profit organizations (e.g., pharmaceutical companies)	❑	❑	❑
f.	Working with peers to exchange ideas, experiences and best practices	❑	❑	❑

[INDIVIDUAL CHARACTERISTICS (PREDICTOR)]

13) Please indicate to what extent are scientific journals from the following places likely to influence your clinical practice.

	Very unlikely 1	2	Neutral 3	Likely 4	Very likely				
a.					1	2	3	4	5
b.					1	2	3	4	5
c.					1	2	3	4	5

[INDIVIDUAL CHARACTERISTICS (PREDICTOR)

14) Please indicate to what extent is research performed in the following places likely to influence your clinical practice.

	Very unlikely 1	Unlikely 2	Neutral 3	Likely 4	Very likely 5				
a.					1	2	3	4	5
b.					1	2	3	4	5
c.					1	2	3	4	5

[INDIVIDUAL CHARACTERISTICS (PREDICTOR)

15) Please indicate how you rate the quality of the research performed in the following places.

	Extremely poor 1	Below average 2	Average 3	Above average 4	5				
a.					1	2	3	4	5
b.					1	2	3	4	5
c.					1	2	3	4	5

[INDIVIDUAL CHARACTERISTICS (PREDICTOR)

16) How do you rate the applicability of the research performed in the following places to your local settings?

Extremely poor 1	**Below average 2**	**Average 3**	**Above average 4**	**Excellent 5**				
a.				1	2		4	5
b.				1	2	3		5
c.				1	2		4	5

Finally, we would like to ask you a few questions about your practice and yourself. When answering questions 26-29, please circle *all* that apply if you work in more than one facility.

17) What is your year of birth? _____

18) What is your gender? ❑ Male ❑ Female

19) Please indicate first facility where you work is:

a.	Primary care physician/General practitioner	❑
b.	Specialist physician	❑
c.	Nurse	❑
d.	Health worker	❑
e.	Other (please specify):_____	❑

20) Estimate the percentage of your time that you spend doing each of the following:

		%
a.	Clinical practice	
b.		
c.		
d.		
e.		
		Total = 100

21) Please indicate if you have completed the following degrees. If so, when?

		Yes If so, when	Specialty, if any	No
a.	Medical degree (MD, MBBCh)	❑ year: _____		❑
b.	Nursing degree (RN)	❑ year: _____		❑
c.	Master's degree (e.g., MPH, MSc)	❑ year: _____		❑
d.	Doctorate degree (e.g., PhD, DPhil, DSc, ScD)	❑ year: _____		❑

22) Please indicate how well you read English?
Please note the following definitions: Very well means you can read/write policy reports or scientific articles, give lectures or presentations (i.e., as good or almost as good as mother tongue); Well means you can read newspaper articles/contribute to writing scientific papers/contribute to discussions (i.e., advanced); A little means you can read signs, write short notes, ask for directions, or not at all.

a.	Very Well/almost as good as mother tongue	❑
b.	Well/advanced	❑
c.	A little/not at all	❑

23)

[FOR CONTRACEPTION ONLY]
Approximately how many women and men have you counseled about family planning over the past 12 months?
_____ (number of cases encountered)

[FOR MALARIA ONLY]
Approximately how many children with malaria-related fevers have you seen over the past 12 months?
_____ (number of cases encountered)

Approximately how many pregnant women have you seen over the past 12 months?
_____ (number of cases encountered)

24) Are you aware of any recommendations or guidelines concerning [INSERT HEALTH TOPIC]? If yes, what is the source?
❑ Yes Source: _____
_____
❑ No

25) Would you characterize the operating authority of your facility (ies) as government, non-governmental organization or for-profit?
Government ❑ Non-governmental organization ❑ For-profit ❑

26) Would you characterize the service area of your facility (ies) as rural, urban or mixed?
Rural ❑ Urban ❑ Mixed ❑

27) How would you define the organization of your practice(s)? Please tick all if you work more than one place

a.	Solo/individual practice	❑
b.	Group practice	❑
c.	Hospital	❑
d.	Community health centre	❑
e.	Other (please specify): _____	❑

28) Does your facility (ies) have the following items available today?

		Yes	No
a	Insecticide-Treated Mosquito Nets (ITNs) [FOR MALARIA ONLY]	❑	❑
b	Intrauterine devices (IUDs) [FOR CONTRACEPTION ONLY]	❑	❑

29) Please summarize in point form what you think is the most salient findings from the body of all available research on [INSERT HEALTH TOPIC].

_____
_____
_____
_____

Source (if available): _____

30) Would you be willing to let us contact you again if other questions emerge from this research?
❑ Yes ❑ No

Thank you for completing the questionnaire.

Please return the completed questionnaire in the large envelope provided.

As a small token of our appreciation, we are pleased to provide you with [...]. To receive these publications, simply complete the attached request form, place it in the small envelope addressed to Emmanuel Guindon of the World Health Organization, and seal the small envelope. Please insert this sealed envelope along with your completed questionnaire in the large return envelope addressed to the local investigator leading this study and seal the large envelope. Please be assured that your request form will be kept separate from your completed questionnaire.

ID #: _____

(Your responses will be kept confidential and data will not be reported in ways that could potentially identify you or your facility.)

Additional Thoughts (Optional)

Do you have any comments regarding any of the questions?

(If the space provided is insufficient to accommodate all your ideas, please feel free to attach additional pages.)

_____

_____

7.3 Policy-maker's guideline for interview

McMaster University/World Health Organization Interview Guide on Knowledge Transfer and Exchange in the Health Sector
Version - 27 September 2004

Interview Guide for [Malaria/contraceptive] in [Lao PDR]

Introduction

As you know, the purpose of today's interview is to obtain your insights and perspectives on the [policy decision] and the events leading up to it. The questions I'll be asking you fall into three broad categories: 1) questions regarding when and how the government become aware of the [policy issue]; 2) questions regarding when and how the policy issue came to be seen as something the government needed to take action on; and 3) questions about when and how the final policy was selected. If events moved very quickly, the first and second categories may be hard to distinguish in which case we can discuss them as one category. We have developed a short timeline of key events related to the [policy decision]. Please feel free to review this now offer your reactions, including any inaccuracies you see in the timeline. Do you have any questions or concerns before we begin?

A Government Agenda

A1 When did the policy issue first come to the attention of the government?

A2a. Who brought the issue to the attention of the government?

- ❑ Societal interest groups (civil society groups, patient groups, professional associations)
- ❑ Elected officials
- ❑ Civil servants
- ❑ Researchers
- ❑ International organizations or donor agencies
- ❑ Other

A2b. How [i.e., in what form] was the issue brought forward?

- ❑ Interest group submission
- ❑ Departmental memorandum
- ❑ Media attention
- ❑ Other

A2c. How did (individual(s) or group(s)) characterize the issue? And what solutions (if any) were proposed at that time?

Characterization

- ❑ Crisis (corrective action is long overdue and circumstances exist)
- ❑ Severity (devastating consequences)
- ❑ Incidence (frequency)
- ❑ Causality
- ❑ Novelty (novel, unprecedented, trailblazing)
- ❑ Proximity (hits close to home or directly impinges on a person's interest)

Solutions

- ❑ Nature of the solutions proposed
- ❑ Magnitude of change proposed
- ❑ Type/mix of instruments proposed
- ❑ Source of information (commission, international meeting)

A3a. At that time, were any competing perspectives regarding the issue? And, if so, by whom?

- ❑ Societal interest groups (civil society groups, patient groups, professional associations)
- ❑ Elected officials
- ❑ Civil servants
- ❑ Researchers
- ❑ International organizations or donor agencies
- ❑ Other

A3b. How did (individual(s) or group(s)) characterize the nature of the policy issue and what solutions were proposed?

Characterization

- ❑ Crisis
- ❑ Severity
- ❑ Incidence
- ❑ Causality
- ❑ Novelty
- ❑ Proximity

Solutions

- ❑ Nature of the solutions proposed
- ❑ Magnitude of change proposed
- ❑ Type/mix of instruments proposed
- ❑ Source of information

A3c. Would you say that the characterization of the issue differed significantly from the first group?

A4. Why do you think that (individual(s) or group(s)) brought forward the issue at the moment they did?

- ❑ Policy legacies (e.g., past policy was due to expire)
- ❑ Triggering event (e.g., release of a research report or international guideline)

- ❑ Electoral cycle (e.g., pending election)
- ❑ Interest group negotiations

The next series of questions relate of the government's decision agenda, that is, how the issue came to be seen as something the government needed to take action on.

B. Decision Agenda

B1. When did the issue come to seen by the government as something it needed to make a decision or choice about?

B2. Who brought forward the issue as something that the government needed to make a decision about?

- ❑ Societal interest groups (civil society groups, patient groups, professional associations)
- ❑ Elected officials
- ❑ Civil servants
- ❑ Researchers
- ❑ International organizations or donor agencies
- ❑ Other

B3. How did government characterize the issue and what solutions did they consider?

Characterization

- ❑ Crisis (corrective action is long overdue and circumstances exist)
- ❑ Severity (devastating consequences)
- ❑ Incidence (frequency)
- ❑ Causality
- ❑ Novelty (novel, unprecedented, trailblazing)
- ❑ Proximity (hits close to home or directly impinges on a person's interest)

Solutions

- ❑ Nature of the solutions proposed
- ❑ Magnitude of change proposed
- ❑ Type/mix of instruments proposed
- ❑ Source of information (commission, international meeting)

B4. Why did government decide that the issue was important enough to necessitate to a decision?

- ❑ Policy legacies (e.g., past policy was due to expire)
- ❑ Triggering event (e.g., release of a research report or international guideline)
- ❑ Electoral cycle (e.g., pending election)
- ❑ Interest group negotiations

The final portion of this interview addresses how the decision unfolded.

C. Policy Choice

C1. What was government seeking to achieve with or through the policy decision?

- ❑ Solution to the issue as defined
- ❑ Interim solution to allow for more time to investigate the issue
- ❑ Fundamental versus incremental change

C2. When was a final decision made?

C3. Who was involved in making the final decision?

C4a. Why did government choose this policy option as opposed to others?

- ❑ Government structures (e.g., national versus local government responsibilities, department or legislative committee mandates)
- ❑ Policy legacies (e.g., international agreements, administrative capacities, and past experience with approach)
- ❑ Interest group power/pressure (e.g., societal interest groups, patient groups, professional associations, elected officials, civil servants, researches, international organizations and donor agencies)
- ❑ Research (what "is")
- ❑ Values (what "ought" to be)
- ❑ "External" events (e.g., release of major reports, international pressure)
- ❑ Other

C4b. To what extent did past policies constrain or facilitate the options the government could consider in addressing the policy issue?

Thank you for your collaboration and your time

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