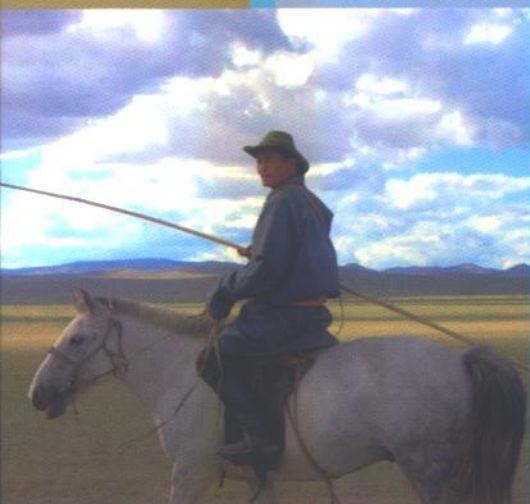


Ulaanbaatar

Mongolia



Report of WHO
interregional workshop
on the use of
traditional medicine
in primary health care

Ulaanbaatar, Mongolia,
23 – 26 August 2007



World Health
Organization

Report of the WHO Interregional Workshop on the Use of Traditional Medicine in Primary Health Care

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WHO would also like to thank the Government of Mongolia for hosting the WHO Interregional Workshop in Ulaanbaatar, Mongolia.

Thanks are due to Vansemeruu-Mongolia, which made logistical arrangements for the workshop in close collaboration with the Ministry of Health of Mongolia and the co-organizers of the meeting, The Nippon Foundation and WHO. Through Vansemeruu-Mongolia, WHO and The Nippon Foundation would like to thank the volunteers who supported the operation of the workshop in various ways.

WHO gives thanks to the participants in the meeting, who shared their experiences and knowledge in the use of traditional medicines in the primary health care context.

Finally, acknowledgement is due to the Mongolia project teams, who gave the participants the opportunity to visit their project site and obtain a better understanding of the project.

Introduction

The Declaration of Alma-Ata, which was adopted at the International Conference on Primary Health Care (Alma-Ata, 6-12 September 1978) conceived the goal of "health for all" by the year 2000. The Declaration was particularly significant for traditional medicine practitioners and users since, despite the long history of traditional medicine, it was the first time that countries and governments had been urged to include it as an important component of primary health care in order to achieve the goal. As a result of this new commitment to traditional medicine, the WHO traditional medicine programme was established. The principles set forth in the Declaration continue to be relevant for WHO and its Member States.

Since the Declaration of Alma-Ata was adopted, 30 years ago, the use of traditional medicine has greatly evolved. A major component of this evolution has been the relatively new and growing trend for populations in high-income countries to use traditional medicine and complementary and alternative medicine to supplement existing allopathic health care. However, in many low- and middle-income countries, traditional medicine often represents the only affordable, accessible and available form of care, and therefore represents an essential part of the primary health care system. It has been reported that up to 80% of the population in some developing countries still continue to rely on traditional medicine for their primary health care needs.¹ Widespread use of traditional medicine often stems also from its association with a wider belief system that is culturally accepted and practised.

The year 2008 will be significant for WHO, as it is the 60th anniversary of WHO and the 30th anniversary of the Declaration of Alma-Ata. Dr Margaret Chan, the Director-General of WHO, has set up six priorities for the WHO agenda for the next five years: Health and Development; Health and Security; Health Systems; Information and Knowledge; Partnerships; Performance. Increased access to primary health care is an objective that inspires work on health systems. Besides this, it also includes integrated service delivery, including self-care. In order to celebrate the two anniversaries and emphasize primary health care needs, the *World Health Report* in 2008 will focus on primary health care.

To mark the occasion, WHO organized an *Interregional Workshop on the Use of Traditional Medicine in Primary Health Care* on 23-26 August 2007 in Ulaanbaatar, Mongolia, with the support of The Nippon Foundation.

This meeting report will share the countries' experiences which were presented during the workshop. Some communities, particularly in remote areas, benefit from using traditional medicine through self-care to meet primary health care needs, and some communities have developed different forms of implementation e.g. using a "medikit" in Mongolia and "your medicine in your garden" booklets

¹WHO Traditional Medicine Strategy 2002-2005. Geneva, World Health Organization, 2002 (document WHO/EDM/TRM/2002.1).

in south Asian countries. These experiences are significant in making health services accessible, available and affordable.

This document will focus on a successful model for the use of traditional medicine products to achieve a systematic increase in access to primary health care through the distribution of “medikits” in Mongolia. The objective of this project, which distributes pharmacy kits containing traditional medicines and related educational materials, is to improve access to primary health care in Mongolia. The project receives financial and technical support from The Nippon Foundation and operates in collaboration with the Ministry of Health of Mongolia.

We hope the valuable models and experiences included in this report will allow Member States that were unable to attend the WHO Interregional Workshop to benefit from the exchange of information on the use of traditional medicine in primary health care.

There is a great deal of potential for using traditional medicine in primary health care. However, Member States must be cautious about the quality, safety and efficacy of traditional medicine therapies and products. This is of particular concern since traditional medicine is often used for self-care. Therefore, during the workshop, the issues of safety, efficacy and quality of traditional medicine were discussed.

We expect that these projects or programmes in the use of traditional medicine will not only meet primary health care needs, but will also enhance the knowledge of both providers and patients in order to ensure the safe and effective use of traditional medicine.

Dr Xiaorui Zhang
Coordinator, Traditional Medicine
Department of Essential Medicines and Pharmaceutical Policies

1. Opening and overview of the WHO Interregional Workshop

1.1 Opening of the workshop

The *WHO Interregional Workshop on the Use of Traditional Medicine in Primary Health Care* was co-organized by WHO and The Nippon Foundation, financially supported by The Nippon Foundation, and hosted by the Government of Mongolia. The WHO Interregional Workshop was held at the Chinggis Khaan Hotel in Ulaanbaatar, Mongolia from 23 to 26 August 2007.

Dr Margaret Chan, Director-General of WHO, although not present at the meeting, sent written remarks that were read by Mr Robert Hagan, the WHO Representative in Mongolia (see Annex 1). Dr Chan emphasized that primary health care is essential for an effective health care system, and that traditional medicine plays a key role in meeting basic health-care needs.

The WHO Interregional Workshop was opened by Dr Shigeru Omi, WHO Regional Director for the Western Pacific, who reiterated the importance of primary health care and traditional medicine, as outlined in the Declaration of Alma-Ata. He offered his sincere congratulations to the Government of Mongolia and The Nippon Foundation for their successful collaboration to achieve a model which would increase access to primary health care. Finally, Dr Omi outlined the objectives of the meeting (see Annex 2).

Mr Yohei Sasakawa, Chairman of The Nippon Foundation, contributed to the opening of the WHO Interregional Workshop with comments (see Annex 3) that emphasized how traditional medicine could be effective for primary health care by bringing relief and acting as the first line of treatment and prevention, especially for the initial stages of colds, diarrhoea, stomach pains, low-grade fevers, etc. Mr Sasakawa also informed participants that the model of distributing pharmacy kits containing traditional medicines in Mongolia had arisen from the desire to expand access to medicines. Mr Sasakawa ended his remarks by highlighting the importance of good evaluation and continual improvement of the Nippon Model that has worked in Mongolia, so that a successful model may be disseminated to other countries in the future.

The welcome address was given by Her Excellency Dr D. Tuya, Minister of Health, Mongolia, who stated (see Annex 4) that the use of traditional medicine was a key component of the Mongolian primary health care system, and that the prominence of traditional medicine has increased over the past 20 years. Dr Tuya also stated that increased national and international prominence has made the quality and safety of traditional medicine a critical issue. She expressed the hope that the project will continue to highlight Mongolian traditional medicine internationally.

His Excellency Mr Ichihashi, Japanese Ambassador to Mongolia, also addressed the audience. Mr Ichihashi stated that the successful Mongolian model was based upon knowledge accumulated through more than 300 years of traditional medicine distribution in the Toyama prefecture of Japan. He added that traditional medicine is particularly useful in filling gaps in the health-care needs of rural areas.

The WHO Interregional Workshop was attended by 40 participants and 13 observers from a total of 14 Member States in four WHO regions. The meeting elected Dr Bujin Tserensodnom (Mongolia) and Mr Asoka Malimage (Sri Lanka) as Co-Chairpersons for the meeting, and Dr Tin Nyunt (Myanmar) and Dr Ta Thu Thuy (Viet Nam) as Co-Rapporteurs. The agenda was adopted and the programme of work confirmed.

1.2 Objectives of the workshop

The objectives of the workshop were as follows.

1. To introduce a model for increasing access and availability of primary health care in rural Mongolia that disseminated traditional medicines through a “use first – pay later” family pharmacy kit model, which was achieved through a project supported by The Nippon Foundation and implemented by the nongovernmental organization Vansemeruu-Mongolia in collaboration with the Ministry of Health of Mongolia and WHO.
2. To exchange and share national experiences and information on the use of traditional medicines in PHC.
3. To deepen the understanding of key issues related to the quality, safety and efficacy of traditional medicines.
4. To develop the criteria for selecting traditional medicine products for use in primary health care.

The expected outcomes of the workshop were as follows.

1. The sharing by Member States of lessons learned from the successful family pharmacy kit model supported by The Nippon Foundation in Mongolia.
2. The provision of technical guidance for Member States, especially on the selection of traditional medicines for use in a primary health care system, with particular emphasis on ensuring safety, quality and efficacy.
3. The publication, translation into all WHO official languages, and distribution of the Interregional Workshop report to WHO Member States, policy-makers, national health authorities, nongovernmental organizations working in related fields, researchers, manufacturers of traditional medicines and the general public.
4. Evidence and case-studies for the use of traditional medicines in primary health care settings as a contribution to the events celebrating the 30th anniversary of the Declaration of Alma-Ata and/or those celebrating the 60th anniversary of the creation of WHO.

1.3 Programme of the workshop

The workshop took place over four days. The first two days consisted of presentations to facilitate information-sharing. The representatives of participating Member States gave presentations about their national experiences of the use of traditional medicines in primary health care and in their respective health systems (see Annex 5). In addition, several specific models of using traditional medicine for primary health care were presented (see Annex 6 and Annex 7), as was the family pharmacy kit model that was being implemented in Mongolia.

The third day was particularly useful for learning about the Mongolian family pharmacy kit model. The day was devoted to a site visit to one of the project sites to observe the programme at first hand. Participants left the hotel very early in the morning and travelled a few hours to Khentii Province, which is the province immediately to the east of Tuv Province, where the workshop was being held in Ulaanbaatar. The landscape of Khentii Province was observed to be incredibly lush, and it became apparent how providing comprehensive primary health care could be a challenge because of the sparse population and the difficulty of travel through the region. Specifically, the participants visited Umnudelger *soum* (village), where the local economy relies mostly on animal husbandry. For instance, in 2006 the domestic animal population was estimated at 186 500, consisting of 0.2% camels, 8.1% horses, 9.7% cattle, 42.0% sheep, and 40.0% goats. At Umnudelger *soum*, participants visited a *soum* hospital and spoke with local people who had benefited from the programme.

On the last day, a conclusive review and discussion occurred, including guidance on key technical issues related to the use of traditional medicine for primary health care.

The list of participants, agenda and programme of work of the WHO Interregional Workshop are attached as Annexes 8, 9 and 10.

2. Experiences of using traditional medicines in primary health care

Twelve countries from four of the six WHO regions gave presentations to share their respective experiences in using traditional medicine for primary health care. These countries were Madagascar from the African Region, Kyrgyzstan from the European Region, India, Indonesia, Myanmar, Sri Lanka and Thailand from the South-East Asia Region, and Cambodia, China, Lao People's Democratic Republic, Mongolia and Viet Nam from the Western Pacific Region. Basic summaries are presented in the table on the next page, with more information on each country situation available in Annex 5. A summary case-study of the Nippon Method is also presented, with the full report available in Annex 6. Finally, four other unique models related to using traditional medicine for primary health care are also summarized in table format, with more detailed summaries available in Annex 7.

2.1 Summary of country presentations¹

Country	Widely used as PHC by population?	Types of TM treatments or systems that are widely used	Are TM providers officially registered or trained?	Research on local TM	National policy on TM
African Region					
Madagascar	Yes	<ul style="list-style-type: none"> · Malagasy herbal medicines · Foreign CAM 	No	Yes, but more is needed	Yes: priorities are increased access and collaboration
European Region					
Kyrgyzstan	No	· N/A	No	No	No
South-East Asia Region					
India	Yes	<ul style="list-style-type: none"> · Ayurveda · Yoga · Naturopathy · Unani · Siddha · Homeopathy 	Yes	Yes	Yes, with the priority being standardization and quality control of TM drugs
Indonesia	Yes	<ul style="list-style-type: none"> · <i>Jamu</i> · TM based on physical skill · TM based on herbal, animal or mineral materials · TM based on supernatural practices · TM based on religion 	Yes	Yes	Yes
Myanmar	Yes	<ul style="list-style-type: none"> · <i>Bhesijjanaya</i> (which includes Ayurveda) · <i>Desananaya</i> · <i>Netkhattanaya</i> · <i>Vijjadhanaya</i> 	Yes, with formal education since 1976	Yes	Yes
Sri Lanka	Yes	· <i>Desheeya Chikitsa</i> (enriched by Ayurveda, Siddha and Unani)	Yes	Planned for future	In preparation
Thailand	Yes	· Thai traditional medicine including herbal medicines, Thai traditional massage and midwifery	Yes	Yes	Yes
Western Pacific Region					
Cambodia	Yes	<ul style="list-style-type: none"> · TCM · Herbal medicine 	No	Yes	Yes
China	Yes	<ul style="list-style-type: none"> · TCM including acupuncture, manual therapies and medicines · Various ethnic medicine 	Yes	Yes	Yes
Lao People's Democratic Republic	Yes	· Herbal medicines	No	Yes	Yes
Mongolia	Yes	<ul style="list-style-type: none"> · Herbal medicines · Mongolian medicine 	Yes	Yes	Yes
Viet Nam	Yes	<ul style="list-style-type: none"> · Oriental medicine with Vietnamese influence · Various ethnic medicines 	Yes	Yes	Yes

PHC = primary health care; TM = traditional medicine; CAM = complementary and alternative medicine; TCM = Traditional Chinese Medicine.

¹More detailed summaries of country presentations can be found in Annex 5.

2.2 Mongolian model: using traditional medicine to expand access to primary health care in rural Mongolia (the Nippon Method)¹

Overview of project²

In January 2004, after three years of planning, The Nippon Foundation began to support a project in Mongolia in which traditional medicines for personal home use were provided through a “family pharmacy kit” to rural, nomadic families through a pay-as-you-use system made popular in Japan. A professional council of Mongolian medicine decided on the 12 medicines that would be supplied in the kit; all medicines were described in detail in an enclosed instruction manual. As of August 2007, 9 615 family pharmacy kits had been distributed covering approximately 50 000 people, over 8 000 people had received mobile traditional medicine services, and over 540 rural physicians had been trained to assist in implementing the model.

The cost of the first three years of the project was just over US\$ 1 million. The total fee for the kit requested of families was US\$ 8, but this will increase to US\$ 12 to cover more of the cost. The percentage of households that paid at least some of the fee was 98%.

The programme has been very popular amongst families and providers. The challenge is to increase usage and set prices appropriately. Future plans include efforts:

- to enhance economic viability
- to increase the number of kits distributed within the programme area (five provinces/15 villages)
- to expand the training programme
- to support the traditional medicine industry
- to introduce the Nippon Method to other countries
- to hand the project on to the Mongolian Government.

Implementation background and results³

The project is in two parts: (1) the Nippon family pharmacy kit; (2) accompanying health education, including the practical usage of traditional medicine. Combined, these two elements enhance primary health care. To initiate the project, 15 villages were selected and village doctors were recruited to implement the Nippon Method. Families to receive the pharmacy kit were selected based upon: (1) interest; (2) willingness to pay; (3) presence of extended family (children, parents and grandparents); (4) ability to follow instructions.

Traditional medicines to be included in the kits had to meet two basic requirements: (1) they had to be recognized by the Mongolian Ministry of Health

¹A more detailed report on the project can be found in Annex 6.

²Adapted from the presentation by Mr Shuichi Ohno, Executive Director of The Nippon Foundation.

³Adapted from the presentation by Dr Sharav Bold, Member of the Professional Committee of Vansemberuu-Mongolia.

and be in compliance with national policies; (2) they had to have enough background material to develop proper consumer information to guide people in proper self-care. After meeting the basic criteria, individual traditional medicines were selected based on:

- assured quality and effectiveness
- absence of any known side-effects
- over-the-counter status
- local origin (sourced in Mongolia)
- low cost
- intended for primary health care use.

Village doctors made monthly visits to families, but collected payment only twice a year. The other visits were to assess health status, answer questions, provide health education and basic necessary services and replenish the kits as needed.

Project monitoring was targeted at usage, quality and satisfaction. Notable results include the following.

- the payment collection rate exceeded expectations.
- there was an increased understanding and use of traditional medicine.
- training in traditional medicine has boosted the self-confidence of medical practitioners.
- among 386 herders who participated in a user satisfaction survey, 64% stated that their health generally improved, while 22% said their health improved noticeably. In addition, 75% felt the kit was useful in emergencies, and nearly 60% felt the fee was cheap or adequate. Overall, 87% said they would use the family pharmacy kit in the future.

Opportunities for synergy with other public health issues¹

Owing to the high cost of getting a doctor to a rural household, the opportunities for synergy between the Nippon Method and other public health issues are significant. The dissemination of health education in rural areas can be expanded to include other important topics such as water, sanitation, hygiene, nutrition, anti-smoking messages, etc. The kit could also be used to distribute other items that can improve public health that may not be considered as traditional medicines in the strict sense. Finally, the visits provide opportunities to collect data about these areas that can be used to make informed policy decisions that could have a positive impact on health.

Other issues related to the project^{2,3}

Financial sustainability: The primary objective of the project was to supply kits to the very poor, the elderly and families with many children. In order to reach these populations effectively, families were not pressured to join the project and participated of their own free will. Fees were also not mandatory: however, most people paid since they had the means, and it was contrary to the local culture to avoid obligations.

¹Adapted from the presentation by Mr Robert Hagan, WHO Representative in Mongolia.

²Adapted from site visits, discussion, questions and answers during the WHO Interregional Workshop.

³Adapted from the presentation by Dr Sharav Bold, Member of the Professional Committee of Vansemberuu-Mongolia.

However, the cost of the project exceeds the mere materials in the kit, since it also includes the mobile teams, who were paid by the day. Financial support was provided entirely by The Nippon Foundation, while the Mongolian Government, through the Ministry of Health, supported any legal and operational issues. The Mongolian Government has expressed willingness to continue supporting the programme, as well as mandating traditional medicine as part of the medical education curriculum.

It is important not to consider the cost of this project in isolation, since the kits and mobile teams supplement primary health care, and therefore should be considered as part of the cost of maintaining a functioning health system. In addition, the use of local traditional medicine products keeps costs down and helps the local economy.

Quality assurance: The quality of the products distributed in the kit is controlled by national policy, such as the Mongolian Good Manufacturing Practices (GMP) standards, to ensure quality and safety. Only over-the-counter medicines (i.e. those available without prescription) were included in the kit.

Quality assurance of medicines is particularly critical because, if people experience or observe negative health consequences due to quality problems in the medicines used, it may affect the credibility of the project and of traditional medicine as a whole. A similar negative impact may also be created if people misuse, abuse or misunderstand traditional medicine with adverse health consequences.

Effect on primary health care: The provision of kits supported efforts to increase access to primary health care. Doctors who visited the families, besides supporting the logistics of distribution and education for the kits, also provided treatment, prescribed additional treatments, discussed health issues, etc. Mobile services were used to provide primary health care, as well as encouraging the use of the kits, which increased synergy between the two systems.

The project also emphasized the importance of referring families to allopathic medicine when needed.

Challenges faced during the pilot: One challenge was that the Mongolian people and physicians had forgotten the use and application of local traditional medicines, a problem which had to be overcome first with professionals and then with families. One strategy to address this challenge was the broadcast of information on Mongolian traditional medicine on national television every Saturday, which is a very effective health promotion technique. The topography, scattered population of Mongolia, and nomadic lifestyle provided difficulties for logistics and communication. Finally, a unique challenge for patient education occurs when people are illiterate. The lessons learned are being incorporated to improve the project.

Unexpected benefits: It was found that families were using traditional medicines from the kits to treat their animals. The development of a veterinary version of the kit is currently under consideration.

2.3 Other models using traditional medicine in primary health care¹

Project name	Area impacted	Goal of project	Method of distribution	Benefits	Other information
New project on promoting the use of medicinal plants for primary health care in five Mekong countries	Five Mekong countries: · Cambodia · Lao People's Democratic Republic · Myanmar · Thailand · Viet Nam	<ul style="list-style-type: none"> · Promote TM · Integrate TM into PHC · Collaborate and exchange information within the Mekong subregion · Promote national capacity-building 	<ul style="list-style-type: none"> · Four countries published patient education materials regarding local medicinal plants · Myanmar distributed kits with TM for emergency use 	<ul style="list-style-type: none"> · Documentation of local herbal medicines and increased public awareness · 150 kits were formally distributed in Myanmar to 150 villages in three townships 	Challenges include a lack of technical knowledge. From 30 July to 1 August 2007 with the support of The Nippon Foundation, the countries assembled for a WHO working group meeting
Strengthening the primary health care system and providing safe, convenient, effective and economical basic health care service for local people	Aba Zang and Qiang Minority Autonomous Regions located in the north-west part of Sichuan Province in China	<ul style="list-style-type: none"> · Improve access to PHC in rural areas · Distribute TM to remote regions 	<ul style="list-style-type: none"> · Developed a supply network to meet rural needs, including horseback bags or medical counters (small outlets) · Used supervision network to ensure quality, safety, low cost and effectiveness 	<ul style="list-style-type: none"> · Stronger infrastructure (constructed 151 new sites) · Promotion of TM · Decrease in difficulty and expense of visiting a doctor 	A challenge was the sparse population in a large area with difficult terrain for travelling, which also makes it difficult to visit doctors, buy medicines, etc.
Promoting affordable and accessible medicines	Ningxia Hui Autonomous Region, China	<ul style="list-style-type: none"> · Ensure distribution of the medicines to meet demand · Ensure safety, efficacy and quality · Ensure medicines are cheap, accessible and affordable 	<ul style="list-style-type: none"> · Principle of the "three uniforms": uniform bid, uniform price and uniform distribution and delivery to hospitals, clinics and village health stations. 	<ul style="list-style-type: none"> · The distribution price of the medicines was reduced by 40% · The total reduction in cost reached 259 million Chinese yuan. 	Project was overseen by a committee of experts that included doctors, pharmacists and managers from both TM and allopathic medicine
"HAICHI" medicine sales system	Japan	<ul style="list-style-type: none"> · Increase the health of the nation in both rural and urban areas · Sustain a relationship of trust with clients · Offer high-quality medicines · Understand market needs · Collect and provide information 	<ul style="list-style-type: none"> · HAICHI medicine vendors visit clients' households and leave a medicine box · HAICHI vendors revisit every 4-6 months to replenish medicines and charge for medicines used, as well as providing health education 	<ul style="list-style-type: none"> · Boosted pharmaceutical industry · 52.3% of the total medicine produced is for use through the HAICHI sales system throughout Japan 	The HAICHI medicine sales system works in alignment with national regulations on medicine vendors, as well as the local administrative system of the Toyama Prefecture, where the operation is based

TM = traditional medicine; PHC = primary health care.

¹ More detailed summaries of each model can be found in Annex 7.

3. Key technical issues for selection and use of traditional medicines for primary health care

WHO supports Member States in promoting the use of traditional medicines in primary health care with three core principles: (1) ensuring the safety and quality of medicines; (2) educating the public and consumers so they understand how to use traditional medicines properly, particularly for self-care; (3) devising sustainable mechanisms and systems for delivery. During the workshop, these issues were discussed. The participants agreed that Member States should establish regulations and registration systems to control the safety and quality of traditional medicines and their raw materials. In addition, national pharmacovigilance systems need to cover traditional medicines. Consumer information should also be provided about the proper use of traditional medicine products in self-care. During the workshop, WHO representatives introduced WHO technical guidelines related to the above-mentioned issues.

3.1 Quality assurance and control of medicinal plants and herbal materials: good agricultural and collection practices (GACP) for medicinal plants¹

Medicinal plants are a common source of medication products in various traditional medicines. The first issue surrounding quality assurance and control of herbal medicines is to ensure good quality of medicinal plant and raw herbal materials, for which guidelines on good agricultural and collection practices (GACP) for medicinal plants are directly relevant. The main elements of GACP include: (1) selection of medicinal plants for collection or cultivation; (2) selection of propagation materials; (3) selection of cultivation and/or collection sites; (4) cultivation and/or collection methods; (5) harvesting methods; (6) personnel management; (7) post-harvesting processing including detoxification and storage, and (8) recording. Conservation of medicinal plants and ecofriendly processes are important considerations as well. The quality of medicinal plants and herbal materials, as the source materials for traditional medicines derived from medicinal plant materials, has a major impact on safety and efficacy.

More information about GACP is contained in the *WHO guidelines on good agricultural and collection practices (GACP) for medicinal plants*.²

¹ Adapted from the presentation by Professor Motoyoshi Satake of the Institute of Environmental Science for Human Life at Ochanomizu University.

² *WHO guidelines on good agricultural and collection practices (GACP) for medicinal plants*. Geneva, World Health Organization, 2003.

3.2 Quality assurance and control of traditional/herbal medicine products: good manufacturing practices (GMP) for herbal medicines and experience in China¹

Good manufacturing practices have been established to achieve quality and safety in traditional and herbal medicinal products through the basic principles of minimizing human error, reducing contamination and designing high-quality assurance systems. Good manufacturing practices are important because poor quality can be dangerous to the consumer, thereby destroying consumer confidence. In contrast, a reliably effective and safe product increases opportunities for export. Good quality cannot, however, be inspected or reliably tested after manufacturing; it must be incorporated during the manufacturing process. The role of good manufacturing practices goes beyond the process of manufacture itself. It should also be employed in a comprehensive classification system for herbs, herbal materials, herbal preparations and finished herbal products (both oral and topical). In summary, good manufacturing practices cover: (1) defined manufacturing processes; (2) validated critical manufacturing steps, including protocols; (3) qualified and trained production and quality control personnel; (4) adequate laboratory facilities; (5) approved written procedures and instructions; (6) records to ensure all steps of defined procedures have been taken; (7) full traceability of a product through batch records and distribution records; (8) systems for recall and investigation of complaints.

More information about good manufacturing practices is contained in the *WHO publication WHO guidelines on good manufacturing practices (GMP) for herbal medicines*.²

3.3 Safety monitoring of traditional medicines and experience in China¹

Despite the large number of herbal medicine users, there is still a general lack of reliable information regarding the safety of traditional medicines. In addition, consumers tend to use traditional medicines for self-medication, sometimes concurrently with other medicines, because they perceive them to be safe. Because of these risk factors for unsafe use of traditional medicines, pharmacovigilance systems are needed to detect previously unknown safety problems, identify risks and prevent consumers from being affected unnecessarily. Components of a pharmacovigilance system include identifying and reporting adverse drug reactions, assessing drug safety and managing risk. Ideally, there should be a standard protocol for reporting adverse drug reactions, consistent with national laws.

¹ Adapted from the presentation by Dr Zhang Li of the Center for Drug Re-Evaluation, National Centre for ADR Monitoring, State Food and Drug Administration, People's Republic of China.

² *WHO guidelines on good manufacturing practices (GMP) for herbal medicines*. Geneva, World Health Organization, 2007.

More information about safety monitoring of herbal medicines can be found in the *WHO guidelines on safety monitoring of herbal medicines in pharmacovigilance systems*.¹

3.4 Developing consumer information

Traditional medicines are often used as self-medication in primary health care by patients and consumers. Therefore, it is both important and necessary to provide guidance for patients and consumers on the proper use of traditional medicines. The information should include: how and when to use traditional medicines; how to store them; when not to use them; when to consult a doctor; basic health education.

More information can be obtained from the *WHO guidelines on developing consumer information on proper use of traditional, complementary and alternative medicine*.²

¹ *WHO guidelines on safety monitoring of herbal medicines in pharmacovigilance systems*. Geneva, World Health Organization, 2004.

² *WHO guidelines on developing consumer information on proper use of traditional, complementary and alternative medicine*. Geneva, World Health Organization, 2004.

4. Meeting recommendations

4.1 WHO Member States

Policy

- Increase commitment of national governments in providing traditional medicine services for meeting primary health care needs, including drafting of a policy on the use of traditional medicine within primary health care.
- Integrate traditional medicine into the existing national primary health-care system.
- Develop the infrastructure for integrated (i.e. both traditional and modern) health services delivery at all levels.
- Work with other Government departments and sectors e.g. trade, environment, forestry, etc., which have activities that may be related to traditional medicine.
- Develop national lists of essential traditional medicines.

Access

- Formulate a mechanism for delivery of traditional medicine services for primary health care.
- Identify gaps in primary health care that could be met by traditional medicine therapies within the community.

Use

- Ensure adequate training of health professionals in the practice of traditional medicine (including modifying job descriptions of basic health staff to include the provision of traditional medicine services).
- Develop training programmes and materials on traditional medicine for health professionals in order to ensure that they understand the indications and contraindications of traditional medicine therapies and products.
- Encourage cultivation of household medicinal plants for primary health care use.
- Educate consumers about the appropriate use of traditional medicines (including references to the potential side-effects associated with their use).
- Develop a guidebook for consumers using home remedies derived from traditional medicine.

Quality, efficacy, and safety

- Ensure that traditional medicines are manufactured in accordance with good manufacturing practices.
- Ensure that traditional medicines are labelled appropriately – including details of the contents, storage requirements and expiry date.
- Ensure distribution of traditional medicines by appropriately trained fieldworkers.
- Develop indicators for monitoring, supervision and evaluation of the provision of traditional medicine within primary health care.

4.2 WHO

- Develop a model list of traditional medicines that are safe and effective and respond to clearly defined health needs.
- Develop training modules for fieldworkers in provision of traditional medicine services.
- Support Member States in developing systems for supply, distribution and monitoring of traditional medicines.
- Provide opportunities for Member States to share experiences and information related to traditional medicine.
- Develop a guidebook for government ministries on the use of traditional medicine pharmacy kits.

4.3 The Nippon Foundation

- Support further expansion of the Nippon Method in Mongolia (including integration with other primary health care activities).
- Expand activity to different settings in other countries.
- Assess the effectiveness and efficiency of the Nippon Method, with the aim of improving access to and rational use of medicines.

Annex 1: Message to the Interregional Workshop from the Director-General, WHO¹

The year 2008 will be significant for the World Health Organization (WHO) as it will mark its 60th anniversary and the 30th anniversary of the Declaration of Alma-Ata. As Director-General of WHO, I have set six priority activities for the next five years: Health and Development, Health and Security, Health Systems, Information, Knowledge, and Partnerships and Performance. Primary health care is an inspiration for work on health systems. Besides this, it also includes integrated service delivery, including self-care. In order to celebrate these two above-mentioned events and emphasize primary health-care needs, the 2008 World Health Report will focus on primary health care.

I am very pleased to hear that the WHO Interregional Workshop on the use of Traditional Medicine in Primary Health Care will be held in Ulaanbaatar, Mongolia, from 23 to 26 August 2007, co-organized with The Nippon Foundation. This will be a means for countries to share experiences. Some communities, particularly those in remote areas, benefit from using traditional medicine through self-care to meet primary health needs, for example, by means of a “medikit” in Mongolia (with support from the Nippon Foundation) and “Your Medicine in Your Garden” in south Asian countries. These methods are significant in making health services accessible, available and affordable.

I look forward to receiving the report of the workshop and I hope that these valuable models and experiences will be included in the 2008 World Health Report, which will enable the further sharing of information with other countries who are unable to attend this workshop. I expect that through these projects or programmes in the use of traditional medicine, primary health care needs will be met and also both providers’ and patients’ knowledge of traditional medicine will be improved therefore ensuring the safe and effective use of traditional medicine.

I take this opportunity to wish the event every success.

Yours sincerely,
Dr Margaret Chan
Director-General

¹ The written address to participants was originally a letter addressed to Dr Yohei Sasakawa, Chairman of The Nippon Foundation, dated 10 August 2007.

Annex 2: Inaugural address by Dr Shigeru Omi, Regional Director for the Western Pacific, WHO

Honourable D. Tuya, Minister of Health, Mongolia,
Distinguished participants, ladies and gentlemen,

I am very pleased to have been invited to address the WHO Interregional Workshop on the Use of Traditional Medicine in Primary Health Care.

My sincere congratulations to the Government of Mongolia and to The Nippon Foundation for organizing this workshop, in collaboration with WHO.

In 2008, we will celebrate the 60th anniversary of the establishment of WHO, and the 30th year since the Declaration of Alma-Ata of 1978, during which countries and governments were urged for the first time to include traditional medicine in their primary health systems, and to recognize traditional medicine practitioners as health workers, particularly for primary health care at the community level. Since then, WHO has paid attention to traditional medicine. Especially for primary health care, there has been close collaboration between Member States and WHO, with support by many partners, including The Nippon Foundation. The World Health Organization recognizes that traditional medicine and its practitioners have a significant role to play if we are to attain the highest possible level of health for all people.

During the next four days, participants in this workshop will be introduced to the model of using “med kits”, which was developed by the Nippon Foundation with support from the Government of Mongolia. These kits will increase access to traditional medicine at a primary-health-care level. I also understand that the workshop will be a venue for the exchange and sharing of national experiences and information on the use of traditional medicine in primary health care. This will give participants a deeper understanding of the key issues related to the quality, safety and efficacy of traditional medicine, as well as develop criteria for selecting traditional medicine products for use in primary health care.

Again, I would like to express my sincere congratulations to the Mongolian Government and The Nippon Foundation for the success of your collaborative efforts, as well as my gratitude for sharing your precious experience with other Member States. I wish you all a fruitful workshop and an enjoyable stay in Ulaanbaatar. Thank you.

Annex 3: Opening remarks by Mr Yohei Sasakawa, Chairman, The Nippon Foundation

Your Excellency Madame Tuya, the Minister of Health,
His Excellency Mr Ichihashi, the Ambassador from the Embassy of Japan in
Mongolia,
Dr Omi, the WHO Regional Director for the Western Pacific,
Distinguished guests,
Ladies and gentlemen, a very good morning to you.

It is said that, out of the world's population of approximately six billion people, two billion people have to live on less than one dollar a day. That is a truly enormous number of people suffering under great poverty, day in and day out.

What do these people really need to help them survive?

I feel that there are three things that take top priority for poor individuals throughout the world: food, medicine, and education.

The organization of which I am the chairman, The Nippon Foundation, provides welfare on a global level, and we have taken three major paths in our attempt to improve living conditions for poor people worldwide.

The first route we have taken is to increase food production. The second is to provide medicine and medical care. And the third is to develop human resources, in other words, education.

Today's theme is medicine, so I would like to focus my speech today on the medical side of our activities.

As you may know, leprosy is a disease that has existed for a very long time, and is found all over the world. I have given my utmost for the past 30 years to fight this disease, and it is my goal to achieve worldwide elimination. Thirty years is a long time for a battle, but it seems now that we really have success within our sights. I feel, and I really hope, that within two to three years we will be able to eliminate leprosy completely. This will be made possible due to the current collaboration of WHO and The Nippon Foundation; a collaboration that has been going on for a great many years and that spans several countries.

I spend four months every year travelling to various different developing countries, and I feel truly privileged to have been able to visit local areas and investigate the different approaches we must use in order to battle this disease. To eliminate leprosy is really a very difficult issue, however what we have focused on is delivering leprosy medicine to people who previously had no access to it.

If I may just add at this point, for the record, that leprosy today is 100% curable.

From a global point of view, I believe that there is no medicine that is as readily available as the medicine for leprosy. For example, if you go deep into the mountains of India, or the deserts of Africa, you will see that, even there, people who need this medicine have access to it.

In order to fight leprosy, health centres, or health posts, as they are sometimes known, have been established in several countries. When I visit these countries, I see that the only medicine they have is medicine for leprosy. In other words, in the remotest locations in the world, the only truly accessible medicine is that for treating leprosy.

Therefore, for many years, I wondered how it would be possible to deliver other medicines to needy people. Between 1993 and 1996, there was what was known as the Bamako Initiative. This initiative involved The Nippon Foundation donating medicines, which were then used to set up an experimental revolving system whereby the financial resources obtained from people buying the medicine were then used to buy more medicine. This initiative was implemented in 22 countries, and 27 million dollars was spent. As I said, this was an experiment, and the revolving system did bring about a certain amount of sustainability.

And just to tell you about the conclusion to this initiative – it was not as magnificent as we expected, however it was a starting point for thinking about ways to deliver medicine to those that so urgently require it.

Fortunately, I had an opportunity to talk about the problem of delivering medicine with Dr Omi, the WHO Regional Director for the Western Pacific. Dr Omi suggested that the traditional medicine that already exists in many countries could be very effective if used for primary health care. In other words, you could use traditional medicine in the initial stages of, for example, a cold, or diarrhoea, or you could use it to stop pain from stomach-ache, or to lower fever. Basic medicine can often be used as an initial treatment, and Dr Omi's suggestion that traditional medicine might be something worth looking at was extremely valid and helpful.

The President of Mongolia, Mr Enkhbayar, announced a very important policy this morning. The aim of this policy is to re-evaluate and reassess the traditional Mongolian culture. Within this large framework of re-evaluation, there will be an initiative to include the traditional medicine that once used to be a very prevalent and a very successful means of treatment here in Mongolia.

This brings us back once again to the old question of how to deliver medicine. In Japan, there was a traditional system for delivering medicine that was used for 300 years. A group of people in a prefecture called Toyama delivered medicine to different households around the country using small medicine boxes. We focused on this system as a possible solution to the delivery problem, hoping that it may give us the system that we had been searching for desperately for so many years.

We have with us today Mr Mori, the mayor of Toyama. Mr Mori, would you please stand and come forward.

As I said, Mr Mori is the mayor of Toyama – home of the 300-year-old system that we now use to deliver medicine in Mongolia.

Generally speaking, especially in developing countries, it is held that medicine should be free of charge. This system, however, is different. In this system, people who are poor also have to pay a certain amount towards their medicine. The payment is not high, but is enough to bring about a certain level of sustainability.

During the experimental stage of this system, I thought that it was vital that we collect very detailed and precise data in order to convince the participants of this workshop and other people to implement this project. And therefore I have collected, through my people, through various research and investigations carried out by The Nippon Foundation staff, very valid data which I'm sure will be important later on during this workshop.

And, furthermore, I'm sure that we will hear later about the report on the frequency of doctors' visits, for example, time-consuming doctors' visits have been reduced by approximately 30%. There should be a detailed report on the payment situation of this medical system later on, however I can say that I have a report that 100% of the people who used this medicine have paid for what they have used.

We have already received requests to implement the Mongolian method from a number of countries, but of course we have to focus on a number of very important points, including strict quality controls.

We are now using this system, however I feel that everything is not yet perfect, and we would of course very much appreciate any suggestions or advice that you may have. There is still a lot of work to be done, however the method being used now in Mongolia may well prove successful for delivering medicine in other locations, and for bringing medicine to every single person who needs it.

Next year, 2008, will be the 30th anniversary of the WHO Declaration of Alma-Ata, and I have no doubt that today's workshop will be a major theme during the WHO-sponsored conference in 2008.

On a final note, let me say that I would like to ask the delegates at this workshop to put forward their very honest and frank criticism and comments. Based on these criticisms and comments, the WHO, the Government of Mongolia and The Nippon Foundation can better evaluate the method used in Mongolia, and we can obtain clues as to how to disseminate the system throughout the world. It is through your kind contributions that this system will become complete. Thank you very much.

Annex 4: Welcome address by Dr Danzandarjaa Tuya, Minister of Health, Mongolia¹

Your Excellency,
Honourable Dr Omi,
Mr Sasakawa Yohei,
Dear Participants,
Ladies and Gentlemen,

First of all, let me extend my best regards to all of you for coming to share your experiences and views about traditional medicine development and its tendency on the wide steppes of sunny Mongolia.

In Mongolia, Eastern medicine is considered already as substantial part of the health sector, and the State policy on development of traditional medicine has been implemented since 1999 on the principles to increase the scope of preventive and curative care in parallel with Western medicine. It has been playing a pivotal role to bring the development of Mongolian traditional medicine at new stage while ensuring consistency with the overall development of medicine around in the world.

For the last 20 years, the role of traditional medicine has been increasing at all levels of health care due to setting up legal environment and streamlining diagnosis and treatment practice for common diseases, like Western medicine.

Therefore Mongolia has officially been described as a country with an “integrated system” of Eastern medicine, according to the WHO classification in the *WHO Traditional Medicine Strategy 2002-2005*.²

Each country is asked to make several critical decisions in order to mobilize Eastern medicine as additional resource to the health sector. For instance, development of national policy, safety and quality assurance of herbal medicine, supply and rational use of drugs and introduction of new preparations and drugs.

We have been undertaking interventions including registration and safety for traditional medicine, introduction of GMP³ standards and increasing capacity of drug manufacturing, standardization of raw materials and improving the drug packaging.

¹ Welcome address was originally given in Mongolian and subsequently translated into English by the Ministry of Health, Mongolia.

² *WHO Traditional Medicine Strategy 2002-2005*. Geneva, World Health Organization, 2002 (document WHO/EDM/TRM/2002.1).

³ GMP: good manufacturing practices.

Mongolian scientists and doctors have produced new drug products to improve liver and digestive organs function, drugs for neurological disorders, medicines with anti-ageing, anti-carcinogenic, tonifying and immunostimulating effects and introduced these to the world market. As a result of a research project on "musk deer and musk study", the methodology of cultivation and reproduction of musk deer has been discovered and chemical and pharmacological studies are underway.

Today, the increased use of traditional medicinal products inevitably requires greater efforts to ensure safety, quality and effectiveness of those products.

Efforts and studies by professionals and researchers of Mongolian traditional medicine are not only recognized nationally but also have reached the international level, greatly contributing to meeting various expectations from the citizens in health care and drug supply, among others.

Mongolia already has its own education system for under- and postgraduate training in traditional medicine, and the Government of Mongolia has been working in close cooperation with international partners such as KOICA,¹ The Nippon Foundation and JICA² to provide quality health services in accordance with WHO guidelines. Moreover, bilateral collaboration extends to other countries such as China, Korea, India, Russian Federation, Poland, Great Britain, Japan, Austria and the USA.

I would like to congratulate the project team of the "Extending Traditional Medicine in Mongolia" project that has been implemented with support from The Nippon Foundation, on successful implementation of the project. At the same time, I want to emphasize that there are many lessons we should learn together, and express our support for future collaboration and extension of the project activities for the remaining period.

Today's interregional workshop actually gives us a unique opportunity to share knowledge and experience and to extend cooperation for health policy and decision-makers, professionals and doctors that eventually would contribute to the development of traditional medicine in your respective countries. Finally, I hope that workshop recommendations will be important for development of Mongolian traditional medicine as well as introducing it to the world and strengthening interregional cooperation.

Thank you for your attention.

¹ KOICA: [Republic of] Korea International Cooperation Agency.

² JICA: Japan International Cooperation Agency.

Annex 5: Summary of country presentations¹

African Region

Madagascar

The Republic of Madagascar is an island nation in the Indian Ocean, located on the eastern side of Africa towards the south. It has a total area of 587 041 km² and a total population of 18 606 000 (2005 estimate). The gross domestic product per capita is US\$ 90.5 (2006 estimate). Sixty-five percent of the rural population live more than five kilometres away from basic health centres. Infectious diseases such as malaria, the main cause of mortality, represent the biggest health threat, while noninfectious diseases such as hypertension, diabetes and heart disease are increasingly prevalent.

As a consequence of its geographical location, traditional medicine in Madagascar is linked with the origins of the human population (mainly Asian, Arabic and African). Malagasy traditional medicine has a social and cultural history predating recorded history, and still remains very popular. From the patients' viewpoint, when in need they first use what is accessible at home. If unsuccessful, they consult the nearest healer. If still unsuccessful, they then go to health centres, hospitals and/or pharmacies.

The training of practitioners of traditional medicine is still largely informal, but it is continuous and well established enough to ensure a constant supply of practitioners. Interested and motivated individuals move into the field and work full-time but, owing to economic pressures, some also learn other skills. For census purposes, a practitioner of traditional medicine is defined as a native healer recognized by his/her community, since practitioners do not hold any formal certificate or diploma awarded by the State. A partial census of traditional healers has been carried out, from which the total number may be estimated at about 10 000. This is equivalent to one practitioner per 1 800 inhabitants. In-kind payments for traditional medicine services (goats, chickens, palm wine, services, specially-valued token gifts, prestige and precedence, etc.) are considered acceptable. In urbanizing communities, practitioners of Malagasy traditional medicine exists alongside other practitioners who hold foreign certificates in homeopathy, naturopathy, nutritional medicine, palmistry and other systems, including traditional Chinese medicine.

¹ Adapted from presentations made during the workshop. More information about national policies can also be found in: *National policy on traditional medicine and regulation of herbal medicines: Report of a WHO global survey*. Geneva, World Health Organization, 2005.

A number of studies of Malagasy medicinal plants and traditional medicine have been recorded. Several books were published during the 20th century on Malagasy concepts and practices employed before the introduction of allopathic medicine. Malagasy traditional medicine has already given humanity modern drugs such as antileukaemia medications derived from *Catharanthus roseus*, discovered in the 1950s, wound-healing medications derived from *Centella asiatica*, discovered in the 1940s, and antidiabetes medications from *Eugenia jambolana* (ongoing clinical trial in Chile in 2006/2007). Properties of many indigenous plants are still unknown and research should continue to uncover any medicinal benefits.

The main objective of the (future) national policy in traditional medicine in Madagascar is (1) to improve access to health care; (2) to promote partnership between communities, traditional healers, researchers and clinicians to achieve the integration of improved traditional remedies into primary health care. For the Malagasy Ministry of Health to succeed in its traditional medicine policy, the next steps are to:

- establish a clear strategic plan with local and international partners (technical and financial partners)
- share information about best practices in traditional medicine with other countries
- train students and specialists to build Malagasy capacity in the field of ethnopharmacology
- strengthen Government research centres and universities
- involve national centres such as the Malagasy Institute of Applied Research (IMRA) and the HOMEOPHARMA pharmaceutical laboratory.

The objective of the Madagascar National Strategic Plan is to integrate traditional medicine into the national health-care delivery system. If traditional medicine of proven efficacy and safety and good quality is to be integrated into primary health care at a national level in Madagascar, it will be necessary to develop a ambitious and realistic multi-year project with the collaboration of other countries.

European Region

Kyrgyzstan

The public health-care system in Kyrgyzstan has been under reform for over 10 years. When Kyrgyzstan was part of the Soviet Union, all health services were free of charge, since the Government paid for everything. However, as the newly independent States (including Kyrgyzstan) moved over to a market economy, free health services were no longer available, and the State budget only covered about 40% of needs. This needs gap prompted much-needed public health reform in Kyrgyzstan.

In coordination with WHO and other donors, the *Manas* programme was initiated and successfully completed. To continue with the progress made and to complete reforms in the public health system, the *Manas taalimi* programme is currently being implemented. Current reforms are system-wide and include, but

are not limited to, a mandatory health insurance system, financial collection and distribution systems for medical organizations, new control mechanisms, licensing and accreditation of medical organizations, a system of family medicine for rural areas to replace district hospitals and the polyclinics, and privatization of some aspects of health care, such as pharmaceuticals.

During the transitional period of extensive public health reform, Kyrgyzstan is considering how to incorporate traditional medicine into primary health care. Until recently, traditional medicine was considered illegal: however, there have been recent positive changes, including the recognition of “folk medicine” in the Law on Protection of the Health of Citizens of the Kyrgyz Republic. The Law began the process of resolving issues that prevent traditional medicine from being used more widely. The Ministry of Public Health of Kyrgyzstan plans to explore the possibility of implementing the Nippon Method to address the health of livestock breeders who, owing to their line of work, are often at a distance from any health facilities for routine care.

South-East Asia Region

India

The term “Indian systems of medicine and homoeopathy” (ISM&H), currently known as AYUSH (Ayurveda, yoga and naturopathy, Unani, Siddha and homoeopathy), covers systems which originated in India as well as those which originated elsewhere. The systems that originated in India are Ayurveda, Siddha, yoga and naturopathy. Homoeopathy came to India from Germany in the early 18th century. The Unani system of medicine arrived from Greece through the Arab countries around the 9th century and has been assimilated over time. The salient features of these systems include the use of natural materials, affordability, low and simple technological inputs in drug manufacturing, cost-effectiveness, a culture-friendly and holistic approach, an emphasis on preventive health/health promotion, and a wide range of therapies and remedies. The proven strengths of these systems of medicine have been experienced in the areas of primary health care, lifestyle disorders, allergic and skin disorders, neuromuscular and musculoskeletal diseases, degenerative disease conditions, psychosomatic health problems, etc.

In post-independence India, there occurred a phenomenal growth in AYUSH and, as a result, a huge health-care infrastructure is now available in the public, private and voluntary sectors. State patronage has been accorded to these systems since independence, owing to their acceptance by the public and their ability to offer affordable and accessible health care to many people, particularly in rural areas. Traditional medicine continues to be popular despite the introduction of allopathic medicine. Approximately 6.5 AYUSH doctors per 10 000 population are available in the country.

The development of the AYUSH sector has reached a level where there is extensive infrastructure for administration and regulation, which includes a central department under the Ministry of Health and Family Welfare, regulatory bodies, research councils, national institutes, pharmacopoeia laboratories, etc.

The Department of AYUSH (originally named Department of ISM&H) was established in March 1995.

Policy support for ISM&H has existed since India gained independence in 1947. The objectives of the policy include: (1) expansion of health care through AYUSH; (2) mainstreaming of AYUSH facilities; (3) quality control and standardization of education and drugs; (4) research and development relevant to emerging health needs; (5) increased awareness about the potentials and strengths of AYUSH systems; (6) integrating AYUSH systems into the national health-care delivery system. To achieve these policy objectives, the following priorities have been identified by the Department of AYUSH: (1) strengthening of the AYUSH infrastructure; (2) integration into health-care delivery; (3) quality control and standardization; (4) sustained availability of raw materials; (5) research and development on the efficacy of the systems; (6) protection of traditional knowledge; (7) promotion and propagation of AYUSH; (8) revitalization and scientific validation of folk medicine. Of these, the standardization of drugs and quality control are seen as the priorities, and committees are developing uniform standards for the manufacture of traditional medicine drugs.

Both the National Health Policy of 1983 and the National Policy on ISM&H - 2002 envisage the integration of ISM&H with allopathic medicine. Mainstreaming AYUSH is the core strategy envisaged under the National Rural Health Mission, with the objective of improving outreach and quality of health delivery in rural areas. The objective of integrating AYUSH into the health-care infrastructure is to supplement the existing public health-care delivery system with natural, safe and consumer-friendly remedies which are time-tested, accessible and affordable. Under the National Rural Health Mission, AYUSH doctors and facilities are being co-opted into the existing health infrastructure.

Indonesia

Indonesia is an archipelago comprising about 17 000 islands, with 32 provinces and 440 districts. As reflected by the diversity of indigenous and medicinal plant species, Indonesia is the second richest country in the world in terms of biological diversity and, if marine organisms are included, it is even considered the most biologically diverse.

Traditional medicine has a long history of popularity in Indonesia and continues to be popular in both rural and urban areas. Traditional medicine in Indonesia is deeply rooted in local culture, and the empirical evidence and knowledge related to traditional medicine has been passed on from generation to generation. It has served as an alternative to allopathic medicine because it is considered lower cost and has less risk of side-effects.

Traditional medicine in Indonesia is classified as: (1) traditional medicine based on physical skill, e.g. massage, bone-setting, acupressure, acupuncture, chiropractic, etc.; (2) traditional medicines based on the use of herbal, animal and/or trace mineral formulas, e.g. herbalism, aromatherapy, homeopathy, etc.; (3) traditional medicine based on supernatural and/or metaphysical power, e.g. yoga, meditation, inner-power healing, etc.; (4) traditional medicine based on religion.

In Indonesia, traditional (herbal) medicine is called *Jamu* and was originally used for health maintenance and promotion, as well as to treat diseases. As of August 2007, a total of 9 737 herbal medicines had been registered, 1 039 of which were imported. Besides the registered products, *Jamu Gendong* (vendors) and fresh *Jamu* compounds are not required to be registered. Up to the end of 2006, there were 1 046 licensed traditional medicine enterprises in Indonesia, consisting of 129 large-scale enterprises and 917 small-scale enterprises.

Indonesian herbal medicines are technically classified into three categories, based on the preparation method, claims made and efficacy evaluation: (1) *Jamu*, described above, is also defined as herbal medicine whose safety and efficacy are recognized empirically and through traditional use; (2) “standardized herbal medicines” are herbal medicines for which the safety and efficacy have been recognized by a preclinical test, and a standardized extract of plant materials has been obtained; (3) phytopharmaca are standardized herbal medicines that have had their safety and efficacy confirmed by a preclinical and clinical test.

Modern research is required on Indonesian herbal medicines including a comprehensive understanding of their origin, distribution, resources, therapeutic use, processing, quality, safety and efficacy. The specific objectives of Indonesian herbal medicine research and development are: (1) to strengthen the Indonesian herbal medicine industry; (2) to increase effective use of Indonesian herbal medicines and assure their safety for community health care; (3) to explore and search Indonesian natural resources and ethnic medicines to develop herbal medicines with special emphasis on the protection of intellectual property rights.

The Indonesian Government has made great efforts to create a system of traditional medicine by using regulations, promoting technical and scientific advances, conducting inventories and standardizing to improve quality, safety and efficacy. To increase the evidence base for traditional medicine, many institutions, including universities, the Indonesian Institute of Sciences, National Agency for Drug and Food Control, etc., have conducted research on Indonesian traditional medicine independently or in collaboration with other research institutions in Indonesia or overseas, as well as with the traditional medicine industry.

Myanmar

Myanmar has an area of 678 578 km² with a total population of 55.4 million (2005-2006 figures). Traditional medicine has been chronicled as a prestigious part of Myanmar history. Currently, traditional medicine in Myanmar has four components: (1) *Bhesijjanaya* (which includes Ayurveda); (2) *Desananaya*; (3) *Netkhattanaya*; (4) *Vijjadhanaya*.

Before 1976, the knowledge of Myanmar traditional medicine was handed down from one generation to the next. In 1976, with the aim of preventing unqualified practice of traditional medicine, the Institute of Myanmar Traditional Medicine was established, with a systematic training programme. This is a three-year programme, including one year of internship, leading to a Diploma in Myanmar Traditional Medicine. Approximately 100 students are enrolled every year. In 2001, the University of Traditional Medicine began conferring the degree of Bachelor of Myanmar Traditional Medicine on graduates of a five year programme, including one year of internship. The annual enrolment is 175. Since

2003, Myanmar has also incorporated 36 hours of traditional medicine training into the undergraduate curriculum for Bachelor of Medicine and Bachelor of Surgery of all medical universities, in which students are assessed and successful candidates awarded a certificate of completion of the course. As of August 2007, there were 5 821 registered traditional medicine practitioners. The Myanmar Traditional Medicine Practitioners Association was formed in 2002, with the objective of identifying practitioners well-versed in their field and organizing traditional medicine seminars for physicians to bring practitioners together.

Routine scientific research, including botanical, chemical, pharmaceutical and pharmacological investigations, postmarketing surveillance and quality control for registered traditional medicine drugs is carried out through the Department of Traditional Medicine and the Department of Medical Research under the Ministry of Health. Monographs of Myanmar medicinal plants are being published. In addition, old palm-leaf manuscripts about Myanmar traditional medicine, written in Pali and Sanskrit, are also being conserved and published.

The goal stated in the 14th item of the National Health Policy is "to reinforce the service and research activities of indigenous medicine to international level and to involve [it] in community health-care activities". In Myanmar, there are two laws related to traditional medicine: (1) Traditional Medicine Drug Law and (2) Traditional Medicine Council Law.

Traditional Medicine has been integrated into the national health-care system, from education and training to registration, licensing of traditional medicine drugs and research. One unique and important feature of the health-care system in Myanmar is the coexistence of traditional and allopathic medicine. To support this coexistence, the Department of Traditional Medicine was established in 1989 as a separate department under the Ministry of Health, with a staff of 2 579. In addition, traditional medicine is used throughout Myanmar's health infrastructure to extend the scope of health services for both rural and urban areas, including 237 district and township traditional medicine dispensaries extending to the border areas and dispensing care free of charge. In addition to these public institutions, private traditional medicine practitioners are also taking part in health-care provision. According to the records, traditional medicine is dispensed to 6 000-8 000 inpatients and 100 000-140 000 outpatients annually by hospitals and dispensaries. Traditional medicine practitioners also go into the community to provide services to 150 000-200 000 patients annually.

Sri Lanka

Sri Lanka is a country of rich heritage, including its indigenous system of medicine. Sri Lankan traditional medicine is called *Desheeya Chikitsa*, which includes contributions from Ayurveda from North India, the Siddha system of medicine from South India, and the Unani system of medicine from Arab countries. Ayurveda in Sri Lanka is defined by the Ayurveda Act No. 37 of 1971 as "Ayurveda, Siddha, Unani, *Deesheya Chikitsa* and surgery and any other system of medicine indigenous to Asian countries and recognized as such by their respective governments and the expression Ayurvedic shall be construed accordingly".

Traditional medicine is widely used by the population, even when allopathic medicine is available. Primary health care is indirectly undertaken by traditional

medicine practitioners: however, allopathic medicine still dominates the health sector, owing to Government support and the longer time necessary for successful treatment with traditional medicine. However, the population displays a general faith in traditional medicine and will use it even in conjunction with allopathic treatments. Access to and affordability of the traditional medicine sector have gradually improved in recent years, with many Government medical institutions providing Ayurveda/traditional medicine care: 3 out of 19 teaching hospitals, 49 out of 54 provincial hospitals, 230 out of 407 rural hospitals, and 123 out of 192 central dispensaries. All 38 base hospitals and 155 district hospitals provide allopathic care. In 1999, there were 28 857 inpatient and 4 071 559 outpatient Ayurveda/traditional medicine visits, compared with 3 825 868 inpatient and 41 325 304 outpatient allopathic medicine visits.

As of December 2005, there were 17 503 traditional medicine practitioners who were registered under the Sri Lanka Ayurveda Medical Council. According to statistics available in June 2005, of all general physicians Ayurveda accounts for 84.6%, while Siddha and Unani systems account for 12.7% and 2.7%, respectively. In addition to registered traditional medicine practitioners, there are more than 8 000 unregistered traditional medicine practitioners from reputed practitioner families.

A strategy to protect traditional medicine knowledge is currently being implemented, and includes: (1) a programme to promote studying under a guru to conserve knowledge that is passed down from generation to generation; (2) the conservation of Ola leaves on which secret formulas are written; (3) publishing handbooks on home remedies; (4) conducting awareness programmes to make people aware of home remedies. New research on traditional medicine is a strategy for the future.

A national policy on Sri Lankan systems of traditional medicine is in preparation. An extensive plan to use traditional medicine for primary health care is being implemented to address the following key challenges: (1) no separate policy for the traditional medicine sector; (2) no integration with allopathic health sector; (3) lack of financing compared with the allopathic system; (4) less recognition rather than equal recognition for traditional medicine in comparison with allopathic medicine; (5) less institutional capacity for traditional medicine; (6) lack of legal provisions for sector improvement; (7) unavailability of raw material; (8) underestimation of the potential of traditional medicine.

Thailand

Thai traditional medicine originated in Thailand during the Sukhothai period (1238-1377 AD) and progressively developed as a means of national healthcare until the introduction of allopathic medicine in the early 20th century. The revival of traditional medicine began around 1978 after the adoption of the Declaration of Alma-Ata, and the commitment to integrate traditional medicine appropriately into the community health system has continued, as stated in the National Economic and Social Development Plans (1992-2010).

Traditional medicine services are provided through various channels. As of August 2007, these included traditional medicine clinics operated by licensed practitioners, centres for health promotion through traditional medicine (150 centres have been established in collaboration with hospitals), drug stores and

community or provincial/general hospitals. Hospital services can be divided into four levels: Level 1 – establishments which sell herbal medicines; Level 2 – establishments which sell herbal medicines and provide traditional medicine services, e.g. Thai traditional massage, hot herbal compresses, herbal steam baths, etc.; Level 3 – establishments which provide level 2 services and also serve as training centres for traditional medicine; Level 4 – establishments which provide level 3 services and also produce herbal medicines. According to a 2006 survey, of 96 regional/general hospitals and 726 community hospitals, 95.83% and 93.25%, respectively, provided Level 2 services or above, while 91.91% of the 9 781 health centres provided Level 1 services or above. Services provided in a hospital setting are guided by published standards.

Education for Thai traditional medicine practitioners can take the form of an apprenticeship with a licensed practitioner, or can be achieved in formal educational institutions. There are 15 universities in Thailand that provide a bachelor's degree in traditional medicine. Of licensed traditional medicine practitioners surveyed in 2006, there were 15 806 practitioners of Thai traditional medicine, 21 675 practitioners of Thai traditional pharmacy, 4 025 practitioners of Thai traditional midwifery, 79 practitioners of Thai traditional massage, and 541 practitioners of applied Thai traditional medicine.

In order to promote the use of traditional medicine and herbal medicines in the health-care system, the Ministry of Public Health has: (1) published a list of 11 traditional medicine preparations in the National List of Essential Drugs for 2006; (2) identified 27 traditional medicine preparations with detailed formulae, indications and dosages as household remedies that could be sold with no selling license; (3) recommended 61 medicinal plants to be used in primary health care.

In 1993, the Institute of Thai Traditional Medicine was established under the Department of Medical Services to play an active role in the revival of traditional medicine and its integration into the health system. The Department for Development of Thai Traditional and Alternative Medicine (DTAM) was established in October 2002 as a new department under the Ministry of Public Health, comprising the Institute of Thai Traditional Medicine, Division of Alternative Medicine and Office of the Secretary.

According to the policies of the new Government, traditional medicine has become a part of the national health policy. DTAM, in collaboration with other related organizations, is responsible for the implementation of this policy by: (1) strengthening the body of knowledge of traditional medicine through research and development; (2) transferring knowledge about traditional medicines that have been selected and well-studied to the public and healthcare personnel through training, demonstration, exhibition, printed materials and various other media; (3) developing herbal products and traditional medicine services to meet international standards. In addition, it is the responsibility of the Ministry of Public Health and DTAM to increase the number of health service facilities at all levels that provide traditional medicine services, and add more traditional medicine services to be covered by the universal coverage programme of the national health security system.

Like many other countries, Thailand has a national policy to integrate traditional medicine into the mainstream health-care system. The integration process requires strengthening of the body of knowledge of traditional medicine, human

resource development, developing quality herbal medicinal products, and commitment and financial support from the Government. All of these can be achieved by good administration, an information system, research and development, a certified educational system and training curriculums, and good collaboration amongst concerned institutes and organizations at both national and international levels.

Western Pacific Region

Cambodia

Cambodia has a surface area of 181 035 km² and a total population of approximately 14 million. Cambodian traditional medicine was particularly developed in the 12th century, and continued to be widely used as the only affordable form of health care for most people when Cambodia was under the French protectorate. During the rule of Pol Pot in the 1970s, many documents were destroyed or lost and many intellectuals, monks, and traditional healers killed. Currently, traditional medicine is still used in the household, but it has now also entered the public and private health-care sector.

Monks and traditional healers are among those who represent the private sector and represent an important part of traditional medicine use in primary health care. Usually, patients use ground or chopped parts of medicinal plants in decoction, liqueur or powder forms. Plant extracts can be used alone or in combination with other ingredients for external or internal use.

The National Centre of Traditional Medicine, which represents the public sector, supports traditional healers by providing basic training in primary health care. The National Centre also provides training for pharmacy students in medicinal plant recognition. Besides its role in training, the National Centre is responsible for collecting information on: (1) traditional remedies in primary health care; (2) medicinal plant species of commercial or industrial interest; (3) diseases or disorders treatable by traditional medicine; (4) books from Bali which describe traditional medicine and reproduce the experiences of intellectuals, monks and traditional healers; (5) how to promote the appropriate use of traditional medicine in the community.

Challenges that Cambodia currently faces in terms of integrating traditional medicine into primary health care include a lack of: (1) facilities and expertise for quality control of medicinal plants; (2) information and standards/models to guide people on how to use traditional medicine properly in primary health care; (3) information and standards/models on the cultivation of medicinal plants to ensure the quality of raw materials; (4) experience and information on how to prepare a traditional medicine curriculum at a university level; (5) appropriate methods for evaluating the efficacy, safety and quality of medicinal plants and products; (6) programmes for disseminating information and training on the use of traditional medicine in primary health care to the public at the community level; (7) interregional conferences to share information and experience of promoting the use of traditional medicine for primary health care.

China

Traditional Chinese medicine is the essence of traditional Chinese culture and forms an important part of medical sciences in China. Traditional Chinese medicine is completely integrated into the wider health system in China, and has been used for treating chronic diseases, difficult and complicated cases, geriatric diseases and functional diseases. Traditional Chinese medicine also plays an important role in first-aid and in prevention and treatment of infectious diseases, such as severe acute respiratory syndrome (SARS) and AIDS.

Traditional Chinese medicine has become increasingly popular because of advantages which include being safe, effective, economical, simple in terms of diagnosis and treatment, flexible in terms of methodology and holistic in nature. In terms of cost savings, in 2006, the average fee for an outpatient in a traditional Chinese medicine hospital was 98 Chinese yuan, which is 27.9 Chinese yuan less than the medical fee at a comprehensive hospital. The average fee for an inpatient in a traditional Chinese medicine hospital is 3 499.1 Chinese yuan (including 1 500 Chinese yuan for herbal medicines), which is 1 019.8 Chinese yuan less than a comprehensive hospital.

In 2006, 17.1% of patients who received diagnosis and treatment did so at a traditional Chinese medicine hospital, and 12.4% of inpatient visits were at a traditional Chinese medicine hospital. In 2004, 82.83% of the types of diseases listed in the International Classification of Diseases, 10th Revision (ICD-10) were treated with traditional Chinese medicine. In addition, 54.7% of community health-care stations and 50% of village clinics can provide traditional Chinese medicine services. In urban areas, the traditional Chinese medicine service network includes integrated hospitals, traditional Chinese medicine hospitals, separate traditional Chinese medicine departments in integrated hospitals, community health-care organizations and traditional Chinese medicine outpatient departments and clinics. In rural areas, the service net consists of traditional Chinese medicine hospitals at county level, departments in village and town hospitals, and clinics. The traditional Chinese medicine service network continues to develop in rural areas, and urban community health-care organizations are encouraged to include traditional Chinese medicine in their services. Traditional Chinese medicine is integrated into the medical insurance reimbursement system.

In 1998, China issued the Law on Licensed Doctors of the People's Republic of China. The Law states that Chinese people must obtain the qualification of doctor before registering and practising in the medical field. This includes traditional medicine practitioners who may be qualified in traditional Chinese medicine, traditional Chinese medicine integrated with Western medicine, Tibetan (*Zang*) medicine, Mongolian (*Meng*) medicine, *Wei* medicine, or *Dai* medicine. In 2005, 523 934 people qualified as Licensed Doctor and Licensed Assistant Doctor in traditional Chinese medicine, 54 583 qualified as Licensed (Assistant) Doctor in Traditional Chinese Medicine integrated with Western Medicine, and 5 418 people qualified as Licensed (Assistant) Doctor in Traditional Chinese Ethnic Medicine. China has also issued the Regulation of the People's Republic of China on Traditional Chinese Medicine and the Executive Byelaw on Village Doctors to guarantee the quality of rural doctors.

In order to guarantee and accelerate the legalization and standardization of traditional Chinese medicine, China has issued a series of regulations on medical administration by: (1) formulating standards for medical administration of traditional Chinese medicine and strengthening the supervision of traditional Chinese medicine organizations and personnel; (2) formulating standards for traditional Chinese medicine techniques to guide and standardize clinical practice. Although China has formally integrated traditional medicine into its primary health care systems, it will continue to strengthen support for traditional Chinese medicine through the establishment of finance systems, human resource development, scientific research, promotion of traditional Chinese medicine and commitment to furthering the integral role of traditional Chinese medicine in maintaining human health.

Lao People's Democratic Republic

In the Lao People's Democratic Republic, there is a long history of traditional medicine use. Traditional medicine continues to provide tools for treating diseases and is supported by both the private and public sector.

The private sector consists of factories and grass-roots healers. Some of the larger private-sector manufacturers of traditional medicine finished products are Kanoukham (Golden Mouse Brand), Phayanak Traditional Pharmacy (Naga Brand) and One Tiger Brand. Currently, 116 traditional medicine products are registered, 55 of which are domestic and the rest imported.

The public sector consists of dedicated areas within the Ministry of Health, which include a traditional medicine division under the Food and Drug Department, a Traditional Medicine Research Center, and local traditional medicine stations at a provincial level. There are also two pharmaceutical factories under the Ministry of Health that produce traditional medicine, one of which, Pharmaceutical Factory No. 3, increased traditional medicine production from 7% (2004) to 35% (2007) of total sales, an increase that was also reflected in the private sector.

Traditional medicine is addressed in one of the 13 components of the National Drug Policy Programme" (1993 and 2003). In addition, there is a Law on Drug and Medical Products (2000) and Prime Ministerial Decree No. 155 (2003) on promoting the use and preservation of medicinal natural research.

The integration of traditional medicine into primary health care is currently being promoted by conducting training courses for healers, as well as disseminating published information in the booklet "Medicinal plants in your garden" on the use of simple medicinal plants for primary health care. Some challenges to the integration of traditional medicine into primary health care include a lack of: (1) technical knowledge; (2) facilities for quality control; (3) personnel trained in traditional medicine; (4) financial support for research projects. Some current needs include: (1) a national standard or pharmacopoeia as a reference for traditional medicine manufacturers; (2) human resource development; (3) dissemination of knowledge on medicinal plants and traditional medicines through various media; (4) regular budget support from the Government or donors.

Mongolia

Mongolia, in 2006, had a total population of 2.5 million and a per capita GDP of US \$1 013. Mongolian traditional medicine has a long history, starting with shamanism in ancient Mongolia. Mongolian traditional medicine evolved with the introduction of Buddhism and Indian-Tibetan traditional medicine after the 16th century. However, in the period 1937-42, Mongolian traditional medicine knowledge was repressed and destroyed in favour of Western medicine. Currently, Mongolian traditional medicine is in a new stage of development that has existed since 1959.

Traditional medicine service delivery is organized at levels similar to those of general health service delivery: primary – family group practices, *soum* (village) hospitals; secondary – *aimag* (province) and district general hospitals; tertiary – clinical and specialized hospitals. Currently, there are several traditional medicine organizations and centres in each province. According to 2006 health statistics, the percentage of hospital beds devoted to traditional medicine rose from 0.5% in 2002 to 5% in 2006, while the total proportion of inpatients admitted to traditional medicine departments rose from 3.5% to 4.15%. During the same period, the number of traditional medicine doctors increased dramatically from a national total of 27 doctors to 1.1 doctors per 10 000 people. Approximately 10-15% of graduates of medical schools are Doctors of Mongolian Traditional Medicine. A study by WHO, the Ministry of Health and the Public Health Institute in 2003 showed that 71% of patients used a combination of traditional medicine services and Western methods. The traditional medicine drug industry has also grown, and 260 different kinds of traditional medicine are manufactured domestically, although only 78% of raw materials needed locally are supplied from domestic resources. The traditional medicine drug industry is regulated by the Law on Drugs, 1998 and the State Policy on Drugs, 2002-2011. Accordingly, certain standards and guidelines have been developed for traditional medicine diagnoses and treatments, case-records and raw materials.

Since 1959, extensive research has been conducted in Mongolian traditional medicine, especially in relation to medicinal plants. The Institute of Traditional Medicine was established in 1961, and the Institute of Natural Compounds in 1973. Traditional medicine research has been intensified since 1990 and the main areas and priorities for research are as follows: (1) study of Mongolian traditional medicine theory; (2) clinical studies and trials; (3) investigation of medicinal plant raw materials. Research funding for traditional medicine has more than doubled over the last 10 years. The main research and training institutions in Mongolian traditional medicine are the School of Traditional Medicine, Health Sciences University of Mongolia, Traditional Medicine Science Technology and Production Corporation of Mongolia, Otoch Manramba Traditional Medicine School, Monos Medical Institute and the Hepatology Centre of Traditional Medicine. In the field of phytochemistry and pharmacognosy, more than 80 Mongolian medicinal plants have been investigated and 650 pure substances have been isolated and identified, with their structures, between 1973 and 2003. More than 130 new natural compound structures have been discovered from Mongolian plants, using spectral techniques and analysis.

In contemporary Mongolia, a number of policy papers have been issued to enhance the legal environment of Mongolian traditional medicine development, such as some acts of the Health Law in 1998 and the State Policy to Develop

Mongolian Traditional Medicine in 1999. The objectives stated in this policy paper were: (1) to expand research on traditional medicine and improve quality and access to traditional medicine services; (2) to upgrade the structure of hospitals providing traditional medicine services in provinces and cities; (3) to improve the quality, safety and efficacy of herbal medicines; (4) to improve human resources capacity.

The main challenges in achieving Mongolia's traditional medicine policy objectives are: (1) shortage of health professionals; (2) inadequate budget for research; (3) inadequate laboratory equipment and lack of reagents. Some future activities to help develop the traditional medicine sector will be: (1) to develop standards for traditional diagnosis and treatment methods for common diseases and standards for the structure of hospitals providing traditional medicine; (2) to develop comprehensive training curriculums for traditional medicine; (3) to expedite the development of standards for raw materials; (4) to improve packaging of medicines and provide safe and effective herbal products; (5) to expand clinical research and conduct clinical trials on the effectiveness of new herbs; (6) to improve quality control for herbal medicines by strengthening laboratory services capacity; (7) to develop a licence to ensure the quality of commonly used herbal medicines, with appropriate indicators for quality assurance.

Viet Nam

Viet Nam is situated in South-East Asia and has a long history of traditional medicine, which is recognized by the Government as a part of the nation's cultural heritage that needs preservation, promotion and development. Vietnamese traditional medicine is composed of two main parts: Oriental medicine with Vietnamese influence and ethnic medicine originating from 54 ethnic groups. Upon the country's independence, the Vietnamese Government paid attention to the development of traditional medicine. President Ho Chi Minh, the Vietnamese Government leader, stated: "We should attach special importance to studying integration of traditional medicine and modern medicine".

Overall, 20% of all patients are treated with traditional medicine. This percentage varies by region: for instance, it is lower in urban areas than in rural and mountainous areas, where the rate is closer to 30-40%. The Ministry of Health has issued a list of essential traditional medicines, comprising 60 substances for treatment of nine common disease groups at the grass-roots level, and the model is being properly and effectively applied. Traditional medicine in Viet Nam is provided through the hospital system under the Ministry of Health, with 100% of provincial general hospitals having a traditional medicine department, and traditional medicine units are available in more than 60% of commune health stations.

Alongside the public traditional medicine system, the Vietnam Oriental Medicine Association exists at the central level, but also at the provincial, district and commune levels, to promote traditional medicine at the grass roots. As of 2007, there were more than 25 000 members nationally. The Association's activities mainly focus on: (1) retention, preservation and development of useful formulae and local medicinal herbs; (2) enhancement of expertise; (3) scientific research, translation and documentation.

Viet Nam also has a large number of private traditional medicine practitioners, who make a significant contribution to primary health care with more than 10 000 private traditional medicine facilities, three pharmaceutical raw material companies, dozens of pharmaceutical companies manufacturing herbal medicines, dozens of limited companies and over 400 private entities licensed for production and trade of herbal medicines.

In recent years, the Vietnamese traditional medicine sector has collected over 40 000 traditional remedies from 13 000 herbalists and the general population. It has also identified 3 000 floral species classified in 238 families and over 100 animals used for producing medicines. There are more than 1 000 research studies on the application of traditional medicines and their combination with modern medicine.

In order to increase the quality of primary health care through the use of traditional medicine, traditional medicine practitioners should be trained in allopathic medicine so that they can integrate the two practices effectively. Therefore, the Vietnamese Government has paid much attention to the development of traditional pharmaceutical and medical education systems with the establishment of: (1) a National Traditional Pharmaceutical and Medical Academy; (2) two departments and nine units of traditional medicine in medical and pharmaceutical universities; (3) departments or units of traditional medicine in medical colleges and secondary medical schools in all provinces.

In 2003, the Government of Viet Nam promulgated the National Strategy for Development of Traditional Medicine to 2010, which focuses on: (1) developing a national policy on traditional medicine (including intellectual property rights); (2) perfecting the management network of traditional medicine pharmacies; (3) perfecting the health delivery network; (4) developing human resources; (5) developing medicinal materials and traditional medicine products; (6) promoting international cooperation on traditional medicine. However, the strategy is faced with challenges including: (1) insufficient State investment; (2) an uncoordinated traditional medicine network; (3) need to upgrade infrastructure and equipment for traditional medicine; (4) the low priority accorded to traditional medicine research; (5) the improvements required in order to comply with good agricultural and collection practices (GACP) and good manufacturing practices (GMP).

Annex 6: Summary of presentation – Mongolian model¹

Chapter 1. Executive summary

During the three years since its commencement in 2004, the project has reached out to the residents of rural areas, who do not have adequate access to health services, through the means of traditional medicine, a branch of medicine officially recognized by the Ministry of Health of Mongolia, with the objective of improving health services in Mongolia. The following activities have been undertaken to this end:

- the training of medical practitioners in traditional medicine
- the provision of mobile traditional medical services to people in rural areas
- the distribution of family pharmacy kits containing traditional medicines.

As part of training activities, rural doctors specializing in Western medicine have been trained in the basic concepts of traditional medicine, and in the use of the specific medicines that are contained in the family pharmacy kit. In terms of numbers, 540 people took part in the training during the three-year period, and they are now applying the knowledge they have gained in their everyday work of providing health services.

Expert medical practitioners provide mobile traditional medical services to rural people from village hospitals covered by the project. The provision of mobile health services answers the demand of people who live in rural areas for traditional medical services, which had previously been unmet by the village hospitals. During the three years of the project, over 8 000 people have received the mobile health services.

The family pharmacy kits, which are loaned to families, contain traditional Mongolian medicines which are more affordable than Western medicines. The distribution of such kits is an almost unique practice that aims to establish a sustainable health-service system. This project has attracted considerable attention from health-sector officials.

As well as 12 types of traditional medicines, ranging from those intended for ailments of the stomach and intestines to those for fever, the family pharmacy kit contains a thermometer, cotton wool and gauze, altogether worth a total amount of US\$ 8.00. The kit is used on the same principle as a hotel minibar: people pay

¹ Adapted from: *Promoting traditional medicine in Mongolia: project report for 2004-2006*. Implementing organization: Vansemeruu-Mongolia; created and funded by: The Nippon Foundation; collaborating partner: the Ministry of Health of Mongolia; original report dated August 2007.

only for the medicines they use, essentially a “use first – pay later” principle. This can lead to a smaller financial burden on people who would otherwise have to spend money on essential medicines in order to be prepared for the eventuality of an illness.

Another distinctive feature is the visits by doctors to these households to check pharmacy kits, replenish the kits and collect payment for the medicines used, when residents can also receive medical advice. The medicines included in the family pharmacy kit, their medical effects and their prescriptions are officially recognized and approved by the Ministry of Health of Mongolia, and represent a selection of the most useful essential medicines of their kind.

When the project started in 2004, family pharmacy kits were distributed to 2 000 families (10 000 people) in four villages in three provinces of the 21 provinces in Mongolia. The number then grew to about 10 000 households (50 000 people) in 15 villages in five provinces in 2005, and has been maintained at this level until now. The collection of payments for the medicines used and the replenishment of the kits have been carried out with the help of rural medical practitioners, who have visited households once every spring and autumn for these purposes.

The distributed medical kits are still in the possession of the households. During the rounds of payment collection and replenishment between January and December 2006, the doctors visited all 9 615 households (a coverage rate of 100%). Precisely 9 423 of these households had used some of the medicines (a utilization rate of 98.0%), 9 265 of them paid for the medicines they used (a payment rate of 98.3%), and 84.3% of the total price for the medicines used has been collected (a payment collection rate of 84.3%).

A survey was conducted in 2005 on the convenience of use and the effect of medicines among the 2 000 households that had received family pharmacy kits in 2004. Out of the 1 515 households that took part in the survey, 1 121 (74.0%) responded that the kits were convenient to use, and 1 113 families (73.5%) said the medicines they used had been effective, which was an indication of the people’s high opinion of this service.

In the villages where the pharmacy kits have been distributed, a study was made on the number of requests for house-calls received by the village hospitals before and after the distribution. The result of the study indicated that there has been a downward trend in the number of house-calls requested each year. For the 15 villages in five provinces where pharmacy kits were distributed in 2004 and 2005, the total number of requests for house-calls received by the 15 village hospitals, which had amounted to 35 753 in 2003, had decreased to 29 437 in 2006, a decrease of 17.7%. Apart from the decrease in house-calls that has greatly reduced the burden on the doctors’ workload and budget, the results also indicate a considerable improvement in the quality of rural hospital services.

Within 3-4 years of further project implementation, the plan is to enhance and fine-tune the system of family pharmacy kits, and to turn the project into a model for improving medical services using traditional Mongolian medicine, which will then be handed on to the Ministry of Health of Mongolia for replication.

Chapter 2. Project overview

Project name: Promoting traditional medicine in Mongolia.

Area covered: 15 villages in five provinces of Mongolia.

Scale of coverage: Approximately 50 000 people, predominantly herdsmen.

Implementing organization: Vansemeruu-Mongolia (a nongovernmental organization registered in Mongolia).

Funding agency: The Nippon Foundation (Tokyo, Japan).

Budget: US\$ 420 000 (2006).

Project start date: January 2004.

Main project activities

- Training of medical practitioners in traditional medicine.
- Provision of mobile traditional medical services to people in rural areas.
- Distribution of family pharmacy kits containing traditional medicines.

Purpose of project activities

- Promotion of Mongolian traditional medicines that harmonize and integrate with Western medicines.
- Creation of an affordable and highly effective health service system for people in rural areas who do not have adequate access to medical services, and vulnerable groups of people who cannot afford expensive Western medicines.
- Developing the project into a model project that establishes an effective “social system”, which could be replicated by the Government of Mongolia on a nationwide basis.

Chapter 3. Current state and future direction of the project

1. Challenges faced by public health in Mongolia

Following the disintegration of the Soviet Union, the Government of Mongolia set out on the path of transition into a democratic society, and embraced the principle of the market economy in 1992. However, the attempt to revive industry failed owing to sudden changes in the social structure, which in turn led to economic hardships. The health system that had provided the population with Western medical services free of charge had been established with many years of financial, technical and technological support from the Soviet Union, and the latter's disintegration led to the cessation of this assistance. Formerly free services suddenly had to be paid for, even though their quality and accessibility had deteriorated. Western medicines that met most of the demand for medication in the domestic market became expensive, rare and inaccessible for low-income, vulnerable groups in the population.

Statistics for 2005 indicate that 40% of the population of 2.56 million people lives in the capital city, and the remaining 60% in rural areas. There are 6 788 general medical practitioners at the national level, with 60% of them working in the capital city and 40% in rural areas. The national average is one doctor per 378 people: one doctor per 237 people in Ulaanbaatar, and one doctor per 588 people in rural areas. These statistics show that there are twice as many people for rural doctors to treat than for urban practitioners. In addition to the inadequate number of general medical practitioners, the vast distances separating rural people create further challenges in ensuring sufficient access to health services. Furthermore, a village only has one hospital, which has an average annual budget of US\$ 1.00–2.00 for medication for each resident, and a capacity that does not ensure adequate availability of services for rural people.

In these circumstances, interest has grown in reviving traditional Mongolian culture along with traditional medicine. Traditional medicine provides for an array of medical services, including acupuncture, cauterization, manual therapy, bloodletting and therapies using mare's milk, which all commonly fit into the lifestyle of people in rural areas. The medications use raw materials from herbal, animal and mineral sources native to Mongolia, which helps to make medical services more affordable for the people. This shows there is considerable potential for the use of traditional medicine alongside Western medicine, a factor that underlies the added confidence and interest in the revival of traditional medicine.

Traditional Mongolian medicine has a history over 2000 years long, and is the intellectual property of the Mongolian people. Traditional medicine comprises accumulated knowledge and experience that are rooted in the study of the human body both in illness and health. Traditional medicine is in holistic harmony with the lifestyle of the people and their customs and habits. The Tibetan medicine that sprang from Tibetan Buddhism was first introduced in Mongolia around the 16th century, and merged with traditional Mongolian medicine to give birth to an array of novel therapeutic methods. Mongolia was dependent on the Soviet Union during its 70 years of socialism, during which the practice and study of Buddhism and traditional medicine were prohibited. Thousands of monks, who continued the tradition and handed down the knowledge and methods to following generations, became victims of oppression, leading to a period of stagnation in the growth of traditional medicine. Nevertheless, people's faith in traditional medicine, a part of their lifestyle, has persisted.

The State Policy on the Development of Traditional Mongolian Medicine, which outlines policy directions for the development of traditional medicine in 19 clauses, was adopted in 1999 on the initiative of the President of Mongolia. However, policy implementation is lacking, since only 307 out of a total of 6 788 (4.5%) general medical practitioners in the country are traditional medical practitioners. Furthermore, there are only six pharmaceutical companies, approved by the Ministry of Health, that produce traditional medicines. The gap between the demand for traditional medicine and treatments and the existing capacity to produce and provide is evidently very large.

2. Purpose and initial stages of the project

In the light of the above situation, The Nippon Foundation, the biggest private foundation in Japan, carried out numerous surveys and research activities to explore the possibility of improving public health through traditional medicine in Mongolia. The research focused on the possible use of traditional medicine alongside Western medicine, the depth of the general faith in traditional medicine, the affordability of traditional medications, the lifestyle of the herdsmen living in remote areas away from hospitals, and other features of Mongolian society. As a result, the decision was reached to make use of traditional Mongolian medicine and of the system for distributing medicines (family pharmacy kits) that has existed for a long time in Japan. The main components and the purpose of the project were described in the section “Project overview” above. The Nippon Foundation therefore established Vansemeruu-Mongolia as a implementing organization for the project in Mongolia at the end of 2003.

The executive summary above briefly describes the family pharmacy kit system. With a tradition dating back over 330 years, this system ensures the sustainable supply of medicine to households in Japan, which has substantially contributed to public health over the centuries. It is a sizeable business in Japan even today, with over 30 000 people working in the sector of family pharmacy kits.

A distinctive feature of the family pharmacy kits system is that the kits are provided to families without prepayment, requiring them to pay only if they have used the medicines, and only the price of the particular medicines they have used. This is the “use first – pay later” principle. Furthermore, personnel responsible for maintaining the pharmacy kits pay regular visits to the families for the purposes of collecting payment for the medicines that have been used, and replenishing them with new ones. This system removes the financial burden of having to pay for drugs that might or might not be useful later. The system provides families with essential medicines without prepayment, which they can use even when cash may not be instantly available.

In a country like Mongolia, even though such households need to have medicines available to them at any given time, the only times of the year when rural families can pay for medicines is when they can sell the wool, cashmere and meat that are produced by their households. The family pharmacy kits system is being piloted to respond to these challenges and to ensure that rural households are able to obtain immediate access to medicines when necessary.

3. Results achieved in the period 2004-06

3.1 First year: 2004

3.1.1 Activities

The project was initiated in January 2004. In order to launch the project, The Nippon Foundation consulted expert practitioners of traditional medicine in Mongolia and established a new organization named Vansemeruu-Mongolia, a nonprofit entity registered with the Government of Mongolia. With a grant from The Nippon Foundation, Vansemeruu-Mongolia started the project with a local implementing partner on a commission basis, with expert practitioners participating as members. In 2004, the following activities were implemented.

Selection of villages for project implementation: Upon consultation with the Professional Council, consisting of professional traditional medical practitioners of the implementing partner, four villages in three provinces were selected, located at a distance of 200–300 km from Ulaanbaatar and located in steppe, highland and desert areas.

Selection and packaging of traditional medicines for inclusion in the family pharmacy kit: Twelve types of medication were selected from over 300 types of traditional medicine, the composition and effects of which are recognized and approved by the Ministry of Health of Mongolia. These include medicines that are frequently sought out by rural people for common ailments such as those of the stomach and intestines and for cold and fever. Additionally, iodine solution, disinfectant alcohol, adhesive tape, cotton wool, gauze and a thermometer were included in the family pharmacy kit. The medicines were procured by issuing a call for tenders from the six companies that produced traditional Mongolian medicines. Three companies were selected upon consultation with the implementing partner. Until recently, traditional medicines were sold on the market in hand-wrapped paper packages with no indication of the date of manufacture or expiry. Now, the pharmaceutical companies were required to package the project medicines in paper containers using automatic packing equipment, with each dose wrapped separately inside the package and the dates of manufacture and expiry printed clearly on the outside. This initiative resulted in adequate factory packaging for traditional medicines for the first time in the history of Mongolian traditional medicine. The price of the family pharmacy kit was set at 10 000 Mongolian tögrög (MNT – approximately US\$ 8.30) based on market prices in Mongolia. The outer container for the kit is portable, waterproof, resilient and made of plastic so that it will be convenient to use even during moving seasons.

Requests for collaboration in the distribution, payment collection and replenishment of family pharmacy kits: Requests were forwarded to the village doctors for their assistance and collaboration in the distribution of the family pharmacy kits, the collection of payments for the medicines used, and the replenishment of the kits. According to their terms of reference, each village doctor has about 100–150 herder families under his/her responsibility, and is required to pay each family a visit once a month. After the distribution of kits, doctors were requested to make a regular round tour of the recipient households for payment collection and replenishment of medicines.

Selection of households and distribution of family pharmacy kits: The criteria for the selection of families to receive the family pharmacy kits were whether the families fully understood the purpose of the medical kits; whether they were interested in getting involved; whether they could afford and were willing to pay for the medicines used; and whether the family included infants, small children and elderly people. Agreements were signed with the recipient households, which were requested to collaborate and follow the regulations for the family pharmacy kits. Judging by the ratio between the total number of households in the area and the number of recipient families, one half of

all families became recipients of medical kits. The distribution was carried out between the months of August and October, with the help of village doctors.

Collection of payments for the medicines used and replenishment of the kits: Payment collection and replenishment activities were carried out in December 2004. Although only two months had passed since the distribution, out of the 1 589 households visited, 854 (53.5%) had used the medicines, and 288 of that number (33.7%) paid for the medicines they had used. Compared with the monetary value of the medicines used, the payment collection rate was 44.8%.

Training of rural medical practitioners in the concepts of traditional medicine: Around 300 medical practitioners in three provinces that specialized in Western medicine received 48 hours of training (eight hours a day for six days) in traditional medicine. They were also provided with knowledge about the medicines inside the family pharmacy kits. Following this training, the village doctors were able to offer suitable advice about the medications and their use to families to which pharmaceutical kits had been distributed.

Provision of mobile health services by traditional medical practitioners: A team composed of five Professional Council members, all expert traditional medical practitioners, visited the four villages in the three provinces, and provided diagnostic services free of charge for three days. This action was based on the needs and demands of rural residents for diagnosis and treatment in traditional medicine, and allowed for the detection and treatment of more serious chronic ailments which could not be cured with the medicines in the family pharmacy kit. A total of around 2 000 people received these diagnostic and treatment services in 2004.

3.2 Second year: 2005

3.2.1 Activities

The implementation of the project continued in 2005 in collaboration with the local implementing partner. When an evaluation determined that the project and the family pharmacy kits would make a substantial contribution to improving medical services for herdsmen, the area of coverage expanded in 2005 from four villages in three provinces to 15 villages in five provinces, with an added focus on activities related to the family pharmacy kit. Activities similar to those of the previous year were implemented, this time with the policy that the training of medical practitioners and the provision of mobile medical services should perform secondary roles in which they would both support and complement the pharmacy kits system. Furthermore, an International Workshop on Traditional Medicine was held in Ulaanbaatar City in August, during which the project activities were presented to representatives of WHO and Government representatives of three Asian countries, at which time possibilities for future collaboration were explored.

An additional 8 000 family pharmacy kits were distributed: In addition to the 2 000 pharmacy kits distributed in 2004 in four villages in three provinces, 8 000 more kits were distributed in the four-month period July-October 2005 to households in the newly covered areas. The total number

of participating families grew to 10 000 (approximately 50 000 people), and the ratio between recipient families and ones not covered by the project was 1:2.3, which closely maintained the ratio set the previous year.

Progress achieved in the family pharmacy kit system: The following changes were made on the basis of the 2004 experience.

- The number of household visits for the purposes of payment collection and replenishment were reduced from three annual visits to two (one in April/May and one in October/November).
- Certain medicines in the pharmacy kit were replaced by alternative medicines that were better suited to the needs and demands of the people participating in the project.
- Agreements were signed with the village doctors assisting with the distribution of family pharmacy kits, the collection of the payments for medicines used and replenishment of medicines. Incentives such as reimbursement of the cost of petrol used during their visits were provided.
- One of the village doctors at each village hospital was made responsible for the family pharmacy kits. The directors of the village hospitals were requested to take on this administrative responsibility, and agreements were signed. The assignees were given incentives and reimbursed for petrol used in the fulfilment of this duty.
- Collection of payments for medicines used, and replenishment: Payment collection and replenishment of medicines were carried out in April and May among the 2 000 households that had received the pharmacy kits in 2004. The October and November visits included the additional 2 040 households who had received their kits in August. Payment collection and replenishment of medicines was carried out among 4 040 families in total.

Conducting training for general practitioners: In 2004, 300 doctors (all medical practitioners in three provinces) had been trained. However, in 2005, only the village doctors from the 15 villages in the five project provinces (130 medical practitioners) received training. Those who had attended the basic course in 2004 went onto the intermediary training course, and the newly participating doctors received basic training. Both courses lasted eight hours a day for six days. The training programme consisted of lectures on the basic concepts of traditional medicine and the utilization of the family pharmacy kit.

Provision of mobile medical services: Mobile medical services were offered in 10 villages in five provinces, where five traditional medical practitioners provided traditional diagnostic and treatment services for 4 000 people.

International Workshop on Traditional Medicine: An International Workshop on Traditional Medicine was organized in Ulaanbaatar towards the end of August, with support from the Ministry of Health of Mongolia. Over 70 participants representing WHO headquarters in Geneva, the WHO Regional Office for the Western Pacific and the

governments of Sri Lanka, Myanmar and Bhutan, as well as delegates from Japan, attended the event.

3.2.2 Results

Indications of the sustainability of the family pharmacy kits system: During the payment collection and replenishment round in April and May, 1 994 households out of 2 000 (99.7%) were visited by doctors. Of these 1 994 households, 1 920 families had used the pharmacy kits (a utilization rate of 96.3%), and 1 487 of them paid for the medicines they had used (a payment collection rate of 77.4%), a substantial increase compared with the rate of 33.7% in the previous period. Medicines costing MNT 1 977 362 (US\$ 1 648) had been used, of which MNT 1 056 407 (US\$ 880, 53.4%) was collected – an increase of 8.6% over the previous December (44.8%).

The total number of households visited in October and November could not be correctly calculated because of errors in the computation methods used. However, the number of households that used the pharmacy kit was clear: 3 495 out of the 4 040 recipient families. Amongst them, 2 353 families paid for the medicines they had used (a payment collection rate of 67.3%), although there was a decrease of 10.1% from the rate achieved during the April and May round. Medicines costing MNT 3 705 162 (US\$ 3 088) were used, of which payments to the amount of MNT 2 134 587 (US\$ 1 779, 57.6% of the overall amount) were collected, which represents an increase of 4.2% compared with the rate achieved during the previous round.

International Workshop on Traditional Medicine: During the international workshop, WHO specialists and delegates from a number of Asian countries were introduced to the activities of the project, which were of considerable interest to them. Particularly notable was the positive appraisal of the project as an effective model for improving medical services for rural people by the representatives from WHO headquarters in Geneva and the WHO Regional Office for the Western Pacific. Furthermore, a representative of WHO headquarters offered advice on the cultivation and domestication of medicinal plants, and the international guidelines on the production of medicines (GACP, GMP) to increase the quality of the project further. A specialist from Vansemberuu-Mongolia went on to participate in the WHO Inter-Regional Training Workshop on GACP and GMP for Herbal Medicines (Shanghai, China, 20-23 September 2005). At the proposal of WHO headquarters, four specialists from the Ministry of Health of Mongolia also attended this meeting. This enabled the Ministry of Health to accelerate the development of guidelines for the production of traditional medicines.

Accreditation of training course for medical practitioners: The Ministry of Health agreed to recognize the credits awarded to medical practitioners who attended the training programme. Doctors need these credits in order to renew their licence to practise, so recruiting medical practitioners for training has become easier.

3.3 Third year: 2006

3.3.1 Activities

Some changes were made in the organizational structure of the project during the third year of implementation. Vansemeruu-Mongolia started implementing the entire project independently, strengthening its ability by establishing its own Professional Council with five new experts in traditional Mongolian medicine, who were more committed and enthusiastic than the staff of the local implementing partner. The number of employees in Vansemeruu-Mongolia was increased. Although project activities remained the same (provision of family pharmacy kits, training sessions and mobile medical services), new methods and measures were needed to accommodate the new responsibilities incurred because of the direct implementation of project activities. The following activities were carried out in the first half of 2006.

Training of Mongolian medical practitioners in Japan: The directors of four hospitals, in the initial four villages of three provinces covered by the project since 2004, were invited to visit Japan in mid-March 2006 to attend a week-long training session in Toyama, the birthplace of the family pharmacy kits system. The training session included lectures by an entrepreneur in the family pharmacy kits business, a visit to one of the families using the kit, observation of the whole operation including the payment collection and replenishment process, and a visit to a pharmaceutical factory. The team that attended the training programme was headed by the Vice-Minister of Health of Mongolia, and had as its members an adviser of the Ministry of Health, a member of the Professional Council and two officers of Vansemeruu-Mongolia. The training of Mongolian medical practitioners in Japan is planned to continue in 2007.

Training medical practitioners: Training in traditional medicine was organized in Ulaanbaatar at the beginning of April for 106 medical practitioners from 15 village hospitals in five provinces covered by the project. This year's training session comprised 40 hours (eight hours a day for five days) of lectures and practice relating to the traditional medicines in the household kit, their composition, prescription and use.

Payment collection and replenishment activities in April and May: The first payment collection and replenishment round to cover all 10 000 households of 15 project villages in five provinces was carried out in April and May.

Radio programme on healthy lifestyles through traditional medicine: A 10-minute weekly radio programme produced by Vansemeruu-Mongolia, "Leading a healthy lifestyle through traditional medicine", was broadcast on national radio for eight months between 1 April and 31 December 2006 at 11 a.m. every Saturday morning, and repeated on the Monday of the following week. The programmes were prepared by the staff of Vansemeruu-Mongolia and five members of the Professional Council.

Provision of mobile medical services: Five members of the Professional Council under Vansemeruu-Mongolia provided mobile traditional

medical services to rural households in 12 villages in five provinces. Free medical services based on traditional medicine were provided for around 1 500 people in 2006.

3.3.2 Results

Payment collection rate exceeded 80%: As a result of payment collection and replenishment of medicines carried out in 2006, the payment collection rate exceeded 80% for the first time, in terms both of the number of households and of the monetary value of the medicines. All 9 615 of the recipient households were visited by doctors (a coverage rate of 100%), 9 423 households had used the household medical kit (a utilization rate of 98.0%), and 9 265 households paid for the medicines they had used (a payment collection rate of 98.3% in terms of the number of households). Medicines costing MNT 20 096 713 in total were used (approximately US\$ 16 747), and the sum of MNT 16 947 863 (approximately US\$ 14 123) was collected in payment, which is a payment collection rate of 84.3% in monetary terms.

Generating statistical data and information: Inspired by the “user data form” used by the Japanese businessmen in their monitoring of the family pharmacy kit users, a Mongolian version was developed following the training held in Japan in March, and distributed among the village doctors and village medical experts. The “Mongolian user data form” (with data for each household) has been developed separately for village doctors, village medical experts and households. This system clearly shows not only the utilization rate by the household, but also information concerning payment collection, the number of household members and their medical history. Since the same design and format is used on all types of monitoring sheets, village doctors and village medical experts found it easier to exchange necessary information. It has also made it easier for the project team at Vansemberuu-Mongolia to obtain accurate information about the utilization of the family pharmacy kits.

3.4 Analysis

The biggest question that arose at the beginning of this project was how the Mongolian people would receive the Japanese concept of “use first – pay later” and how it could be disseminated throughout Mongolian society. The fact that the people of Mongolia had got used to various kinds of grant aid and assistance given by donor countries following the country’s transition to democracy caused doctors and recipient households to assume that the family pharmacy kits were to be provided free of charge. The idea of using the medicines and paying for them later was not well understood by the people for a while. However, the payment collection rate exceeded 80% in terms both of the number of households involved and of the amount of money collected during the April/May round of visits in 2006, which testified to the feasibility of more widespread implementation of the system. The following is a brief account of the way herdsmen received the family pharmacy kits, and the major and minor reasons for the success achieved so far.

The family pharmacy kit system was seen as being congruent with the herdsmen’s lifestyle: The peculiarity of the Mongolian herdsmen’s lifestyle lies in their nomadic practice of moving from place to place on a seasonal basis in their

search for fresh pastures. Furthermore, they mostly live in individual households several dozens of kilometres from urban settlements with medical service providers. Because of this distance, if a member of the family falls ill, he or she has to be transported to the hospital. If medicine is not readily available, they face great difficulties. They also have to endure winter temperatures as cold as -30°C on horseback, a feat that might daunt even a healthy person. Additionally, herdsmen would only have cash available during spring and autumn, when they prepare and sell wool, cashmere and meat. They appear to have realized that they do not need to spend money in advance to purchase medicines that might not be needed, if they have a pharmacy kit with essential medicines accessible to them at all times. They now know that they will pay only for what they use, and the doctor visits them to collect the payment only during spring and autumn, when they have the money to pay. The doctor's visit also offers them a chance of a consultation about their health concerns. The herdsmen are believed to have embraced this system because of all these factors, as well as the suitability of the system to their lifestyle and the strong feeling of protection it provides for their families.

The current state of rural hospitals benefiting from the family pharmacy kits system and methods of using traditional medicine: The rural hospitals still maintain the medical services system used during the Soviet era, where village medical experts working under the village hospital each have around 100–150 households under their responsibility. The area they have to cover varies greatly from a few dozen square kilometres to over 100 kilometres, and they are required by the current medical system to visit the households at least once every month, including house-calls when someone gets sick. In reality, however, this obligation is often difficult to accomplish in the severe climate and, as a result, is not always completely fulfilled. Although there is a village hospital in the centre of the village, it is woefully inadequate in terms of both equipment and medication for treatment. For instance, the annual budget of a village hospital covering around 6 000 people would barely amount to US\$ 4 800.

These were the prevailing circumstances when the family pharmacy kit was introduced. The kits have had a positive impact in various ways. For instance, family pharmacy kits were distributed to Erdenesant village in Tuv Province in 2004: compared with the 2003 figures, the number of house-calls received in 2006 had fallen by 45.2%. In addition, a significant impact has been felt by doctors, as the new system has also reduced the hardships they have to endure in the harsh climate when fulfilling their duties. It is also financially convenient for the village hospitals, since expenditure on petrol as well as doctors' allowances for house-calls has decreased. Furthermore, when a recipient of the household kit comes for consultation, both the village hospital doctor and the village medical expert recommend the use of the kit where the conditions allow. In other words, the pharmacy kits are also filling the gap created by a lack of medicines at the village hospitals. These factors are seen as being behind the active participation and enthusiasm of village doctors for the project's activities.

People's expectations of traditional medicines: People in rural Mongolia believe that traditional medicines suit their systems well, with fewer side-

effects, because they are produced in Mongolia and have been used by the people's ancestors from early times. However, on the other hand, there are those who hesitate to use traditional medicines because of a groundless belief that, if they do not stick to the strict regime necessary for the medicines to be effective, the illness will actually worsen. As the method of use also seems to be complicated, they believe they cannot use traditional medicines, even if they want to. However, people can safely use the family pharmacy kits, since they are distributed by trained medical practitioners who also advise the people how to use them. Furthermore, the medicines are considerably more affordable than Western medicines, which dispel worries about cost. These positive aspects may have led to the people's acceptance of this system.

Changes in the packaging of traditional medicines: Until recently, traditional Mongolian medicines had been sold in simple hand-wrapped paper packaging. The requirement notified to pharmaceutical companies for the production and supply of medicines for the family pharmacy kit required the supply companies to package each medicine in a paper container with each dose wrapped separately inside. This way, product hygiene has improved, and the indication of the dates of manufacturing and expiry on the packaging have created greater trust among clients. These appropriately packed medicines are especially well suited for herdsmen who spend the entire day out in the field herding cattle and sheep, and they are also convenient to use. These facts are well-recognized by the herdsmen themselves, judging by their positive appraisal of this initiative.

Overcoming the language barrier: Most of the medicines sold in Mongolia are imported from the Russian Federation or Germany. Both prescription medicines and over-the-counter medicines that rural residents buy at the pharmacy are imported products, with instructions for use mostly written in Russian or German. Thus it is quite difficult for people to use the medicines by themselves, reading instructions in a foreign language. There is also the unfavourable perception that Western medicines are expensive and have side-effects. The manuals for the family pharmacy kits were supplied to all recipient households and village doctors in 2006. The composition of the medicines and their methods of use are all written in Mongolian, at a level of language that is accessible to ordinary citizens. The country's literacy rate is high, at 97.6% (2000 figures). The manual has been evaluated as extremely user-friendly. Senior citizens were particularly happy about being able to read the instructions and use the medicines by themselves.

Training in traditional medicine is restoring the self-confidence of medical practitioners: Numerous rural doctors have submitted requests to receive the mobile medical services team at their village hospital because of rural people's faith in traditional medicine. However, most of the village doctors are specialized in Western medicine and have no knowledge whatsoever of traditional medicine. Starting this year, the project training in traditional medicine focuses on the medicines inside the family pharmacy kit, their composition, prescriptions, instructions for use and practical application. The medical practitioners receiving the training are happy to be able to apply this knowledge to the benefit of the

people in their area. The project team has regularly received comments that the doctors are able to respond more effectively to people's questions regarding the medicines in the family pharmacy kit.

The performance of pharmaceutical companies that produce traditional medicines has been accelerated by the introduction of family pharmacy kits: As previously mentioned, the pharmaceutical companies producing traditional medicines have had an important role to play in creating adequate packaging for the family pharmacy kits. During the International Workshop on Traditional Medicine held in August 2005, a representative from WHO headquarters advised the Ministry of Health and the pharmaceutical companies to manufacture traditional medicines in accordance with good manufacturing practices and introduced them to the WHO guidelines on good manufacturing practices (GMP) for herbal medicines as a reference. This proposal was welcomed by the Ministry of Health, which started preparations for the introduction of national guidelines on GMP. The manufacturing companies have begun to introduce the necessary facilities and manufacturing procedures.

Promoting the concepts of traditional medicine through the medium of radio: Beginning in April 2006, a radio programme called "Leading a healthy lifestyle through traditional medicine" was broadcast nationwide on public radio channels. It has helped to increase rural people's fragmentary knowledge of traditional medicine and increase the use of family pharmacy kits. Many requests for family pharmacy kits have been received from nonproject areas.

The 1999 Parliament resolution on the development of traditional medicine outlining the need for the family pharmacy kits system: The Government of Mongolia enacted its new constitution in 1992, leaving behind both the communist regime and the diverse variety of assistance received from the Soviet Union, including supplies of medical equipment and medicines. The desire to revive traditional culture and the interest in traditional Mongolian medicine increased as a consequence of this action. In 1999, the State Great Khural [Parliament] of Mongolia adopted a resolution on the State Policy on the Development of Traditional Mongolian Medicine, which describes in 19 clauses the harmonization and integration of traditional medicine with Western medicine. The project to promote traditional Mongolian medicine, focusing on the family pharmacy kits system, is thoroughly aligned with the above Parliamentary resolution, and has rightfully gained the support not only of the traditional medicine community, but also of the Government.

4. Issues for further consideration and future course of action

4.1 Issues for further consideration

Sustainability of the project – costs, price and rate of utilization: In order to ensure the sustainability of the project in the long run, it is necessary to maintain a balance between costs and sales of medicines. The major factors to be considered are as follows:

- increasing utilization rates (sales)
- provision of more suitable medicines as requested by users

- keeping an appropriate quantity of medicines in the kits
- appropriate transportation of the medicines and reducing transportation costs
- establishing sustainable prices for medicines.

Although the payment collection rate has exceeded 80%, the utilization rate (amount of sales) is only 20% in terms of the total amount of the medicines distributed. Therefore, the utilization rate would have to be raised well beyond the present level to ensure sustainability. The list of medicines in the kits must be reviewed in a timely manner so that more suitable medicines in demand by the users may be provided in more appropriate quantities in the kits. Transportation costs are also an important factor which greatly affects the price of medicines. It is a challenge to reduce it in a vast country like Mongolia, with few alternative means of transportation and poor infrastructure. The market prices of both traditional medicines and Western medicines should also be reviewed. Taking these costs into consideration, the sales price of the medicines must be set at a level which ensures sustainability of the project.

Capacity of pharmaceutical companies producing traditional medicines: Presently, there are six pharmaceutical companies that produce traditional medicines which are approved by the Ministry of Health. Their combined annual output is estimated at approximately 5 000 kg. The total quantity of medicines distributed by the project to 10 000 households amounts to approximately 1 000 kg. If we set out to place family pharmacy kits in all 240 000 herder families in Mongolia, around 24 000 kg of medicine would be required just for the first round. Moreover, if the annual replenishment level is 50%, this means around 12 000 kg of medicines would be required every year for this purpose. The present capacity would not satisfy the demand for household medical-kit medicines, let alone the demand from medical institutions. Therefore, the question of how the capacity of such companies could be enhanced becomes inevitable. At the same time, however, there is a move to create a new pharmaceutical company in Mongolia in the light of expected future demand for the family pharmacy kits. The kind of measures that can be taken to support such a move would be another challenge.

Guarantees for the continuous supply of raw materials: The raw materials presently used for producing traditional medicines in Mongolia are not procured solely in Mongolia, but also imported from India, Russian Federation, Tibet and China. Although Mongolia is considered to be rich in medicinal plants, they are rarely domesticated. Therefore, there is no guarantee of a continuous supply of medicines incorporating herbs found in Mongolia. The possible mass production of traditional medicines in the future would have to face the issue of ensuring a sustainable supply of raw materials.

Capacity for sustainable supply of quality medicines: At present, none of the six companies that produce traditional medicines use GMP or GACP guidelines in the manufacture of herbal medicines. The Ministry of Health adapted and developed Mongolian GMP guidelines in 2006, and

the pharmaceutical companies are taking gradual steps towards compliance with them. However, compliance with international GMP guidelines would require major investment by the companies concerned, and it must be accepted that it is difficult to produce high-quality medicines with the capacity of the present companies.

4.2 Future course of action

Family pharmacy kit project: The project is piloting a family pharmacy kits system using traditional medicine. The training of medical practitioners in traditional medicine provides support for the project's implementation and concentrates on instructing doctors in the use of the pharmacy kits. There have been indications that the family pharmacy kits system has improved on many fronts. It is also planned to turn mobile health service provision into an activity that supports the operation of the system.

Transferring the model project to the Government of Mongolia: The implementing organization aims to make this project a model for continuous, sustainable activities. The hope is to perfect and ensure the sustainability of the project, after which it is to be transferred to the Government of Mongolia.

Inclusion of Western medicines in the family pharmacy kits system, and their harmonization with traditional medicine: Although the family pharmacy kits were initially introduced for the purpose of promoting traditional medicine, the possibility of including Western medicines exists, depending on needs and cost.

Future directions of the project to meet the needs of rural people: Even though numerous requests have been made by nonproject areas for family pharmacy kits to be distributed in their areas, the pilot project is not intended to cover the entire country. What was initially intended to cover only 2 000 households was extended to cover 8 000 more households, and it could not be made to cover every household in the area on demand. Nevertheless, possibilities for expanding the number of household kits are being considered for places where demand and payment collection rates are very high.

Appendices

Appendix 1: Payment collection for medicines of family pharmacy kit

Time of payment collection		Apr-May 2005	Oct-Nov 2005	Jan-Dec 2006	Jan-Mar 2007
Number of recipient families		2 000	4 040	9 615	9 688
Number of families visited		1 994	—	9 615	8 311
Utilization	No of families	1 920 (96.3%)	3 495	9 423 (98.0%)	7 728 (93.0%)
	Amount (MNT)	1 977 362	3 705 162	20 096 713	3 480 418
Collection of payment	No of families	1 487	2 353	9 265	7 454
		77.4%	67.3%	98.3%	96.5%
	Amount (MNT)	1 056 407	2 134 587	16 947 863	2 802 822
		53.4%	57.6%	84.3%	80.5%

*Exchange rate: US\$ 1 = 1183 MNT (Mongolian tögrög) (as at 13 August 2007)

Appendix 2: Comparison of number of house-calls carried out in the 15 soum hospitals

Aimags (provinces)	Soums (villages)	Number of families in the area (as at July 2007)		Number of kit-holding families (as at July 2007)		Number of house-calls				Increase or decrease (%)	
		Remote area	Centre of soum	Remote area	Centre of soum	2003		2006		Remote area	Centre of soum
						Remote area	Centre of soum	Remote area	Centre of soum		
Total		Total (Coverage)				Total				Total	
Bulgan	Khishigundur	443	500	455	120	105	454	114	268	8.6%	-41.0%
		943		575 (61.0%)		559		382		-31.7%	
	Dashinchilen	402	350	275	300	181	503	103	646	-43.1%	28.4%
		752		575 (76.5%)		684		749		9.5%	
	Saikhan	756	280	88	410	354	239	225	178	-36.4%	-25.5%
		1 036		498 (48.1%)		593		403		-32.0%	
Bulgan	326	2 755	0	1 000	358	6 645	304	5 166	-15.1%	-22.3%	
	3 081		1 000 (32.5%)		7 003		5 470		-21.9%		
Dundgovi	Deren	460	120	414	126	362	186	266	156	-26.5%	-16.1%
		580		540 (83.1%)		548		422		-23.0%	
	Delgertsogt	432	180	400	100	220	73	266	126	20.9%	72.6%
		612		500 (81.7%)		293		392		33.8%	
	Mandalgovi	942	2 511	98	902	490	320	291	382	-40.6%	19.4%
		3 453		1 000 (30.0%)		810		673		-16.9%	
Tuv	Erdenesant	768	450	640	160	315	200	169	113	-46.3%	-43.5%
		1 218		800 (65.7%)		515		282		-45.2%	
	Altanbulag	530	300	328	150	697	925	796	817	14.2%	-11.7%
		830		478 (57.6%)		1 622		1 613		-0.6%	
	Jargalant	250	1 322	179	518	195	93	160	76	-17.9%	-18.3%
		1 572		697 (44.3%)		288		236		-18.1%	
Zuunmod	127	4 022	28	972	5 241	15 187	4 318	12 216	-17.6%	-19.6%	
	4 149		1 000 (24.1%)		20 428		16 534		-19.1%		
Arhangai	Chuluut	842	227	470	80	593	127	470	84	-20.7%	-33.9%
		1 069		550 (51.4%)		720		554		-23.1%	
	Ikhtamir	1 305	385	390	110	379	419	420	456	10.8%	8.8%
		1 690		500 (29.6%)		798		876		9.8%	
Khentii	Murun	430	136	379	96	401	126	248	277	-38.2%	119.8%
		566		475 (83.9%)		527		525		-0.4%	
	Umnodelger	806	359	420	80	178	187	102	224	-42.7%	19.8%
		1 165		500 (42.9%)		365		326		-10.7%	
Total		8 819	13 897	4 564	5 124	10 069	25 684	8 252	21 185	-18.0%	-17.5%
		22 716		9 688 (42.6%)		35 753		29 437		-17.7%	

Appendix 3: Contents of family pharmacy kit (2007)

#	Effect	Name	Quantity	Method of utilization	Validity (years)	Price (MNT)
1	Respiratory disorders	Sorool-4 decoction	1 g x 9	1-2 g twice or thrice daily. Decoct to 1/3 cup of water	3	920
2		Mana-4 decoction	1 g x 9	1-2 g twice or thrice daily. Decoct to 1/3 cup of water	3	850
3		Darvo-5 powder	1 g x 9	1-2 g twice or thrice daily with hot water	3	900
4		Norov-7 decoction	1 g x 9	Decoct 1-2 g to 1/3 water level and take once daily, preferably in the afternoon	3	920
5	Digestive disorders	Shijed-6 powder		1-2 g twice or thrice daily with hot water	3	1100
6		Indra-4 decoction	1 g x 9	Decoct 1-2 g to 1/3 water level and take twice or thrice daily, preferably in the afternoon	3	850
7	Urinary disease	Arur-10 powder	1 g x 9	1-2 g twice or thrice daily with hot water	3	900
8		Sugmel-10	1 g x 9	1-2 g daily at night with hot or warm water	3	1500
9		Sojed	1 g x 9	1-2 g daily at night with hot or warm water.	3	900
10		Shargaa(Yuna)-4 decoction	1 g x 9	1-2 g decoct to 1/3 water level and take twice daily	3	1100
11	Cardiovascular, nervous disorders	Zadi-5 powder	1 g x 9	1-2 g twice daily with boiled water	3	1100
12		Shun agar-8 powder	1 g x 9	1-2 g twice daily with boiled cold water	3	1100
13	Liver, gallbladder disease	Gurgum chogdun powder	1 g x 9	1-2 g twice daily with boiled cold water	3	1100
14		Lanchen-13 powder	1 g x 9	1-2 g twice daily with boiled water	3	1100
15		Serdog-5 powder	1 g x 9	1-2 g twice daily in the morning and at noon with hot water	3	1100
16	Gynaecological disorders	Shimshin-6 powder	1 g x 9	1-2 g twice daily with boiled cold water	3	900
17	Yellow fluid, joint disorders	Boigar-10 powder	1 g x 9	1-2 g twice daily with boiled cold water	3	1100
18		Senden-4 decoction	1 g x 9	1-2 g twice or thrice daily. Decoct to 1/3 cup water		700
19	Injury plaster		10	Cover the injured place		150
20	Cotton		1 set			400
21	Bandage		1 set			500
22	Alcohol		5 ml			120
23	Thermometer		1			1000
*	Medicines shown in bold type are basic medicines, which are compulsory for the kit.					
*	Others are optional medicines, three items of which are selected by the doctors of the village hospital based on the tendency of diseases in the area.					
*	Exchange rate: US\$1=1183 MNT (Mongolian tögrög)(13 August 2007)					

Annex 7: Summary of presentations – other models using traditional medicine in primary health care¹

New project on promoting the use of medicinal plants for primary health care in five Mekong countries

In general, each of the five Mekong subregional countries (Cambodia, Lao People's Democratic Republic, Myanmar, Thailand and Viet Nam) have had a long history of using their own respective traditional medicines (see table), and their governments have supported the development and promotion of traditional medicine. Each Government is also willing to continue promoting the integration of traditional medicine into the health system.

General review of country situations

	Cambodia	Lao PDR	Myanmar	Thailand	Viet Nam
National policy	1996	1998	1993	1993/updated 2002	
Law and regulations on traditional medicine			1953		1989
Programme		2000		1993	1986
Office in Ministry of Health	1982	1976	1989	2002	Yes (no year)
Expert committee	2003		1997	Yes (no year)	
Research institution		1996		2002	1957
Law and regulations on herbal medicine	1998	1998	1996	1967	1989
National monographs/ pharmacopoeias	Monographs Vol. 1 1996 Vol. 2 1997 Vol. 3 2000	10 Monographs with legal binding	Monographs 2000	21 pharmacopoeias 2003	pharmacopoeia
Registration of herbal medicines	48	?	3678	2000	1573
Essential herbal medicines		3			267
GMP requirement	?	yes	Yes	Voluntary	yes

The use of traditional medicine in primary health care has been promoted in four of the Mekong countries through publications that provide information about simple herbal medicines. For instance, in Cambodia, Lao People's Democratic Republic and Viet Nam, a book is available, entitled "Your medicine in your

¹ Adapted from presentations made during the workshop.

garden". In Thailand, a similar book is available, entitled "Manual for cultivation, production and utilization of herbal medicine in primary health care".

In Myanmar, a programme exists for the use of traditional medicine for primary health care in cases of emergency. In the programme, 150 kits were formally distributed to representatives in 150 villages in three townships. As of August 2007, the programme was in phase 1 of a pilot study, after which the experience of using the kits will be reviewed and the contents will be modified accordingly. It is the goal of the project for every village in Myanmar to receive similar kits. A logistical issue being discussed involves the management of the kits at the village level, and how contents will be replenished and financed.

Overall, most Member States face the same challenges in terms of the development of traditional medicine policy. These include a general lack of: (1) information and knowledge at the national health authority and/or national regulatory authority level regarding the methodology for evaluating the safety, quality and efficacy of medicinal plants and herbal medicines; (2) information and knowledge regarding development of guidance materials for the general public on the proper use of traditional medicine in primary health care; (3) information and knowledge on how to guide the general public in cultivating medicinal plants of an appropriate quality for family use and/or sale at a local market for self-medication purposes; (4) experience and information on how to prepare a university curriculum on traditional medicine; (5) a national programme for disseminating information and training on the use of traditional medicine in primary health care to the general public, especially at community level; (6) an interregional mechanism, such as a conference, to share information and national experiences in promoting the use of traditional medicine in primary health care.

To overcome these shared challenges, The Nippon Foundation is providing support for two years from January 2008 to implement the *New project on promoting traditional medicine to meet primary health care needs in Mekong countries*. The purpose of the project is: (1) to facilitate close collaboration within the Mekong subregion; (2) to support the exchange of information and national experiences within the legislative framework (regulation and law) of traditional medicine; (3) to promote traditional medicine in the Mekong subregion for primary health care and to contribute economically to local communities; (4) to promote national capacity-building in traditional medicine in the Mekong subregion through training programmes.

The project included a *WHO working group meeting on promotion of traditional medicine in primary health care in the Mekong countries*, held in Phnom Penh, Cambodia, from 30 July to 1 August 2007 with the support of The Nippon Foundation. The objectives of the working group meeting were: (1) to review the current situation of traditional medicine use in these five countries, especially challenges and needs in promoting traditional medicine in primary health care; (2) to identify the needs of the Mekong countries and the activities/projects which should be proposed in order to meet those needs; (3) to obtain Government commitment to participation in the project; (4) to discuss working procedures and mechanisms. By the end of the meeting, the delegates from five countries had identified two priority areas for their initial collaboration: (1) development of a guidebook on "Your medicines in your garden" for commonly used medicinal plants in primary health care in the Mekong subregional

countries; (2) organization of a national training workshop in each country on a topic chosen from among the difficulties and challenges listed above that is identified by each country as their own priority and need.

Strengthening the primary health care system and providing safe, convenient, effective and economical basic health-care services for local people (Aba Zang and Qiang Minority Autonomous Region, China)

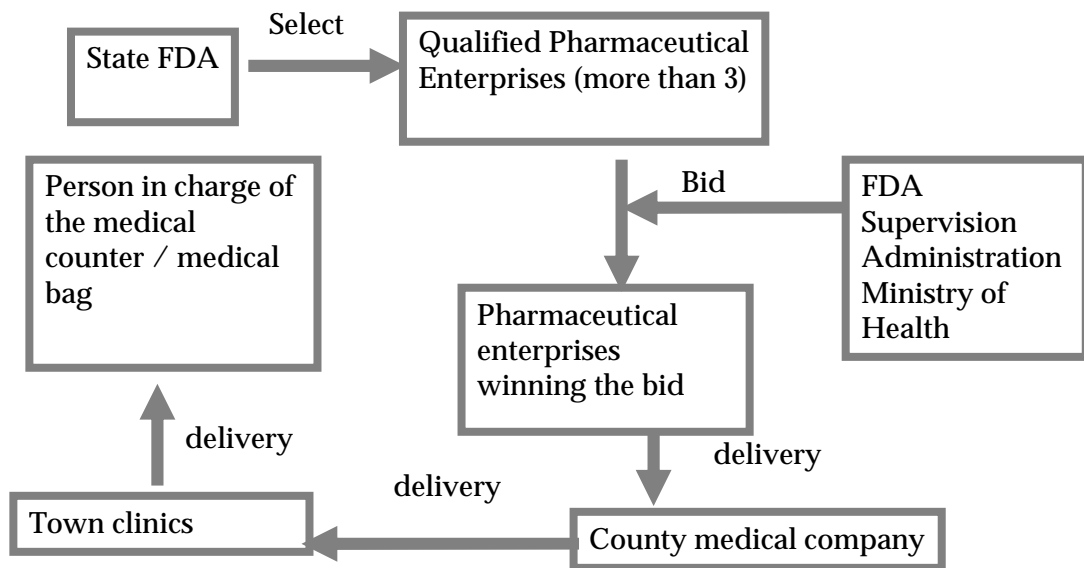
Aba Zang and Qiang Minority Autonomous Region is located in the north-west part of the Sichuan province of China, near the south-east margin of the Qingzang altiplano, which is composed of altiplanos, mountains and gorges. Overall, the area covers 84 200 km², which includes 13 counties, 224 towns and 1 353 villages, with a population of 850 000. The state has been affected by historical, geographical and environmental factors, and is typically considered a remote and poor region with a sparse population.

General introduction to health capacity in the Aba Zang and Qiang Minority Autonomous Region

Total number of medical organizations	1630	Medical personnel	5116
Government medical organizations	295	Wholesale medical companies	10
Other organizations or individual medical organizations	197	Retail medical companies	362
Village clinics	1138		

In order to solve the problems faced by health-care services and drug suppliers in this unique geographical situation, the state government has adopted powerful measures to establish: (1) a rural medicine network; (2) supply and supervision networks to improve rural health care (see figures below); (3) a system to strengthen human resources; (4) a commitment to solve problems faced by rural areas, such as a lack of doctors and drugs.

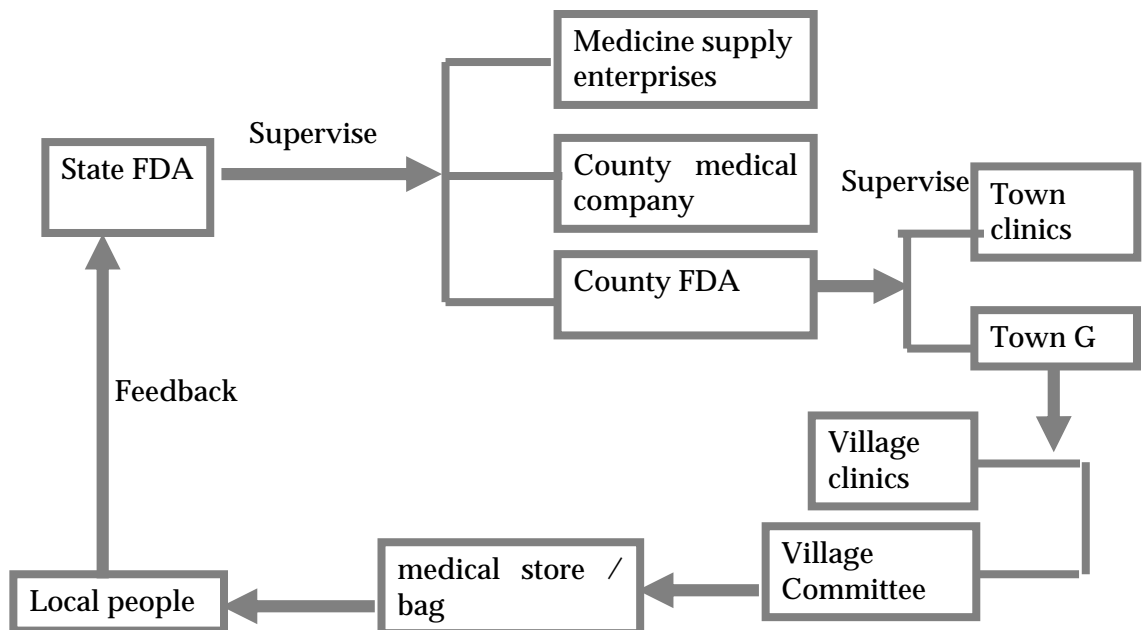
Supply network



FDA = State Food and Drug Administration.

Depending on each region’s unique situation, 60 rural medical counters (small sales outlets), stocking over 80 kinds of drugs, were set up in three pilot counties (Wenchuan, Maoxian and Jiuzhaigou).

Supervision network



FDA = State Food and Drug Administration

The main objective of the supervision network was to complement the supply network by providing quality control to ensure that traditional medicines were safe, economical and effective.

Measures that supported the establishment of the supply and supervision networks include: (1) an increase in funds for rural health to strengthen the

establishment of a rural medical infrastructure and improve rural health; (2) the establishment of a rural health-care service system, optimizing health resources, improving the local health-care service network and promoting uniform administration in the rural medical organizations; (3) the launch of a new type of rural cooperative medical-care system, in which local citizens actively participated from its inception in 2005; (4) the development of a strategy that takes advantage of the simplicity, convenience, cost savings and effectiveness of traditional medicine.

As of August 2007, the project had already accomplished a great deal, including: (1) using the project as an opportunity to solidify the rural public health infrastructure, including 151 new construction projects to establish hospitals in counties and towns, which increased the number of village hospitals to 765 by 2006; (2) optimizing the positive features of traditional medicine in order to promote its use; (3) implementing and improving on pilot schemes which gradually promoted the supply and supervision networks. Overall, through the collaborative efforts of multiple stakeholders, public health in this area has improved greatly and barriers to access and affordability of health care have also been dismantled.

Promoting affordable and accessible medicines (Ningxia Hui Autonomous Region, China)

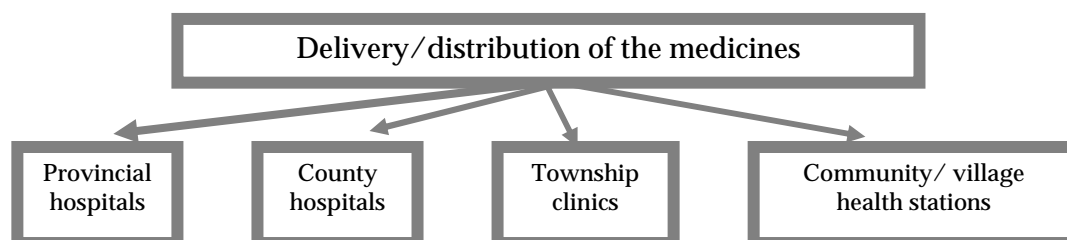
The Government of the Ningxia Hui Autonomous Region was concerned about public complaints about the high cost of medicines and visits to a doctor. The Government established a leadership group to meet these gaps. The leadership group consisted of the Bureau of Health, Bureau of Food and Drug Administration and Bureau of Audit.

The leadership group decided to apply an approach of “uniform bid, uniform price, uniform distribution and delivery”, otherwise called the “three uniforms”, for medicines for the medical organizations in the Ningxia Hui Minority Autonomous Region, under the guidance of the Government. The objectives of the approach were: (1) to ensure delivery and distribution of medicines to meet medical demand, based on health conditions, economy and culture; (2) ensure safety, efficacy and quality of the medicines that were delivered and distributed; (3) ensure the medicines delivered and distributed were cheaper than other medicines; (4) ensure the medicines that were delivered and distributed were accessible and affordable.

An expert committee consisting of both allopathic and traditional medicine doctors, pharmacists and health administrators was established to oversee the operation of the “three uniforms” model. The responsibility of the expert committee was: (1) to set up the lists of medicines for delivery and distribution to different levels of health institutions, including provincial hospitals, county hospitals, township clinics and community/village health stations; (2) to draw up operating procedures; (3) to monitor and analyse the results and feedback of the delivery and distribution of medicines and make recommendations to the leadership group; (4) to exchange information with the pharmaceutical industry, companies that delivered and distributed the medicines, health institutions, patients and the general public.

In order to ensure the safety, efficacy and quality of the medicines that were delivered and distributed, the Bureau of Food and Drug Administration ensured that only pharmaceutical enterprises with GMP certification were qualified to participate in the bid: when the quality of the drug had been guaranteed, the lowest price would be selected.

Delivery/distribution scheme



In order to ensure that the medicines delivered and distributed would be accessible and available to the local people, one health station in each village or community was financially supported by the province. In each health station, there is one health assistant who has been trained and certified.

After one year, the Ningxia Hui Minority Autonomous Region made a review and assessment of the “three uniforms” model and found that: (1) the cost of delivery and distribution of the medicines was reduced by 40%; (2) the total reduction in costs amounted to 259 million Chinese yuan; (3) the cost barrier relating to medicines and visiting a doctor cited originally was overcome. The achievements of the project were recognized by the Ministry of Health and State Council of People’s Republic of China and the “three uniforms” model has been recommended as the “Ningxian model” for health system reform by the central Government of the People’s Republic of China.

“HAICHI” medicine sales system (Japan)

The HAICHI medicine sales system, invented in the Toyama Prefecture in Japan, is over 300 years old. This traditional way of selling is still widely practised today, and has a national market.

There are five reasons why the HAICHI sales system became successful: (1) it promoted access to medicines and increasing access to the health for the nation; (2) the HAICHI vendors have put in a lot of effort to build and sustain the trust of their clients; (3) the HAICHI manufacturers have provided high-quality medicines; (4) the HAICHI medicines industry has tried to understand the needs of the customers; (5) the HAICHI vendors have gathered information from their clients and provided the clients with information about the best way to use the medicines.

The HAICHI sales system consists of several steps. First, the HAICHI vendors visit the household of their clients, and leave the “HAICHI medicines box” (medical kit), in which the clients store and organize the HAICHI medicines. The box contains medicines used frequently at home, such as cold remedies, stomach medicines, eye drops, etc. The clients use the medicines as needed. The HAICHI

vendors return to visit every four to six months, at which time the HAICHI vendor checks to see which medicines have been used in each household and in which quantities, remove any of medicines approaching their date of expiry, and replenish the stocks. In the end, the clients pay only for the medicines they have used. The payment system, which embodies the spirit of “use first, pay later”, is the most unique feature of the HAICHI sales system. It was developed with the clients’ interests in mind.

Another unique feature of the HAICHI sales system is *Takeba-cho*. *Takeba-cho* is a notebook database which keeps a record of payments and client information. *Takeba-cho* has been used since the Edo period (17th-19th century). The *Takeba-cho* is a very good way of keeping track of sales and the performance of the business. It is also useful for market research.

There are several advantages to the HAICHI sales system. One of these is its safety. Clients have easy and secure access to the necessary medicines in their own home. They feel safe using them because of the proven quality of HAICHI medicines. Another advantage of the HAICHI sales system is its convenience. Especially for clients who do not have easy access to transport or for elderly people, the HAICHI sales system provides a great way to sustain and promote health by visits to each household. The third advantage is the trust between vendors and clients on which the HAICHI sales system is based. The HAICHI vendors regard it as the most important and fundamental task to build up a relationship of trust with their clients. Lastly, the HAICHI vendors provide valuable information for the clients. The vendors explain directly to the clients how they should take the medicines and indicate issues they should be aware of.

The HAICHI sales system works in accordance with national laws and regulations (see table), including the Pharmaceutical Affairs Law, which regulates medical supply sales.

Regulations governing HAICHI medicine vendors

Requirement	Contents of regulations
Business permit	Each prefecture government issues a permit to the individual vendor and designates the medicines the vendors can supply
Qualifications of vendor	Work experience of more than five years in HAICHI sales
Type of medicines	Designated medicines based on the National HAICHI Medicines Sales Items Standards National HAICHI Medicines Sales Items Standards <ul style="list-style-type: none"> • mild pharmacological action, and not bioaccumulative or addictive • long shelf-life • forms, usage and dosage of the medicine must be easy to understand • containers and wrappings must not be breakable.
Sales method	<ul style="list-style-type: none"> • Home visit sales (store sales are prohibited) • Medicines should be paid for only after the client has used them
Terms of permit	Six years before renewal is required

Overall, the HAICHI sales system is safe and practical. It is an excellent sales system that can help to promote safe and easy self-medication for mild illnesses.

Annex 8: List of participants

WHO Interregional Workshop on the Use of Traditional Medicine in Primary Health Care, Ulaanbaatar, Mongolia, 23-26 August 2007

Participants

Cambodia

Dr UNG Phyrun, Secretary of State, Ministry of Health, Phnom Penh, Cambodia

Dr HIENG Punley, Director, National Centre for Traditional Medicine, Ministry of Health, Phnom Penh, Cambodia

China

Dr LI Daning, Deputy Director-General, State Administration for Traditional Chinese Medicine, Beijing, People's Republic of China

Mrs LI Daixin, Principal Staff Member, Social Security Department, Ministry of Finance, Beijing, People's Republic of China

Mr QIN Dalin, Vice-Sheriff of People's Government of Aba Autonomous Prefecture in Sichuan Province, Sichuan, People's Republic of China

Mr CAO Shengxian, General Manager, Ningxia Medicine Commercial Group Ltd, Yinchuan City, Ningxia Hui Autonomous Region, People's Republic of China

Ms YU Mingxian, State Administration for Traditional Chinese Medicine, Beijing, People's Republic of China

India

Dr Ravi Kant SHARMA, Technical Officer, Central Drugs Standard Control Organization, Ministry of Health and Family Welfare, New Delhi, India

Dr A. RAGHU, Assistant Adviser (Ayurveda), Department of Ayurveda, Yoga, Unani, Siddha and Homoeopathy (AYUSH), Ministry of Health and Family Welfare, New Delhi, India

Indonesia

Dr Agnes LOUPATTY, Sub-Directorate of Community Traditional Health, Directorate of Community Health, Directorate-General of Public Health, Ministry of Health, Jakarta, Indonesia

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Japan

Mr Yoshihiro TAKADA, Senior Associate Director, Pharmaceutical Policy Division, Health and Welfare Department, Toyama Prefecture Government, Toyama City, Toyama, Japan

Kyrgyzstan

Dr Abdymomun DJUMABAEV, Chief Specialist, Department of Licensing, Ministry of Health, Bishkek, Kyrgyzstan

Dr Arzyamat TYNALIEV, Head, Unit of Pharmaceutical Management, Department of Drug Procurement and Medical Techniques, Ministry of Health, Bishkek, Kyrgyzstan

Lao People's Democratic Republic

Mr Khamboung HEANGVONGSY, Vice-Minister, Ministry of Health, Vientiane, Lao People's Democratic Republic

Mr Sevengvong DOUANGSAVANH, Director, Department of Food and Drug, Ministry of Health, Vientiane, Lao People's Democratic Republic

Madagascar

Dr Hortense RAKOTONIRAINY, Head, Traditional Medicine Service, Ministry of Health, Family Planning and Social Protection, Antananarivo, Madagascar

Mongolia

Dr Bujin TSERENSODNOM, Director, Health Policy and Planning Division, Ministry of Health, Ulaanbaatar, Mongolia [Co-Chairperson]

Dr Zina SEREENEN, Officer in Charge for Traditional Medicine, SPA and Rehabilitation, Ministry of Health, Ulaanbaatar, Mongolia

Dr N. TUMURBAATAR, Head of Professional Committee on Traditional Medicine, Ministry of Health, Ulaanbaatar, Mongolia

Dr S. OLDOKH, Director, Institute of Traditional Medicine, Ulaanbaatar, Mongolia

Dr D. NATSAGDORJ, Merited Doctor of Mongolia, Director, Manbadatsan Traditional Medicine Teaching Hospital, Ulaanbaatar, Mongolia

Dr M. AMBAGA, Director, Monos Institute of Traditional Medicine, Ulaanbaatar, Mongolia

Mongolia: Vanseberuu-Mongolia Project

Professor P. NYAMDAA, Former Minister of Health and President, Mongolian Academy of Medical Science, Ulaanbaatar, Mongolia

Dr Badamjav BOLDSAUKHAN, Head of Professional Committee, Vanseberuu-Mongolia, Ulaanbaatar, Mongolia

Dr Zeveg MENDSAUKHAN, Member of Professional Committee, Vanseberuu-Mongolia, Ulaanbaatar, Mongolia

Dr Begzsuren DAGVATSEREN, Member of Professional Committee, Vanseberuu-Mongolia, Ulaanbaatar, Mongolia

Dr Sharav BOLD, Member of Professional Committee, Vanseberuu-Mongolia, Ulaanbaatar, Mongolia

Mr Jigjid TOGTOKHBAYAR, Member of Professional Committee, Vanseberuu-Mongolia, Ulaanbaatar, Mongolia

Mr Yuji MORI, President of Vanseberuu-Mongolia, Ulaanbaatar, Mongolia

Myanmar

Dr TIN NYUNT, Director-General, Department of Traditional Medicine, Ministry of Health, Naypyitaw, Myanmar [Co-Rapporteur]

Dr THAN LWIN, Deputy Director (Basic Health Services), Department of Health, Ministry of Health, Naypyitaw, Myanmar

Sri Lanka

Mr Asoka MALIMAGE, Secretary, Ministry of Indigenous Medicine, Nawinna, Maharagama, Sri Lanka [Co-Chairperson]

Dr J. A. KEERTHI SAMARANAYAKE, Community Health Medical Officer, Community Health Project Office, New Town, Anuradhapura, Sri Lanka

Thailand

Dr SUPACHAI KUNARATANAPRUK, Director-General, Department of Health Service Support, Ministry of Public Health, Nonthaburi, Thailand

Dr PRAMOTE STIENRUT, Director, Institute of Thai Traditional Medicine, Department of Thai Traditional and Alternative Medicine, Ministry of Public Health, Nonthaburi, Thailand

Viet Nam

Dr PHAM VU Khanh, Department of Traditional Medicine, Ministry of Health, Hanoi, Viet Nam

Dr TA Thu Thuy, National Hospital of Traditional Medicine of Viet Nam, Hanoi, Viet Nam [Co-Rapporteur]

Individual experts

Professor Motoyoshi SATAKE, Institute of Environmental Science for Human Life, Ochanomizu University, Tokyo, Japan

Dr ZHANG Li, Center for Drug Re-Evaluation, National Center for ADR Monitoring, State Food and Drug Administration, Beijing, People's Republic of China

Representatives of United Nations programmes

United Nations Children's Fund (UNICEF)

Dr Bertrand DESMOULINS, Resident Representative, Ulaanbaatar, Mongolia

United Nations Development Programme (UNDP)

Ms Pratibha MEHTA, Resident Coordinator and Resident Representative, Ulaanbaatar, Mongolia

United Nations Population Fund (UNFPA)

Ms Delia BARCELONA, Resident Representative, Ulaanbaatar, Mongolia

Observers

Mr Dugarjav BATJARGAL, Director of Health Department, Khentii Province, Mongolia

Dr Ch. CHIMIDRAGCHAA, Director, Cooperation in Traditional Medicine Science, Technology and Manufactures, Ulaanbaatar, Mongolia

Mr Dorjkhuu DAGVASUMBEREL, Director, Health Department, Arkhangai Province, Mongolia

Mr Tsedensodnom ENKHSAIKHAN, Director, Health Department, Dundgovi Province, Mongolia

Dr Tomoyuki HAYASAKI, Oriental Medicine Research Center, The Kitasato Institute, Tokyo, Japan

Dr J. KHATANBAATAR, Director, "Liver" Research Centre, Ulaanbaatar, Mongolia

Dr Naojiro KOBAYASHI, Hamamatsu Minami Hospital, Hamamatsu City, Shizuoka, Japan

Ms Byakhar MYAGMAR, Director of Health Department, Bulgan Province, Mongolia

Mr D. NYAMAA, Director, Armon Traditional Medicine Manufacture, Ulaanbaatar, Mongolia

Professor S. NARANTUYA, Vice-President, Health Science University of Mongolia, Ulaanbaatar, Mongolia

Mr Dajaa OCHIRBAT, Director, Health Department, Tuv Province, Mongolia
Mr SAMDANTSOODOL, Director, Mongolian Traditional Medicines LLC, Ulaanbaatar, Mongolia

Mr S. ULZIISAIKHAN, Head, Department of Licensing and Accreditation, National Centre for Health Development, Ulaanbaatar, Mongolia

The Nippon Foundation, Tokyo, Japan

Mr Yohei SASAKAWA, Chairman, The Nippon Foundation

Mr Kenzo KIIKUNI, President, Sasakawa Memorial Health Foundation

Mr Jiro HANYU, Vice Chairman, Sasakawa Peace Foundation

Mr Shuichi OHNO, Executive Director, The Nippon Foundation

Mr Tadashi MIYAZAKI, Adviser, The Nippon Foundation

Mr Yoshihiko YAMADA, Press Officer, Media Relations Team, Communications Department, The Nippon Foundation

Ms Natsuko TOMINAGA, Press Officer, Media Relations Team, Communications Department, The Nippon Foundation

Mr Tatsuro YOSHIKAWA, Project Coordinator, Basic Human Needs Team, International Programme Department, The Nippon Foundation

Ms Kanae HIRANO, Interpreter, The Nippon Foundation

Mr Jumpei SASAKAWA, Consultant, The Nippon Foundation

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Mr Ulziidelger BATBAYAR

Mr Tuvaan NOMUUNTUGS

Ms Sedragchaa OYUNDELGER

Ms Puntsagsuren ADIYASUREN

Mr Sumiya OTGONBAYAR

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Ms Lina REINDERS, Office of the World Health Report, World Health Organization, Geneva, Switzerland

Ms Jacqueline SAWYER, External Relations Officer, Health Technology and Pharmaceuticals, World Health Organization, Geneva, Switzerland

Dr Xiaorui ZHANG, Coordinator, Traditional Medicine, Department of Technical Cooperation for Essential Drugs and Traditional Medicine, World Health Organization, Geneva, Switzerland

Annex 9: Agenda

WHO Interregional Workshop on the Use of Traditional Medicine in Primary Health Care, Ulaanbaatar, Mongolia, 23-26 August 2007

1. Opening of workshop
2. Nomination of Co-Chairpersons and Co-Rapporteurs
3. Adoption of the provisional agenda
4. Introduction and briefing on the working methods of the workshop
5. Briefing on WHO policy, activities and future direction in the field of traditional medicine
6. Exchange and sharing of national experiences and information on the use of traditional medicines in primary health care/national health-care system (country presentations)
7. Presentation and discussion on the Mongolian model for using traditional medicines in primary health care
8. Presentation on other models using traditional medicines in primary health care/national health-care systems
9. Discussion on the use of traditional medicines in primary health care to ensure affordability, accessibility and availability
10. Model-project site visit
11. Discussion on the applicability of the Mongolian model to other countries and key issues to support its sustainability
12. Key technical issues relating to: (1) the selection of traditional medicines; (2) measures for ensuring quality, safety and efficacy of the selected traditional medicines; (3) patient information for the safe use of traditional medicines
13. Recommendations
14. Closure of workshop

Annex 10: Programme of work

WHO Interregional Workshop on the Use of Traditional Medicine in Primary Health Care, Ulaanbaatar, Mongolia, 23-26 August 2007

Wednesday, 22 August 2007

Arrival of participants

Thursday, 23 August 2007

07:30 - 08:45 Registration of participants

09:00 - 10:00 Opening ceremony

- Welcome addresses
Government of Mongolia:
Minister of Health, Mongolia
- Address by the Japanese Ambassador to Mongolia
- Inaugural addresses
The Nippon Foundation:
Mr Yohei Sasakawa, Chairman, The Nippon Foundation

WHO:

Dr Shigeru Omi, Regional Director, WHO Regional Office
for the Western Pacific
Mr Robert Hagan, WHO Representative, Mongolia

10:00 - 10:30 Coffee/tea break

10:30 - 12:30 Nomination of Co-Chairpersons and Co-Rapporteurs

Adoption of provisional agenda

Introductory remarks and general briefing on the working
methods of the workshop: Dr Xiaorui Zhang, Coordinator,
Traditional Medicine, WHO

Exchange and sharing of national experiences and information on
the use of traditional medicines in primary health care/national
health system

- Presentation by country in WHO African Region:
Madagascar
 - Presentation by countries in WHO South-East Asia Region:
India
Indonesia
Myanmar
- 12:30 - 14:00 Lunch
- 14:00 - 15:45 Exchange and sharing of national experiences and information on the use of traditional medicines in primary health care/national health systems (continued)
- Presentation by countries in WHO South-East Asia Region (continued):
Sri Lanka
Thailand
 - Presentation by countries in WHO Western Pacific Region
Cambodia
China
Lao People's Democratic Republic
- 15:45 - 16:00 Coffee/tea break
- 16:00 - 17:30 Exchange and sharing of national experiences and information on the use of traditional medicines in primary health care/national health-care system (continued)
- Presentation by countries in WHO Western Pacific Region (continued):
Mongolia
Viet Nam
 - Presentation by country in WHO European Region:
Kyrgyzstan
- Discussion
- 18:30 Welcome reception (Temuujin Restaurant, 5th floor, Chinggis Khaan Hotel)

Friday, 24 August 2007

- 09:00 - 10:30 Presentations on the Mongolian model in the use of traditional medicines in primary health care
- The Nippon Foundation: Mr Shuichi Ohno, Executive Director (general overview of the project including background on the project's development, aims and expected outcome)
 - Mongolian Project Team: Dr Sharav Bold, Member of Professional Committee, Vansemberuu-Mongolia (operational overview of the Mongolian model, including the design of the system and organization of the model, how the site was set up, how contents of the medical kit were selected, and how the system is being operated; detailed presentation on the implementation of the project, including good points and benefits to the community, challenges and difficulties faced and proposals for solution)
 - Presentation by Mr Robert Hagan, WHO Representative, Mongolia
 - Presentation by Professor P. Nyamdawaa, Former Minister of Health and President of Mongolian Academy of Medical Science
- 10:30 - 10:45 Coffee/tea break
- 10:45 - 12:30 Discussion on the Mongolian model for the use of traditional medicines in primary health care
- 12:30 - 14:00 Lunch
- 14:00 - 15:45 Presentations on other models for the use of traditional medicines in primary health care/national health systems:
- Cambodia: Dr Ung Phyrun, Ministry of Health
 - China: Mr Qin Dalin, People's Government of Aba Autonomous Prefecture in Sichuan Province
 - China: Mr Cao Shengxian, Ningxia Hui Autonomous Region
 - Japan: Mr Yoshihiro Takada, Toyama Prefecture Government
- Discussion on the use of traditional medicines in primary health care to meet affordability, accessibility and availability
- 15:45 - 16:00 Coffee/tea break
- 16:00 - 17:30 Discussion on the use of traditional medicines in primary health care to meet affordability, accessibility and availability (continued)

Saturday, 25 August 2007

Visit to one of the project sites: Umnudelger soum of Khentii aimag, Khentii Province

- Visit to Umnudelger soum hospital and families participating in the Med-Kit Project

Sunday, 26 August 2007

9:00 - 10:30 Feedback on the site visit

Discussion on the applicability of the Mongolian model to other countries and key issues to support sustainability

Key technical issues relating to: (1) the selection of traditional medicines; (2) measures in ensuring quality, safety and efficacy of the selected traditional medicines; (3) patient information for the safe use of traditional medicines

Session (1): Key technical issues relating to the selection of traditional medicines and patient information for the safe use of traditional medicines

- Overview by Dr Xiaorui Zhang, WHO

10:30 - 10:45 Coffee/tea break

10:45 - 13:00 Key technical issues (continued)

Session (2): Key technical issues relating to measures in ensuring quality, safety and efficacy of the selected traditional medicines

- Presentation on good agricultural and collection practices for medicinal plants (Professor Motoyoshi Satake)
- Presentation on good manufacturing practices for traditional medicines (Dr Zhang Li)
- Presentation on safety monitoring of traditional medicines (Dr Zhang Li)

Discussion

General discussion on recommendations

Concluding remarks and closure of meeting

13:00 - 14:00 Lunch

Evening: Farewell party at the Hotel Mongolia

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