G8 Follow-up International Symposium: Hashimoto Initiative Meeting Report

The Global Parasite Control for the 21st Century

27 March 2000

WORLD HEALTH ORGANIZATION
Centre for Health Development
Kobe, Japan
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CENTRE FOR HEALTH DEVELOPMENT
KOBE, JAPAN

G8 FOLLOW-UP INTERNATIONAL SYMPOSIUM:
HASHIMOTO INITIATIVE – GLOBAL PARASITE CONTROL
FOR THE 21ST CENTURY

MEETING REPORT
27 March 2000

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Executive Summary

At the G8 Birmingham Summit in May 1998, the then Prime Minister of Japan, Mr Ryutaro Hashimoto, advocated the need for global parasitic diseases control as one of the group’s health priorities, and it was finally included in the G8 Communique.

The G8 Follow-up International Symposium, held at the WHO Kobe Centre on 27 March 2000, was aimed at following up Japan’s commitment, through the so-called “Hashimoto Initiative”, to provide Japanese expertise through bilateral/multilateral cooperation, and to work with WHO to alleviate the burden of parasitic diseases in the developing world. Japan’s success in controlling endemic parasitic diseases has brought much more than better health to the Japanese people: it has also meant land being retrieved that is free from the causes of these diseases as well as increased productivity, all of which has had a profound impact on the country’s rapid development after the Second World War.

Lessening the burden of parasitic diseases in the developing countries has similar implications. These diseases are preventable and, thanks to recent technical developments and to WHO’s partnership with other agencies and the private sector, the cost of treatment is lower than ever. However it is essential to accelerate action through renewed commitments to this issue on the part of a broad range of people.

The Symposium was therefore convened to provide a forum for people from different professional backgrounds, as well as the general public, to consider the economic and social implications of parasitic diseases for people’s health, and the efforts which can accelerate action to prevent these diseases.

Approximately 200 people attended the Symposium. Mr Ryutaro Hashimoto, former Prime Minister of Japan, delivered the Keynote Speech, providing information on the background of his initiative to promote international collaboration in the control of parasitic diseases, and also emphasizing Japan’s overall contribution to international health.

Dr Toshinobu Sato from the Japanese Ministry of Health and Welfare explained the current ongoing projects as specific examples of how the "Hashimoto Initiative" is being implemented.

Dr Sornchai Looareesuwan of Thailand discussed recent developments in parasite control in South-East Asia. He stressed the necessity for constant vigilance and initiatives by governments, health professionals and communities to control parasitic diseases, and looked forward to the establishment in Thailand of the Asian Center of International Parasite Control (ACIPAC), in cooperation with the Japanese Government.
Dr Alberto G. Romualdez Jr, Secretary, Department of Health, Government of the Philippines, gave an overview of the health policies and measures that have been carried out by his government. Following these presentations, a Panel Discussion was held, with Dr Tsutomu Takeuchi, Professor, Keio University School of Medicine, Japan, as Moderator, and with Dr Donald Bundy, International School Health Initiative, World Bank, Dr Sornchai and Dr Sato as Panel Members. Lively discussions were held on practical strategies for global parasite control, and many questions were also raised from the audience.

It should be noted that the views expressed in the papers presented at the Symposium and those included in the proceedings belong to the individual authors and do not necessarily represent the views of the World Health Organization.
Opening remarks

Dr Yuji Kawaguchi
Director
WHO Kobe Centre

Distinguished guests,
Honourable participants,
Colleagues,
Ladies and Gentlemen,

It is my great pleasure to welcome all of you to this G8 Follow-up International Symposium: The Hashimoto Initiative – Global Parasite Control for the 21st Century. We are particularly honoured by the presence of the most distinguished and ardent advocate of the initiative, Mr Ryutaro Hashimoto.

WHO has spearheaded steady progress in controlling parasitic diseases through collaboration with other United Nations partners, nongovernmental organizations, the private sector and of course the scientists.

Today’s international symposium on global parasite control presents a unique opportunity for us to exchange information on some practical steps which can be taken to make the best use of knowledge and available technology to bring better health closer to those people most in need, particularly in the developing world. We are also grasping this opportunity to once again communicate with decision-makers within, but particularly outside the health sector, to provide convincing evidence that investing in health indeed means investing, not only in human development, but in the overall social and economic development of our nations.

WHO plays a leadership role in this. WHO recognizes that, to influence people’s health, it is essential to work in partnership with other sectors and organizations. This WHO policy is well reflected in parasitic diseases control. For instance, WHO has established partnerships with a number of international organizations, bilateral aid agencies, NGOs and the private sector. Thus, several leading pharmaceutical companies have made substantial contributions in financial terms as well as in kind.

The burden of parasitic diseases is well documented and some inroads into their control are being made. Such successful areas include the regional initiative to control Chagas disease in Latin America, which resulted in one country being certified free of vector and transfusional transmission of Chagas disease in 1997, while it is forecast that it will be interrupted in three additional countries in the coming three years.

The Onchocerciasis Control Programme (OCP) in West Africa, a programme administered by WHO in partnership with several other organizations of the UN System, through its almost 25 years of work, first in seven countries then since 1986 in 11 countries and covering an operational area of approximately 12 million km², has protected some 11
million children who would otherwise have lived with the risk of being blinded by onchocerciasis, and has prevented almost 500,000 cases of blindness. It has also meant that approximately 250,000 km$^2$ land can now be opened up for resettlement and cultivation. Using traditional technologies and practices, this land will produce foodstuff to feed 17 million people. There are also many other positive spin-off effects — country roads are being constructed, wells are being drilled, school and out-patient clinics are being built, and nationals are being trained in the field of management. The affected African countries themselves are now able to pursue the disease surveillance activities through a partnership between affected communities, participating governments, a consortium of international nongovernmental organizations and bilateral agencies$^1$.

Strong political commitment is a key factor in successful multi-sector collaboration and social mobilization. Parasite control is an excellent test area in this regard. It is therefore with great pleasure that, at the invitation of the Ministry of Health and Welfare of Japan, the WHO Kobe Centre is organizing this international symposium to keep this issue high on the international agenda.

Providing a platform to exchange information on crucial health topics, such as parasite control, is an important function of the WHO Centre for Health Development, known as the WHO Kobe Centre, which is a new global and interdisciplinary research institution with a unique international perspective and mission. It is dedicated to defining and explaining practical strategies which can respond to current and future global health and welfare issues.

Consistent with its mission the WHO Kobe Centre is pursuing three major programmes of activity. These are, namely: research of an international and interdisciplinary nature; the collection, analysis and dissemination of information; and the organization of significant symposia, such as today’s international symposium, and conferences which serve as international forums where the successes and failures of national and international experiences can be shared. These activities are proceeding within the Centre’s mission and unifying theme of Global Health and Welfare Systems Development. Therefore the three key elements which characterize our approach to health research are: international, intersectoral and interdisciplinary.

To discuss parasite control today is highly relevant and timely, as such programmes have a great effect on and can be greatly affected by the very health and welfare systems that the WHO Kobe Centre is attempting to address.

As we approach the new century, one of our greatest challenges is to apply the scientific knowledge and technology we already have. In many cases there is a need to re-direct our thinking from the conventional and established lines of operation to those which seek new and more practical solutions to current and future global health and welfare issues. Our capacity to resolve such challenges is enhanced through intersectoral partnerships and the development of cooperative research and action networks. At the same time we should capitalize on the fact that the old perception of health as a “consumer” of scarce resources has been challenged by recent research and economic experience. It is now increasingly

$^1$ WHO Press Release, 25 February 2000
accepted that, rather than being a consumer of scarce resources, expenditure for health must be considered as a sound economic and social investment. Ridding millions of people of the scourge of parasitic diseases would be one of mankind's greatest achievements to demonstrate this.

I am therefore very pleased to welcome you once again to today's symposium. Through your free exchange of views and suggestions this afternoon, I believe a clear message to accelerate a stronger political commitment to parasite control can be carried to the G8 leaders at this year's Summit in Okinawa.

Thank you very much for your attention.
Congratulatory remarks from Mr Yuya Niwa
Minister of Health and Welfare, Japan

Read by Dr Hideo Shinozaki
Director, Health Services Division
Ministry of Health and Welfare

Honourable Mr Ryutaro Hashimoto, the former Prime Minister of Japan,
Honourable Dr Alberto G. Romualdez Jr, Secretary of the Department of Health, Philippines,
Distinguished guests,
Honourable participants,

First I would like to welcome you all to this symposium and convey my congratulations for holding this international symposium, which focuses not only on the health consequences but also on the socio-economic development issues related to parasitic diseases.

The average life expectancy of Japanese is 77 for males, 84 for females – the longest life expectancy in the world. However, only about half a century ago, infectious diseases including parasitic diseases were a big threat to the health of the Japanese people. Therefore Japan has made efforts to prevent such diseases and their spread, e.g. through cooperation with schools and industries. This, together with socio-economic development and the advance of medicines and health services, has brought about a significant reduction in infectious diseases, so that certain infectious diseases no longer pose a threat to the health of the Japanese people. However, since 1997, the re-emergence of infectious diseases such as tuberculosis has been reported, with an increase in newly infected people, calling for new measures to cope with these. At the same time, it is clear that the long experience, knowledge and technology should be transferred to those who struggle with similar situations.

Unfortunately, increasingly fewer medical schools in Japan now offer parasitology in their curricula, resulting in the knowledge being lost. Consequently, Mr Hashimoto advocated for global parasite control at the Birmingham Summit in the United Kingdom in 1998. Together with the Ministry of Foreign Affairs and the Japan International Cooperation Agency, the Ministry of Health and Welfare is committed to global parasite control.

I hope that the symposium will provide a good opportunity for all participants to further deepen their understanding of parasitic diseases, and I would like to extend my gratitude to the hosts, Mr Kaihara, Governor of Hyogo, Mr Sasayama, Mayor of Kobe City, and the organizer of the symposium, Dr Kawaguchi, Director of the WHO Kobe Centre.

Thank you very much.
Welcoming Remarks

Mr Toshitami Kaihara
Governor of Hyogo Prefecture

It is my great pleasure to greet you all at this Symposium. We are also greatly honoured that the former Prime Minister, Mr Ryutaro Hashimoto, who is responsible for advocating global parasite control, is here on this occasion.

Since a new law concerning the prevention of infectious diseases came into force last April, Hyogo Prefecture has made efforts to prevent the outbreak and spread of infectious diseases by collecting and analysing information on these outbreaks at many facilities, including the Hyogo Prefectural Hygienic Science Laboratory.

As one of the local authorities supporting the activities of the WHO Kobe Centre, we hope that activities for global parasite control, which is a worldwide problem, will be further promoted by this symposium.

Currently, the International Gardening and Landscaping Exhibition, “Japan Flora 2000,” is being held on Awaji Island from March 18 to September 17, under the theme of “Communication Between People and Nature” as a new starting point for creative reconstruction from the Great Hanshin-Awaji Earthquake of January 1995.

In the process of reconstruction after the Earthquake, we received great support from Mr Hashimoto, the former Prime Minister of Japan, and on this occasion of “Japan Flora 2000” we look forward to his participation in the “Photo Gallery of Flowers and Greenery” held from May 18 as one of three noted photographers who will be displaying their works. I would like to take this opportunity to express my gratitude to Mr Hashimoto and I hope all of you will have a chance to visit and enjoy “Japan Flora 2000”.

In closing, it is my great hope that this Symposium will be fruitful and will achieve all its intended objectives. I would also like to express my sincere wishes for the health and success of all of you here.
Welcoming Remarks

Mr Kazutoshi Sasayama  
Mayor of Kobe City

It is my great pleasure to welcome to Kobe so many experts from different countries who have come to participate in this international symposium.

As you know, five years have passed since the Great Hanshin-Awaji Earthquake in January 1995. Thanks to the warm support of former Prime Minister, Mr Hashimoto, and of all people throughout the world, we have made steady progress towards full reconstruction. I would like to take this opportunity to express my sincere appreciation.

The organizers of this symposium, the WHO Kobe Centre, moved to this new urban centre in East Kobe, HAT Kobe, one of the symbolic projects of our recovery, in April 1998. Last year, Dr Kawaguchi became the new Director of the Centre. Since then, the Centre has been actively engaged in various projects of health development with great success.

As was mentioned earlier, this symposium aims to follow up the international cooperation concept of "strengthening mutual cooperation on parasite control". The outcome of the symposium has already raised great expectations all over the world. We are highly delighted that such an important meeting is now being held here in Kobe. Let me express my sincere appreciation to the WHO Kobe Centre, to the Ministry of Health and Welfare, and to all the people who made this symposium a reality.

Based on the lessons we learned from the earthquake, we in Kobe City aim to create a city in which residents can be mentally and physically healthy. We have a project called "the Athletes' Town", designed to encourage all citizens to enjoy sports and stay healthy. Another new concept is to develop a "medical industrial city of Kobe" to attract high-quality medical industries to our city. With the cooperation of the WHO Kobe Centre and other organizations, including the Asian Information Center (AOI) which is also contributing to Kobe city, all this is possible. Urban life and health are two of the main issues facing Asian nations which are also being studied in the WHO Kobe Centre, and that motivated us to create "Athletes' Town" project.

Finally, I would like to conclude my remarks by expressing my sincere wish for the resounding success of today's symposium. Thank you very much.
Hashimoto Initiative

Mr Ryutaro Hashimoto (Keynote speech)
Former Prime Minister, Senior Foreign Policy Advisor to the Prime Minister

It is a great pleasure for me to be given this opportunity to speak to you at this International Symposium at the WHO Kobe Centre. At this moment, as I stand before you, I am truly moved, because the building where we are meeting was built after the Great Hanshin-Awaji Earthquake which devastated this whole area. As Minister of International Trade and Industry at that time, I visited Kobe several times. Now, looking at the city from the windows, I can see that it has been fully rebuilt—at least the traces of devastation can no longer be seen. The WHO Kobe Centre is one of the buildings that were newly built after the earthquake. I am very moved by this, and would like to take this opportunity to extend my sincere gratitude to the Governor of Hyogo Prefecture, the Mayor of Kobe City, the landowners and all the people of the community in this area.

Indeed, this is a great privilege but at the same time I am not sure whether I can talk about matters that would be relevant or useful to an audience of scientists. I am a politician and know nothing about medical science. I do not know whether I can live up to your expectations. However, I can very frankly disclose why I came up with the Initiative for Parasite Control. Before starting my speech, let me say that I actually first proposed this issue at the Denver Summit in 1997, but it took a whole year before the G8 leaders finally agreed at the Birmingham Summit in 1998 to tackle this issue globally. Shortly after that, I had to resign due to a defeat in the House of Counsellors’ election. However, I still support this Initiative all the way.

At the Denver Summit, when I decided to take up the issue of parasite control, there was no response at all from any of the delegates. Some were aware of the issue—for instance, two references were made to malaria and one to onchocerciasis. I therefore told them that I would come up with convincing evidence by the next Summit in Birmingham one year later. Upon my return to Japan, I asked the Ministry of Health and Welfare to prepare a map showing the distribution of various parasites through the use of different colours. The Ministry, after a while, reported that it was difficult to prepare such a map because it was necessary to apply so many different colours in certain countries that the picture eventually turned black. I was not expecting the situation to be that serious. However, at the Birmingham Summit in 1998, with a series of maps, I argued that the issue was indeed a great threat to people’s health in tropical countries.

More than 500 million people are infected by malaria every year, and about two million die as a result; 3.5 billion are reported to be suffering from Ascaris and other soil-transmitted diseases. Worse still, the increasing numbers of refugees due to civil wars, the destruction of the environment, ill-planned and excessive development, weakened infrastructures or the lack of expertise in controlling re-emerging infectious diseases—all these further increase the risk of infections.
Nowadays, in Japan, people are less concerned about parasitic diseases. But if we look back a thousand years ago, for instance, the situation was totally different. That was the period of aristocracy led by Michinaga Fujiwara and his clan. Court culture was prospering, and famous court literature such as Tail of Genji and Makuranososhi were written around this period. About that time, there was a disease called “Okori,” and we assume that this is equivalent to malaria today. Anecdotes about Okori had been repeatedly described in Japanese literature up until the Edo era in the 17th Century. In “Emaki” or scroll paintings in the Edo era, we can find people infected by filariasis. Mr Takamori Saigo, a famous historical figure who had been a driving force for the Meiji Restoration, was himself infected by filariasis. Just a brief retrospection helps us to realize that we have had a full range of these diseases in Japan.

I was in second grade when Japan lost World War II. Japanese soldiers came back from overseas battlefields, many of them infected with malaria and having difficulty in recovering from it. At that time, we used human faeces as fertilizer to grow crops. As a result, cases of soil-transmitted nematode infection rose substantially – probably 70% of our population were actually infected with some kind of parasite. Today, we have none of these. How did we tackle such a situation after the war when we did not have sufficient budget to do it?

Two national policies were instructive. Even in a difficult financial situation, the Japanese government aimed at the efficient production of safe food. The development of chemical fertilizers was promoted and supported as much as coal mining, which was the main energy source of our industrial development, and we started to set up a clean water and safe sewage system. While this took years to complete, it also had a lot to do with the substantial reduction of various infectious diseases. At the community level, even before the war, medical doctors had been involved in protecting people’s health, and the government introduced a universal health insurance system so that almost everyone had access to medical services. All of these contributed to reducing the incidence of infectious diseases.

Yet I believe that one of the biggest contributions was to use the school system as a basis for health education and infection treatment. We sprayed insecticide, tested the children for parasites, and provided vermifuge drugs. Children brought the health information home, and so preventive medicine expanded into the communities too. School-based health education covered not only parasitic disease control but also tuberculosis, which was one of the most common diseases in Japan. Through the wisdom of the health authorities, the control of infectious diseases was a great success and indeed worthy of praise.

Control measures for schistosomiasis offer another example, too. A great many rivers and lakes were infested by *Schistosoma* at that time. Therefore, the bed and the banks of the rivers were shielded with concrete all the way to the river mouth so that the parasites could not survive. This was quite effective in eradicating the host snail; however, it also proved counterproductive. The concrete shielding should have been removed once *Schistosoma* had been eradicated. However, this was overlooked and now there is criticism that the ecology has been destroyed. The small fish and insects which used to be plentiful in the rivers and lakes, and which I used to play with when I was a child, are now disappearing.

Being a politician, I have travelled a great deal throughout the world. Often I find that there are countries, especially developing countries, which are struggling against
problems that Japan has conquered after many trials and errors. Our failures and mistakes in the past should be studied and shared with those countries. For instance, I promoted the provision of information on how we dealt with environmental pollution around the 1970s. We had to pay a high price for improving the situation. In order not to repeat the same mistakes in other countries, we are trying to share this information. I believe that this kind of information is useful and can contribute to our own future as well. In the same way, I am wondering whether our know-how in parasite control can be applied, especially in developing countries, and whether it is beneficial for them to share our experiences. That was the reason I raised the issue of parasite control at the G8 Denver Summit.

Nowadays, people are moving around frequently in massive numbers; in addition Japan has to rely on imported food, and we are dependent on other countries in this respect. This means, even if we have a perfect anti-parasite strategy, that individuals could still get infected abroad or there may be a risk of encountering contaminated food in Japan. In helping other countries, we can also protect ourselves.

If we look at countries with a high parasitic disease prevalence, it is easy to find enthusiastic people who are concerned with the issue, and are willing to work on it. Often, these people cannot do their best due to financial constraints or lack of appropriate leadership in their own country. Perhaps Japan could build an infrastructure or set up a system for these competent people to work more actively. Parasitology is a field about which human beings have accumulated considerable knowledge; now is the time to make use of this knowledge.

For instance, Japan used the school system to fight intestinal parasites. A vermifuge is a powerful tool to combat intestinal parasites, and it costs only US$ 0.35 per person. Moreover, schoolteachers and health workers could work together, incorporating the component of health education at the same time. The effect of a vermifuge is visible: people can actually see the parasites expelled from their body, and this can serve to accelerate active community participation.

The G8 members at the Denver Summit were interested in the economic gains from parasite control, and concerned about the magnitude of the mortality rate due to parasite infection. Talking about the mortality rate in relation to parasites, they did not realize that the parasites live within their host, the human body, so it is not possible for them to cause a high mortality rate among human beings. Economic gains from parasite control are, as you can imagine, very difficult to measure in a scientific manner. Maybe we can add up the medical expenses used for the treatment, or compare the mental and physical development of children with or without parasites in their bodies. However, concerning factors such as adults’ productivity lost due to infections, or subsequent economic loss, all I can say is that, even though we cannot show the exact figures for health advancement, the impact of parasite control is profound as has been shown by different social and health indicators over time.

Having said that, I recently become concerned about current medical education in Japan. The importance of parasitology is being overlooked, and many schools are replacing it with other fields of study. In Japan, to tell the truth, parasitic diseases are regarded as of lesser value compared to complex, modern diseases. However, if we look around the world, parasitology is not a study of the past. As I mentioned earlier, 3.5 billion people are affected by soil-transmitted nematodes. I do not wish to see a further decrease in the number of
medical schools that teach parasitology, as long as Japanese medical professionals are concerned with international issues as much as domestic issues.

I made this clear to the Ministry of Education, which is in charge of setting standards in national medical education. I also take every opportunity to talk with people in the universities to deliver my message, before it gets too late. We still have excellent experts with a lot of experience. Before these people’s knowledge is lost forever, we should take action. We should make use of such know-how and related technologies for the benefit of the rest of the world, especially for the developing nations. In doing so, I also hope that young Japanese experts will be trained. Thanks to the Japanese government’s efforts, the Initiative has led to the appointment of one institute in Asia and two in Africa to be regional research centres.

In my opinion, even WHO does not pay as much attention to schistosomiasis control in Asian countries as it pays, for instance, to malaria control, despite Dr Kawaguchi’s encouraging speech. Malaria and onchocerciasis seem to draw much public attention, and every single success story is reported by the mass media. Therefore I would hope that we can work more intensively on the parasitic diseases which, while less appealing to the mass media, impose an enormous burden on the people. In this way, we would hope to contribute to humankind. That is my dream that I wanted to convey to you in this 30-minute speech.

Thank you all very much indeed.
Hashimoto Initiative – from policy to implementation

Dr Toshinobu Sato
Director
Office of Intelligence Service, Infectious Diseases Control Division
Health Service Bureau, Ministry of Health and Welfare, Japan

You have just heard from former Prime Minister, Mr Ryutaro Hashimoto, about his motivation for starting the Hashimoto Initiative. Now I would like to speak briefly about how we, the Ministry of Health and Welfare (MOHW) of Japan, formed this Initiative, and about its future direction.

Introduction

Globally, over 500 million people contract malaria every year, and two million die from it every year. And 3.5 billion people are infected with soil-transmitted nematodes. Figure 1 and 2 are the maps that the MOHW made, on the request of then Prime Minister, Mr Ryutaro Hashimoto. These show how some areas affected by malaria, for instance, overlap with the area with schistosomiasis, which suggests that people have a risk of multiple parasitic disease infections.

At the G8 Denver Summit in 1997, Mr Hashimoto, then Prime Minister of Japan, proposed this Initiative. Prior to the Summit, the Ministry of Health and Welfare and other related organizations had started discussions about the sort of initiative that we, as a government office, should establish.

First, we set up a working group within the MOHW to further investigate the current problems and possible solutions. Until then, however, we had mainly been involved with domestic infectious disease control activities. No specific division at the Ministry at that time dealt with parasite control issues on a global scale. As a result, we called for support from the International Division of the Ministry of Health and Welfare, the Ministry of Foreign Affairs, the Japan International Cooperation Agency (JICA) and the Ministry of Education by inviting them to join our working group. Meanwhile, in December 1997, the International Parasite Conference was held in Tokyo. We prepared a report for that occasion which Mr Hashimoto later presented at the Birmingham G8 Summit in May 1998, calling other leaders’ attention to this issue. On that occasion, he succeeded in having parasite control issues included in the Communiqué.

Outcomes of the Initiative – Global parasite control for the future

As advocated in the Hashimoto Initiative, the four key strategies for global parasite control are:

1. Effective international cooperation;
2. Active pursuit of research (including the development of new curative medicines);
3. Development of infrastructure and setting up of effective organizations and framework;
4. Strengthening of the G8 countries’ capabilities and collaborative network.
Among these four, we give most emphasis to the third strategy. Currently, we are trying to set up regional focal points for project implementation, one in South-East Asia and two in Africa.

**Regional Focal Point in Asia**

In South-East Asia, the Department of Tropical Medicine at Mahidol University, Bangkok, Thailand, was chosen to be a focal point. On 23 March 2000, Professor Tsutomu Takeuchi, of Keio University, and Dr Sornchai Looareesuwan, Dean of Tropical Medicine at Mahidol University, signed the Record of Discussions (R/D). This spring JICA is planning to assign a long-term expert and provide the necessary equipment to implement the projects financed by the Japanese government. Moreover, the Japanese government is going to invite Thai researchers to Japan for training. Over time, it is expected that these researchers will in turn be able to train their counterparts in other South-East Asian countries (South-South cooperation). Japan would continue to provide the resources required for such training.

**Regional Focal Points in Africa**

In Africa, the project will be based in two existing research institutes: the Kenya Medical Research Institute (KEMRI) in Kenya and the Noguchi Memorial Institute for Medical Research in Ghana. In April 2000, JICA is planning to send a preliminary study team to these institutes. The project in Africa develops more slowly, almost two years later compared to the project in South-East Asia. Nevertheless, in the near future the Japanese government is expecting that these institutions will function in a similar manner to their counterparts in South-East Asia.

Lastly, I would like to mention our future plan to promote this Initiative, based on our strategy. Today’s symposium aims to strengthen our first strategy: effective international cooperation with international organizations, such as the World Health Organization. In order to promote our second strategy – the active pursuit of research – the Ministry of Health and Welfare is willing to support a research project to find effective global parasite control measures. The budget has been allocated for research into finding new curative medicines for emerging and re-emerging infectious diseases as well as research aimed at promoting international cooperation activities, among which global parasite control is, of course, included.
Figure 1


Figure 2

Parasite Control in South-East Asia

Professor Sornchai Looareesuwan
Dean, Faculty of Tropical Medicine, Mahidol University and
Director, SEAMEO TROPED Thailand
Secretary General, SEAMEO TROPED Network

1. Global burden and magnitude of tropical diseases

<table>
<thead>
<tr>
<th>Disease</th>
<th>People</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria</td>
<td>500 million</td>
<td>2.7 million</td>
</tr>
<tr>
<td>Schistosomiasis</td>
<td>200 million</td>
<td>20 000</td>
</tr>
<tr>
<td>Chagas disease</td>
<td>18 million</td>
<td>45 000</td>
</tr>
<tr>
<td>Sleeping Sickness</td>
<td>300 000</td>
<td>High</td>
</tr>
<tr>
<td>Visceral Leishmaniasis</td>
<td>12 million</td>
<td>High</td>
</tr>
<tr>
<td>Filariasis</td>
<td>120 million</td>
<td>Reduced lifespan</td>
</tr>
<tr>
<td>Dengue Virus</td>
<td>10 million</td>
<td>30 000</td>
</tr>
<tr>
<td>Ascaris</td>
<td>1 billion</td>
<td>60 000</td>
</tr>
<tr>
<td>Whipworm</td>
<td>900 million</td>
<td>not estimated</td>
</tr>
<tr>
<td>Hookworm</td>
<td>500 million</td>
<td>90 000</td>
</tr>
<tr>
<td>Amoebae</td>
<td>500 million</td>
<td>70 000</td>
</tr>
</tbody>
</table>

2. Parasitic diseases in the region and their human impact

At this stage we do not have accurate, standardized or reliable information for all countries in the South-East Asian region. The existence and reliability of data vary quite markedly from country to country – in some it is quite good, while in others only partial data exist and, in the worst case, there are no coherent data at all. Therefore, it was a challenge to prepare the following summary.

2.1. Cambodia

2.1.1. Main parasitic diseases and their control programmes

Not much information is available about parasitic infections in Cambodia. Nevertheless, malaria, schistosomiasis, filariasis and soil-transmitted helminthiasis (STH) have been identified as problems.

a. Malaria

*Plasmodium falciparum* and *P. vivax* are two species of malarial parasites in the country. Total clinical malaria cases in 1998 were reported to be 140 843, with 58 874 cases being confirmed. In addition, there were 4 580 severe cases and 621 deaths.
Malaria control is carried out through preventive measures such as insecticide-treated nets, insecticide-treated hammock nets, training of health workers, and curative measures (early diagnosis of the parasite using dipstick and using drugs in combination).

b. **Schistosomiasis**

Prevention of severe morbidity is by mass treatment in endemic villages, and through health education, which is the responsibility of the Ministry of Health.

c. **Filariasis**

Operational research on the distribution of infection and disease is in progress.

d. **Soil-transmitted helminthiasis (STH)**

There is a high prevalence of worm infection (hookworm, whipworm and roundworm) in all provinces. Prevalence in schoolchildren varies from 30% to 70%. The control measure is regular mass treatment combined with health education, which has been integrated into school health activities.

2.2. **Lao People’s Democratic Republic**

2.2.1. **Main parasitic diseases and their control programmes**

a. **Intestinal parasitic infections**

Intestinal parasitic infections are prevalent in many areas of Laos. Studies conducted between 1990–1994 show the prevalence of infection to be between 77% and 83%. A more recent survey of all seven districts of Vientiane province found that intestinal parasitic infections are endemic, with a prevalence of over 63%. Consumption of undercooked fish, pork and beef, as well as widespread consumption of raw vegetables, was reported. About 25% of the sample population did not always put shoes on when going outside, and 46% defecated in nature; 92% were not aware of helminthic diseases at all.

Ascariasis, trichuriasis and opisthorchiasis are the most prevalent of the intestinal parasitic infections in the Vientiane province. A relatively low rate of hookworm infection can be found in all districts. Ascariasis, trichuriasis and ancylostomiasis affect all age groups with the highest prevalence in teenagers. Only *Opisthorchis viverrini* infection is predominant in adults, mostly in men.

For the long-term effectiveness of the control programme, it is necessary in the future to concentrate on preventive measures. Schoolchildren especially are well-organized and easy to access. Therefore we can combine blanket treatment and health education campaigns at school. In addition, the provision of latrines around the school will raise their awareness about hygiene.

b. **Malaria**

Reported malaria cases varied from 3000 to >20 000 per year, with particularly high incidence in the southern and central northern parts of the country. In 1998, it was reported
that 31,749 malaria cases were hospitalized and 399 malaria deaths occurred. One study found a slide-positive rate of 14.2%.

2.3. Malaysia

2.3.1. Main parasitic diseases and their control programmes

a. Soil-transmitted helminthiasis

Trichuriasis, ascariasis and hookworm infections are the main diseases, in that order, with trichuriasis being the most common. In urban slums and estates where living conditions are poor, infection rate is higher, with up to 91% among squatter communities. Those under 20 years of age are at highest risk. At the moment, there is no control programme for most of the worm infections.

b. Enterobius vermicularis

The prevalence in 6–12 years old is 48% to 61%.

c. Filariasis

The prevalence is 2.64 per 100,000 population in 1997. Malaysia has been implementing an integrated control programme since 1992.

d. Malaria (Plasmodium falciparum, vivax, malariae)

The number of cases has steadily decreased between 1990 and 1997. The incidence rate in 1997 was 12.2 per 10,000, more than 70% of which cases were from Sabah. Malaysia has had an integrated control programme since 1992.

e. Giardia lamblia

Overall prevalence ranges from 2.6% to 25%. Most parasitic infections are associated with the underprivileged, poor sanitation, a poor living standard and poor basic amenities, e.g. the squatter areas, estates, Malay villages, and Orang Asli (aboriginal people in West Malaysia) communities.

2.4. The Philippines

2.4.1. Main parasitic diseases and their control programmes

a. Malaria is endemic in 63 provinces. P. falciparum makes up about 70% of cases, P. vivax about 30%, but P. malariae is rarely found. Insecticide resistance is not a problem so far. People at risk are estimated to be around 11 million, equal to 14.5% of the population. Confirmed cases were 86,172 in 1990, but have been reduced to 42,247 in 1997. Mortality from malaria also was reduced to 0.9/100,000 in 1995, compared to 1.5/100,000 in 1990.

The malaria control programme is a vertical one implemented directly by the Department of Health of the Philippines and has a budget of 27 million pesos. Malaria control personnel are located at all levels of the national health system.
b. **Schistosomiasis** is endemic in 24 provinces, with a prevalence rate of 4.5%. A vertical schistosomiasis control programme is being implemented by the Schistosomiasis Control Service of the Department of Health, and a control team is stationed in each endemic area.

c. **Soil-transmitted helminthiasis** is endemic all over the country. The prevalence rate of all helminthiasis is 50% to 90%. A programme to control soil-transmitted helminthiasis was initiated in 1999, with a budget of three million pesos. The Office of Communicable Disease Control (CDC) Service is responsible for the programme. The main control strategies include mass treatment, family empowerment and community management.

d. **Filariasis** is endemic in 20 to 25 provinces, with an estimated prevalence rate of up to 25%. Its average annual prevalence rate is 2%. A strategic plan to eliminate filariasis in the Philippines was approved in late 1998, and is now under implementation. The CDC Service of the Department of Health is responsible for the vertical programme.

e. **Paragonimiasis**, endemic in 13 – 18 provinces, is prevalent in up to 39% of the population. Currently a survey is underway to update information on the endemic areas. Its infection rate is 0.7% in snails, and 41% to 99% in crabs. About 75% of cases are suspected to have been misdiagnosed as tuberculosis by the general public and health workers.

2.4.2. **Philippines National Health Plan 1995 – 2000**

1. Conceptual framework on the interaction of the population, health sector and health-related sectors in influencing and determining health status.
2. The vision to improve the social and economic status of the population.
3. Health status analysis reveals high levels of malnutrition among pre-school children, pregnant and nursing women.
4. Sets linkages among the health sector, private sector, various government and non-government agencies to further enhance community efforts to attain health for all.

2.5. **Thailand**

2.5.1. **Main parasitic diseases and their control programmes**

a. **Malaria**

   The malaria situation in 1998 is shown in Table 1. The Malaria Control Programme Division is in the Center for Disease Control (CDC) of the Ministry of Public Health (MoPH). The Malaria Division has seven subdivisions, namely: epidemiology, entomology, diagnosis, treatment policy, vector control operations, health and social behaviour, and administration.

   At the country level, the programme comprises five regions. The country was divided into three operational areas in 1991, comprising a control area (1997 population, 41
million), a pre-integration area (4.4 million) and an integration area (11 million). The annual budget for malaria control has varied between US$21 million (1992), US$28.5 million (1996), and US$23.7 million (1999).

Table 1

<table>
<thead>
<tr>
<th>Malaria in Thailand (1998)</th>
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<td>• Total Malaria cases:</td>
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<td>Thai cases</td>
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<td>Foreign cases</td>
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• Cases reported along international borders  70%
  of which,
    Thai – Myanmar border  66%
    Thai – Cambodia border  19%
    Thai – Malaysia border  12%
    Thai – Lao border  3%

Strategies

1. Disease management
   • prompt treatment
   • national drug policy
   • public/private sector collaboration
2. Disease prevention
   • health education and public relations
   • personal protection (bednets, impregnated nets, repellent use)
   • selective vector control using bio-environmental measures and pyrethroids
3. Strengthening of malaria control operations along border areas
4. Prediction, prevention and epidemic control
   • information system, IT and epidemic early warning system
   • prioritization of areas according to risk
   • development of special response team and operation plan for epidemics
5. Development of appropriate malaria control strategies
   • upgrade health personnel
   • promote collaboration between public and community organizations
6. Promote collaboration among sectors, institutes and organizations
   • promote Thailand as the location of a training centre for personnel development and the Center for Malaria Research in the South-East Asian Region
7. Promote expansion of the Integration area.

b. Soil-transmitted helminthiasis

Surveys have shown a declining trend in intestinal helminths over the past three decades, with prevalence rates of 63% in 1957 down to 42% in 1991, and further down to 35% in 1996. The intensity of infections is also declining, even in the endemic areas, and the parasitic infections can be classified as light to moderate.
Opisthorchiasis is the most important trematode infection in Thailand, and it is estimated that there are 8.7 million people infected. Endemicity was found in the northeast (24%) and the north (22%).

The prevalence of hookworm also declined from 41% (1981) to 28% (1991), and down to 22% (1996). Hookworm is most prevalent in the southern part of Thailand. The prevalence in 1981 was 76%, while in 1989, following the start of the hookworm control programme in two pilot provinces, prevalence decreased to 49% in 1991, and to 34% in 1996.

At present, only 1.5% of villages in Thailand still have filarial transmission, and only 0.19% of villages still have a microfilarial prevalence over 0.6%. Diethylcarbamazine (DEC) is used for treatment. The newly emerging problem is the migration of illegal Burmese labourers (about 1.5 to 2 million) throughout Thailand; the vector species is *Culex quinquefasciatus*, a nocturnal periodic type. There is a danger that filariasis may spread throughout Thailand as a result.

The main activities of the programme include:

1. Mobilize and utilize national health resources for the control of helminthiasis;
2. Strengthen operational management
3. Ensure collaboration of health-related sectors in helminthiasis control;
4. Have adequate manpower for the control of helminthiasis, and provide health staff with technical training under regular monitoring from the Center.

Control measures consist of treatment to eradicate animal reservoir, improvement of hygiene, and health education to prevent both new and re-infections.

Hookworm has been targeted in the intestinal helminthiasis control programme in certain provinces of Thailand since 1968. Later the programme was integrated into the Five-year National Health Development Plan.

The helminthiasis programme is under the control of CDC, MoPH, whose main responsibility is to formulate and facilitate the national programme for the control of common helminths. Control activities are performed at the peripheral level by provincial health personnel, while technical and logistic support is provided by the General Communicable Disease Division through 12 Regional Communicable Disease Control Offices throughout the country.

The programme provides blanket treatment with mebendazole (1982 – 1992) and albendazole (1993 to date) for the general population over two years of age. Primary school children are especially targeted countrywide to get intensive three-year blanket treatment. In addition, health education on wearing shoes and on constructing and using latrines is carried out to prevent re-infection. Leaflets, pamphlets, posters, slides, films, audio-tapes and videotapes are widely used for health education in schools, communities, village loudspeaker posts, health agencies and radio-TV programmes.
c. **Opisthorchiasis control programme**

A special programme for opisthorchiasis started in 1984, due to the high prevalence in the north-east of Thailand. A region-wide liver fluke control programme started in 1987, and later was included in the 6th Five-year National Public Health Development Plan (1987–1991). 5.24 million cases underwent stool examination, and 1.78 million positive cases were treated with praziquantel. The programme was expanded to include 42 provinces. At present, the liver fluke programme remains in the 8th Five-year National Public Health Development Plan, and control activities are integrated into the comprehensive rural health services of all target provinces.

d. **Filariasis control programme**

A filariasis survey started in 1953 in 26 provinces of Thailand, of which five still remain endemic. Five strains of two species (*Brugia malayi* – vector *Manson*; and *Wuchereria bancrofti* – vector *Aedes niveus* group) were found as local parasites in Thailand. The Filariasis Control Programme is now integrated into basic health services, except in some highly endemic areas, but is still supervised by the Regional Vector-borne Disease Control Center. The overall objective is to reduce microfilarial positive rates to less than 0.6% in all endemic areas and then interrupt transmission. No large-scale vector control measures have been conducted in Thailand, other than the use of insecticide-impregnated bednets and repellents, because the vectors bite and rest outside the house.

### 2.5.2. Five major areas of health development policy

1. Strengthen implementation of primary health care programmes both in rural and congested urban areas.
2. Raise the quality of overall health services at all levels.
   - management competency
   - health information system
   - mechanisms for policy consolidation and health manpower development
   - for normal situations and emergencies
   - reduce costs and increase efficiency
3. Improve the existing health insurance system.
   - low income families; those needing welfare services
4. Support concerned agencies or institutions which seek to raise health status of the population.
   - improve health behaviour
   - health education
   - mental health
   - environmental control
   - consumer protection
5. Revitalize and extend the use of proper low-cost Thai traditional medicine.
2.6. Viet Nam

2.6.1. Main parasitic diseases and their control programmes

a. Soil-transmitted helminthiasis

In the Red River Delta of Vietnam, 28% to 31% of the residents were infected with clonorchis (liver fluke). Eight species of freshwater fish were determined as second intermediate hosts with infection rates ranging from 12% to 68%. Dogs and cats were the reservoir hosts, and infection rates were 20% and 30% respectively. STH infection was found throughout the country with high prevalence rates; in some areas the prevalence was higher than 90%.

b. Malaria

The Malaria Eradication Programme was launched in 1958. Since 1976, it has expanded countrywide and produced good results. After the initial attack phase, malaria was reduced by more than 20% in the north and 4% in the south.

Since the end of the 1970s, there has been a resurgence of malaria due to many reasons, such as lack of resources and large population movements during and after the war. In central Viet Nam, more than 500 000 malaria cases with over 3000 deaths and 13 large outbreaks were recorded during 1991-1992.

Since 1991, together with other parts of the country, the central region has radically changed its strategy from malaria eradication to malaria control, and has achieved good results.

Malaria deaths have been reduced by 91% (18 deaths in 1997, compared with 1314 deaths in 1992). The number of malaria cases has been reduced by 58%. In 1997, malaria mortality was 0.95/100 000 and morbidity was 11.4/1000. The number of malaria epidemics declined greatly, with only 10 small outbreaks recorded in the same year.

Key reasons for success of the malaria control programme (1992 – 1997)

1. Malaria has been identified as a national health priority, with direct funding from the government. The Ministry of Health and authorities at all levels established steering committees at all levels, from provincial to local.
2. The malaria control strategy promoted by WHO was creatively applied. Objectives and control measures were established, appropriate for each period and area.
3. Production and use of artemisin and its derivatives for the treatment of falciparum malaria (severe and complicated malaria) were promoted. The mortality rate and number of severe and complicated malaria cases were rapidly reduced. Drug resistance was regularly monitored and suitable treatment guidelines were issued in the region. Antimalarial drugs were distributed free of charge and early-stage malaria was treated at commune and village levels.
4. Malaria outbreaks were forecast in a timely manner and controlled in high-risk areas. Epidemiological surveillance was strengthened, and drugs and insecticides were stocked in preparation for outbreaks.
5. Vector control through the use of insecticides was expanded, protecting 4.5 million people in 1997, compared with 2.6 million in 1992. The number of people protected by impregnated bednets increased from 24% in 1992 to 74% in 1997.

6. The malaria control system was consolidated and coordinated with the general health system. Commune and village health networks were trained to deal with malaria.

7. Scientific research was closely linked with malaria control to establish appropriate technical control measures.

8. Intersectoral cooperation took place, improving the quality of health education and encouraging community participation in malaria control.

9. Resources were mobilized and managed. International cooperation and assistance played an important role in supplementing resources, improving the quality of technical control measures and programme management capacity.

Main obstacles

1. The risk of malaria resurgence remains high, with incidences increasing in 1997.
2. Village health service networks do not exist in some areas.
3. Knowledge of malaria control at the district and commune levels is still limited.
4. Activities of the private sector are not closely managed.
5. Coverage and quality of technical measures (surveillance, vector control, health education, training and re-training) are still limited.
6. Coordination with other sectors (outside the health sector) and the mobilization of community participation in malaria control is still not routinely implemented on a large scale.
7. Resources for the malaria control programme are still limited and unstable.

2.7. Summary of existing control measures and programmes in the Region and their weaknesses

Dr Nobuhiko Nagai, of the Japanese International Cooperation Agency (JICA), confirmed during his mid-1999 visit to six South-East Asian countries that vector-borne diseases were a big problem in the countries that he visited—namely, Cambodia, Lao PDR, Malaysia, Myanmar, the Philippines and Viet Nam. At the same time, surprisingly, the priority of helminthic diseases, except for schistosomiasis, was low in these countries. No country had an ongoing control project on helminthic diseases at that time. In fact, these diseases represent regional problems, being accentuated by civil conflicts, increased migration between countries, climatic and environmental change, inadequate and deteriorating health systems, and socio-behavioural risk factors.

Malaysia has already established a control system for malaria and other vector-borne diseases. The Philippines is struggling to rebuild a new health system after decentralization. In Viet Nam and Myanmar, the health systems have functioned to some degree, led by the central governments, even at the peripheral level. However, their health budgets put severe limits on health-related activities. In Lao PDR and Cambodia, a system to control malaria and parasitic diseases has not yet been established as they do not have sufficient budget nor human resources at the central level, let alone at the provincial/district level.
3. Institutions working for global parasite control

3.1. SEAMEO TROPMD/Thailand and SEAMEO TROPMD Network

SEAMEO TROPMD was established under the South-East Asian Ministers of Education Organization (SEAMEO) in 1967 to teach, research and train in tropical medicine and public health. At the 28th SEAMEO Council Conference in Singapore in 1993, the SEAMEO TROPMD Network was established, as it exists today. Member countries include Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam. Associate members include Australia, Canada, France, Germany, New Zealand and the Netherlands.

SEAMEO TROPMD serves to link bilateral and multilateral assistance programmes with WHO and other UN agencies, thus maximizing the utilization of existing resources and bringing results to bear on specific national health programmes in which TROPMD is involved.

3.2. Asian Parasite Control Organization (APC0)

The regional training course on the control of intestinal helminthiasis was initiated by the Asian Parasite Control Organization to promote the concept of the Integrated Project (IP), covering parasite control together with family planning among other activities, including nutrition, maternal health and sanitation. The course has been conducted annually since 1977 at the Faculty of Tropical Medicine, Mahidol University, Thailand. Participants are invited through IP programmes from 11 participating countries – Bangladesh, Bhutan, Cambodia, Indonesia, Lao PDR, Malaysia, Nepal, the Philippines, Sri Lanka, Thailand and Viet Nam, and occasionally from eight other countries – Egypt, Guatemala, India, Japan, Mexico, Myanmar, Tanzania and Zambia.

3.3. Asian Center of International Parasite Control (ACIPAC)

3.3.1. Background

On 23 March 2000, the ACIPAC Implementation Study Team visited Thailand. Members of the team included Dr Akira Endo, of JICA, Leader of the Implementation Study Team, and Dr Kenji Iwaguchi, the Resident Representative, JICA Thailand Office.

As a major initiative to control parasitic diseases in the South-East Asian Region, the Record of Discussions was signed in Bangkok on 23 March 2000, in which it was agreed that the Government of the Kingdom of Thailand would implement a five-year project for the Asian Center of International Parasite Control (ACIPAC) Project, in cooperation with the Government of Japan, through the Japan International Cooperation Agency (JICA). ACIPAC is now officially operational.

The Faculty of Tropical Medicine, Mahidol University, Thailand, has been designated the Asian Training Center for Parasite Control, in addition to being already the SEAMEO-TROPMD Regional Center for Tropical Medicine for South-East Asia.
3.3.2. Project goals

The overall goal of the ACIPAC Project is to substantially reduce the public health problem of parasitic diseases in South-East Asia by strengthening parasite control programmes through human resources development in the Region.

In this context, appropriate training in the control of parasitic diseases will be provided for the next five years to the managers of parasite control programmes in South-East Asian countries. Based on the findings of operational research, a control programme model, tailor-made for each participating country, will be developed before it is extended to a nationwide control programme.

A network of parasitologists and related health personnel within and outside the Region will be established to promote research collaboration and successful implementation of parasite control. Inter-institutional communication is currently quite weak, and a concerted knowledge-based approach is needed to resolve trans-sectional problems. A regional knowledge network for parasite control to stimulate research information exchange, discussion and dissemination should be set up. Through the use of Geographic Information System (GIS) and other appropriate information technology, ACIPAC will play a leading role in providing the latest epidemiological data to both public and private sectors, eventually leading to renewed health policy and resource planning, early warning of epidemics, and sharing of programme evaluation data among the countries in the Region.

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Health Sector Reform Agendas in the Philippines

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Former Prime Minister Hashimoto and the other distinguished speakers on the panel, officials of the WHO Kobe Centre, Honoured Guests:

First, let me express my gratitude for the honour of speaking at this significant symposium. In particular, I would like to thank my good friend and former colleague in WHO, Dr Yuji Kawaguchi.

My country, the Philippines, has a heavy burden of parasitic diseases (including schistosomiasis, soil-borne helminthiasis, paragonimiasis and others). The subject of this gathering is therefore of great interest to us.

This afternoon, however, with your permission, instead of focusing on the problem of parasites per se, I would like to tell you a little bit about an ambitious reform programme for the entire Philippine health sector. I believe it is relevant to our discussions because, as all of us agree, parasitic diseases – like the other great scourges of mankind – affect primarily the poor of each community. The summary that I shall present is part of the Estrada government’s pro-poor programme on the basis of which he was elected less than two years ago.

Present health situation

During more than a decade’s commitment to WHO’s health for all strategies emphasizing primary health care, the health situation of the Philippines has improved considerably. This is evidenced by our having achieved the health status indicator targets that were set globally almost twenty years ago.

Nevertheless, in this day of intra-uterine diagnosis of congenital defects, high technology resuscitation equipment and computer-controlled incubators for premature infants, over 200 000 Filipino infants still die of preventable causes every year. In the age of ultrasound and other sophisticated methods of detecting and controlling high risk pregnancy situations, some 70 000 Filipino women die unnecessarily of avoidable complications of child-bearing and birthing.

Even as new and more potent antibiotics are developed, communicable diseases such as childhood pneumonias, tuberculosis and malaria persist as important causes of morbidity and mortality in the country.

In addition, lifestyle – and environment-related problems such as hypertension, degenerative lung disease, diabetes and others are gaining in importance in our country’s disease profile.
Problem of inequity and the need for reform

Even a superficial study of disease patterns reveals that infant and maternal deaths are highest among the poor and those who live in rural communities. The double burden of disease resulting from the epidemiological shift in disease patterns is heaviest on the poor – their living conditions make them more susceptible to the ravages of lifestyle – and environment-related illnesses. This is compounded by the fact that access to all levels of care is severely limited for the poor and those who live in isolated communities.

The DOH analysis of this situation has led us to conclude that the Philippines’ number one public health problem is really inequity in access to high quality health care. In short, although a few people who can pay for it have access to the most sophisticated tertiary-level care, the majority of Filipinos who happen to be poor do not get the kind of health services that they need and deserve.

Inequity is essentially due to defects in three areas of the health sector:

Personal and public health services are inefficient because of fragmented, inappropriately targeted delivery systems – a private system that caters mainly to the well-off and a government system that is inadequate to serve the majority poor.

Inadequate regulatory systems foster poor quality, high costs and ineffective interventions.

Financing is inadequate, inefficiently sourced and inequitably allocated.

Health sector reform agenda

An analysis of the way health resources have been allocated in the past has shown that structural changes are needed in the health sector in order to properly address this problem of inequity. Expanding shared-risk financing schemes such as health insurance and strengthening the government’s regulatory functions will make possible changes in both public and private sectors. This will in turn allow for reforms of the hospital system to make health facilities more responsive to actual health needs (that is, demand-driven instead of the current supply-driven system). Resources can then be freed to improve public health programmes and local health systems can be systematically strengthened.

Health sector reform must therefore consist of structural changes in:

• Health service delivery: the hospital system must be upgraded and linkages forged between the private and government sectors. Also promotive, preventive, curative and rehabilitative services should be re-integrated, especially at local levels. At national level, technical support services for all levels and sectors need to be strengthened and re-oriented;

• Health regulations: the regulatory agencies must be strengthened through capability building as well as legislation of more stringent quality and cost regulations in all areas. Further, regulatory policy should aim at promoting public health-sensitive government interventions in social and economic areas.
• Health financing must undergo major changes in order to effect better equity through risk- and cost-sharing as well as cross-subsidy schemes.

Reform of the hospital system must begin with the government facilities. Measures must be taken to allow them to compete effectively with private hospitals in generating revenues from health insurance schemes while preferentially catering to the needs of the poor majority.

Along this line, reforms are being initiated to provide fiscal autonomy to these hospitals by allowing them to collect, retain and allocate revenues from socialized user fees. The Department of Health is providing the leadership for the appropriate institutional arrangements, such as conversion to public corporations, to allow government hospitals sufficient autonomy without compromising their social responsibilities.

To effectively exercise fiscal autonomy, critical capacities like physical infrastructures, diagnostic equipment, laboratory facilities and human resource development are being upgraded. With better resources and highly skilled staff, government hospitals are expected to provide better quality of health services, be more competitive and be more responsive to the health needs of the people. As government hospitals become more competitive and autonomous, subsidies from the government (national and local) are expected to decline. This will free up resources for priority public health programmes such as tuberculosis control and the reduction of parasitic infections, which are major contributing factors in the vicious cycle of poverty and disease that afflicts most Filipinos.

Changing the system of health care financing is the single most important element of the reform agenda. Financial reform is crucial to the other areas that the DOH is targeting for change. Restructuring the spending patterns for health will allow the government to concentrate on the areas that it does best, namely public health and enforcement of health regulations. But, more importantly, our analysis indicates that the key to equity in health services lies in health financing.

Personal health care accounts for almost 80% of health spending in the Philippines, according to the National Health Accounts for 1997. The source of funds for most of this comes from personal or family spending which pays for the care of the 30% of the population that can afford care. The majority of Filipinos depend on the 20% share of personal care expenditures supported by national or local governments. Herein lies the inequity. Shared-risk schemes or insurance take care of only 15% of total health expenditures. Of this, less than half, or 7%, is accounted for by the National Health Insurance Programme (NHIP) (formerly Medicare) administered by the Philippine Health Insurance Corporation (PHIC) or Philhealth.

Reform of health financing will emphasize expansion of the insurance or shared-risk schemes as the major means of paying for personal health care. For this purpose, we have taken steps to:

• expand membership by fully enrolling indigenous members to be subsidized by local and national government contributions as well as initiating a programme to enroll self-employed or self-paying members. Improvement of benefits will shift the emphasis from hospitalization to out-patient services, especially those for priority problems such as TB and child care;
strengthen administration and management with emphasis on greater use of information technology by the whole health system;

• establish linkages and collaboration with other schemes such as the existing private insurance systems and community-based health financing schemes.

These activities will expand NHIP coverage to 80% of the population by the year 2004. At the same time the insurance share of total health expenditures will increase from 14% to 40% or 45%.

Reforms in health financing will be effective only if health care costs are kept within reasonable limits. Thus cost containment is a critical component of the health financing reform package. This can be achieved by means such as: emphasis on promotive and preventive health; development of outpatient benefits programmes; rationalization of professional fees; and the reduction of the costs of drugs and medicines.

This brings us to one of the more contentious issues of the health sector reform agenda - the concerted, determined and forceful implementation of the National Drug Policy first articulated by President Corazon Aquino in 1987. It is our firm conviction that equity in the provision of health services can never be achieved without assurance of the availability of high quality, effective, safe and affordable medicines.

This is apparent from the fact that PHIC data reveals that 60% of health care costs go to the payment of pharmaceuticals. In fact, in 1997, almost half of the 89 billion pesos spent on health was attributed to the cost of drugs and medicines.

Anyone who has been to a drugstore recently will attest to the fact that prices of prescription drugs are beyond the reach of many of our countrymen. There is the all-too-common scene of a mother of obviously modest means having to choose the cheaper vitamins over the expensive antibiotics prescribed by the paediatrician for her sick child, because that is all she can afford.

Amoxicillin when it is sold as the brand – Amoxyl – costs 18 pesos. When it is sold as a generic preparation, it is 8 pesos. In India, the brand is available at 4 pesos. At the DOH drugstore in the Davao Regional Training Hospital at Tagum, we are now selling Amoxicillin at 3.50 pesos – with a 10% mark-up.

It is clear that price mark-ups are excessive and they occur along the entire value chain of medicines – from importation to manufacture and packaging; from marketing and promotions to distribution and wholesaling; and finally at the retail end where the poor Filipino patient is made to pay more than he or she can afford.

And the basic cause of all this is the aggressive marketing tactics of large mainly manufacturing companies using brand names.

Meaningful reform of the pharmaceutical industry will focus on the firm, vigorous and relentless implementation of the national drug policy first announced by President Corazon Aquino in April, 1987.

This will include the following actions:
• Rational drug use through full compliance with the Generics Law of 1988 and prescription requirements for dispensing of RX medicines;
• Strict regulation of marketing practices;
• Close monitoring of drug prices and instituting government interventions throughout the entire value chain of the pharmaceutical process: from importation of materials to manufacture and packaging, from marketing and promotions to distribution and wholesaleing, and finally to retailing;
• Lastly, realizing the size of the government market in pharmaceuticals, a thorough overhaul of the government procurement system has been started – beginning with the DOH but eventually to include all other agencies.

Expected outcome and impact of the health reforms: implications for socio-economic development

The foundation for health reforms is based on appropriate and effective health care financing. This will provide the people with access to better promotive, preventive, curative and rehabilitative health services. It also influences proper planning and regulation of health facilities and health professionals to ensure equity and quality in health care. Lastly, it provides the mechanisms to lower the price of health services and the cost of drugs and medicine, making them more affordable to the majority of our people.

Ultimately, these reforms will lead to significant improvement in health status through greater and more effective coverage of national and local public health programmes, increased access to health services especially by the poor and the disadvantaged, and a reduced financial burden on individual families.
Summary of Panel Discussion

The panel discussion held after the presentations provided an opportunity for the audience to raise questions and exchange views with the panelists. Professor Tsutomu Takeuchi of Keio University, Japan, who heads a research group set up in the Ministry of Health and Welfare of Japan to promote the Hashimoto Initiative, and who has also been working on making a "package" of Japanese cooperation for global parasite control, was moderator of the panel discussion. The panel members were Dr Donald Bundy, Head of the International School Health Initiative, World Bank, Dr Toshinobu Sato, Director of the Office of Intelligence Service, Infectious Diseases Control Division of the Japanese Ministry of Health and Welfare, and Dr Sornchai Looareesuwan, Dean of the Faculty of Tropical Medicine, Mahidol University, Thailand.

Dr Bundy first presented the Bank’s activities and involvement in the Hashimoto Initiative. Dr Lorenzo Savioli, from WHO headquarters in Geneva, Dr Daniel Colley, from the Center for Disease Control (CDC), Atlanta, USA, and Dr Eric Albert Ottesen, from WHO headquarters in Geneva, commented briefly on the presentations.

Comments

Dr Bundy has been involved in a school-based soil-transmitted helminthiasis control programme called "FRESH Start" (Focusing Resources on Effective School Health, Hygiene and Nutrition), a joint initiative of the World Bank, WHO/PAHO, UNICEF and UNESCO. One of its core intervention activities included "School-based health and nutrition services". The group had been motivated by the successful Japanese example in parasite control among schoolchildren, which recorded an improvement in children’s education outcomes at the same time. Trichuris is highly prevalent among school-age children in Africa, with severe infections causing a high level of children’s absence from school. But, after the children were dewormed, their academic performance has improved to almost the same level as that of the children without worms.

Dr Bundy stated that, despite the control efforts, the magnitude of soil-transmitted helminthiasis has not changed very much in the last 50 years, which means that the prevalence rate has not changed so much, but the number of cases has been increasing given the population increase since then. School-based health services delivery to treat helminthic infections (US$33 per DALY) has proved to be almost as cost-effective as other "commonly-used" public health interventions (Figure 1). The big success of school health programmes in Japan suggests a promising way of tackling the problem.

Dr Savioli reiterated the importance of "learning from Japanese success" in controlling soil-transmitted helminthiasis. The successful experience had been extensively studied and had already been transferred to other countries in the East and South-East Asian region. Dr Savioli said it was gratifying that a high-level political leader such as Mr Hashimoto was advocating for parasite control.

Dr Colley recalled the impact that commitments from high-ranking political people, such as Mr Jimmy Carter, former President of the United States of America, can have on heads of state in convincing them to pay greater attention to the control of
schistosomiasis. Committed policy-makers could make a huge difference that scientists or health workers would never be able to match.

Dr Ottesen praised the good collaboration among the different sectors involved in the global parasitic disease control agendas currently being set up. He expressed appreciation for the generous donations from some pharmaceutical companies, such as SmithKline Beecham and Merck, for the early interest and involvement of the Japanese government and that of the United Kingdom, and for the ardent advocacy of the issue shown by the distinguished political leader, Mr Hashimoto. When money, science and political power come together, an enormous impact can be made.

Questions from the audience indicated their high interest and expectations of the Hashimo Initiative. These covered the following areas:

**Environmental management**

Environmental management was one of the crucial components of parasite control, and indeed infection treatment and environmental management should go hand in hand. This was also one of the four key strategies promoted by the Japanese government. However, training health personnel should be the first priority in the Hashimoto Initiative. Since the Japanese government had been working on the provision of safe water in separate health projects, it was assumed that the environmental factors were already included. Basic research on the mode of transmission and identification of the host should be encouraged for each disease so as to pinpoint the cutting point of the infection cycle. The initiatives taken by the Japanese government were praised for their collaboration with developing countries’ counterparts in terms of establishing the issues and working together.

**Importance of operational research**

Though it was not mentioned in the presentations, operational research was another indispensable component of the Initiative, together with laboratory research by Japanese scientists and the training of health professionals from the developing countries. In addition to training for health professionals, a project management training session for health service managers had been included in the plan.

**School health projects**

Intersectoral collaboration, especially between the Ministries of Education and Health in the school health context, was the focus of attention and concern. Dr Bundy explained that the World Bank, in partnership with UNICEF and UNESCO, had succeeded in involving both Ministries, working together. The Hashimoto Initiative is expected to give a strong impetus to this kind of intersectoral collaboration, and will facilitate the training of officers from both of those Ministries.
Comprehensive school health projects

In Dr Bundy’s view, a comprehensive approach is not always necessary to bring a school health project to success. Some key factors that are really important have been identified, and concentrating on these usually makes a difference.

Professor Takeuchi clarified that the Hashimoto Initiative itself does not focus on school-based health projects *per se*, but the Japanese government has evaluated that its school health project was the most successful intervention in controlling soil-transmitted helminthiasis. Therefore the government chose to focus on the implications of this when accepting trainees from developing countries.

Political commitment and public health projects

The importance of commitment from the local government, and of starting from a basis of what the collaborating partners (e.g. schoolteachers) can do without much difficulty, was reiterated by both panelists and participants many times during the discussion.

Future of parasitology education in Japan

Concern was expressed about the future of parasitology education in Japan. Increasingly fewer medical schools have parasitology courses, and local medical doctors were criticized for not being sufficiently trained to treat imported tropical disease cases properly.
Figure 1

Cost in US$ per DALY
(Disability Adjusted Life Year)

- STDs & HIV screening / referral
- Helminth infection
- School-based delivery (high est.)
- Measles - 9 mth vaccine (high est.)
- Cervical Cancer - PAP smear screening every 5 yrs
- Food supplement for pregnant women
- Cholesta vaccine (if effective)
- Diarrhoeal diseases: rotavirus vaccine
- PEM - mass chemotherapy
- Vit A (mass dose in 0 - 5 yrs)
- ARI (low mortality)
- Iodization of salt / water
- DPT & Polio (low mortality)
- BCG & DPT Tuberculosis
- DPT & Polio (high mortality)
- Helminth infection
- ARI (high mortality)
- School-based delivery (low est.)
- Measles - 9 mth vaccine (low est.)
- Fortified sugar or salt with Fe
- (mass provision)
About the speakers

Mr Ryutaro Hashimoto (keynote speaker)
Former Prime Minister of Japan

Mr Hashimoto has been elected as a Liberal Democratic Party member of the Japanese House of Representatives 11 times since 1963. After holding a number of cabinet-level positions, he served as Prime Minister from 1996 to 1998. At present, Mr Hashimoto is Senior Foreign Policy Advisor to the Prime Minister.

Dr Toshinobu Sato
Director, Office of Intelligence Service, Infectious Diseases Control Division, Health Service Bureau, Ministry of Health and Welfare, Japan

As Director of the Office of Intelligence Service in the Infectious Diseases Control Division, Dr Sato is in charge of domestic parasitic diseases control (including Echinococcus) and of promoting international cooperation in parasite control.

Dr Sornchai Looareesuwan
Dean, Faculty of Tropical Medicine, Mahidol University, Thailand

Dr Sornchai is a distinguished researcher in clinical tropical medicine. Besides being the Dean of the Faculty of Tropical Medicine, Mahidol University, he is Director of SEAMEO TROPMED, a training and research institute for scholars from South-East Asia.

Dr Alberto G. Romualdez Jr.
Secretary, Department of Health, Government of the Philippines

Dr Romualdez has worked in both national and international organizations, including the University of the Philippines College of Medicine, where he was Dean from 1984 to 1988, and the WHO Regional Office for the Western Pacific, Manila, Philippines.

Dr Tsutomu Takeuchi
Professor at the School of Medicine, Keio University, Japan

Dr Takeuchi has taught at Keio University's School of Medicine since 1978. He is also an executive board member of several academic associations, including the Japanese Society of Parasitology.

Dr Donald Bundy
International School Health Initiative, World Bank, Washington D.C., USA

Dr Bundy has been instrumental in promoting school health projects as Deputy Director of the Wellcome Trust Centre for the Epidemiology of Infectious Disease in London from 1993 to 1999, and currently as Head of the International School Health Initiative at the World Bank.
Programme

13:00 – 14:00 Registration

14:00 – 17:00 G8 Follow-up International Symposium: Hashimoto Initiative - Global Parasitic Disease Control for the 21st Century

14:00 – 14:20 Opening

Dr Yuji Kawaguchi, Director, WHO Kobe Centre
Dr Hideo Shinozaki, Ministry of Health and Welfare of Japan
Mr Toshitami Kaihara, Governor, Hyogo Prefecture
Mr Kazutoshi Sasayama, Mayor, Kobe City

14:20 – 14:50 Keynote Speech

"Hashimoto Initiative"
Mr Ryutaro Hashimoto, Former Prime Minister of Japan

14:50 – 16:00 Presentations

"Hashimoto Initiative - from policy to implementation"
Dr Toshinobu Sato, Ministry of Health and Welfare of Japan

"Parasite control in South-East Asia"
Dr Sornchai Looareesuwan, Dean, Faculty of Tropical Medicine, Mahidol University, Thailand

"Health Sector Reform Agendas in the Philippines"
Dr Alberto G. Romualdez Jr., Secretary, Department of Health, Philippines

16:00 – 17:00 Panel Discussion

Moderator:
Dr Tsutomu Takeuchi, Professor, Keio University School of Medicine, Japan

Panel Members:
Dr Donald Bundy, International School Health Initiative, World Bank
Dr Toshinobu Sato
Dr Sornchai Looareesuwan

WHO Secretariat

Dr Yuji Kawaguchi, Director
Ms Kumiko Yoshida, Technical Officer
Ms Polly Chua, Administrative Assistant