

# JICA's Operation in Health Sector

## - Present and Future -



September 2013



## Preface

Only two more years remain for the international community to work towards achieving the Millennium Development Goals (MDGs) by 2015. Developing countries have succeeded in improving the health of their citizens in many respects, yet some countries, especially low-income countries, either have little hope of achieving the health-related Millennium Development Goals (MDGs) or suffer from persistent internal gaps in improving health outcomes. JICA views saving lives and protecting the health of people as one of the most important goals of development. We will continue our commitment to global health assistance and join global initiatives to achieve the MDGs and Universal Health Coverage (UHC), which is to ensure that all people obtain the health services they need without suffering financial hardship when paying for them.

This paper describes the framework of JICA's operations in the health sector until 2015. We, JICA, updated the paper to reflect the current international context as of 2013. In it we share the reasons for our engagement, explain what tasks we believe need to be tackled, and offer approaches drawn from our own experiences in public health to define our cooperation toward achieving the MDGs during this last phase. We hope it will aid others to understand JICA's involvement in international health assistance and publicly reaffirm our commitment to attain the MDGs by 2015.

September 2013

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# 1. Objectives of JICA's operations in the health sector<sup>1</sup>

## (1) Global health and JICA's operations

Development assistance in the health sector is of paramount importance because it serves a humanitarian purpose and it ensures people's health, which is the base for economic and social development in developing countries. Every year in the world, about 290,000 women lose their lives due to delivery and pregnancy related causes<sup>2</sup>, and about 6.9 million children die before they turn five<sup>3</sup>. 99% of these maternal and childhood deaths occur in developing countries<sup>4</sup>. People in these countries also face imminent threats from infectious diseases. The three major infectious diseases, namely, HIV/AIDS, tuberculosis and malaria, kill 3.35 million people per year<sup>5</sup>. In many countries in sub-Saharan Africa, these diseases hinder economic and social development.

JICA's operations in the health sector are an important pillar for achieving JICA's vision of "Inclusive and Dynamic Development". These activities are also in line with all four of the key missions of JICA, namely, (i) Addressing the global agenda; (ii) Reducing poverty through equitable growth; (iii) Improving governance; and (iv) Achieving human security.

Among the eight Millennium Development Goals (MDGs<sup>6</sup>) set in 2000, three goals put the health sector front and center: Goal 4 (reduce child mortality), Goal 5 (improve maternal health), and Goal 6 (combat HIV/AIDS, malaria and other diseases). In addition, two other goals are closely related to the health sector: Goal 1 (eradicate extreme poverty and hunger) and Goal 8 (global partnership for development).

To achieve these goals, lower income countries increased their government expenditure on health (as % of total government expenditure) from 8.5% to 9.3% and reduced out-of-pocket health expenditures (as % of total health expenditure) from 52.4% to 46.6% between 2000 and 2010. In the same period, the international community significantly increased its development assistance for health; the United States and other countries increased their bilateral funding, while new multilateral funding mechanisms such as the Global Fund to Fight AIDS, Tuberculosis and Malaria emerged. Private foundations including the Bill & Melinda Gates Foundation<sup>7</sup> also played an important role. The Japanese

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<sup>1</sup> "Health" in this paper includes both "medical care" and "public health".

<sup>2</sup> Trends in Maternal Mortality: 1990 to 2010, WHO, UNICEF, UNFPA and The World Bank (2012)

<sup>3</sup> MDGs 2013 report, United Nations(2013)

<sup>4</sup> Trends in Maternal Mortality: 1990 to 2010, WHO, UNICEF, UNFPA and The World Bank (2012)

<sup>5</sup> The number of death by each disease is; 1.7 million by AIDS (in 2011) (UNAIDS, Global report: UNAIDS report on the global AIDS epidemic 2012), 0.99 million by tuberculosis (in 2011, excluding HIV super infection) (WHO, Global tuberculosis report 2012), 0.66 million by malaria (in 2010) (WHO, World Malaria Report 2012)

<sup>6</sup> These were set by integrating the Millennium Declaration, which was adopted at the U.N Millennium Summit in 2000 and were adopted at other major international conferences.

<sup>7</sup> 10.7 billion USD in 2000, 28.2 billion USD in 2010, which marks the highest, and 28.1 billion USD in 2012

government's ODA in health increased from 64.5 billion yen in 2001 to 78.2 billion yen in 2011<sup>8</sup>. Among the several sources of Japanese ODA, JICA's assistance in health increased from 23.8 billion yen in 2008 to 42.5 billion yen in 2011<sup>9</sup>.

With the efforts of developing countries and the international community, the health of people in the developing world has improved. For example, 12.6 million children under age five died in 1990; twenty years later, that number decreased to 6.9 million in 2011<sup>10</sup>. However, especially in lower income countries, improvements in maternal and child health and in infectious disease control have been too slow<sup>11</sup>. In some countries, the MDGs are unlikely to be achieved by 2015. In others, country-wide health indicators have improved, but the level of disparity within the country remains unacceptable. This inequality in health especially afflicts the poor, people in dire need of health services, and people living in remote areas. This is an issue of physical, economic, and social access – people cannot use quality health services due to the distance to health facilities; the cost of health services is prohibitively expensive; and various cultural and traditional barriers prevent them from using health services. Therefore, universal health coverage (UHC), which is a concept of ensuring that all people can use promotional, preventive, curative and rehabilitative health services as needed and at affordable cost, was promoted by the World Health Organization<sup>12</sup> and adopted as an international agenda item at the UN General Assembly in December 2012.

Against this background, the Government of Japan made a commitment of 5 billion USD for ODA in health, including water and sanitation, between 2011 and 2015. Furthermore, at the Fifth Tokyo International Conference on African Development (TICAD V) in June 2013, the Government of Japan released Japan's Strategy on Global Health Diplomacy. Key pillars of the strategy include: sharing Japanese expertise/experience on achieving UHC with the international community; implementing bilateral assistance that advances UHC by applying preferential terms and conditions for ODA loans in the health sector; collaborating with global partners; strengthening human resources for health; cooperating with Africa to expand UHC on the continent; and mobilizing Japan's medical industry and technology as a means to achieve these ends. In accordance with the government's policy and in light of Japan's health history and system which have achieved the longest life expectancy at birth at relatively low cost, JICA will strive to help developing countries tackle health challenges in partnership with the international community with a vision to achieve the MDGs and UHC.

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(Development assistance for health 2012, Institute for Health Metrics and Evaluation, 2013).

<sup>8</sup> Based on JICA's internal calculation.

<sup>9</sup> Japanese fiscal year

<sup>10</sup> MDGs 2013 report, United Nations (2013)

<sup>11</sup> The life expectancy at birth in Japan is 83 years and that of Zambia is 55 years. In Japan, 2 children out of 1,000 die before they turn one-year old, but 73 children die in Afghanistan. Out of 100,000 deliveries in Japan, 6 women die due to delivery-related causes, but 480 die on average in African countries. The general government expenditure on health (as % of total government expenditure) is 18.2% in Japan and that of Bangladesh is 8.9% (World Health Statistics, WHO, 2013)

<sup>12</sup> World Health Report (WHR) 2010

## **(2) Important perspectives in developing JICA's operations**

### **1) Strengthening strategic programs based on international trends in global health**

JICA will formulate its strategy and translate it into operations through two approaches: (i) the country-based approach in which JICA lays out its strategic operational plans for an individual country based on a holistic country analysis, and (ii) the issue-based approach in which JICA improves the quality of its operations by applying accumulated sector-specific expertise. In the health sector, there are many development partners including multilateral, bilateral and private organizations, as well as many forums where such partners and developing countries gather to share their expertise in global health - the World Health Assembly and the Prince Mahidol Award Conference, among others. JICA aims for effective operations by strategically incorporating into its projects the knowledge accumulated from its operations on the ground, discussions in those forums, and the findings of impact evaluations. Building on these efforts, JICA will strive to improve the quality of both its country-based and issue-based approaches and to scale up pilot projects into programs for broader and better development results.

At the global level, JICA will actively share the results and experiences gained from its operations, thereby adding value to discussions on health and promoting better collaboration among partners. Some of JICA's best practices include: the spread of 5S-KAIZEN-TQM to Africa for the management of health facilities, built on the management methodology originally developed for Japanese manufacturing industry; the enhancement of managerial capacity in health administration in Kenya and Tanzania regarding the adaptation of national health policies to local conditions and supportive supervision/coaching for health facilities; and efforts to strengthen budget planning and execution. Furthermore, by the end of 2015, JICA plans to publish the results of research on its EMBRACE (Ensure Mothers and Babies Regular Access to Care) model<sup>13</sup> in Ghana.

### **2) Aid coordination and promotion of medium- and long- term cooperation based on a country's national plan**

It is important to reduce the transaction costs for developing countries on aid coordination and to respect their ownership to ensure the sustainability of development efforts. Especially in lower income countries, where many development partners work and development needs are high, it is essential for any partner to work within aid coordination frameworks. In implementing a project, partners must share information and coordinate fully with other

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<sup>13</sup> A model aimed at improving maternal and child health, proposed in "Japan's Strategy on Global Health Diplomacy," which was launched in 2010.

actors, such as development agencies, NGOs, and private organizations; work with the recipient government in setting development goals; and ensure that their projects are aligned with the national development plan of the country. In working with other partners, it is important to recognize each partner's characteristics. With WHO and UNICEF, JICA will share its knowledge and promote technical collaboration to support national development and health plans and to monitor and evaluate health indicators. With the World Bank, JICA will collaborate in the form of co-financing to scale up existing operations in the health sector in developing countries.

### **3) Capacity development for developing countries**

Although the amount of development assistance in the health sector has increased rapidly in comparison with other sectors in recent years, the capacity of recipient countries to manage and disburse funds effectively is limited. Attaining better health for people is not a short-term but a long-term issue for a country, and it requires continuous efforts. Therefore, it is important to strengthen the government's administrative and managerial capacity as the provider of health services, to enhance health facilities' capacity to ensure quality service, and to empower communities by promoting health education, facilitating behavioral change, and supporting mobilization.

JICA will support developing countries as they make efforts to continuously identify and solve problems to ensure better health for their people by sustaining health services with their own systems and finance.

### **4) Use and creation of empirical evidence**

JICA will use more empirical evidence for better quality operations and greater accountability. As a result of a number of global research studies, there is now accumulated empirical evidence on the effects of various health interventions in developing countries. Given JICA's limited budget and human resources, it is imperative to use such intellectual global public goods to enhance JICA's operations.

In monitoring and evaluating JICA's operations in the health sector, JICA will measure its progress and results quantitatively, using an appropriate framework and indicators. In addition to the existing framework for process evaluation, JICA will conduct impact evaluations to make quantitative assessments on the effects of capacity development processes on health outcome indicators, such as mortality, morbidity, and health service coverage.

## **5) Contributions through the utilization of Japan's health technology and industry**

Japan will promote the utilization of health technologies developed by Japan's health industry according to the following policies: Japan's Strategy on Global Health Diplomacy, which was formulated in May 2013 and then endorsed at the fourth Ministerial Meeting on Strategy relating to Infrastructure Exports and Economic Cooperation; Japan's Revitalization Strategy, which was decided by the Cabinet in June 2013; and the Health and Medical Care Strategy, which was formulated by the Office for Health and Medical Care Strategy established within the Cabinet Secretariat.

In many developing countries, medical equipment is poorly maintained due to the lack of proper infrastructure, unstable voltage and unclean water, weak managerial capacity at health facilities, insufficient technical knowledge of users, and the shortage of revenues from medical fees.

To tackle these problems, JICA has conducted training programs regarding the proper usage and maintenance of medical equipment, as well as the enhancement of managerial capacity at health facilities. In addition, JICA will deploy Japanese health technologies to improve health outcomes through its loan, grant aid and public-private partnership programs.



## **2. Key priorities and specifics of JICA's health sector operations**

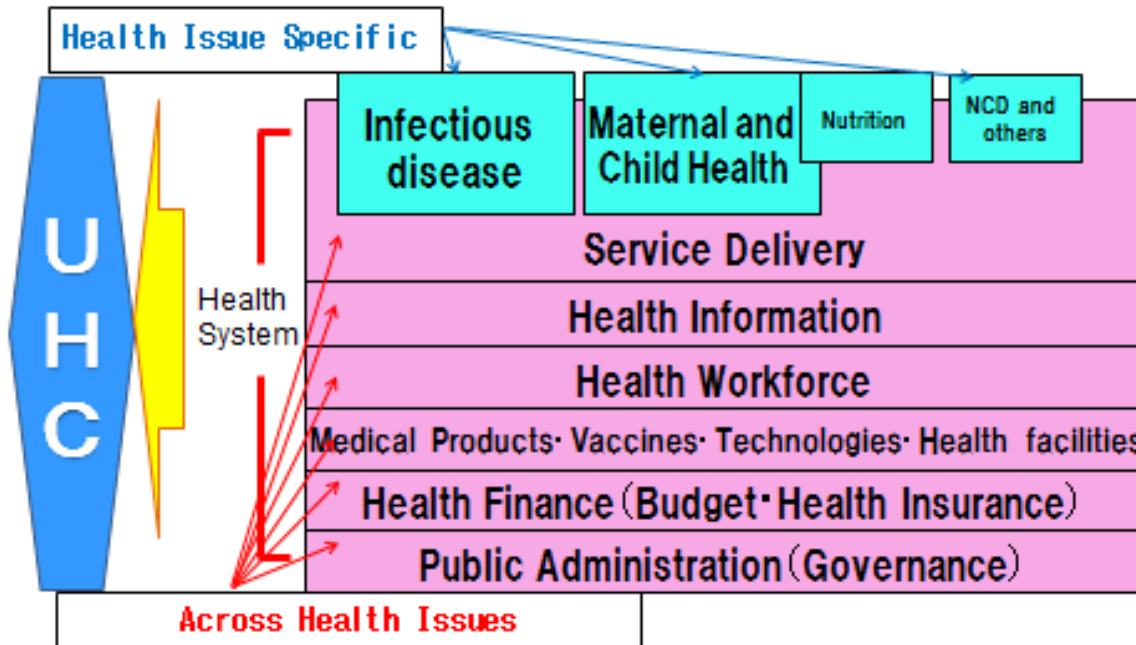
While JICA has mainly targeted maternal and child health and infectious disease control as the key issues to help achieve the MDGs, it has also focused on establishing and strengthening health systems in order to ensure that effective service is provided across health issues. In addition, rehabilitation of health facilities, non-communicable disease control and other measures have been conducted depending on the needs and situation of partner countries.

JICA has a rationale for this approach. Focusing on the provision of vertical services for delivery and vaccinations in maternal and child health interventions and infectious disease control can improve health outcomes (e.g., less morbidity and mortality) in a relatively short period of time. However, in order for such an effort to reach and benefit people in a sustainable manner, an effective health system –equipped with accurate health information, quality health workforce and facilities to provide services, administrative structures for the provision of medical products and vaccinations, sound governance for formulating and implementing such plans and budgets, plus health insurance– must be in place. In reality, health systems are weak in many developing countries. Even with intensive inputs to support service delivery and vaccinations, improvements in health outcomes cannot be sustainable without a functioning health system.

Going forward, JICA will place higher priority on strengthening health systems to advance UHC as illustrated in the picture below. JICA will continue to tackle the issues related to maternal and child health and infectious disease control, which especially affect the poor in lower income countries; but in doing so, it will focus on the horizontal dimensions associated with health system strengthening. Detailed information on JICA's operations is provided in sections (1) and (2) below.

# Key areas of JICA's Health Operation

Health Issue Specific Operations (Vertical) and  
Operations across Health Issues (Horizontal)



## (1) Focus on Health System Strengthening

JICA recognizes the need to adopt comprehensive, flexible, and multi-layered approaches to address the complex health challenges faced by developing countries. It is essential to consider a wide range of factors, such as economic conditions, disease patterns, health service delivery, human and financial resources and public administrative systems, when laying out assistance policies and plans and putting them into practice.

Aiming to help developing countries' self-reliance, JICA will focus on strengthening institutions' administrative capacity for implementation and management, managing health financing, improving the quality of health services, and strengthening workforce quantity and quality. In addition, JICA will work across sectors in areas such as infrastructure and water supply systems and also provide medical equipment and medicines where necessary to maximize the impact of its operations.

### 1) Strengthening administrative capacity for health

Establishing effective administrative systems in the health sector and strengthening management capacity is imperative to utilize limited human and financial resources efficiently. In general, health officers in developing countries often lack the necessary skills

and abilities to develop health plans in accordance with relevant laws and regulations, to compile necessary budgets, and to implement, monitor, and evaluate planned activities. This is true not only at the national level but also at the sub-national level. While decentralization of health services has taken place in many parts of the world, it has often resulted in fragmented health services at the community level.

In this regard, JICA will assist governments at all levels, from the central authorities to the local administrations that are the closest to the communities, to strengthen their management capacities in Laos, Kenya and Senegal, among others. In Ghana and the Democratic Republic of Congo, JICA will support strengthening a mechanism to accumulate accurate data within a health information system about realities that health workforce face on the ground to ensure that health policies and programs adequately match local needs and contexts at both the central and local government levels.

JICA will also assist governments to develop comprehensive health development plans for rehabilitating health facilities, supplying medical equipment, training and allocating health workers, and managing medicines and vaccines, in accordance with the government's health policies. In Viet Nam, Tanzania, and Kenya, JICA will strengthen supportive supervision between national, regional and district levels as well as between administrative offices and regional or district hospitals, so that health plans are implemented efficiently. Additionally, JICA will support health finance management, including the management of payments from health insurers to private service providers where necessary. Furthermore, JICA will use grants and loans to support these operations and maximize development impact. JICA will also extend results-based financing to expand health services to the poor when and where necessary conditions are met.

### **Capacity Development for Sector-Wide Coordination in Health (Phase 1 and 2), Laos**

In Laos, many development partners were working in the health sector without sufficient coordination, causing inefficiencies in their efforts to improve health outcomes. Against this backdrop, JICA's technical cooperation project, "Capacity Development for Sector-Wide Coordination in Health (Phase 1)", was implemented from 2006 to 2010 to improve sector-wide coordination in the health sector. Through this cooperation, the Ministry of Health (MOH) set up a sector-wide coordination mechanism based on sector working groups, technical working groups, and a Coordination Unit to facilitate their efforts. With this mechanism in place, stakeholders from the MOH and development partners began to meet periodically to share information and discuss health policies, plans, and strategies. The outcomes from this project include the development of a national strategy for maternal and child health and the



introduction of a unified monitoring framework, as well as mapping of programs supported by various development partners.

The project is now in its second phase, which goes from 2010 to 2015. During this period, JICA is seeking to further enhance the government's coordinating capacity by assuring consistency in the planning, implementation, and monitoring processes across the government and harmonizing and standardizing policy procedures through the sector-wide coordination mechanism. Specifically, JICA is now assisting the MOH to lead the discussions and the implementation process on important agendas such as monitoring the 7th Five-Year Health Sector Development Plan (2011 - 2015), developing policies and strategies for key issues, monitoring progress on programs and projects, formulating budget plans, and collecting statistical data. As an example of the achievements so far, various development partners are sharing their experiences through working groups on implementing a policy to exempt fees for delivery and child health care in respective pilot areas, thereby contributing to better policymaking by the MOH.

### **Strengthening Management for Health in Nyanza Province, Kenya**



In Kenya, where health service indicators and health indexes were showing a sharp decline between the 1990s and 2000s, health system reconstruction was an urgent issue. In particular, the great disparity among provinces called for immediate action to strengthen the capacity of the health administrative system in rural areas. In this context, JICA initiated a project, “Strengthening Management for Health in Nyanza

Province”, to build the management capacity of the health administration in Nyanza Province, a province plagued with serious challenges including high HIV prevalence and childhood mortality. The project developed a training program for health system management, which consisted of 12 modules such as leadership, team-building, coaching & mentoring, and resource management, in cooperation with universities in Kenya and other development partners.

The training, which started in a pilot district, was then scaled up gradually to cover health administration teams in all 36 districts of the province. In addition, the project utilized the training outcomes to strengthen health promotion activities and supervision of health services facilities. As a result, the percentage of deliveries attended by skilled health personnel increased dramatically in the pilot areas between 2008 and 2011, from 27 % to 64% in Kisumu West district and from 28% to 57% in Siaya district, while the overall average in Nyanza Province rose from 28% to 49% during the same period. The Kenyan Government highly valued the project's achievements and is now utilizing the model to build

the capacity of health administration teams in “counties”, which were introduced to replace provinces as new administrative entities under the new constitution.

## **2) Improving health services**

In order to achieve UHC, it is essential to ensure the quality of health services, such as less-complicated deliveries, minor surgery and in-patient treatment, vaccinations, nutrition education, antenatal care and rapid testing for infectious diseases. In this regard, provision/improvement of medical facilities and equipment, as well as health system management, is very important. In Ghana, JICA is providing technical assistance to strengthen human resources and local health systems in combination with rehabilitation of primary health facilities, so that communities have access to appropriate health services.

With regard to the provision of facilities, JICA places the highest priority on primary health facilities. Assistance for higher levels of health facilities will be provided after taking into consideration the level of human and financial resource constraints and the role of these facilities in relation to primary facilities in terms of human resources development, supervision, and the referral system. In Viet Nam, JICA contributed to the development of top referral hospitals through its grant aid programs: the Cho Ray Hospital in Ho Chi Minh, the Bach Mai Hospital in Hanoi, and the Hue Central Hospital in central Viet Nam. These programs were executed in conjunction with JICA’s technical program to strengthen the function of these hospitals as training hubs to increase the capacity of health workforce in each region. Furthermore, JICA is supporting the rehabilitation of secondary health facilities through ODA loans in combination with technical support for top referral facilities with an aim to strengthen the country’s referral system. Moreover, JICA is extending funding to rehabilitate primary and/or secondary health facilities in Sri Lanka, Moldova, Iraq, Uganda and others.

However, in order to improve health service delivery, construction and rehabilitation of health facilities is not enough. It is also essential to improve the management of facilities. Since many countries struggle with a shortage of goods and financial constraints, the management methodology originally developed for Japanese manufacturing industry, called 5S-KAIZEN (Continuous Quality Improvement)-TQM (Total Quality Management), has been introduced and applied to hospital/health facility management. JICA will integrate 5S-KAIZEN-TQM activities where necessary so that hospital/health facility upgrades can produce sustainable outcomes. The program focusing on rolling out 5S-KAIZEN-TQM across Africa by utilizing the experience and expertise of Sri Lanka received a South-South Cooperation award from UNDP in 2012.

### **The Program for Health System Strengthening in Tanzania**

The Program for Health System Strengthening in Tanzania focuses on (i) realizing effective management with technical support for health facilities from health administrations at the region and the district level and (ii) training human resources for better service provision in health facilities. As part of this program, the project “Strengthening Development of Human Resources for Health” in Tanzania aims to build and expand an information system for human resources for health and to use Japanese management methods to improve the quality of performance and services provided by the health workforce. The information system, which was developed using local resources in collaboration with University of Dar es Salaam, has been scaled up to cover 133 districts and 21 regions and now operates as the first information system on health personnel that oversees the entire country. An information system on pre-service training institutions was also developed to be introduced in all of the country’s 134 institutions. The Ministry of Health and Social Welfare used these systems to compile a country profile on the health workforce and also to launch a national strategic plan to develop human resources for health based on a demand-supply forecast of health personnel in the medium and long-term. Meanwhile, the improvement of health workforce performance using the 5S-KAIZEN -TQM method was introduced in over sixty hospitals. Mbeya Consultant Hospital, which introduced this method



as a pilot hospital, achieved cleaner spaces, less waiting time for patients and a reduction of excessive inventory through KAIZEN activities, leading to a better hospital environment and dramatic improvements in hospital management. These achievements have received great attention from home and abroad, including from neighboring countries and development partners such as WHO.

### **3) Addressing the shortage of health workers**

There is a positive correlation between the availability of health workers and improvements in key areas of health outcomes, and addressing the shortage of health workers is essential for achieving the health-related MDGs. However, many countries face severe shortages in health workforce quantity and quality, which tend to hinder the provision of sufficient health services to the poor and people in rural areas. This is the result of complex and multiple issues, such as the limited number of training institutions and teachers to produce qualified health personnel, the shortage of budget for recruitment, turnover due to harsh conditions in remote areas, urban-rural disparities in allocation, and brain drain.

Medium and long-term measures are required to address these problems. JICA will assist developing countries' efforts to improve the quality of human resources, increase their number, and establish necessary systems and institutions. Specifically, JICA will provide support through the following focused interventions: (i) upgrading the quality of the existing health workforce through in-service training (Indonesia, Lao PDR, the Pacific, African countries); (ii) constructing professional training facilities and developing curriculum and teaching materials (Mozambique) to train more health professionals, and (iii) establishing policies and institutions for producing, recruiting, and retaining health workers and developing human resources management information systems (DRC).

In countries where the shortage of health workforce is particularly severe, efforts are being made to expand health services at the community level through the recruitment of local volunteers and community health workers with professional backgrounds. In order to support these activities, JICA will help formulate policies, train human resources, and create and scale up new models for intervention.

### **Renovation of a Technical School for Medical Care, Project for Human Resources Development of Co-medicals, Cambodia**

Years of conflict in Cambodia led to a severe shortage of human resources for health both in terms of quantity and quality. Today, the country still faces critical issues. For example, national examinations and the registration system for health personnel remain underdeveloped. To support Cambodia to tackle this challenge, the Government of Japan provided assistance to renovate and equip the



Technical School for Medical Care (TSMC) in Phnom Penh, while JICA worked with the Ministry of Health to improve pre-service training for co-medicals (state registered nurses, laboratory technologists, physiotherapists and radiological technologists) at TSMC and four Regional Training Centers. JICA supported the development of curricula and training packages, establishment of national minimum standards for training institutions, and capacity development of teachers, among other areas.

As a result of this project, Cambodia's first course for radiological technologists was established at the TSMC. In addition, educational standards for the targeted four categories of health professionals improved, and a decree on school licenses was issued for the four categories of co-medicals and other key medical professions (doctors, pharmacists and midwives). The current project is designed to develop regulations concerning the qualifications of nurses and accreditation of nursing schools. Furthermore, the project has supported nurses and nursing teachers to obtain Bachelor's degrees in Nursing. Twenty-six

personnel have received the degree as of August 2013, and they are now playing a major role in improving the quality of nursing and nursing education in their respective organizations.

### **Support for Human Resource Development in the health sector of the Democratic Republic of the Congo (DRC)**

In the Democratic Republic of the Congo (DRC), as a result of the civil strife which has lasted for more than ten years, the health system faces serious challenges, including uneven distribution of human resources between urban and rural areas and a deterioration of the quality of health services. In 2008, JICA began to partner with the Ministry of Health to carry out a joint problem-analysis on human resources development through the work of a JICA advisor and training programs. This process led to the formulation of a project, “Support to Human Resource Development in the Health Sector of DRC” in 2010, which aimed to introduce a national development plan for health personnel for the first time in the country’s history and to strengthen the capacity of relevant departments in the Ministry of Health to implement it.

The project achieved an important milestone in April 2011 with the formulation of the national development plan, “Plan National de Développement des Ressources Humaines de la Santé 2011-2015 (PNDRHS).” Furthermore, the organizational capacity of the departments in charge of human resources development within the Ministry has been strengthened. Currently, each department develops and implements its annual plan based on the PNDRHS; a committee on human resources is convened across departments on a regular basis; and national examinations for mid-level human resources are implemented and monitored regularly.

The project also supported the development of a health information system and the drafting of various regulations related to the PNDRHS, including a revised allocation plan for human resources and qualification, education, and evaluation standards for secondary-level midwives.

These efforts have strengthened the capacity of the Ministry of Health to implement



PNDRHS at the central level as well as the local level, and many provinces now include activities for human resource development in their annual activity plans.

JICA views this project as an important part of a broader program which includes an Advisor to the Ministry of Health and the establishment of a national pilot institution, the Institute for Medical Education of Kinshasa.



## **(2) Priority areas among health challenges**

### **1) Maternal and child health**

Maternal and child health problems, especially malnutrition, continue to constitute a formidable challenge in developing countries.<sup>14</sup>

In order to help countries face these challenges, JICA, along with interventions for building and strengthening health systems, provides a comprehensive “Continuum of Care for maternal and child health” through improvements in the quality of and access to health services at the community level in Bangladesh, Ghana and Senegal, among others.

Specific measures under this framework include: improving antenatal care; increasing the number of childbirths attended by skilled health personnel; providing vaccinations for under five children; improving nutrition, including the promotion of breast feeding; training health professionals; improving and upgrading health facilities; enhancing partnerships among the health administration, health care providers and the community; and utilization of a mother-child health handbook.

An impact assessment survey is underway to measure the effect of this framework in Ghana, and an ODA Loan has been launched to roll out the Continuum of Care model for maternal and child health<sup>15</sup> on a national scale in Bangladesh. JICA also collaborates with other donors to implement the Expanded Program for Immunization (EPI) to provide necessary vaccines, including polio vaccinations, to protect mothers and children.

Looking forward, JICA will continue to strengthen the Continuum of Care for maternal and child health and will also increase ODA Loans in the health sector. With regard to nutrition, JICA will focus on mothers and children (especially under two-years old<sup>16</sup>) who are most affected by malnutrition. JICA has participated in the Scaling Up Nutrition (SUN) network<sup>17</sup> and will promote collaboration with other development partners and the private sector. It will also strengthen multi-sector interventions including water, the environment, and agriculture.

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<sup>14</sup> It is estimated that 45% (3.1 million per year) of all the causes of under-five mortality can be attributed to malnutrition. The percentage of under-five children suffering from stunting, which creates a high risk of delays in mental and physical development, is as high as 26% (165 million per year).

<sup>15</sup> Seamless care through adolescence, before pregnancy, pregnancy, birth, postnatal motherhood, infancy, and childhood / Continuous care provided by collaboration between households, communities, primary, secondary and tertiary health facilities

<sup>16</sup> The thousand-days initiative: An initiative which recognizes nutrition improvement as an important global issue based on the evidence that nutrition status during the 1000 days from pregnancy to the child's second birthday has a great impact on health and socioeconomic status in adulthood.

<sup>17</sup> Framework for development partners which was set up in September 2010 to collaborate in providing cost effective preventive nutrition improvement programs for pregnant women and children under two.

### **Safe Motherhood Promotion Project (Phase 2), Bangladesh**

With limited utilization of antenatal care services and skilled attendance at birth, improving maternal health in Bangladesh was once a formidable challenge. To respond, the “Safe Motherhood Promotion Project (Phase 1)”, implemented between 2006 and 2011, sought to strengthen the national and local health administrations, improve facility-based health services, and promote community support systems for women and



children in the pilot district of Narsingdi. The outcomes of the project showed significant improvements in the proportion of women who accessed emergency obstetric care when experiencing complications during pregnancies and deliveries. In Narsingdi, this proportion increased from 17.8% in 2006 to 57.4% in 2010.

Based on the results of the first phase of the project, Phase 2 (2011 - 2016) is now being conducted to scale up community-based health care to the entire country. It also seeks to advance the Bangladeshi Government’s policy for improving maternal, newborn and child health.

With a view to build synergies with this technical cooperation project and accelerate the Government’s efforts to put its health policies into practice, JICA is also implementing an ODA Loan project, the “Maternal, Neonatal and Child Health Improvement Project (Phase 1) within the Health, Population and Nutrition Sector Development Program.” The scope of this loan includes training members of Community Groups to support activities of Community Clinics and to promote community mobilization (around 160,000 people and 600,000 people respectively) and renovating 10 hospitals at the district and sub-district levels.

### **Project for Maternal and Child Health in Quetzaltenango, Totonicapan, and Solola in the Republic of Guatemala**

Maternal mortality and other indicators on maternal and child health in Guatemala are worse than other Central American countries. These statistics can be attributed to the large proportion of women delivering at home with traditional birth attendants and limited access



to health facilities. To improve the situation, the Government of Guatemala has emphasized maternal and child health as one of its priorities in the health sector.

Against this background, JICA is implementing the “Project for Maternal and Child Health in Quetzaltenango, Totonicapan, and Solola”, where many indigenous people live and the poverty rate is high.

Specifically, the project (1) strengthens the administrative capacity of central and local governments to monitor health facilities, (2) conducts high quality morbidity and mortality conferences, (3) improves perinatal care in health service facilities through in-service trainings for health personnel and provision of basic medical equipment, and (4) promotes community-based activities. The mid-term review in February of 2011 confirmed an increasing rate of deliveries at facilities (from 41.1% in 2010 to 49.3% in 2012) and a lower incidence of maternal mortalities (from 58 in 2010 to 40 to 2012) in the target areas.

Moreover, the project focuses on the improvement of pregnant women's nutrition as a means to decrease neonatal mortality due to low-birth weight and provides nutritional guidance for mother groups at the community level.

### **Improvement of Maternal Health Care in Rural Areas, Morocco**

In Morocco, JICA implemented the "Improvement of Maternal Health Care in Rural Areas" project from 2004 to 2007 to strengthen maternal and child health services for around 11,000 women of reproductive age in two pilot districts (Ifrane District in Meknes-Tafilanet Province and Sefrou District in Guelmim-Es-Smara Province). Specifically, the project supported establishing an in-service training system for midwives as well as strengthening Information Education and Communication (IEC) activities.



Having highly valued the project's results, the Ministry of Health (MOH) in Morocco is now disseminating part of the project's activities to the entire country. For example, the in-service training for new midwives, which was developed in the pilot areas, was incorporated into a Five-year National Program in 2008 and is now being implemented at the national level. In addition, child birth education has been introduced in all sixty-one regional health centers as part of national policy. Moreover, building on the achievements of the project, the Government of Morocco provided training courses on child birth education for neighboring countries. This has led some countries, including Benin, Burkina Faso, and Senegal, to introduce child birth education in their own counties.

A key success factor that allowed the project's outcomes to be incorporated into national policies and disseminated to the entire country is the mix of multiple interventions under a program-based approach that included long-term technical assistance to develop human resources. Two years prior to the commencement of the project, JICA began to provide training courses on maternal and child health for MOH staff in Japan. Over 100 members that participated in the courses are now at the core of child birth education classes across Morocco. After 2008 when the project was completed, JICA dispatched an expert to MOH to develop manuals for in-service training and child birth education and also JOCVs to assist

the education classes. The project itself was designed and implemented with the intent to scale up beyond the pilot areas, and its activities included the training of trainers (TOTs) for this purpose.

JICA's ex-post evaluation cited the positive effects generated through the combination of training in Japan, the technical cooperation project, and dispatch of experts, and it concluded that such long-term engagement with a strategic perspective was an important lesson to be learned from this project.

## 2) Infectious disease control

In developing countries, infectious diseases are major factors that hinder economic and social development and place a large burden on the poor in particular. Tackling infectious diseases, mainly HIV/AIDS, Malaria and Tuberculosis, is imperative. The amount of funding for these three major infectious diseases has been increasing since 2000. The Global Fund to fight AIDS, Tuberculosis and Malaria<sup>18</sup>, UNITAID, the President's Emergency Plan for AIDS Relief (PEPFAR)<sup>19</sup> and the President's Malaria Initiative (PMI)<sup>20</sup> of the United States, and other relevant programs have been established over the past decade. Infectious disease control has shown dramatic improvements as demonstrated by the expansion of antiretroviral therapy<sup>21</sup> to prevent the onset of AIDS and the prevalence of insecticide-treated nets to prevent malaria<sup>22</sup>. Apart from these three diseases, the international community is also collaborating to eradicate or control other infectious diseases that cause severe health damage, such as polio and Neglected Tropical Diseases (NTDs), among others<sup>23</sup>. However, even now, many people remain exposed to threats from one or more of these diseases depending on where they live.

JICA will pursue infectious disease control through (i) health system strengthening and (ii) disease specific interventions. The first approach will produce impacts beyond the control of the target diseases. In supporting developing countries' infectious disease control, JICA will focus on building countries' capacities to achieve the International Health Regulations established by World Health Organization<sup>24</sup>. Disease-specific interventions such as

<sup>18</sup> The amount of cumulative funding is 25.9 billion USD as of May 2013.

<sup>19</sup> The total amount of contributions is 38.8 billion USD from fiscal years 2004 to 2012 (subtracting a donation for the Global Fund).

<sup>20</sup> The total amount of contributions is 2.5 billion USD from 2005 to 2012.

<sup>21</sup> Total cost for antiretroviral therapy used to be 10,000-15,000 USD per person in 1996, but it has been reduced to 64 USD. As a result, the number of people who are taking this treatment is 20 times as high as in 2003 and the number of deaths from HIV/AIDS has declined by 24% compared to that in 2005 (UNAIDS 2011)

<sup>22</sup> The prevalence of mosquito nets improved from 2% in 2000 to 33% in 2012 and the death rate decreased by 33% compared to the level of a decade before (WHO 2011)

<sup>23</sup> The Global Polio Eradication Initiative and the London Declaration respectively serve as important frameworks for collaboration for polio and NTDs. With regard to polio, the international community has succeeded in reducing endemic countries to three, namely Afghanistan, Pakistan and Nigeria.

<sup>24</sup> A major revision to IHR was approved by the WHO General Assembly in 2005. The revision requires member countries to report all public health emergencies of international concern (PHEIC) within their territory

assistance for tuberculosis, HIV/AIDS (mainly in southern African countries), polio (in Pakistan and other endemic countries), NTDs (mainly through cooperation in research) and new types of influenza (eastern Asia) will be considered taking into account JICA's comparative advantages, availability of domestic resources, priorities of the recipient country, as well as demand from the international community. In doing so, JICA will explore using the scheme called Science and Technology Research Partnership for Sustainable Development (SATREPS), under which research institutions in Japan and developing countries conduct joint microbial research, as well as collaboration with the private sector.

In addition to health system strengthening, JICA will help countries develop policies and guidelines for specific diseases (e.g. Ethiopia), strengthen surveillance from the community to the national level, develop capacity for prevention, diagnoses, and treatment, and facilitate networking among laboratories.

With regard to the Global Fund, to which the Japanese Government is a major contributor<sup>25</sup>, JICA will continue to engage in discussions at the global level and also selectively provide assistance to countries as they try to use their funds to implement projects effectively. In Afghanistan, JICA was approved as a Principle Recipient of the Global Fund in 2012 for its long time contribution in developing human resources, building systems for diagnoses and treatment, and improving planning and management capacity for TB control. In Cambodia and other countries, JICA's projects were scaled up with funds from the Global Fund.

#### **Department of Health, Ministry of Health (Phase 1 & 2), Myanmar**

In the Republic of the Union of Myanmar ("Myanmar"), HIV/AIDS, Tuberculosis (TB) and Malaria have been posing serious threats to the population, causing high morbidity and mortality. Therefore Myanmar's national health plan places high priority on controlling these three diseases. Since 2005, JICA has worked continuously with the Ministry of Health to strengthen the national control program for these diseases by improving the technical skills and management capacities of administrative/medical staff.

Outcomes from the first phase of the project include the formulation of national guidelines for safe blood transfusion and an External Quality Assurance Scheme, implementation of a TB prevalence survey, and development of malaria control packages for a community-based malaria control program. The second phase of the project (2011 to 2015) is supporting a wide range of activities. With regard to HIV/AIDS, greater coverage and stronger monitoring of the registration system for blood donation and external quality control is being pursued. As for syphilis, the establishment and operation of systems for blood screening and external quality control is the main intervention. In the field of TB,

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to WHO. This gives WHO legal justification to carry out global surveillance and response activities. Each member country is expected to improve its capacity to detect and respond to PHEICS.

<sup>25</sup> Japan is the fifth largest contributor after US, France, Germany and UK. The contribution in 2012 was 342 million USD.

efforts to identify and treat patients are expanding in Yangon and Mandalay through new community-based Directly Observed Treatment Short-course (DOTS) and Private-Public Mix (PPM) involving private providers including pharmacies. And with regard to malaria, identification of hot spots using Geographical Information Systems (GIS) to map and visualize suspected cases in each facility, along with direct distribution of drugs to facilities closest to the affected populations, have contributed to a reduction of severe cases; in Oakpho Township, the number of malaria deaths sharply declined from 18 in 2003 to only one in 2011. Furthermore, the project is taking up the global challenge of controlling Artemisinin-resistant malaria as part of its efforts to enhance community-based control programs. To this end, the project is also building partnerships with developing partners such as the Global Fund, which is expected to make a large-scale investment under the New Funding Mechanism, and USAID.



### **Project for the Eradication of Poliomyelitis, Pakistan**

Along with Afghanistan and Nigeria, Pakistan is one of the last three countries in the world where the wild polio virus is still being transmitted among the population. The Government of Pakistan has shown a strong commitment to eradicate polio as demonstrated by its announcement of a "National Emergency Action Plan for Polio Eradication". Since 2011, JICA has implemented an ODA Loan of up to approximately 50 billion yen in order to scale up polio vaccinations for children under 5 years.

This project adopted an innovative financing approach. Upon completion of the project, if the audit evaluates the project as satisfactory, the Bill & Melinda Gates Foundation (BMGF) will assume Pakistan's financial obligations and make a repayment to JICA on its behalf. JICA expects this mechanism to further promote Pakistan's campaigns for the eradication of polio without imposing a debt burden on the government.

The polio eradication program is being conducted in partnership with many development partners, including co-financing with the World Bank, collaboration with UNICEF for the procurement of vaccinations, and vaccination campaigns with WHO. The experience gained



through enhanced vaccination campaigns has been applied to other infectious diseases control programs, contributing to increasing the managerial capacity of health services at prefectural and district levels.

As a result of this joint effort, the number of confirmed polio cases in Pakistan has decreased from 198 in 2011 to 58 in 2012.

## **Tuberculosis Control in Cambodia**

Tuberculosis (TB) spread widely among Cambodia's population as over 20 years of conflict devastated the country's health system and brought about nationwide malnutrition. Cambodia is now listed as one of the 22 high Tuberculosis-burden countries by WHO.

JICA supported Cambodia's National Centre for Tuberculosis and Leprosy Control (CENAT) from 1999 to 2010 under the "National Tuberculosis Control Project (Phase 1 and 2)" by providing a comprehensive package of assistance for TB control, especially focusing on diagnosis and treatment (Directly Observed Treatment, Short-course - DOTS) recommended by WHO. During the first phase of the project, JICA assisted in spreading DOTS service across the country. By 2004, all health centers in the country, around 900 facilities in total, had acquired the ability to provide the service. Moreover, JICA, together with WHO and other partners, conducted the National TB Prevalence Survey for the first time in the country's history.

In response to new challenges, such as an increase in the number of people with HIV/AIDS and the spread of TB in urban areas, JICA conducted a second phase of the project for five years from 2004 in order to improve the quality of DOTS, strengthen capacity for "Beyond DOTS" implementation, and build administrative and managerial capacity for Cambodia's National Tuberculosis Control Program (NTP).

As a result, the number of detected new sputum smear-positive patients rose while the treatment success rate was maintained at around 90%, meeting the target of 85% or higher. Furthermore, the number of registered smear-positive cases saw a twofold increase between 2003 and 2009 (8,378 cases in 2009), while the number of registered childhood TB cases increased to 1,422 in 2007, surpassing the target of 1,268. Strengthening human resources in CENAT and developing a database helped facilitate the appropriate management of drugs in TB treatment facilities and the utilization of basic data in the National Health Strategic Plan for Tuberculosis Control (2014-2021).

Furthermore, the Public-Private Mix (PPM) program, which aimed at referring suspected TB patients utilizing private clinics and pharmacies in urban areas to public health facilities, contributed to the steady increase of patients receiving DOTS services. A relevant guideline



that was introduced as part of the project was later revised with support from USAID and other donors, assuring sustainability of the program. Moreover, in order to take measures against TB/HIV co-infections, the project established a system for mobile HIV testing and counseling, as well as TB screening for HIV/AIDS patients; other development partners are now expanding the system with funds from the Global Fund.

In 2009, JICA launched the “Project for Improving the Capacity of the National TB Control Program through Implementation of the 2nd National Prevalence Survey.” The Survey, which marked the first time a developing country conducted two such surveys within a period of nine years, showed that the prevalence of smear-positive tuberculosis in persons aged 15 years and above (per 100,000) decreased by around 38%, from 437 in 2002 to 272 in 2011. This result empirically proved the effectiveness of the DOTS strategy that has been used all over the world, but it also revealed challenges for the future: how to contain tuberculosis among the elderly as well as smear-negative tuberculosis. The project has also had impacts beyond Cambodia’s borders; the research protocol established in the process of the Survey is now used as a model by other developing countries.

JICA’s support for TB control in Cambodia started in 1997 with a Japanese expert in the field of laboratory science, who was dispatched to obtain relevant information on the ground. Building on the expert’s achievements, JICA then conducted long-term technical assistance for over 10 years, helping to rehabilitate CENAT through Grant Aid in 1999 (803 million yen) in the process. One of the success factors lay in JICA’s efforts to gradually develop human resources in line with the Government’s absorptive capacity, while simultaneously upgrading facilities necessary for rolling out its national program. In addition, in the process of supporting a wide range of measures, such as TB/HIV, PPM and childhood TB control, JICA succeeded in expanding collaboration with the Ministry of Health as well as building new alliances with other partners. This is another lesson learned from JICA’s experience in Cambodia – strong and broad partnerships will allow activities to be sustained and expanded after project completion.

### **3) “Base of Pyramid (BOP) business”**

“BOP business” has been attracting attention these days as a new method for private enterprises to provide solutions to various health issues, such as maternal and child health and infectious disease control. JICA has been working with Japanese companies to promote BOP businesses that intend to improve nutrition in emerging and developing countries. For instance, JICA, USAID and Ajinomoto<sup>26</sup> signed a Memorandum of Understanding to support Ajinomoto’s BOP business to provide nutrition supplements to infants in Ghana in collaboration with international NGOs such as PLAN and CARE. In the case of infectious disease control, JICA provided support to scale up coverage of the insecticide-treated bed nets developed by Sumitomo Chemical for malaria prevention<sup>27</sup>. In Uganda and Cambodia, JICA is supporting Saraya’s BOP business to raise awareness about hand-washing with

<sup>26</sup> JICA supported a preparatory study conducted by Ajinomoto for “Weaning Child Nutrition Improvement in Ghana” through its BOP Promotion Survey Program. Other cases include: Earth Biochemical Co.Ltd (Preparatory survey on BOP business for developing nutritional supplementary foods); and Kagome Co. Ltd (Preparatory survey on BOP business on nutritional supplement (Vitamin A) products).

<sup>27</sup> JICA supported Sumitomo Chemical Co. Ltd for a preparatory survey on “BOP business on long-lasting insecticidal net for the poor” through its BOP Promotion Survey Program.



disinfectant or soap to prevent infectious diseases<sup>28</sup>.

### **(3)The utilization of Japan’s health technology**

Japan’s Revitalization Strategy and its Strategy on Global Health Diplomacy promote the utilization of health technologies developed by Japan’s health industry. In many developing countries, medical equipment is poorly maintained due to the lack of proper infrastructure, unstable voltage and unclean water, weak managerial capacity at health facilities, insufficient technical knowledge of users, and the shortage of revenues from medical fees.

To tackle these problems, JICA has conducted training programs regarding the proper usage and maintenance of medical equipment, as well as the enhancement of managerial capacity at health facilities. In addition, JICA will deploy Japanese health technologies to improve health outcomes through its loan, grant aid and public-private partnership programs.

(Reference) Japan Revitalization Strategy

● Global outreach of medical market

· By making maximum use of Medical Excellence JAPAN (MEJ), the government aims to promote the global deployment of Japanese medical technologies and services through close public-private cooperation in global markets. Aiming to capture a 5 trillion yen market share by 2030, around 10 Japanese medical centers will be established by 2020 focusing on emerging countries. In this process, synergies among the Strategy on Global Health Diplomacy, utilization of ODA, and public finance will be explored hand-in-hand with industry to realize continued business deployment which will genuinely contribute to medical progress in partner countries.

· To achieve the goal, along with the approaches described above, the government will steadily promote measures including (1) promoting export, etc. of medical devices, pharmaceuticals and infrastructure suited to the actual local conditions of partner countries and (2) creating and developing a secure environment in which foreign people can receive medical services.

(Reference) Infrastructure Systems Export Strategy

· To promote the global deployment of Japanese high quality pharmaceuticals and medical devices as a package with medical technologies and services through international cooperation on health and other means.

<sup>28</sup> JICA supported Saraya Co. Ltd for a preparatory survey on “BOP business on infection control with alcohol hand rub in Uganda” and “BOP business on portable water supply with solar power system and small water desalination units in Cambodia.”

• To increase the concessionality of the ODA Loans in the health sector and to add “medical equipment” to the list of eligible fields for the Special Terms for Economic Partnership (STEP), which will enable best use of Japanese technologies and equipment in the sector.

(Reference) Strategy on Health and Medicine

● Building a Framework for International Cooperation on Health

• The government aims to promote global deployment based on the needs of emerging countries through close cooperation among private businesses, relevant ministries, and other institutions ( e.g., MEJ, JICA, JETRO, Japan Medical Education, and PMDA).

● Promoting the global deployment of Japanese medical technologies and services by making maximum use of MEJ

• This framework, with MEJ at the core of its operations, will promote verification and feasibility studies as well as health-related market research and infrastructure development as a way to advance the integrated deployment of medical technologies, services, and devices to countries, including emerging and resource-rich countries. By doing so, the government will help Japanese medical institutions and manufacturers build local centers and networks to provide their services sustainably and independently in overseas countries. The government will improve conditions for accepting foreign patients by making use of these local centers and networks to promote understanding of Japan’s advanced medical services and to facilitate the exchange of medical information on foreign patients. The objective is to offer the best of Japanese medical services, such as accurate diagnoses using cutting edge equipment, and thereby enhance global medical interactions and further raise the level of services in Japan.

● Utilizing ODA and other means (operations utilizing medical devices and services in which Japan has a comparative advantage, effective implementation of bilateral assistance, and collaboration with global partners based on Japan’s Strategy on Global Health Diplomacy)

• Based on Japan’s Strategy on Global Health Diplomacy, the government prioritizes global health in its foreign policy and promotes Universal Health Coverage (UHC). Moreover, through collaboration with global partners and effective implementation of bilateral assistance, it will contribute to promotion of UHC while accelerating its efforts towards the achievement of the MDGs.

• By utilizing ODA and other forms of public finance, the government aims to promote the export of Japanese medical services, pharmaceuticals, and devices to developing countries along with related policies/institutions and capacity building.

• The government will accelerate utilization of STEP in ODA loans and Private Sector Investment Finance of JICA.

### **Project for Improvement of Medical Care Service, Moldova (ODA Loan)**

The objective of this project is to make health service provision in Moldova more effective by equipping the core hospitals and centers for public health mainly in the capital city of Chişinău with medical and laboratory equipment. The funds for this project will be used to procure equipment and consulting services (including project management, procurement assistance, procurement supervision and capacity building for the medical staff) . At the request of the Government of Moldova, the project will apply the Special Terms for Economic Partnership (STEP), which will enable best use of Japanese medical equipment.

After independence from the Soviet Union in 1991, health financing in Moldova was put under great pressure due to the flagging economy and the fiscal strain, leaving citizens with insufficient access to health services. The system which had required the Government to bear all health expenditures and the excessive number of hospitals leading to inefficient health service provision were part of the problem.

Since then, Moldova has spent more than 20 years to push forward health financing reforms and improve the quality of health services, introducing universal health insurance coverage and enhancing the division of roles and coordination among hospitals and medical centers in the process. As a result, the health sector in Moldova has improved so drastically as to be labeled a "model for health care reforms."

Japan supported the Moldovan reforms by supplying medical equipment under two Grant Aid projects. The Government of Moldova highly appreciated the durability and the reliability of the Japanese equipment provided, and this led to their request for application of the STEP. Though health facilities in Moldova now have highly skilled staffs, they face a shortage of medical equipment, particularly at the secondary and tertiary levels. This makes it difficult for many facilities to provide general diagnostic and treatment services, as well as to respond to the increasing number of patients with diseases such as cardiovascular diseases and cancer, which demand use of advanced and specialized technology.

The "Project for Improvement of Medical Care Service" will provide medical and laboratory equipment for the core hospitals and other medical centers and contribute to the Government's goal of ensuring proper division of roles and better coordination among hospitals and medical centers, thereby allowing more people to receive high quality health care. To further enhance the effects of this project, JICA will also provide technical assistance to improve the equipment maintenance capacity and the clinical skills of the target facilities.

### **Seminar on skills for artificial dialysis in Japan, Oita Prefecture and Miyazaki Prefecture**

In East Kyushu, an area that stretches from Oita to Miyazaki Prefecture, a framework for "East Kyushu Medical Valley" has been introduced to make the region a top medical production center through collaboration between industry, academia, and the government by

creating hubs for (i) research and development, (ii) training of skilled medical workers, (iii) blood-related medicine, and (iv) medical instrument industry.

A week-long seminar to introduce the work of the East Kyushu Medical Valley, particularly on artificial dialysis, was held for 17 government officials from 8 developing countries (mainly in Asia) at the end of May, 2013. The participants were asked to consider the applicability in their own countries of the policies, systems, technologies, and products introduced. The seminar resulted in new networks between the participants and the Japanese institutions involved. It also led to greater understanding by the participants of the quality of the Japanese dialysis technology, the “clinical engineer” system, and the safety of Japanese medical equipment, among others. The two prefectures, Oita and Miyazaki, are now considering further collaboration with individual countries.

#### **Public-Private Partnership Training (collaboration with TERUMO Corporation)**

In September 2011, five young physicians were invited from national medical institutions in Mexico, mainly from public hospitals that focus on cardiovascular medicine, to receive training on transradial coronary intervention (TRI), a technique for inserting a catheter through a blood vessel in the wrist. In this training, which was conducted with the cooperation from the world's leading doctor in this field, the five physicians actually practiced the technique using animals and a TRI simulator at Terumo Medical Pranex. In addition, the trainer visited Mexico to follow up on their practice and also to conduct a seminar for high ranking officials in the Ministry of Health and other personnel from health institutions in the country.

As a result, the trained physicians are now implementing TRI more frequently, and the market share of TERUMO's catheter device is increasing. Moreover, TERUMO's technologies gained wider acceptance as the company formed and strengthened relationships with the Ministry of Health and health institutions in Mexico with JICA providing opportunities for networking.



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