# Chapter 9
# School Health Programs

Although it is essential to work with a local organization which takes a major responsibility to conduct public health activities in developing countries, it is hard to find such organizations precisely because government institutions and community organizations are generally weak. On the other hand, most developing countries do have educational facilities, in some shape or form, that provide elementary education to local children. Many of these schools have long played a central role in their community. It would be efficient to use such a school as the base for public health activities, and it would also have a major impact on the community. Providing health education to schoolchildren not only raises their individual health status, but we could expect to see an increase in the local residents' knowledge of health issues as a result of the children passing on the knowledge they acquire to other children, and all in turn pass it on to their parents.

While school health programs in Japan first began in Meiji Era of the late nineteenth century, the school health system of today has evolved in response to new trends in medical science and to the degree of development of Japanese society. At the beginning of Meiji Era, around 1870, school hygiene programs were launched as a means to control infectious diseases endemic at that time, such as smallpox and cholera. Then in the period immediately after the end of the Second World War, other school health programs were conducted to combat other diseases, in particular tuberculosis and gastrointestinal parasites. These programs not only succeeded in protecting schoolchildren from diseases, they also produced the additional benefit in that as schools were used as the primary base for programs to control diseases in the community, this had a major impact in getting the local community involved in public health activities generally. As we entered the 1990s, the future course for school education placed greater emphasis on collaboration between schools, families and the local community. The connection between school health and community health was further boosted when local school health boards were set up, a concrete example of this collaboration.

As an inseparable part of Japan's school health experience, the school lunch program conducted in this country cannot be overlooked. Large-scale school lunch programs started in Japan with the aim of protecting schoolchildren from the consequences of poverty and inadequate diet, at a time of severe food shortages. Before long, however, the school lunch program was managed independently, considered as a part of the educational activities, and further, it provided a means of education. As a result, children became physically stronger, and people in the communities were able to raise their consciousness about their eating habits and improve their nutrition levels. Japan's experiences will be applicable in improving the situation in developing countries where people confront the same foods and nutrition problems.

In recent years, the WHO has been pursuing the expansion of its program "Healthy People and Healthy Cities" along with the program "Health Promoting Schools," and in a number of aspects of public health and medical services, it has been developing activities that use "school health" methods. In addition, UNESCO is currently promoting its FRESH Initiative (Focusing Resources on Effective School Health) as a comprehensive model for health education[1]). Acting in cooperation

[1] UNESCO homepage (http://www.unesco.org/education/efa/know_sharing/flagship_initiatives/fresh.shtml)

with UNESCO in this initiative, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) has been preparing a proposal to the World Food Program (WFP) to apply the school lunch model in developing countries. In this world trend, Japan's experience in school health programs can also suggest ways to improve community-based health and public health systems in developing countries at various stages of development.

## 1. The History of School Health Programs

Reflecting the development level of Japanese society at any given time, school health programs in Japan have always been implemented in ways appropriate to that level. School health programs began with preventing diseases and managing the health of schoolchildren. It has since expanded beyond those roles however, and now covers activities such as preventive health education for school-aged children, and promoting stronger collaboration between schools and the local community.

### 1-1 Pre-war School Health Programs

School health programs began in Japan with the establishment of the nation's educational system in 1872. Smallpox and cholera were prevalent at that time, and the first school hygiene measures were programs to control these infectious diseases. Infected individuals were banned from attending school, and subsequently all infectious diseases generally were brought within the scope of school health measures. Health checks conducted in Japanese schools today first began under the name of "vitality examination." The purpose of these examinations was to determine children's physiques and strength, through measurements of height, weight, chest circumference, grip strength and lung capacity. Attention was also given to school sanitation, and detailed standards were set out for the structure and size of school buildings and classrooms, as well as for toilets, plumbing, heating and lighting.

In 1898 the school physician system was introduced nationally, under which a school physician was allocated to all public primary schools in the nation. The core tasks of school physicians were to monitor school environmental health and conduct physical examinations, and were not expected to provide medical treatment at first. During Taisho Era, the second decade of the twentieth century, however trachoma was designated for treatment by school physicians, and treatment rooms were set up in schools where eyewashes were conducted and topical eye medication applied. MEXT's predecessor, the Ministry of Education, also actively promoted medical diagnosis and treatment in schools. Considerable effort was undertaken to control roundworm, hookworm and other gastrointestinal parasites in schoolchildren, and to treat skin ailments such as eczema and head lice.

Following the creation of the school physician system, physicians' workloads expanded rapidly. To meet the need for a professional to assist them, full-time school nurses were appointed. In 1929, the Ministry of Education stipulated that the duties of school nurses were to include disease prevention measures, assistance with diagnosis and treatment, disinfecting, caring for children under observation, assisting with health checks and school meals, and hygiene training. In 1941, the emphasis of school nurse duties changed from assisting with medical treatment to providing education and instruction. Furthermore, to demonstrate that they were members of a school's teaching staff, school nurses were designated "health instructors," and their appointment in schools was made mandatory.

### 1-2 Post-war School Health Programs

Immediately following the end of the Second World War, Japan was struck by a major outbreak of tuberculosis, which became a serious health hazard not just to schoolchildren, but also to the population at large. In 1946, preference was given to schoolchildren aged ten years and older for the yearly Mantoux Testing and BCG Immunizations. The 1949 revisions to the School Physical Examination

**Table 9-1 Trends in School Health Programs**

| | |
|---|---|
| **1 Pre-war School Health Programs** | |
| 1873 | School system proclaimed; infectious disease prevention measures implemented |
| 1878 | System of "vitality examinations" (health checks) commenced |
| 1890 | School facilities regulations adopted (school environmental health) |
| 1898 | School physician system introduced |
| 1900 | School nurse system introduced |
| 1941 | School nurses designated as nursing instructors; their appointment in schools made mandatory (under the National Schools Order) |
| **2 Post-war School Health Programs** | |
| 1946 | Mantoux tests and BCG immunizations; parasite egg examination and extermination programs |
| 1947 | Nursing instructors renamed "health instructors" |
| 1949 | Health coordinator system created |
| 1951 | Tuberculosis Control Law promulgated: state to bear full cost of detailed examinations and immunizations |
| 1954 | School Lunch Law adopted |
| 1958 | School Health Law enacted |
| 1988 | Local government student health sections and school lunch sections amalgamated |
| 1997 | Report of Council for Health and Physical Education (stresses importance of collaboration between schools, families and local communities) |
| 2000 | "Kenko Nihon 21" (Healthy Japan 21) and "Sukoyaka Oyako 21" (Healthy Family 21) Campaigns launched (Ministry of Health, Labour and Welfare initiatives) |

Ordinance provided for the addition of a detailed examination for tuberculosis to the items for examination. The Tuberculosis Control Law was enacted in 1951, providing for detailed examinations and immunizations to be conducted entirely at public expense. These measures facilitated the early detection and treatment of tuberculosis, and after peaking in 1951 the rate of new cases of tuberculosis began to decline slowly. Furthermore, examinations for parasite eggs and rigorous extermination programs carried out by Japanese schools also led to a spectacular decline in the prevalence of roundworm, hookworm and other gastrointestinal parasites among schoolchildren, where the immediate post-war period had seen very high infestation rates. Through repeated and regular action and treatment taken against other conditions including scabies, head lice and trachoma, in a few years these too were wiped out. In addition, school lunches, which before the war had been provided only to impoverished or physically infirm children, were now made available to all schoolchildren, with the aim of protecting the nation's children from the consequences of poverty and an inadequate diet. By 1950 the uptake rate for the school lunch program had reached 69%.

The School Health Law was enacted in 1958, creating the basic organizational framework for school health programs in Japan. GHQ had already taken the lead in inaugurating fully-fledged measures for health education as part of school health, but with the new law Japanese school health underwent a major conversion, from providing health care to providing education. Health and physical education courses became an integral part of school educational activities (which included individual subjects, morals, and school events),

and health education was transferred to the jurisdiction of the School Education Law. The School Health Law stipulated matters pertaining to school health planning; school environmental health; health checks (replacing the "vitality examinations"); health counseling; infectious disease control; school physicians, school dentists, school pharmacists, and nurse's offices; reporting information to public health centers; and financial assistance for school diseases. Prior to this, in 1949 health coordinators, who were charged with the conceptual planning, implementation and administration of school health plans, were to be appointed to schools as members of their team of school health professionals. The appointment of health coordinators was important from the perspective of coordinating between school education and school health, and the coordinators themselves would be expected to fulfill a role similar to that of a school health coordinator in the U.S.A.

Systematic school health programs that took shape in the 1970s and the 1980s were modified in response to changes in society. In 1996 the Central Council for Education declared "Room to Grow" and "Zest for Living" as the keywords for the future course of school education in the twenty-first century, and it emphasized the importance of collaboration between schools, families and local communities. As a specific development in this process, emphasis was placed on the comprehensive strengthening of school health boards and on setting up community school health boards. At the base of this approach lies the principle of "safeguarding and improving health based on the concept of health promotion." There are great possibilities that this principle can be tied in with the concepts of the above-mentioned Healthy People and Healthy Cities Program the WHO is promoting in developing countries.

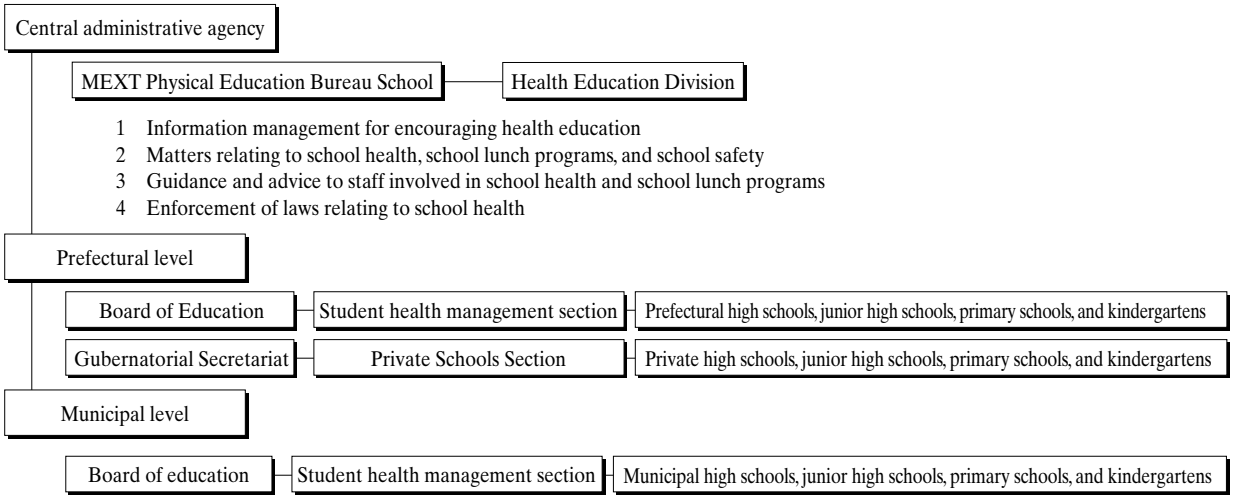
## 2. Main Initiatives in School Health

### 2-1 Administration of School Health

School health activities in Japan developed as part of school education, so systematic problems related to school health are naturally closely associated with the regulatory framework for school education. Japan's school health administrative organization can be illustrated simply by the following descending chain of command: MEXT ⇔ Prefectural Boards of Education ⇔ Municipal Boards of Education ⇔ Schools.

The central government agency responsible for school health is the School Health Education Division (SHED) in MEXT's Physical Education Bureau. It works in conjunction with the other MEXT Bureaus. The main areas for which SHED is responsible are the following:

**Figure 9-1 School Health Administration**




Source: Compiled by the author based on the data from Takano, Yo and Yanagawa, Hiroshi ed. (2000)

## Box 9-1 Regular Health Check Schedule according to School Year

Health checks occupy an important place in Japanese school health. The medical examinations conducted today have their origin in the physical examinations that began in 1898 as a result of the "Schoolchildren and Children Physical Inspection Regulations" adopted the year before.

In the post-war period, the enactment of the School Health Law in 1958 laid the foundations for today's system of health checks, including the dropping of the name "vitality examinations" for currently used. When Japanese people talk about these "medical examinations," they are in fact usually referring to the "regular" health checks that are normally conducted in April of each year. The content of these health checks have evolved in line with trends in the diseases prevalent among school-aged children at the time, as well as advances in medical technology. The parameters examined in medical examinations as of April 2003 are many and varied, as the following table shows.

### Regular Health Checks: Year Conducted and Examination Parameters

As of April 2003

| Item | Examination or investigation | Condition looked for | Kindergarten | Primary (Year) | | | | | | Junior High (Year) | | | High (Year) | | | University |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 2 | 3 | 1 | 2 | 3 | |
| General health survey | | | ○ | ◎ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Height | | | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |
| Weight | | | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |
| Sitting height | | | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |
| Nutritional status | | Poor nutrition, signs of obesity, anemia, etc. | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | △ |
| Spine, chest<br>Limbs<br>Bones, joints | | Bone or joint disorders | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |
| Vision | Eye chart | Students with unaided vision — Unaided vision | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | △ |
| | | Students with aided vision (spectacles, etc.) — Corrected vision | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | △ |
| | | Students with aided vision (spectacles, etc.) — Unaided vision | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ |
| Color vision | Color vision test chart | Color vision disorders | | ※ | | | | | | | | | | | | |
| Hearing | Audiometry | Hearing impairment | ◎ | ◎ | ◎ | ◎ | △ | ◎ | △ | ◎ | △ | ◎ | ◎ | △ | ◎ | △ |
| Eyes | | Infectious diseases, other external eye ailments, ocular alignment | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |
| Ears, nose, and throat<br>Conditions of mouth and throat | | Ear conditions; nasal and sinus conditions<br>Disorders of voice or speech | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |
| Skin | | Infectious skin diseases<br>Eczema, allergies | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |
| Teeth and oral cavity<br>Temperomandibular joint dysfunction | | Caries and periodontal diseas<br>Bite abnormalities, trismus<br>Pronunciation disorders | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | △ |
| Tuberculosis | Indirect plain chest radiography | Tuberculosis | | | | | | | | | | | ◎ | ○ | ○ | ◎ |
| | Direct plain chest radiography<br>sputum testing, chest auscultation and percussion | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Heart | Laboratory investigations<br>Other tests | Cardiac disease<br>Cardiac abnormalities | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |
| | Electrocardiography | | ○ | ◎ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Urine | Urinalysis<br>Diabetes mellitus | Renal disease | ◎<br>△ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | △<br>△ |
| Parasite eggs<br>Sellotape method | Direct smear method<br>Pinworm eggs | Roundworm eggs | ◎ | ◎ | ◎ | ◎ | △ | △ | △ | △ | △ | △ | △ | △ | △ | △ |
| Respiratory system<br>Circulatory system<br>Gastrointestinal system<br>Nervous system | Laboratory investigations<br>Other tests | Tuberculosis, Cardiac disease, Renal disease, Hernias, Language impairment<br>Psychological disorders,<br>Bone or joint abnormalities,<br>Movement disorders | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |

Note: ◎ – almost all students tested for this. ○ – tested if necessary or for particular students who need to be tested for this. △ – can be omitted.
※ Color vision testing from 2003 (that is, can be omitted from examination).
Source: Health and Welfare Statistics Association

1) Promotion of health education in schools as a part of social education.
2) School health programs, school safety programs, school lunch programs, and disaster relief payments.
2) Providing guidance and advice concerning the health of schoolchildren.
4) Providing guidance and advice for school physicians, school dentists, school pharmacists, nursing teachers, school nutritionists and school lunch program officers.

The local government agency with responsibility for school health is the student health management section attached to each prefectural and municipal board of education. Its duties include the health and safety of teaching staff and students, welfare and recreation services, and school lunch programs.

### 2-2 Organization of School Health Programs

School health programs comprise three classes of activities: health education, health management, and public health organization activities. Health education is divided into health guidance and health learning; classroom teachers, nurse teachers and health teachers are responsible for these. Health management is divided into environmental management and personnel management. The former includes environmental safety, improving the environment, and sanitation inspections. The latter is subdivided into health management and lifestyle management. Health management issues include health checks (see Box 9-1), disease prevention, accident prevention, and the management of students with mental and physical handicaps. Lifestyle management involves the provision of guidance to students on lifestyle issues both in and outside school. Finally, public health organization activities are conducted to ensure the effectiveness of all school health management and health education activities. Through school health board and student council activities, the aim is to strengthen collaboration between schools, families and the local community, as well as collaboration with relevant institutions and community groups such as student councils, housewives' associations, neighborhood associations, and PTAs. Collaboration with the local community not only addresses schoolchildren's health issues and improves schools' environmental health, but can also have a major impact in healthcare for the local community.

### 2-3 Parasitic Disease Control

Immediately following the war, the rate of gastrointestinal parasite infection in Japan exceeded 60% (see Figure 5-2 in Chapter 5). The hookworm infestation rate was also around 10%, causing those affected to develop anemia and malnutrition. These high infestation rates plummeted over the following two decades, and parasitic disease is hardly ever seen in Japan today. The principal causes for this improvement are Japan's economic growth and the accompanying improvements in sanitation, along with the switch by Japanese farmers from organic to chemical fertilizers. School health programs also made a major contribution to this improvement. At primary and junior high schools, inspections for parasite eggs were conducted twice a year as a school health measure, and individuals testing positive underwent thorough parasite extermination.

These programs were implemented by four parties working together: schools, government, parasite control associations, and parasitologists. Schools participated through classroom teachers and health teachers distributing and collecting stool test containers and distributing antihelminthics. The government played its part by providing financial assistance under the School Health Law and the Parasite Disease Prevention Law. The Japan Association of Parasite Control participated by devising extermination strategies and by providing group stool testing and treatments, and parasitologists provided support for the other three participants. Schoolchildren were also given health education on a regular basis, along with guidance on how to improve their school and home environment. The most salient feature of these parasite control initiatives was that they did more than simply exterminate

parasites - they were conducted as part of school health education.

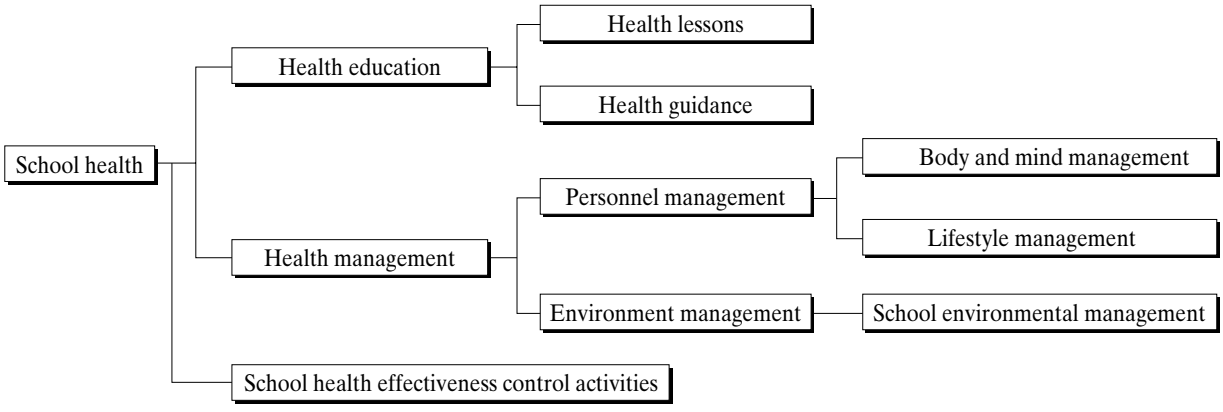
### 2-4 School Lunch Programs

The origin of school lunch programs in Japan is said to be traceable to 1889, when lunches were offered at no charge to children from poor families in a private school in the Yamagata Prefecture, town of Tsuruoka (now Tsuruoka City). Before the war, up until 1945 however, school lunch programs were restricted to a few impoverished or physically infirm schoolchildren. More universal school lunch programs began only in the post-war period (a time of severe food shortages), with the objective of protecting schoolchildren from the consequences of poverty and an inadequate diet. The programs used supplies of powdered skim milk and other food aid received from the U.S. and other countries. A government circular released in 1946 stated that "in terms of strengthening schoolchildren's physiques and providing nutritional education, it would be very beneficial to provide as many schoolchildren as possible with appropriately nutritious meals in schools." Thus, besides impoverished or physically infirm students, all children were eligible for the school lunch programs.

Aid organizations working in Japan at the time included Licensed Agencies for Relief in Asia (LARA), which provided food aid from American NGOs; a UNICEF food program, which supplied powdered skim milk; and Government Aid and Relief In Occupied Areas (GARIOA), the US occupied territories relief government fund which turned the donations of flour it received into a source of funds for meals programs. The programs received massive public approval at the time, and by 1950 the uptake rate for the school lunch program had reached 69%. GARIOA was disbanded, however, in the wake of the 1951 signing of the San Francisco Peace Treaty. Since GARIOA had been the financial source for purchases of food used in the meals program, this inevitably led to increased costs for the program, in turn forcing a number of schools to shut their programs down. In response, a nationwide movement arose, demanding the continuation of school lunch programs with government financial assistance, and there were calls to give the entire program a legislative basis.

In 1954 the School Lunch Law was enacted, establishing the basic framework for Japan's school lunch programs. Article 1 of this law stated that "School lunches are to aid the healthy development of the mind and body of children and students, and contribute to improving the dietary habits of the general population." Article 2 stated that the school lunch program is "to realize the objectives of education during the years of compulsory education," making clear the fundamental principle that the school lunch program was part of schools' educational programs. Organizations that established schools providing compulsory education (that is, primary schools and

**Figure 9-2 Organization of School Health**




Source: Ministry of Education, Culture, Sports, Science and Technology

junior high schools) were to endeavor to make school lunches available, and national and local governments were to exert efforts to work towards the healthy development of the system through the spread of the program.

This law also provided for financial assistance, both with the costs of setting up facilities and equipment needed to start a school lunch program, and to schoolchildren whose parents might have difficulties in paying for meals. The law continues to provide such assistance today. The party responsible for implementing the school lunch program is the organization that founded that school. The cost of facilities and equipment needed to run the program along with the costs of personnel are also the responsibility of the school board. The cost of food ingredients and other expenses are the responsibility of the child's guardian. If a guardian cannot afford this expense, and is eligible under the Daily Life Protection Law, the government can assist them with part of the cost.

The School Lunch Law stipulates that efforts are to be exerted to achieve the following targets in order to realize the aims of education:

1) Cultivate a correct understanding and proper habits in students with respect to meals in their daily life
2) Enrich children's lives at school, and cultivate cheerful social interaction
3) Strive to get children to adopt sensible dietary habits, to improve their nutritional intake, and to improve their health
4) Guide students to a proper understanding of the production, distribution and consumption of food resources

The school lunch program was devised to enable schoolchildren to eat meals that provide them with balanced nutrition. It contributes greatly to safeguarding and improving the health, and to strengthening the physiques, of schoolchildren in their growing years. The menu is specially designed to provide balanced nutrition using a combination of different foods, that children will enjoy eating. Care is taken so that through the school meal children can get 55% of their daily requirements of calcium and some of the vitamins, that children tend to lack in their daily lives. This is another example of how school lunches play a large role in schoolchildren's nutritional intake.

Recent years have seen the emergence of problems affecting schoolchildren such as unstructured meal patterns, and unbalanced nutritional intake including excessive consumption of fats. Through the school lunch program, children in Japanese schools can be expected to acquire the correct knowledge of food, along with the dietary habits for putting that knowledge into practice.

## 3. Japan's School Health Achievements - Application in Developing Countries

School health in Japan has changed in various ways in accordance with social conditions and the state of development of the nation. Many positive outcomes have accordingly been achieved while responding to the demands of the times. In the immediate post-war period, schools were the center of programs to control and prevent widespread tuberculosis and high rates of parasite infestation, and in a short period of time there were massive declines in the prevalence of both. Schools were used as the base for the conduct of many disease prevention programs, and therefore contributed to improving the health of the community. At the same time, regular health checks allowed the early detection and treatment of diseases in schoolchildren. School lunch programs contributed greatly to safeguarding and improving children's health, and to strengthening their physiques. Finally, health education provided to schoolchildren did more than simply raise children's knowledge of health matters; it also served as an entry point for introducing health knowledge into their families, and thus fulfilled a major role in improving the health in the communities.

The outcomes described here were achieved against the social backdrop of their respective eras. These experiences and approaches could

also assist with redressing the health and hygiene issues that developing countries currently face. A discussion will follow here on some of Japan's experiences that may be applicable to developing countries.

### 3-1 Parasitic Disease Control

As discussed earlier, parasitic disease control programs in Japan did more than simply exterminate parasites. They were also implemented as a part of school health hygiene education. The most salient feature of parasite control programs in Japan after 1945 is that they were run by the local residents and sustained over the long-term using their own resources, meaning the community was spurred into engaging in activities that ultimately raised community health levels and their own living standards. As the means to that end, these programs were tied to school health, since the local residents' interest in parasite control could be aroused through their children. Hara (1999) has suggested the following as reasons for this linking with school health.

(1) Primary schools and junior high schools represent coherent groups of people, allowing effective health control programs.
(2) Because school-aged and pre-school children have high rates of gastrointestinal parasite infestation, they constitute the principal source of infestation for the entire community. Treating them is therefore highly effective in reducing overall infestation rates.
(3) Testing for and exterminating gastrointestinal parasites involve public health education processes and outcomes that people can see for themselves. When parasite control programs are adopted in schools to educate children about parasite diseases and infection prevention methods, this knowledge can be passed on through the children to their families and the local community.
(4) Children often have a strong tendency to listen to their teachers rather than their parents. This is because parents and grandparents tend to give in to their children.
(5) Schools and teachers are the psychological leaders of the community. The involvement of teachers influences local residents, making public health activities easier to implement.
(6) If outcomes such as test results and the benefits of extermination are provided to the community, it arouses the interest of local residents. Word spreads to people from news reports and others in the community, and the activities are expanded to other schools and communities.

The basic concept here involves linking school health to community development. By using school health as a vehicle and taking "gastrointestinal parasite control programs" as an entry point, public health programs can be developed for the general community. This concept of an "entry point" can be employed in developing countries, replacing "gastrointestinal parasite" with "diarrhoeal disease" or "malaria" as appropriate, depending on the particular situation in the developing country in question. In large measure, this approach also uses the concept behind the integration projects that were discussed in the context of family planning in Chapter 4. In recent years, awareness has been growing around the world of school health and gastrointestinal parasites, and Japan is expected to make a contribution in the future to this field of international cooperation. At the present time, technical cooperation projects that use the school health approach in gastrointestinal parasite and malaria control programs are being developed at Thailand's Mahidol University and in four neighboring countries, Cambodia, Laos, Myanmar, and Vietnam. These projects are utilizing Japan's experience in school health (see Box 9-2).

As was mentioned in "1-2 Post-war School Health Programs," tuberculosis control initiatives were conducted in Japan combining the measures available under the School Health Law and the Tuberculosis Control Law. It is an example of the

major achievements possible with this approach. In developing countries, tuberculosis overwhelmingly strikes age groups older than schoolchildren, however, and DOTS (see p. 97) has become the mainstream form of tuberculosis control in recent years. Given those factors, other than the concept of health education, Japan's school health approach may be difficult to apply.

### 3-2 School Lunch Program

Since 1945, Japan's school lunch program has contributed greatly to improving the health of schoolchildren, to strengthening their physiques, and to their acquisition of proper dietary habits. As was mentioned in the preceding section, it should not be forgotten that, through children, knowledge and information about proper diet and nutrition was passed on to their families, in turn contributing to better health and hygiene in the local community.

MEXT's International Cooperation Policies Office submitted a proposal to the World Food Program (WFP) for an assistance program that would expand school lunch programs into developing countries modeled on Japan's experience, in cooperation with UNESCO. In response, the WFP and UNESCO conducted a survey of Japan's school meal program over March 12-15, 2003. The survey team visited several schools and shared kitchen facilities throughout Japan, where its members tasted program meals. It also conducted an exchange of views with members of a number of boards of education. The survey team was favorably impressed as shown in the following observations:

1) A school meal program that started with overseas aid after the war had since taken root as a system sustained by domestic resources and efforts
2) Under the School Lunch Law, the school lunch program has been designated a part of school educational activities, providing education through the medium of food
3) Management of the program gave due consideration to safety and hygiene

Following this survey, the next course of action for this proposal will be the organization of study tours and the holding of international workshops for interested parties from developing countries regarding Japan's school lunch program. Representatives from MEXT also gave a presentation on Japan's school lunch program at the Workshop on Comprehensive School Health and Nutrition held in October 2002 in Chang Mai, Thailand under the joint auspices of UNESCO and the WFP. Workshop participants from developing countries showed great interest in the program as a successful example of a comprehensive model for health education, and it attracted many questions and generated considerable discussion. Japan's experience in school lunch programs since 1945 could accordingly be very instructive as a model for developing countries. In order to achieve effective collaboration and cooperation measures that suit the needs of the

**Box 9-2 Summary of the International Control of Parasitic Disease Asia Center Project**

At the 1997 Denver Summit, the prime minister of Japan at the time, Ryutaro Hashimoto, announced a development cooperation project (usually known as the Hashimoto Initiative) that would put Japan's experience in parasite control programs to good use in developing countries. Japan subsequently set up international parasite control centers in Thailand, Kenya and Ghana, where it developed personnel training programs principally for workers involved in parasitic disease control programs in neighboring countries. At Mahidol University in Thailand (inaugurated in 2000), training was given to personnel from Laos, Cambodia, Vietnam and Myanmar. This training principally comprised lectures that drew fully on the collective eradication, hygiene education and collective parasite testing methods developed in Japan in the 1940s and 1950s, mainly for application in primary schools.

particular country that intends to take up Japan's proposal, MEXT has already sent survey teams to a number of countries, to gauge how Japan's knowledge and experience in school lunch programs and school health can be applied.

### 3-3 Collaboration with Schools, Families and the Local Community

In order to implement community-based health programs in developing countries, a local entity or institution that can serve as a base in the community is essential. While small communities in many developing countries may not have a public health center, they almost always have a government or private school providing elementary education to local children, and the teachers in those institutions often fulfill a leadership role in the community. In addition, children who receive health education at schools in turn become "teachers," passing on what they have learned to their families and the community. The knowledge that they acquire spreads from child to child and then from children to parents, and ultimately can be expected to increase the health knowledge of all local residents. This demonstrates the possibilities to utilize school health in order to improve the health of local communities.

It is important to take a comprehensive approach involving collaboration with families and the local community in order to effectively link school health to community health. However, in developing countries, all too often the damage caused by top-down programs can be seen at the grass-roots level and in comprehensive development planning, little or no progress is being made at the national level.

In Japan, since 1945 a number of different parties have joined forces in comprehensive "rural development" and "social development" initiatives. According to Sato (2002), rural development in Japan represents a practical application of the Japanese "multi-sector approach," involving not only efforts to improve the necessities of life (under the slogan of "lifestyle improvement"), but also improvements in a diverse range of sectors such as education, public health and medical services, sanitation, and welfare services (see p. 153 to be checked). Parties from different levels (including regional and local governments, public health centers, agricultural extension centers, schools, agricultural cooperatives, and village organizations) were enlisted to implement the multi-faceted policies produced by central government agencies. Each individual outcome had a positive bearing on other outcomes, leading to a general increase in the affluence of rural communities. The potential for coordination between local community stakeholders that these top-down programs from central government offered was fully exploited, and as a result, out in the field these programs were put into practice using a multi-sector approach, and tied to overall rural development. School health and school lunch programs are included among the range of sectors mentioned by Sato, and school health was promoted by collaboration between teachers, school physicians, public health nurses, and livelihood extension workers. Schools were also actively involved and used as the venue for livelihood improvement campaigns. Japan's "escape from poverty" can be said to be partly the result of the school health and other

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[2] As part of school health in Japan in recent years, efforts have been made to foster collaboration with local communities. In the Council for Health and Physical Education's 1997 report, MEXT declared safeguarding and improving people's overall health based on the principle of health promotion to be the future course for school health activities. In 2000 the Ministry of Health, Labor and Welfare announced the "*Kenko Nihon 21*" (Healthy Japan 21) and "*Sukoyaka Oyako 21*" (Healthy Family 21) programs, and with the enactment of the Health Promotion Law in 2002, health promotion plans are being formulated for each community. These are signs of the rapid progress being made in linking school health with community-based health. Public health organization activities have in recent times been a major feature of school health in Japan, where there are strong reasons for aiming for comprehensive school health through collaboration between schools, families and the local community. The opposite applies, however, at the healthcare grass-roots level in developing countries, where there are strong efforts to link with school health in order to improve healthcare services in local communities. Since community health services in many developing countries are not very advanced, the concept of "school health," as held in developed countries, may often fall on unreceptive ears.

comprehensive initiatives that have involved such collaboration with local communities. Such school health measures may be applicable in improving public health in developing countries[2]. As was described earlier, at the international level the Health Promoting Schools and Healthy People and Healthy Cities Programs are being expanded. In several developing countries the WHO is striving to link health promotion with school health, and linkages between school health and community-based health are likely to advance further in the future.