

Chapter 3

Maternal and Child Health

In 1950, Japan experienced a high infant mortality rate of 60.1 (per 1,000 live births), but this subsequently underwent a dramatic decrease, and by 2000 at 3.2 it was the lowest in the world (see Figure 3-1). Presently, the high infant mortality rate is still greater than 50 in more than 60 developing countries. There is a powerful desire on the part of developing countries to learn from the Japanese experience in maternal and child health, bringing about such a rapid improvement in the health standards after the end of the Second World War.

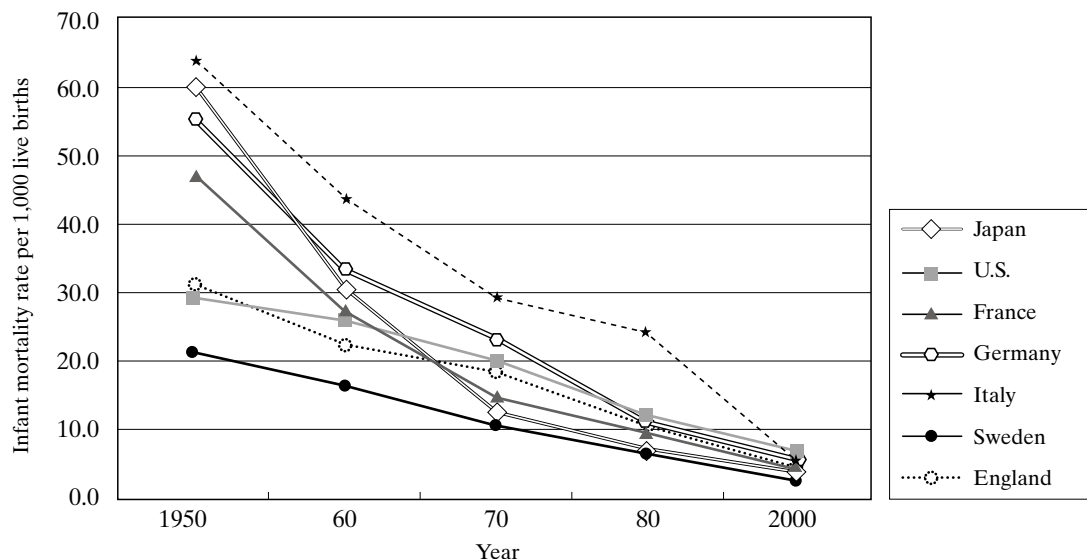
In this chapter, we will provide an overview of post-war Japanese initiatives in the field of maternal and child health, and discuss the programs that may be of use to developing countries.

1. Changes Over Time in Maternal and Child Health Measures

1-1 Pre-war Maternal and Child Health (1868~1944)

It is well known that many foreigners who visited Japan in the early Meiji Era (1868~) were full of praise for Japanese childrearing methods. For instance, E.S. Morse declared “Nowhere in the world have I seen a country that cares for its babies as much as Japan and I am certain that there are no babies in the world as good as Japanese babies,” and stated that the infant mortality rate of Tokyo was lower than that of Boston¹. The Japanese infant mortality rate at the start of the 20th century has

Figure 3-1 Trends in Infant Mortality Rate in a Number of Developed Countries (1950~2000)



Source: Mothers' Children's and Families' Health Education Group ed.

¹ Morse (1917)

been estimated at around 150, relatively low at that time for any country. One reason for this may be the existence in Japan of “*sanba*,” (traditional birth attendants) from the 1300's.

Although rather favorable in comparison to levels in other countries at the time, the infant mortality rate remained at about 150 until 1925, by no means a satisfactory level. There was a distinct lack of scientifically based knowledge concerning pregnancy and childbirth among the general populace, and a number of problems associated with women bearing large numbers of children, hard labor until immediately before giving birth, a lack of a proper system of checkups during pregnancy, and a lack of birth attendants with any specialized training. Problems after birth included a lack of proper neonatal care, malnutrition, diarrhea illnesses caused by poor hygiene, acute respiratory infections due to unhygienic living conditions, and a lack of parental knowledge and understanding. It must be stated, however, that the Meiji and Taisho Governments had their hands full with fighting acute infectious diseases, and did not have spare resources to divert to maternal and child health.

In particular, the situation in rural villages was all but unknown to the authorities, and it was only after the Ministry of Home Affairs set up the Health and Sanitation Research Council in 1916 that information was gathered from rural villages concerning infant mortality rates.

As the country went on a wartime footing and with strong backing from the military in accordance with the *Kenpei-Kenmin* (Healthy Soldier, Healthy People) concept, the Public Health Center Law and Maternal and Child Protection Law were promulgated in 1937, establishing the framework of maternal and child health administration. The Ministry of Health and Welfare was then established in 1938, including maternal and child health within the administrative system comprising the Ministry of Health and Welfare and public

health centers. In 1939 all infants underwent health checks in a mass screening program.

Codification of the profession of public health nurses in 1941 secured human resources in the field including maternal and child health. In 1942 the “Pregnant Mother's Handbook” system, the precursor of the “Maternal and Child Health Handbook,” was launched. Observance of the system of registration of pregnancies and health checks was strongly recommended, and various types of maternal and child health services were established. In 1934 a community organization, the “Imperial Gift Foundation Aiiku-kai,” was established, and began a program of Aiiku Groups (Married Women's Voluntary Groups for Mother-Child Health and Welfare) in 1936. This period is considered to be the incubation period for maternal and child health policy in Japan².

1-2 Post-war Phase of Introduction of Maternal and Child Health Measures (1945~1948)

In post-war Japan, maternal and child health was designated an important field of public health, under direction, and with the assistance of the General Headquarters (GHQ). In 1947, only 2 years after the end of the war, within the Ministry of Health and Welfare, a Children Bureau was established that in turn contained a Maternal and Child Health Section to administer maternal and child health matters. The Child Welfare Law was enacted that same year. The New Public Health Center Law was also enacted in 1947, firmly establishing the public health center as the central provider of maternal and child health services to the community.

With the enactment of the Eugenic Protection Law in 1948, abortion was legalized, reducing the number of dangerous illegal abortions, and contributing in large part to a decline in both maternal and infant mortality rates. The Preventive

² Nishiuchi, Masahiko and Boshi Hokenshi Kanko Iinkai (1988) *Nihon no Boshi Hoken to Moriyama Yutaka* [Maternal and Child Health in Japan and Moriyama Yutaka], Japan Family Planning Association, Inc.

Vaccination Law was enacted the same year, and an intensive vaccination campaign commenced. The “Pregnant Mother’s Handbook” system, launched during the war, was revised and the Mother and Child Handbook relaunched in 1948 (later renamed the Maternal and Child Health Handbook in 1966).

In this way, a number of laws and programs were announced in quick succession over the 3 years after the war ended. Although there have been some changes, these measures have continued as the basis of maternal and child health policy up until the present day.

1-3 Phase of Maturation of Maternal and Child Health Measures (1949~1979)

After the post-war food shortages and Baby Boom had passed, from 1948 onwards the program of health guidance for pregnant women and mothers with small children was intensified, based on the public health centers. Health education programs run by public health nurses and midwives, mainly conducted through home visits, played a major role in promoting infant health.

Rural areas suffered a lack of birthing facilities where women could give birth safely, and many villages had no midwives. Community organizations and local governments set up “Maternal and Child Health Centers” in these areas, allowing for the first time safe deliveries under midwife supervision. These Maternal and Child Health Centers also became the place for maternal education classes, regarding postnatal care and other maternal and child health topics. Recognizing the positive achievements of these centers, in 1958 the Ministry of Health and Welfare passed legislation to establish a network of Maternal and Child Health Centers throughout the country.

In 1961 a nationwide programs of Home Visit Neonatal Health Checks and Advice, and Three Year-old Health Checks were commenced. As the scope of maternal and child health programs progressively widened, the “Maternal and Child Health Law” was enacted in 1965. Whereas the recipients of maternal and child health services had

previously been pregnant women, infants and their mothers, the new law broadened this further to encompass women before they became pregnant, and included their health management in a comprehensive maternal and child health program.

Following the introduction of the Maternal and Child Health Law, a great deal of effort was put into research into various diseases, and the development of preventive measures. The 18 month old health check was introduced in 1977, and the importance of early detection and early treatment of childhood diseases through a series of health checks for the newborn and at 18 months and three years, was underlined. Testing for congenital metabolic abnormalities was introduced in the same year, followed by tests for cretinism (congenital hypothyroidism, 1979), neuroblastoma (1984), and congenital hyperadrenalism (1988), as well as a Vertical Hepatitis B Transmission Prevention Project (1985), and hearing and vision testing and screening for various conditions at the three year old health check.

Based on community organizations dating back to the pre-war period, such as the Aiiiku Groups, in 1968 the Ministry of Health and Welfare gave funding to local governments to support women volunteers acting as “Maternal and Child Health Promoters,” thus extending their activities throughout the nation. It is characteristic of Japan that the positive benefits of grassroots campaigns such as this are spread throughout the country with governmental assistance.

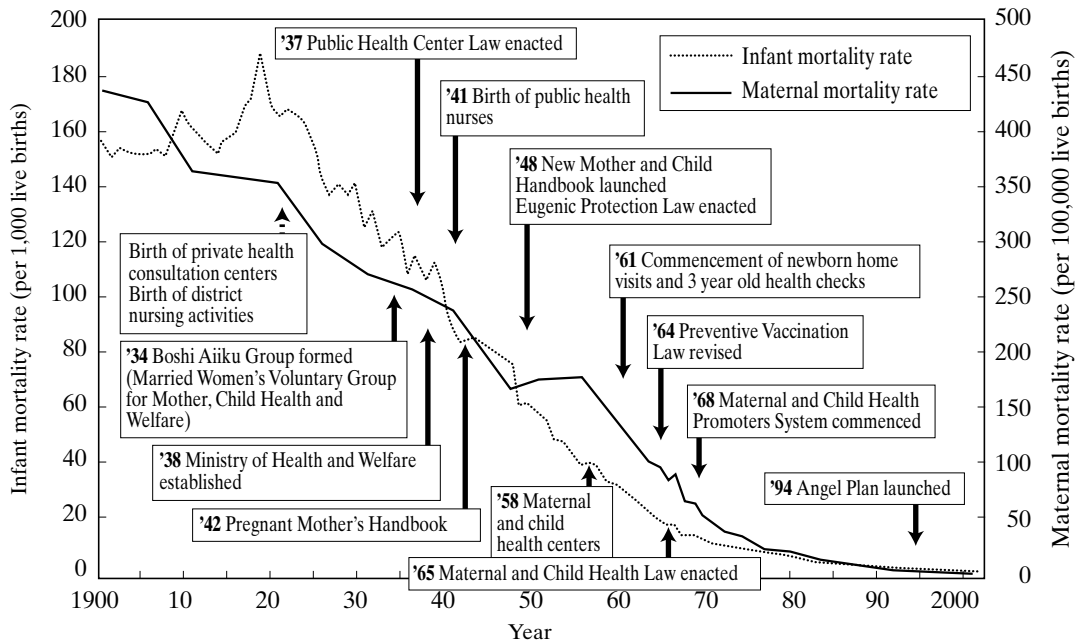
A building boom for medical institutions followed the introduction of universal health insurance coverage in 1961, providing easy access to medical care even for rural villages. As a result, the proportion of home delivery, as high as 95.4% in 1950, had halved by 1960, and was only 4% by 1970 (see Box 3-1).

1-4 Phase of Assistance in Childrearing (1980~present)

The major programs in maternal and child health were in place in almost all Japan by the early 1980’s (see Tables 3-1, 3-2), and the infant mortality

Table 3-1 History of Maternal and Child Health

Year	Infant mortality rate (per 1,000 live births)	Initiatives in maternal and child health	Topics in society, public health and medical services
1916	170.3		Formation of Health Care and Sanitation Council
1934	124.8	Formation of Imperial Gift Foundation Aiiku-kai	
1937	105.8		Public Health Center Law enacted
1938	114.4	Maternal and Child Protection Law enacted	
1940	90.0	Health checks and health advice for infants in accordance with National Physical Strength Law	
1942	85.5	Mother's Handbook System launched	
1945	—		End of World War II
1946	—		Japanese Constitution promulgated, epidemic of typhus fever, outbreaks of smallpox and cholera
1947	76.7	Children's Bureau established within Ministry of Health and Welfare, Child Welfare Law enacted	
1948		Mother and Child Handbooks issued, maternal and child health program outlined	Medical Services Law, Medical Services Personnel Law, Preventive Vaccination Law and Eugenic Protection Law enacted
1951		Support for care and education for children with disabilities, and issue of supportive devices	Complete revision of Tuberculosis Prevention Law; Japan joins World Health Organization (WHO)
1954		Ministry of Health and Welfare sets up community maternal and child health organizations	Programs launched to exterminate parasite eggs, mosquitoes and flies
1955	39.8		Morinaga Milk arsenic poisoning incident
1958		Maternal and child health centers established, medical aid program for premature babies	
1959		Support for care and education for children with tuberculosis	Outbreak of polio in Hachinohe City, Aomori Prefecture
1960	30.7		Pharmaceutical Affairs Law promulgated; Polio epidemic in more than 10 prefectures
1961	28.6	Introduction of 3 year old and neonatal home visit health checks; Emergency importation of polio vaccine and national program of immunization	Universal Health Insurance Coverage achieved
1962			Social Insurance Agency established; Thalidomide children born in Japan
1964	20.4	Preventive Vaccination Law revised (live polio vaccine legislated)	Infant mortality rate becomes less than that of U.S.
1965	18.5	Maternal and Child Health Law promulgated; National Children's Medical Center established	
1968	15.3	Maternal and Child Health Promoter system (919 municipalities nationwide)	Itai-Itai Disease (cadmium poisoning) recognized as pollution-related disease
1974	10.8	Research Program for the Treatment of Chronic Pediatric Diseases of Special Categories established	
1977	9.4	18 month-old health checks introduced; Mass screening for congenital metabolic diseases commenced	Average life expectancy becomes number one in world
1981			Infectious disease surveillance program commenced
1982			Law for Health and Medical Services for the Elderly enacted
1985	5.5	Vertical Hepatitis B Transmission Prevention Project commenced	United Nations International Women's Year
1989			AIDS Prevention Law enacted; "1.57 Shock" (declining birth rate)
1990			World Summit for Children (New York)
1991	4.4	Family Care Leave Law enacted	
1994	4.2	Angel Plan for assistance in childrearing	Community Health Law enacted; Long-term Care Insurance Law enacted
1997	3.7	Maternal and child health programs transferred to municipalities	
1999			Infectious Diseases Law implemented
2000	3.2	"Sukoyaka Family (Healthy and Happy Family)" Plan announced	

Figure 3-2 Infant Mortality, Maternal Mortality and Maternal and Child Health Initiatives

Source: Mothers' Children's and Families' Health Education Group ed. and Statistics and Information Department, Minister's Secretariat, Ministry of Health, Labour and Welfare

rate had fallen steadily (see Figure 3-1). Medical expenditures had also become relatively low in comparison with levels in other developed countries. The Japanese maternal and child health system, so close to the ideal in many ways, is looked at with envy by developing and developed countries alike. On the other hand, recent societal trends, such as the declining birth rate, and increased rates of nuclear families and urbanization, mean fewer opportunities to obtain advice about childrearing from people with experience. Stress related to childrearing has become a social problem, with increased levels of parental stress, a rise in the incidence of child abuse, and a greater financial burden associated with raising and educating children. Quantitative improvements in indicators of maternal and child health have just about reached the saturation point, but there is still a great deal of room for improvement in the emotional health of both parents and children.

To deal with changes in the environment that children grow up in, for instance the ever-declining birth rate and the increasing participation of women in the workforce, the Ministry of Health and

Welfare formulated the "Angel Plan," with the aim of producing a social environment conducive to worry-free childrearing. A "Five-Year Project on Urgent Day-care Measures etc." was mapped out in 1994 with the agreement of the Ministers of Finance and Home Affairs.

Based on the recognition that the existing maternal and child health system was unable to deal with the diversification of lifestyles associated with the above-mentioned changes, such as the increase in nuclear families and the increasing women's participation in the workforce, the basic direction for future childrearing support measures was worked out, through cooperation with agencies in fields other than public health, including child care, employment, education and housing.

The "Sukoyaka Family 21" (Healthy and Happy Family 21) program was announced in 2000, building on initiatives taken during the 20th century, to deal with challenges both pending and new. It is a national campaign, to be jointly promoted by all concerned agencies and organizations, showing the direction of initiatives in

the field of maternal and child health to be taken in the 21st century. The major initiatives are: 1) Strengthening health care measures and promoting health care education for adolescents; 2) Assuring safety and comfort during pregnancy and childbirth, and assistance for infertility treatments; 3) Maintenance and improvement of child health care and medical services standards; and 4) Promotion of the trouble-free emotional development of children and alleviation of anxiety related to childrearing.

2. Main Factors in Improvements in Maternal and Child Health

In the next pages, we will analyze the factors that contributed to the rapid post-war improvement in the level of maternal and child health in Japan, and present in detail those factors particularly characteristic to Japan.

2-1 Analysis of Factors in Raising the Level of Maternal and Child Health

It is of great interest to other countries just what the initiatives Japan took to achieve such rapid reductions in the maternal and infant mortality rates. These indicators are intimately related to a wide range of socio-economic factors, such as education and economic growth, so it is difficult to explain improvements in maternal and infant mortality rates only in terms of medical programs in the field of maternal and child health. A number of studies are in progress, but no definite conclusions have been reached. In this paper, we will present a number of earlier reports, and hope to provide material for future discussions.

Fujisaki (2003) offers three major factors in reducing the maternal mortality rate: 1) "Fundamental conditions": universal health insurance coverage, improvements in medical care, educational standards, and living standards; 2) "Specialized

promoting factors": maternal and child health facilities, promotion of institutional delivery, and advances in perinatal medical care; and 3) "Notable factors unique to (characteristic of) Japan": public health programs, community participation, the Maternal and Child Health Handbook system, enactment of the Mother's Body Protection Law (formerly Eugenic Protection Law). Of these, 1) and 2) can be considered universal requirements for reducing the maternal mortality rate any country. The "programs unique to Japan" (characteristic Japanese initiatives) outlined in 3) are considered to have contributed in part to the remarkable results achieved in such a short time in Japan, and it has been suggested that detailed consideration of these factors may be the key to extracting those aspects of the Japanese experience that will be applicable to developing countries.

A joint US/Japan study investigated factors related to infant mortality³. As shown in Figure 3-1, the infant mortality rate in Japan dropped below that in the U.S. during the 1960's, even though Japan was still much poorer economically at that time. Their analysis revealed the following reasons for this:

- i) Small degree of economic disparity: not only was there little gap between rich and poor in Japan, but the difference in maternal and child health standards between rural and metropolitan regions was also small. In particular the difference between urban and rural infant mortality rates began to decrease after 1965 and maternal and child health standards in rural regions caught up with the metropolitan regions in a short period (5 years)⁴.
- ii) Universal Health Insurance Coverage: with the introduction of the system of universal health insurance, it became easier for many women and children to obtain medical services. With the further introduction of the systems of "Yoiku-iryō" (medical and infant care

³ Kiely M, Hirayama, Wallace, Kessel, Nakamura, Kiely JL, Nora (1999)

⁴ Nakamura (10 March 2003), symposium address "How Can We Apply Japan's Experience in Developing Countries," at the international symposium "Concerning the Possibility of Applying Japan's Experience in Developing Countries"

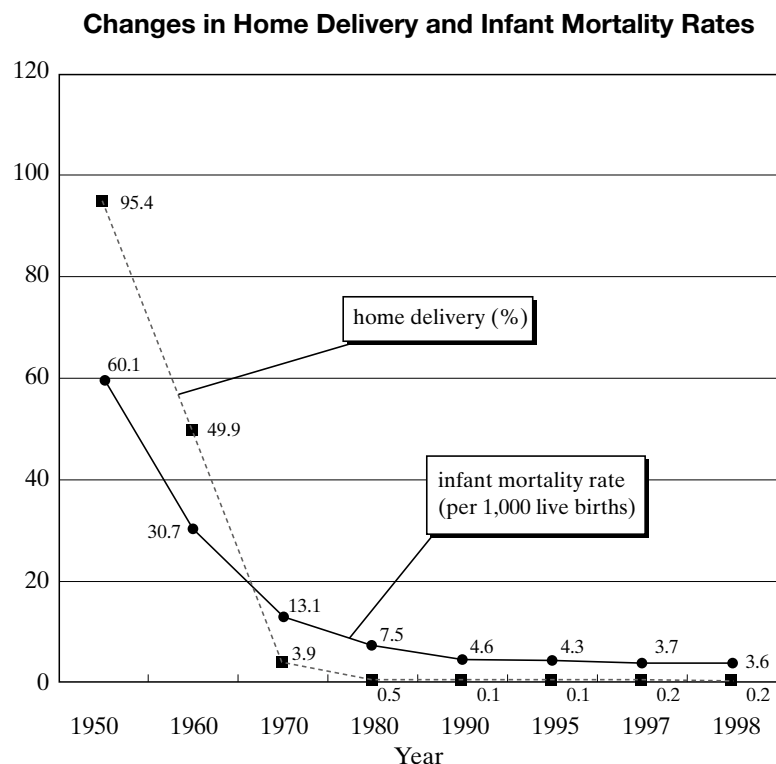
Box 3-1 Home Delivery and Infant Mortality Rate

Fujisaki's analysis (2003) identifies the promotion of institutional delivery as a "specialized promoting factor" contributing to the decline in the maternal mortality rate. Here we will see how this theory fits the available data.

We can see from the graph below that in 1950, the rate of home delivery was 95.4%, but by 1960 had halved, and by 1970 was only 4%. We can also see a rapid decline in the infant mortality rate over the same period. From these data, we can conclude that the move to institutional delivery (includes hospital, medical clinic, and maternity clinics) brought about a significant improvement in the Japanese infant mortality rate. One reason for the move to institutional delivery was a directive from the post-war GHQ, and another important factor was the introduction of universal health insurance coverage in 1961, leading to a rapid expansion of medical institutions, providing easy access to medical care even for rural villages.

It is overly simplistic to say, however, that institutional delivery is superior to home delivery. It is more reasonable to suggest that an appropriate system was not in place for home delivery in Japan, and the move to institutional delivery brought about an improvement in the standard of medical care, thereby lowering the infant mortality rate.

From the viewpoint of reproductive health, a pregnant woman should be able to select the place where she will give birth. The modern theory of international health care cooperation states that the goal is not for "a move to institutional delivery," but rather to "birth under the supervision of someone with specialized training."



Source: Proportion of home delivery from Mothers' Children's and Families' Health Education Group; infant mortality rates from the National Institute of Population and Social Security Research

services)⁵ and “*Ikusei-iryō*” (medical aid for children with potential disability)⁶, no cost is incurred by the parents for neonatal medical treatment, or surgery for congenital conditions, that would otherwise be extremely expensive. These systems are also considered to have contributed to the decline in the infant mortality rate.

- iii) Maternal and Child Health Handbook: there is no scientific evidence that the Maternal and Child Health Handbook system has directly contributed to the decline of the infant mortality rate in Japan. It is considered to have played a role, however, through improving parents' knowledge base concerning childrearing, improving communication between providers and consumers of medical services, provision of maternal and child health information, and making a record of the process of pregnancy, birth and child growth.
- iv) Health checks and screening tests: early detection and treatment of a variety of conditions has been aided by the comprehensive system of health checks and screening tests for pregnant women, new mothers, and children, including medical checks during pregnancy, maternity classes, neonatal mass screening for congenital metabolic diseases, and health checks for infants.

If we consider the above two studies, we see that despite their different subject matter, both maternal mortality rates and infant mortality rates come under the heading of maternal and child health, and both emphasize the same three areas, i.e. socioeconomic factors, technical factors unique to the field of maternal and child health, and approaches and activities characteristic to Japan. Points i) and ii) of Kiely et al. are included in

Fujisaki's 1) Fundamental conditions, point iv) is included in 2) Specialized promoting factors, and point iii) is included in 3) Notable factors characteristic of Japan.

Socioeconomic factors and technical factors related to the field of maternal and child health can both be considered common to Japan and other countries. In this paper, we will therefore focus on approaches and activities characteristic to Japan for further analysis and discussion. We will present the Japan's experience in the four factors identified by Fujisaki as “Notable factors unique to Japan,” public health activities, and community participation, use of the Maternal and Child Health Handbook, and the enactment of the Mother's Body Protection Law. We will also discuss maternal and child health centers and maternal and child health statistics, important subjects for developing countries, where Japanese advantages can be readily used in assistance to developing countries.

2-2 Public Health Initiatives—Activities in Women-only Professions

Maternal and child health activities were conducted in Japan from before the war mainly as a part of public health programs. In particular, the activities of women-only professions, such as practicing midwives and public health nurses, were instrumental in improving maternal and child health.

(1) Practicing Midwives

Among the activities of non-governmental groups, the contribution made by experienced practicing midwives, present in Japan since the Edo Era, ranks particularly highly. The Meiji Government regulated practicing midwives, providing educational opportunities, and worked to provide a grassroots

⁵ *Yoiku-iryō* (medical and infant aid program): a system whereby the gap payment for hospitalization and medical expenses is covered for low birth weight infants (<2,000 g) or neonates with certain medical conditions (Maternal and Child Health Law Article 20).

⁶ *Ikusei-iryō* (medical aid for children with potential disability): a system whereby children with conditions that are expected to improve with surgery or other medical treatment (e.g. conditions affecting limbs, kidneys or heart) can receive treatment at public expense at designated medical institutions (Child Welfare Law Article 20).

environment where women could give birth safely, before institutional delivery became popular. Post-war, the GHQ applied the American experience⁷, where there did not exist such a high quality practicing midwife system, and sought to abolish the system in Japan. Once they recognized the professionalism of Japanese practicing midwives, and their importance to society, the system was allowed to continue⁸. Subsequently, the Ministry of Health and Welfare re-educated midwives, and instituted a system of clinical training for the instruction of nurse midwives regarding public health activities. In particular, midwives were instructed to: 1) encourage the use of Maternal and Child Health Handbooks; 2) promote health checks at public health centers; 3) encourage institutional

delivery; and 4) measure urine protein, blood pressure and weight. Midwives who underwent this re-education were professionals with a good grasp of the health of mothers and children, as well as their economic circumstances. Midwives became very concerned at the post-war increase in the numbers of women undergoing repeated illegal abortions for unwanted pregnancies, as well as the later consequences of stillbirths, congenital abnormalities, and damage to the mothers' health. As a result, when the Family Planning Worker system began in 1952, many midwives, to protect the safety of women's bodies and with no concern for any possible threat to their profession, spread the message of family planning saying "rather than have an abortion, use contraception."

Box 3-2 Activities of Public Health Nurses—Takaho Village in Nagano Prefecture

An NHI public health nurse was first posted to Takaho-mura in Nagano Prefecture in 1944. At the time, this was an extremely poor village with a high infant mortality rate. The new public health nurse first set up a "Public Health Guidance Worker System" based on the Aiiku Group activities, actively involving local wives in public health activities, and thereby increasing independent awareness and knowledge of public health matters. After the war finished, she conducted infant health checks and antenatal and postnatal health checks, in collaboration with the new public health center and local doctors. She later earned accreditation as a Family Planning Worker, and worked to raise awareness of maternal and child health and family planning. She worked with decision makers who controlled the activities of married women, such as the mayor, local Buddhist priest, their husbands and mothers-in-law. She formed an "*Oshidori-kai* (Lovebirds Club)" for married couples, and provided members with health guidance. With the passage of the Eugenic Protection Law in 1948, induced abortion was legalized under certain conditions, and the number of abortions rose sharply in Takaho Village, reaching a peak of 118 procedures in 1953. Programs such as the *Oshidori-kai* and "Love Box" (for the distribution of condoms) were then successful, however, and the number of abortions was halved the next year to 56 procedures (1954), and fell further to 32 in 1955.

Source: Institute for International Cooperation, Japan International Cooperation Agency (2003) *Second Study on International Cooperation for Population and Development —New Insights from Japanese Experience*

⁷ At the time, the majority of births in the U.S. were in hospital, under the supervision of doctors and nurses. Midwives did not receive any formal training, however, were used only by low income earners in rural areas without medical services, and were not socially accepted as a profession. In Japan, midwives received a systematic education, and midwifery was considered a suitable profession for the daughters of prosperous families. In this era, more than 90% of babies were delivered at home, and midwives were extremely well regarded by society (Institute for International Cooperation, Japan International Cooperation Agency 2003).

⁸ Ohbayashi, Michiko (1989) *Josanpu no Sengo* [Midwives after WWII], Keiso Shobo

(2) Public Health Nurses Activities (also see Chapter 8)

The first incarnation of public health nurses in Japan was as volunteer district nurses, whose activities supported mothers and children in the 1920s. In the 1930s National Health Insurance (NHI) unions and local government bodies employed public health nurses to improve the health of community residents. As an example, the NHI public health nurse in Rokugo Village in Gunma Prefecture (population approx. 1,400) in 1945 performed the following variety of duties related to maternal and child health: antenatal health checks (assisted by specialist obstetrician 4 times/year), nutritional supplementation for pregnant women and new mothers (distribution of rice-koji (malted rice) and promotion of goat-keeping), infant health checks (assisted by village doctor twice/year), lactation and childrearing consultations (once/month), and home visits to all infants and pregnant women⁹. Subsequently, public health nurses were posted to public health centers, which were established in 1938. Many public health nurses provided maternal and child health services, based at public health centers, which were based on an intimate grasp of the needs of the community. Until around 1960, outreach activities involving home visits to all households in the area were the cornerstone of public health activities in rural villages, allowing public health nurses to provide services finely attuned to the needs of their local community. At that time, the social status of public health nurses was high, and they were well remunerated (for instance, some public health nurses in Shizuoka Prefecture were paid more than university

graduate teachers, and some were the next best paid after the village deputy mayor)¹⁰. These factors increased the sense of responsibility of public health nurses, and led to finding problems and solving them on their own initiative¹¹.

The field of maternal and child health started in Japan with private sector female medical services personnel recognizing what needed most to be done, and was included in public health initiatives once the systems of public health nurses and public health centers had been implemented. Also characteristic of Japanese initiatives in this area is the fact that practicing midwives and public health nurses set up programs based on outreach services that were finely attuned to the needs of their local community.

2-3 Participation of Community Groups

(1) Boshi Aiiku-Group (Married Women's Voluntary Groups for Mother-Child Health and Welfare) Activities

During and after the war, recognition grew that the protection of the health of mothers and children was an important challenge for the entire world, and in Japan a number of initiatives were launched with some governmental support. A typical example is the Imperial Gift Foundation Aiiku-kai, founded in the pre-war period, and its post-war successor, the Maternal and Child Health Promoter system.

The Imperial Gift Foundation Aiiku-kai was launched in 1934 with Imperial sponsorship, as a non-governmental organization to conduct programs for the health and welfare of mothers and children. The results of a nationwide survey of

⁹ Uchibori, Chiyoko (1985) "Kokuho Hokenfu Katsudo [Activities of Community Public Health Nurses]" *Hokenfu no Ayumi to Kosshu Eisei no Rekishi - Kosshu Eisei Jissen Siriizu 2* [The History of Community Public Health Nurses and Public Health - Series of Practice for Public Health], Oguri, Shiro, Kinoshita, Yasuko ed. Igakushoin

¹⁰ Moriguchi, Ikuko and Hyoui, Nobuyuki (1993) "Sengo no Kosshu Eisei de Hokenfu no Hatashita Yakuwari to Primary Health Care - Kokuhaikyoryoku e no Tenbo wo Fumaete [Accomplishment of Community Public Nurses after WWII and Primary Health Care—Considering the Prospect for International Cooperation], *Kosshu Eisei Kenkyu* [Public Health Research], Vol. 42

¹¹ Ohba, Miyoshi (2002) Second Study on International Cooperation for Population and Development, in Second meeting, June 26, 2002, from conference note.

Box 3-3 Ogyaa (Disabled Children's) Donation

There are a number of examples of mutual aid through charitable foundations in Japan. One is the “Ogyaa (Disabled Children's) Donation” that raises funds for the protection and welfare of children with physical and mental disabilities, and research into pediatric diseases.

In 1963, Dr. Chikae Tohya, an obstetrician and gynecologist practicing in Ohguchi City in Kagoshima Prefecture, heard of the plight of three sisters with severe disabilities living nearby. At that time, it was usual when children were born with disabilities for the families to shut them away from the outside world, but the mother of these three sisters, although poor, was not afraid to bring them out into the open, even taking them to see plays. Impressed by the mother's attitude, Dr. Tohya called on the Ministry of Health and Welfare to recommend an institution that could care for children such as these with severe disabilities, but at the time no such facilities existed.

Dr. Tohya put forward a proposal to the Japan Association for Maternal Welfare (now the Japan Association of Obstetricians and Gynecologists) for a charity to “share the happiness” with unfortunate children, asking for donations from mothers who have given birth to healthy children, and from the doctors and nurses present at the births, and in July 1964 the “Ogyaa Donation” was launched. Collection boxes were placed in maternity wards throughout the country, and money is donated by new mothers, obstetricians, midwives, and nurses. Around ¥140 million was collected during 2001, and by December of that year total donations had reached ¥4,479.3 million. This money has gone to research into childhood disabilities and to 907 institutions caring for disabled children all over the country. It is worthy of note that this mutual aid campaign spread throughout Japan before it became economically affluent.

During the “International Year of the Disabled” in 1981, this foundation was the subject of an article in the English language journal of the Japanese Organization for International Cooperation in Family Planning (JOICFP). The head of the Indonesian Office of the United Nations Children's Fund (UNICEF), Victor Solasara was impressed by the concept, and the following year launched the “Ogyaa Donation” under the aegis of the Indonesian Child Welfare Foundation. It is often said that improvements in maternal and child health, nutrition and the welfare of disabled children in developing countries will require the participation of each individual member of the population, but when individual efforts fail to produce any large scale changes, then initiatives such as the Ogyaa Donation can serve to broaden the scope of mutual aid activities, even in developing countries with serious gaps between rich and poor.

Source: Ogyaa Donation Foundation homepage (<http://www.ogyaa.or.jp/contents.htm>), Institute for International Cooperation, Japan International Cooperation Agency (2003) *Second Study on International Cooperation for Population and Development —New Insights from Japanese Experience* p. 87

children, mothers and education conducted soon after the launch of the Aiiku-kai revealed a particularly high infant mortality rate in farming and fishing villages. Their response was to involve entire villages, in the course of their everyday activities, in improving their understanding of maternal and child health issues, promote home-

based care, and thereby lower the infant mortality rate. This was the program of “Aiiku Groups” in “Model Aiiku Villages.”

In designated Aiiku Villages, Aiiku Groups were set up comprising female volunteers from the community, who underwent a course of training from a public health professional. They then

conducted awareness campaigns, visiting every household in the area, promoting and protecting the health of mothers and children. These Aiiku Group members were a valuable human resource, supporting the public health centers in community activities such as health consultations and group health checks. They were also able to identify local health problems, and initiate programs suiting the actual needs of the community, such as home help for families with large numbers of children, and the provision of child care during the busy season for farmers. Aiiku Groups held regular study groups, working to improve their knowledge and skills bases¹².

This program became an official program of the Ministry of Health and Welfare in 1939, and was further expanded in the form of the “Aiiku Designated Village Program.” Starting with five Aiiku Model Villages nationwide in 1936, the program was expanded in collaboration with municipalities, public health centers, and medical societies, and at its pre-war peak more than 1,200 Aiiku Model Villages were designated nationwide, in 35 prefectures, contributing to improvements in maternal and child health¹³. In Aiiku Groups activities, they were not only visited by the Ministry of Health and Welfare but also invited external specialists such as trainees from other prefectures and UNICEF staffs. These factors helped to build confidence in the residents of the regions and also strengthened the organization and deepened their awareness. Maternal and Child Health Promotion activities were led all by these activities.

In 1938 the “Nippon Aiiku Research Institute of Maternal-Child Health and Welfare” was established within the Aiiku-kai, and it has played a leading role in research in the field of maternal and child health, conducting

comprehensive and practical research into physical and emotional issues concerning women and children.

(2) Maternal and Child Health Promoters

“Maternal and Child Health Promoters” are volunteers involved in community-based maternal and child health activities. They are selected by the local mayor from popular married women with experience of childrearing, and participate in maternal and child health programs in their municipality in their capacity as Maternal and Child Health Promoters. Their duties may vary between municipalities, but in general they assist in infant health checks, conduct painstaking home visits to convince non-participants to undertake health checks, perform antenatal and postnatal home visits and provide advice and guidance regarding childrearing, investigations and other matters.

An example is Ishigaki City in Okinawa Prefecture, where in addition the Maternal and Child Health Promoters assist mothers and children in a number of ways, recruiting participants in “parent education classes,” conducting educational diet classes, and participating in government maternal and child health programs as civilian assistants. Other examples are regular study meetings held at the instigation of the local Maternal and Child Health Promoters, “Town Maternal and Child Health Promoter Liaison Meetings” linking multiple municipalities and independently seeking out training opportunities to improve skills¹⁴.

Activities of Maternal and Child Health Promoters, initially recruited as volunteers, became a state subsidized program under the Ministry of Health and Welfare in 1968, and they are now to be found nationwide.

¹² Boshi Aiiku-kai homepage (http://www.aiiku.or.jp/aiiku/enkaku/enkaku_a.htm)

¹³ Ministry of Health and Welfare (1988) *Hokenjo 50 Nenshi* [Fifty years' History of Public Health Center] Nihon Koshu Eisei Kyokai

¹⁴ Inafuku et al. supervising editor, Ogawa, Sumiko ed. (2002) “Epidemiological Transition and Administrative Measures Taken in Okinawa,” Cooperation by Video Pack Nippon, Produced by Okinawa International Centre, JICA.

Box 3-4 Expected Results of Mother's Handbook System

The following medical results were anticipated with the introduction of the Mother's Handbook system.

According to a survey conducted by the Tokyo University Medical School, the main causes of stillbirth were toxemia of pregnancy (approx. 20%), maceration at birth due to syphilis (approx. 19%), and malpresentation (approx. 10%), so there was urgent need of a program to reduce these three causes. In 1941, Dr. Mitsuo Seki of the Department of Obstetrics and Gynecology of the Tokyo University Medical School published his estimates of how many miscarriages, stillbirths and premature births could be prevented by the introduction of a Mother's Handbook system, registering pregnant women and conducting regular antenatal health checks, and dealing promptly with any abnormalities.

His findings were, "Early detection and treatment of toxemia of pregnancy will prevent 20,000 deaths, early detection of syphilis, the cause of macerated stillborn fetuses, a further 10,000, and moving from home delivery to institutional delivery will prevent a further 5,000 deaths due to malpresentation. In addition, 60,000 deaths in infancy are caused every year by congenital weakness due to prematurity, so careful monitoring during pregnancy should save another 20,000 lives. Miscarriages are difficult to put a figure to, but early detection and treatment of other causes should reduce stillbirths and deaths in infancy by 70,000 to 80,000 each year."

Source: Nishiuchi, Masahiko and Boshi Hokenshi Kankou Inkai (1988) *Nihon no Boshi Hoken to Moriyama Yutaka* [Maternal and Child Health in Japan and Moriyama Yutaka], Japan Family Planning Association, Inc.

2-4 Maternal and Child Health (MCH) Handbook System

The Maternal and Child Health Handbook System was commenced in Japan with the issue of the Mother's Handbook in 1942. This was developed by the Ministry of Health and Welfare, based on a handbook issued to pregnant women by the University of Hamburg¹⁵ in Germany as a response to serious population problems associated with miscarriages, stillbirths and premature births. To reduce the incidence of abnormal births, it was considered necessary to first be cognizant of all pregnant women, and then encourage them to have regular antenatal health checks. The Mother's Handbook System was proposed as a way of registering pregnant women (see Box 2-3).

It is characteristic of the MCH Handbook System that handbooks were not just issued, but it was the first system in the world to register all pregnant women¹⁶, and also provided antenatal checks and vaccinations free of charge to women in possession of a handbook¹⁷, and issued extra food and maternity goods. These easily understood merits for pregnant women helped to popularize the MCH Handbook System.

The first Mother's Handbook was rather simple, containing guidelines for pregnant women and new mothers, sections to record observations about the health of mother and child, and a section to record the details of the birth. These records of the progress of the pregnancy and the birth contained important information for the next

¹⁵ This Mother's Handbook was a system unique to the University of Hamburg, whereby pregnant women carried their own health record, and was not in official use.

¹⁶ Ohba, Miyoshi (2002) Second Study on International Cooperation for Population and Development, in Second meeting, June 26, 2002, from conference note.

¹⁷ Pre-war antenatal health checks were not free, and there was no vaccination service.

pregnancy and the birth¹⁸.

Reborn post-war in 1947 as the Mother and Child Handbook, the guidelines function was expanded to include not only antenatal and postnatal health advice, but also child raising tips. A further name change in 1965 saw the birth of the present Maternal and Child Health Handbook, that has now become a booklet of some 70 pages, with a different version produced by each local government authority. It comprises two parts, one common to all localities (medical records, notations by guardians, etc.), and an information section tailored to the particular circumstances of the region (administrative information, public health and childrearing information). The literacy level among Japanese mothers is high, so the handbook contains few pictures and diagrams, and has many pages for the parents to make notes.

2-5 Promulgation of “Mother’s Body Protection Law” (Formerly “Eugenic Protection Law”)

During the post-war period of chaos and poverty, few had an accurate knowledge of contraception, and in any case it was difficult to obtain contraceptive devices and products. This resulted in many unwanted pregnancies, and a rapid rise in the number of illegal abortions. Many women died from such unsafe procedures, or suffered from unfortunate consequences, leading to an extremely serious situation for women’s health¹⁹.

As a response to this situation, with the primary aim of protecting women’s bodies, the “Eugenic Protection Law” was implemented in September 1948. This law allowed women to have

an abortion by a medical specialist under certain conditions, and is thought to have contributed greatly to subsequent decreases in the infant and maternal mortality rates (see Chapter 4 “Family Planning” for details).

2-6 Provision of Maternity Clinics in Rural Townships

Although the post-war period saw a steady decline in the infant mortality rate, over the post-war decade no improvement was seen in the maternal mortality rate, 160.1 (per 100,000 live births) in 1947 and 178.8 in 1955. In comparison to the significant improvements seen in the 20 year period commencing in 1940 in Western countries (MMR for 1960: U.S. 37.1; France 51.6; Netherlands 39.4; Sweden 37.2)²⁰, Japan was left behind in this area²¹.

In 1954, the Ministry of Health and Welfare issued a directive, “Strengthening Health Guidance for Pregnant Women and New Mothers,” with the aims of reinforcing the various antenatal and postnatal programs, and promoting institutional delivery. As part of the promotion of institutional delivery, in 1958 the Ministry of Health and Welfare commenced a program of assistance for rural townships without maternity clinics or medical institutions to establish “Maternal and Child Health Centers.” These centers were warmly welcomed by pregnant women and mothers, as a place to give birth safely and hygienically, also as a worry-free environment to rest in after giving birth, thereby improving the health of the mothers and children of the village, and providing them emotional stability. Health guidance was also provided during the postnatal rest period²².

¹⁸ Nishiuchi, Masahiko and Boshi Hokenshi Kanko Inkai (1988) *Nihon no Boshi Hoken to Moriyama Yutaka* [Maternal and Child Health in Japan and Moriyama Yutaka], Japan Family Planning Association, Inc.

¹⁹ *ibid.*

²⁰ Boshi Eisei Kenkyukai ed. (2003a) *Boshi Hoken no Shunaru Tokei Heisei 14 Nendo* [Statistics of Maternal and Child Health 2002], Boshi Hoken Jigyodan.

²¹ Ministry of Health and Welfare (1988) *Hokenjo 50 Nenshi* [Fifty Years’ History of Public Health Center] Nihon Koshu Eisei Kyokai p. 1102, Ministry of Health and Welfare (1961) Annual Report on Health and Welfare, p. 188

²² Ministry of Health and Welfare (1988) *Hokenjo 50 Nenshi* [Fifty Years’ History of Public Health Center] Nihon Koshu Eisei Kyokai, and Nishiuchi, Boshi Hokenshi Kankou Inkai (1988) *Nihon no Boshi Hoken to Moriyama Yutaka* [Maternal and Child Health in Japan and Moriyama Yutaka], Japan Family Planning Association, Inc.

2-7 Maintenance of Maternal and Child Health Statistics

Through the implementation in 1872 of a modern family registration system, Japan began to collect something like modern population vital statistics, covering changes in population groups such as births, deaths, inflows and outflows. This was followed in 1899 by the introduction of official “Population Vital Statistics.” There were, however, a number of problems with the collation of births and deaths, and looked at in comparison to the scientific standards of the post-war maternal and child health statistics, they leave much to be desired.

In accordance with the philosophy of the post-war Maternal and Child Health Division Head, “To prevent and treat, we must first discover the cause, and for that we need accurate statistical information,” from that time maternal and child health statistics have been maintained and strengthened. The “Maternal and Child Health Statistics of Japan” have been published annually since the first issue in 1949, and have played a major role in policy formulation in the administration of maternal and child health²³.

3. Improvements in Maternal and Child Health in Developing Countries in the Light of Japanese Experience

3-1 Preconditions for the Application of Japanese Experience

The circumstances of maternal and child health in developing countries differ greatly from those in Japan. Developing countries face a number of fundamental problems in the field of public health and medical services, including shortages of maternal and child health personnel and a lack of equipment and facilities, so Japan’s experience cannot be applied unchanged in the field²⁴. In

particular in the area of maternal and child health, many traditional customs in relation to antenatal care and birth are still strongly adhered to, and any maternal and child health programs must respect the culture and customs.

On the global level, enough personnel must be available to provide the minimum level of maternal and child health services. In the history of the development of maternal and child health in Japan, a large part is due to the high quality of public health nurses and midwives working on the front line, and the fact that quantitative development at a uniform level was possible. If we consider that all basic maternal and child health services, such as antenatal care, care during birth, height and weight measurements, and vaccinations for children, are all individual health care services, then we realize that the provision of trained personnel to the community is of prime importance.

In Japan, at the community level maternal and child health activities developed in close collaboration with the Livelihood Improvement Movement, community education programs in the agricultural field, and community center activities. In this sense, in developing countries as well, it will be important to provide maternal and child health services and at the same time link up with other sectors. In Japan, the high level of literacy among parents, the clients of maternal and child health services, has been a big advantage from the viewpoint of health education. In developing countries, where the level of literacy among parents may not be as high, modifications, such as the use of illustrations in health education and awareness campaigns, should be considered.

As maternal and child health is so closely associated with the culture and traditions of the community, and socioeconomic standing, attempts should not be made to apply Japan’s experience directly. Rather hints should be gleaned from Japan’s experience, and used to develop new

²³ Ohbayashi, Michiko (1989) *Josanpu no Sengo* [Midwives in the Post-war Period], Keiso Shobo.

²⁴ Nakamura, Yasuhide (2001) “*Koshueisei ni Kokkyo ha Nai* [Public Health Knows No Borders],” *Hokenfu Zasshi* [Magazine for Community Public Health Nurses], Vol. 57, No. 4, pp. 304-306

strategies suited to the local situation.

With this premise in mind, out of the Japanese experience in maternal and child health we will provide some approaches that may be applicable to developing countries.

3-2 Promotion of Women-only Professions

In making improvements in maternal and child health, the personnel involved are important, and in order to respond closely to the needs of the community, the role of personnel positioned close to the residents is particularly important. In Japan, public health nurses and midwives, posted within the community, played this important role. In developing countries, public health nurses are active in the field of public health, ranked highly as a profession after doctors and medical assistants. Their numbers are severely limited, however, making outreach activities such as Japanese public health nurses performed before and immediately after the war difficult, and they cannot provide a service finely attuned to the needs of the community. On the other hand, health volunteers (or health workers), who work under public health nurses to provide health services directly to the community, cannot expect remuneration of the level received by Japanese public health nurses, and it is difficult to maintain a high degree of motivation in these circumstances.

In Japan, public health nurses and midwives worked in farming and fishing villages where long-established customs are strongly adhered to, and slowly changed through home visits and health education study groups the people's thinking in regards to antenatal and postnatal health checks, hygienic and safe births, neonatal care, and improved nutrition, growth and development of children. These activities contributed greatly to improvements in the level of maternal and child health. The activities of practicing midwives, working out of facilities such as birthing clinics, are

also worthy of note. The reason for their success is based on their philosophy as a profession, to "protect the lives of mother and child."

It is essential, and also difficult, to produce dedicated professionals such as these in developing countries. The concept of "a natural style of childbirth based on relationships between people and the importance of life" adopted by practicing midwives has also begun to attract attention, within the context of the Western type thinking that medically supervised childbirth is best, in the assistance field. The JICA technical assistance "Maternal and Child Health Project in the State of Ceara, Brazil" demonstrated the validity of the concept "Humanized childbirth, maximizing the ability to give birth and the ability to be born"²⁵.

A number of studies are presently under way analyzing the factors that determine which activities undertaken by public health nurses and nurse midwives are effective in improving maternal and child health outcomes. We anticipate that these studies will systematically and scientifically demonstrate the validity of the Japanese approach, including the "humanizing of childbirth." We further anticipate that their results will elucidate factors that will potentially improve maternal and child health on a global scale.

3-3 Encouragement of Community Participation

There are a number of points of similarity between community-based activities, dominated by women, such as the Aiku Groups and Maternal and Child Health Promoters, and the activities of health volunteers in developing countries. The Japanese track record, whereby government sets up an organization, and in the process the community residents become aware of their own needs, and initiate their own programs, should also be of interest to developing countries. The results of these activities are almost invariably only available

²⁵ Misago, Chizuru (June 11, 2003) Speech "Trends in Safe Motherhood and Future: Toward Establishing System for Safety Care," Jointly hosted by the Ministry of Foreign Affairs and UNICEF, 'Symposium on Maternal Health Care in Developing Countries.'

Box 3-5 “Projeto Luz” (Project of Light) —Humanizing Maternity Care in Brazil

In the poorer parts of Brazil, women must give birth without the help of a midwife, whereas among rich families there is a trend to opt for birth by Caesarian section, requiring the full range of medical services. Against this background, JICA ran a family planning/maternal and child health project, introducing the concept of “Humanizing Maternity Care,” in the State of Ceara, in the northeast of the country, from 1996 to 2001. With the aim of increasing the levels of awareness, knowledge and skills required to manage pregnancy and birth, personnel training was conducted at a variety of levels, including training for doctors, nurses, and assistant nurses to improve maternity services, and a “Reformer Training Course” to train community leaders to promote humanization of birth. Other activities included the introduction to participating institutions within the State of Ceara of a unified system of care through labor, delivery and the post-delivery period; the establishment of a “house to wait for birth,” to which women with high risk pregnancies, such as elderly primigravida, are admitted prior to giving birth; and the sale of low cost condoms for the prevention of AIDS and other sexually transmitted diseases.

This project was widely known as “Projeto Luz,” and provided opportunities for friendly interaction between Japanese midwives and medical services personnel from the local maternity facilities. The system developed in the state of Ceara spread to other states, and in November 2000 an “International Symposium of the Humanization of Maternity Care” was held, attracting delegates from 25 countries, and producing lively debate concerning the promotion of healthy birth. Following the completion of the project, a system was initiated whereby Brazilian obstetric nurses undergo long term training in Japanese maternity clinics, and learn firsthand from their Japanese counterparts about “Humanizing Maternity Care.” In Ceara State, the local participants in the project have set up a Non-governmental Organization (NGO) to continue “Humanizing Maternity Care” training activities. Their efforts are supported by the NGO “Ceara Support Group,” set up in Japan by former Japanese specialists.

In further recent developments, the Brazilian Ministry of Health issued a directive promoting maternity care by obstetric nurses, and the humanization of maternity care has spread to other Latin American countries.

Source: Misago, Chizuru (June 11, 2003) Speech “Trends in Safe Motherhood and Future: Toward Establishing System for Safety Care,” Jointly hosted by the Ministry of Foreign Affairs and UNICEF, ‘Symposium on Maternal Health Care in Developing Countries.’

Japan International Cooperation Agency (2002) Annual Evaluation Report 2002, JICA.

Haneda, Kiyoshi, Misago, Chizuru, Onuki, Daisuke, Umenai, Takusei (1999) “The Factors that Influence Infant Mortality Rate—the Case Study on Ceara State in Brazil,” *Kokusai Kyoryoku Kenkyu* [Research on International Cooperation]

Fujiwara, Miyuki (2002) “23rd International Nursing Research Report—From the Experience on Project of Light in Brazil,” Japanese Society for International Nursing News Letter No. 24 (Jan 1, 2002)
(<http://www.geocities.com/kokusai-kango/new24.htm>)

Fujimoto, Takuro (2002) “Many Cases of Caesarian Section in Brazil (Volume 1)—Reconsidering Natural Delivery—Significant Physical Response of Fetus and Mother’s Body,” *Jornal do Nikkei* (March 6, 2002)
(<http://www.nikkeishimbun.com.br/020306-72colonia.html>)

in the Japanese language, and in many cases the records are in the form of commemorative journals with a limited distribution. This has resulted in a lack of publicity, and scant awareness beyond Japan's borders of the results of these programs. Much effort will be required to put together in English a history of community participation in Japan.

3-4 Maternal and Child Health Handbook Program

Maternal and Child Health (MCH) Handbooks are already in use in a number of countries. South Korea and Thailand produced their own versions based on the Japanese Handbook. JICA projects in Indonesia and Mexico included cooperation in the development of MCH Handbooks. MCH Handbook systems are in development in Laos, Vietnam, Brazil, and Bangladesh, through cooperation with Japanese NGO's and universities. Each country has its own political and economic situation, and its own maternal and child health system, so it goes without saying that the circumstances of the

individual country need to be considered before an MCH Handbook can be introduced. We will therefore discuss some actual examples of countries that have successfully introduced MCH Handbook systems, and elicit some general principles for the introduction of MCH Handbooks to developing countries.

Firstly, it is important that the contents of the MCH Handbook are appropriate to the needs of families and the community. Translations from a Japanese Handbook were not used in the development of a MCH Handbook for Indonesia, but rather Indonesians developed a new Handbook in line with their own requirements. MCH Handbooks issued in the Mexican State of Vera Cruz include a picture of the father on the cover, and pages concerning fathers' health, in consideration of gender equality and male participation in childrearing. The Handbook is called "My Health Record" (in Spanish, Historia De Mi Salud), making the child the star of the show. It is only a matter of course that there are major differences between the MCH Handbooks developed in each country and the Japanese

Box 3-6 Maternal and Child Health Handbooks in Indonesia

Indonesian doctors studying in Japan were impressed by the Japanese Maternal and Child Health (MCH) Handbook, and in 1994 an Indonesian version of the MCH Handbook was developed in central Java. Between 1998 and 2003, a JICA project "A Health Handbook for Mothers and Children" was conducted in Indonesia, as a result of which an MCH Handbook program has been included in Indonesian government maternal and child health policy. Characteristic of the Indonesian MCH Handbook is that no translations from the Japanese Handbook were included, instead source material already available in Indonesia was used, and that Indonesian nationals were instrumental in developing and distributing their own version. In consideration of the multiracial Indonesian society, a different Handbook cover was produced for each state, giving a strong regional flavor.

The Indonesian MCH Handbook is a valuable tool for health education for mothers, and has proved useful not just for parents, but for public health center staff and health volunteers. The Handbook is also believed to have improved communications between maternal and child health personnel and parents. With the cooperation of not only JICA, but also the World Bank, international organizations such as the WHO, philanthropic organizations, and international NGO's, approximately 1.4 millions MCH Handbooks have been issued to mothers in 25 Indonesian States.

original. Future Handbooks developed in the various countries and regions should be based on vaccination records, antenatal health check records, growth charts, and health education pamphlets already in use. In this way, the new Handbook should automatically be responsive to the requirements of families and the community.

Secondly, before an MCH Handbook program can be introduced, enough personnel must be available to provide the minimum level of maternal and child health services on a nationwide basis. In Japan's experience in maternal and child health, not confined to just the MCH Handbook, community-based personnel have played a major role. In regions and countries where the provision of basic maternal and child health services, such as antenatal care, and care during birth, height and weight measurements, and vaccinations for children, is inadequate, then the provision of basic services must be addressed before an MCH Handbook can be introduced.

Thirdly, consideration must be given to the literacy level of the users, the parents. In countries and regions with low literacy rates, the development of a Handbook with a high proportion of pictures and illustrations will broaden its acceptance. At first, it was thought that an MCH Handbook could not be widely distributed if the literacy rate was below a certain level. Vaccination record cards do achieve a certain level of distribution, however, irrespective of literacy rates. From the Indonesian experience, if there is someone within the family who can read, then mothers will appreciate the value of the Handbook even if illiterate, and use it appropriately.

Fourthly, it is worthy of consideration that, in the Japanese experience the MCH Handbook was not merely issued, but was part of an overall program including registration and maternal and child health services.

3-5 Provision of Birthing Places and Improvements in their Quality

A worry-free environment is important for safe childbirth. Health centers or health posts are now provided in remote regions even in developing countries, but in many cases the facilities make one think, "I would not like to have a baby in a place like this." Some Rural Health Units (RHU, corresponding to Japanese public health centers) in the Philippines, through the efforts and improvisations of the unit head, have an air of cleanliness and warmth²⁶ even under the same restricted financial conditions.

In rural mountain villages in Japan in the 1960's, there were no birthing centers or medical institutions, and in some cases the absence of midwife meant home births without any supervision. In these regions, old traditions regarding childbirth as unclean and women as inferior are still held strongly, and these have long been detrimental to the health of women and children. It is not difficult to comprehend that the simple act of establishing maternal and child health centers, where women giving birth can concentrate on the matter at hand, under the supervision of professional midwives, was useful in reducing the maternal and infant mortality rates.

When Japanese maternal and child health centers were established, it was not just a matter of erecting a new building ("hardware"); rather there were innovations on the "software" side in producing a positive, cheerful atmosphere. Based on the above-mentioned concept of "humanized childbirth," research conducted at Japanese maternal and child health centers and maternity clinics should provide information that will assist in improving the quality of health centers and health posts in developing countries.

²⁶ Japan International Cooperation Agency (2001) "Evaluation on Specific Topic: Evaluation of Population and Health Sector in Philippines (draft)"

3-6 Maintenance of Maternal and Child Health Statistics

In order to improve maternal and child health, a thorough grasp of present problems and elucidation of their causes is needed, in turn requiring accurate statistical data. There are still few developing countries where it could be said sufficient effort is made to collate statistical data regarding maternal and child health indicators. Maternal and child health statistics were collected from Japan at a relatively early stage, and used in policy formulation. This experience should be of value to developing countries in formulating policy based on an accurate grasp of the present situation.

4. Conclusion

There are many examples in the field of maternal and child health where the wisdom of developing countries has been transferred to

developed countries. An example is the Columbian method of "kangaroo care" for low birth weight babies, the benefits of which have been confirmed scientifically in the U.S. This method is currently in use in Japanese neonatal care units.

Japan has also learned a great deal through the process of adapting the MCH handbook to developing countries in the light of Japan's experience. For example, during the half-century since the issue of the first Mother's Handbooks, no user surveys had been conducted in Japan. Through cooperation with developing countries in producing their own versions, the Ministry of Health and Welfare recognized the need for a user survey, and taking hints from the Indonesian questionnaire, conducted a similar survey in Japan. The reality that much can be learned from developing countries underlines the desirability of international cooperation.